

**BUSINESS  
PAPER**

## ORDINARY MEETING OF COUNCIL

To be held at 6.00 pm on

**Monday 30 May 2016**

Council Chambers, Level 10,  
Council Administration Building, 41 Burelli Street, Wollongong

### Order of Business

- 1 Acknowledgement of Traditional Owners
- 2 Civic Prayer
- 3 Apologies
- 4 Disclosures of Pecuniary Interest
- 5 Petitions and Presentations
- 6 Confirmation of Minutes – Ordinary Council Meeting 9 May 2016
- 7 Public Access Forum
- 8 Call of the Agenda
- 9 Lord Mayoral Minute
- 10 Urgent Items
- 11 Notice of Motion(s)
- 12 Item Laid on Table –9 May 2016
- 13 Agenda Items

### Members

Lord Mayor –  
Councillor Gordon Bradbery OAM (Chair)  
Deputy Lord Mayor –  
Councillor John Dorahy  
Councillor Michelle Blicavs  
Councillor David Brown  
Councillor Leigh Colacino  
Councillor Chris Connor  
Councillor Bede Crasnich  
Councillor Vicki Curran  
Councillor Janice Kershaw  
Councillor Ann Martin  
Councillor Jill Merrin  
Councillor Greg Petty  
Councillor George Takacs

### QUORUM – 7 MEMBERS TO BE PRESENT

Due to file size, this Business Paper does not contain the Attachments for Item 2 - A City for People, Wollongong Public Spaces Public Life. To view these documents, refer to the individual report for Item 2, located in this Library.

# INDEX

## PAGE NO.

ITEM A	Notice of Motion - Councillor Dorahy - Retention of Title of Lord Mayor and Election by Popular Vote.....	1
ITEM B	Notice of Motion - Councillor Takacs - Illawarra Escarpment State Conservation Area .....	2
ITEM C	Notice of Motion - Councillor Merrin - Footpath Access Ramps - Compliance with Standards .....	3
ITEM D	Notice of Motion - Councillor Merrin - Driveway Design - Safe Footpath Crossings.....	4
ITEM E	Notice of Motion - Councillor Merrin - Asbestos Management Policy.....	5
ITEM F	Item Laid on Table - Council Meeting 9 May 2016 - Notice of Motion - Councillor Martin - Port Kembla Community Investment Fund .....	6
ITEM 1	Implementation Plan for the use of changed Blockage Factors for Flood Assessments.....	9
ITEM 2	A City for People, Wollongong Public Spaces Public Life .....	19
ITEM 3	Review of Wollongong Development Control Plan 2009 - Sustainability.....	41
ITEM 4	Proposed Use of Lot 40 DP 5330 No 24 Bridge Street, Coniston.....	58
ITEM 5	Proposed Closure and Sale of Public Pathway adjoining No 7 Byrarong Avenue, Mangerton.....	65
ITEM 6	Proposed Sale of 40 and 42 George Avenue, Bulli.....	69
ITEM 7	Central Library - Proposed Change to Opening Hours .....	72
ITEM 8	Local Government NSW - Election of Board of Directors - Nomination of Voting Delegates.....	75
ITEM 9	Draft Wollongong Community Safety Plan 2016 - 2020.....	77
ITEM 10	Policy Review: Glass Free Areas.....	80
ITEM 11	Extension of Funding Contract - Community Transport Services.....	82

ITEM 12	Tender T15/41 Bulli Surf Life Saving Club Extension and Building Renewal Works.....	85
ITEM 13	Tender T16/14 – Pedestrian Bridge Upgrade at Farrell Road, Bulli .....	89
ITEM 14	Tender T15/29 - Scheduled Resealing of Pavers in the Crown Street Mall .....	93
ITEM 15	Tender T16/16 - Debris Control Structure adjacent to Cosgrove Avenue, Keiraville .....	97
ITEM 16	Proposed renewal of lease of part of Wollongong Golf Course - Part Lang Park Foreshore (D580076) Reserve.....	101
ITEM 17	2016 National General Assembly of Local Government – Councillor Attendance .....	104
ITEM 18	Annual Fees Payable to the Lord Mayor and Councillors for 2016/2017 .....	106
ITEM 19	Annual Fees Payable to Independent Members of the Audit and Corporate Governance Committees for 2016/2017 .....	108
ITEM 20	April 2016 Financials.....	110
ITEM 21	Statement of Investments - April 2016 .....	115
ITEM 22	Draft Quarterly Review Statement - March 2016 .....	118
ITEM 23	Quarterly Report on Development Applications Involving Variations to Development Standards.....	120

ITEM A

NOTICE OF MOTION - COUNCILLOR DORAHY - RETENTION OF TITLE  
OF LORD MAYOR AND ELECTION BY POPULAR VOTE

Councillor Dorahy has submitted the following Notice of Motion –

“I formally move that Council write to the Premier of New South Wales, The Hon Mike Baird MP, Minister for Local Government, The Hon Paul Toole MP, and Parliamentary Secretary for the Illawarra and South Coast, Gareth Ward MP, affirming Council’s position and support, if a merger was to proceed, for the inclusion of the following in the proclamation of the new Council –

- 1 The title and position of Lord Mayor be retained; and,
- 2 The election of the Lord Mayor be conducted by popular vote.”



ITEM B

NOTICE OF MOTION - COUNCILLOR TAKACS - ILLAWARRA  
ESCARPMENT STATE CONSERVATION AREA

Councillor Takacs has submitted the following Notice of Motion –

“I formally move that Council write to the Premier of New South Wales, The Hon Mike Baird MP, highlighting the need for –

- 1 A significant and sustained increase in the level of recurrent funding for management of the Illawarra Escarpment State Conservation Area; and,
- 2 The level of funding to be sufficient to enable the National Parks and Wildlife Service (NPWS) to maintain and improve both conservation and recreation values on all lands in the Illawarra managed by NPWS.”

ITEM C

NOTICE OF MOTION - COUNCILLOR MERRIN - FOOTPATH ACCESS  
RAMPS - COMPLIANCE WITH STANDARDS

Councillor Merrin has submitted the following Notice of Motion –

“I formally move that –

- 1 Council receive a report which includes a review of all footpath disabled access ramps for compliance with the relevant Standards (Standards Australia/New Zealand) in terms of size, slope, surface treatment, direction etc.
- 2 The report outline measures for –
  - a Repairing ramps which do not meet the Standards; and,
  - b Ensuring that all future ramps are built according to the Standards.”

**Background provided by Councillor Merrin**

A number of examples of non-compliant footpath disabled access ramps in Wollongong have been identified, which create a hazard for the disabled or those with prams.

ITEM D

NOTICE OF MOTION - COUNCILLOR MERRIN - DRIVEWAY DESIGN -  
SAFE FOOTPATH CROSSINGS

Councillor Merrin has submitted the following Notice of Motion –

“I formally move that –

- 1 Council receive a report on driveway design standards across the City, with particular reference to the intersection of driveways and footpaths.
- 2 The report –
  - a Consider the impact of driveway construction on the slope, evenness and surface treatment of footpaths, which may affect pedestrian and disabled comfort and safety;
  - b Provide comparisons with other Councils in terms of requirements for driveway design standards which ensure minimal changes when traversing driveways from footpaths; and,
  - c Outline means for regulation or development conditions to ensure that driveway design and construction does not impede pedestrian and disabled access and movement.”

**Background provided by Councillor Merrin**

There are many instances of driveways constructed in Wollongong which radically change the profile and surface treatment of the footpath which is crossed. Such changes can impede pedestrian and disabled movement and cause a safety hazard.

There are Councils which ensure that driveway constructions do not change the shape or surface of footpaths, as part of their commitment to active transport, and in particular, their commitment to providing good pedestrian and disabled infrastructure.

ITEM E

NOTICE OF MOTION - COUNCILLOR MERRIN - ASBESTOS  
MANAGEMENT POLICY

Councillor Merrin has submitted the following Notice of Motion –

“I formally move that Council review and revise the 2014 Asbestos Policy in light of the recently revised model NSW Asbestos Management Policy prepared by Local Government NSW.”

**Background provided by Councillor Merrin**

In early 2016, Local Government NSW revised their Model Asbestos Management Policy for NSW Councils - "Amendments to the Model Asbestos Policy for NSW Councils February 2016":

<http://mobile.lgnsw.org.au/files/imce-uploads/90/Revisions%20to%20Model%20Asbestos%20Policy.docx>

The Model Asbestos Policy (<http://mobile.lgnsw.org.au/policy/asbestos-model-policy>) provides advice and assistance to NSW Councils in preparing their asbestos policies. Any revisions in the LGNSW advice should be assessed and included in Council's Asbestos Policy where applicable; in order to keep our Policy current and relevant to any changing circumstances.

ITEM F

ITEM LAID ON TABLE - COUNCIL MEETING 9 MAY 2016 - NOTICE OF MOTION - COUNCILLOR MARTIN - PORT KEMBLA COMMUNITY INVESTMENT FUND

On 9 May 2016, Council laid this Item on the table. Prior to laying the matter on the table, the following motion had been moved and seconded -

*Moved by Councillor Martin seconded Councillor Curran that -*

- 1 *Council initiate a proactive program to ensure the maximum benefit to the community of Port Kembla and the wider Wollongong community from the newly-established Port Kembla Community Investment Fund (PKCIF).*
- 2 *The program include, but not be limited to –*
  - a *A Community Planning Workshop to establish –*
    - i *Opportunities for community, business and Council-led projects that could be considered for funding over the years of the funding program and to ensure the funds are utilised to the maximum benefit of the community of Port Kembla and the wider Wollongong community, wherever possible;*
    - ii *Project ideas and opportunities where Council and the community could develop future projects, especially over the early years of the program.*
  - b *An annual Community Assist education and support program to assist communities in preparing their eligible applications so as to ensure the best possible results and ensure that applicants are provided with the maximum opportunity to be successful with eligible projects.*
  - c *A Project Partner Program between potential community fund applicants and Council to ensure –*
    - i *Project development and implementation in the Port Kembla Investment Fund area, especially where the project is developed in partnership with Council, on Council-owned land, or Council-managed sites; and,*
    - ii *Maximum benefit of projects; and*
    - iii *Projects are in keeping with Council's commitment to work in partnership with the community wherever possible.*

RECOMMENDATION

- 1 Council initiate a proactive program to ensure the maximum benefit to the community of Port Kembla and the wider Wollongong community from the newly-established Port Kembla Community Investment Fund (PKCIF).
- 2 The program include, but not be limited to –

- a A Community Planning Workshop to establish –
  - i Opportunities for community, business and Council-led projects that could be considered for funding over the years of the funding program and to ensure the funds are utilised to the maximum benefit of the community of Port Kembla and the wider Wollongong community, wherever possible;
  - ii Project ideas and opportunities where Council and the community could develop future projects, especially over the early years of the program.
- b An annual Community Assist education and support program to assist communities in preparing their eligible applications so as to ensure the best possible results and ensure that applicants are provided with the maximum opportunity to be successful with eligible projects.
- c A Project Partner Program between potential community fund applicants and Council to ensure –
  - i Project development and implementation in the Port Kembla Investment Fund area, especially where the project is developed in partnership with Council, on Council-owned land, or Council-managed sites; and,
  - ii Maximum benefit of projects; and
  - iii Projects are in keeping with Council's commitment to work in partnership with the community wherever possible.

### **Background provided by Councillor Martin**

The aim of this Notice of Motion is to ensure that Council plays a pivotal, supportive and strategic role to ensure the maximum benefit for the local Port Kembla community, and the overall community of Wollongong from this significant new funding initiative for the benefit of future generations, while providing for new infrastructure from Council's own assets in partnership with the Port Kembla community. The funding program, while focused on projects in the funding-mapped area of Port Kembla, is open to any organisation, including business outside of Port Kembla, so long as the project is in Port Kembla.

The funding guidelines state the following:

"The objective of the PKCIF is to support projects that will reactivate, enhance or build community amenity in the suburb of Port Kembla. These projects will support environmental improvement, economic growth and positive social outcomes. PKCIF projects will play a key role in revitalising the community of Port Kembla that has supported heavy industrial and Port-related activities over numerous decades.

The desired outcomes of the PKCIF include:

- Increased economic activity in Port Kembla;
- Enhanced community amenity and activation of public spaces;

- Increased community interaction and engagement;
- Improved environmental quality of air, land and waterways; and
- A more prosperous and liveable Port Kembla community.

Projects funded under the PKCIF will positively contribute to one or more of these desired outcomes."

The funding program specifically encourages partnerships, and also identifies the need for projects to align with Wollongong City Council's community and strategic planning outcomes. The program will clearly benefit Wollongong Council in the future funding of projects in Port Kembla.

ITEM 1

IMPLEMENTATION PLAN FOR THE USE OF CHANGED BLOCKAGE FACTORS FOR FLOOD ASSESSMENTS.

A review of Council's Conduit Blockage Policy contained in Section 10.3.2 of Chapter E14 of Wollongong DCP 2009 commenced in mid-2015 and has now been concluded, following consultation with floodplain management industry and community representatives. The review recommends changes to the existing policy.

This report presents the outcomes of the review and outlines how the recommendations of the review are planned to be implemented.

RECOMMENDATION

- 1 The WMA Water Review of Conduit Blockage Policy Summary Report and Technical Report May 2016 be noted.
- 2 The WMA Water Review of Conduit Blockage Policy Summary and Technical Reports (May 2016), be placed on Council's website for public information.
- 3 Council endorse the following actions to implement the recommendations of the WMA Water Review of Conduit Blockage Policy:
  - a Write to the Department of Planning and Environment seeking clarification on whether variable freeboard applies, and seek approval if necessary;
  - b Continue to use Council's current Flood Studies until they are amended on the basis that they contain the most up to date flood information available;
  - c Amend relevant Section 149 Certificates and Flood Certificates to contain an additional note that flood levels may change due to a revised blockage policy and imminent flood study reviews;
  - d Utilise the revised blockage parameters in the review of existing or preparation of new Flood Studies or Floodplain Risk Management Studies (following Department of Planning and Environment comment and approval if required);
  - e Utilise the revised blockage parameters in any flood assessment in support of a development application or construction certificate application (following Department of Planning and Environment comment and approval if required); and,
  - f Amend Wollongong DCP 2009, Wollongong LEP 2009, Wollongong LEP 1990 and Wollongong LEP No.38 (1984) as required, to make it consistent with the WMA Water recommendations.
- 4 Council note that an accelerated program for reviewing Flood Studies and Floodplain Risk Management Studies is underway and additional budget allocation for this purpose is included in the Draft Annual Plan for 2016-17.



- 5 Council write to the Insurance Council of Australia and request a meeting to discuss the findings and implications of Council's Conduit Blockage Policy Review.

## ATTACHMENTS

- 1 Review of Conduit Blockage Policy Summary Report WMA Water May 2016
- 2 Individual Submissions - Summaries and Responses

## REPORT AUTHORISATIONS

Report of: Mike Dowd, Manager Infrastructure Strategy and Planning  
Authorised by: Mike Hyde, Director Infrastructure and Works

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

Blockage of bridges, culverts and other stormwater conduits is a key consideration for Wollongong City Council in fulfilling our floodplain management responsibilities.

Council's existing policy arose primarily in response to widespread flooding that occurred in August 1998 throughout the Wollongong region, and also in October 1999. Council undertook a broad data collection exercise in response to these storms, not specifically focussed on blockage, but rather on collating information about flood levels, damages, and general flow behaviour in affected areas. As a result of this data collection, blockage was identified as having played a role in some of the observed flood behaviour. This was not just blockage of culverts and bridges with vegetation and urban debris, but also blockage of overtopping flow paths.

It was recognised that flood levels in some areas could vary significantly depending on the amount of blockage occurring at certain culverts or bridges. This was particularly true at major road and rail crossings, where the embankment across the floodplain is in some instances much higher than the top of the culvert passing underneath. It was also recognised that in some areas, flow diversions occurred and created flow paths which were unexpected.

There are several contributing factors why blockage is a major focus of floodplain management policy in Wollongong:

- The Illawarra escarpment causes orographic effects leading to relatively high extreme rainfall intensities.
- The LGA contains multiple parallel catchments running from the escarpment to the coast, and development has primarily occurred in the flatter lower parts of the catchment, leading to a relatively high proportion of flood prone land.

- Most of the upper catchment areas are forested, so there is a relatively high availability of debris.
- Several major arterial roads and railway lines run parallel to the coast, aligned perpendicular to the flow direction in the majority of catchments. This results in a relatively high number of major bridge and culvert structures with high embankments crossing the floodplain, in close proximity to developed areas.

The existing conduit blockage policy was adopted by Council in 2002 and requires that flood modelling of large events (100 year Average Rainfall Intensity (ARI)) should assume bridge and culverts with a diagonal opening span less than 6 m should be assumed completely blocked, and the bottom 25% of the area of larger openings should be assumed blocked. Although there was significant uncertainty about the amount of blockage to apply, and whether this blockage would always occur to the same degree in subsequent floods, the policy as it was implemented has been effective in identifying and planning for flood risks at locations potentially sensitive to blockage.

As far as can be determined, Wollongong City Council was the first jurisdiction in Australia to introduce a floodplain management policy specifically related to culvert and bridge blockage. Comparable policies are not widespread in Australia and overseas, at least partly because of the difficulties in collecting and quantifying blockage data during or after floods.

Since adoption of the policy in 2002, there have been several developments in industry practices for modelling, assessing, and planning for flood risk. There have also been developments in the way design flood modelling is used, for example within the insurance industry. In light of these developments it was appropriate to consider updating and refining Council's blockage policy to reflect current practices.

### WMA WATER REVIEW TEAM

Following requests for quotation to suitably qualified organisations that were able to meet the requirements of the project brief, WMA Water were selected as the successful contractor for the review project. WMA Water were engaged in July 2015 to undertake the project and had a project team which is highly respected. The following is a summary of the project team and their key experience:

#### Mark Babister – WMA Water

- Managing Director of WMA Water
- 30+ years' experience in hydrologic and hydraulic modelling, floodplain management
- Chair of Technical Committee for ARR (Australia Rainfall & Runoff) Revision
- Former chair of Sydney and National Committees Water Engineering (Engineers Australia)

#### Dr Bill Weeks – Independent Consultant

- 40+ years' experience in surface water and groundwater hydrology and hydraulics
- Former Director (Hydraulics) at QLD Department of Transport and Main Roads

- Member of Technical Committee for ARR Revision
- Lead Author of ARR Revision Project 11 – Blockage of Hydraulic Structures

Rhys Hardwick Jones – WMA Water

- 10+ years' experience in floodplain management and surface water hydrology/hydraulics
- Contributing Author ARR Revision Project 15 – 2D Modelling of Urban and Rural Floodplains

## REVIEW OF BLOCKAGE POLICY BRIEF

The primary focus of the review was to:

- Undertake a comprehensive investigation of available historical records of blockage in the Wollongong area;
- Review the existing blockage policy implemented in the Wollongong DCP;
- Review Australian Rainfall and Runoff, Project 11 Blockage of Hydraulic Structures, Blockage Guidelines and determine is it should be used as Council's blockage policy;
- Undertake detailed probabilistic modelling analysis of the available data;
- If appropriate, recommend an alternative policy based on robust technical analysis, and in line with best practice for design flood estimation, to the extent that the data allows.

## WMA WATER REPORTS

The review project was very detailed and highly technical and includes probabilistic modelling of 20,000 simulations at 20 different locations. The outputs of the analysis are considerable and as a result two reports were produced.

- 1 A condensed summary report, highlighting the key elements of the review. The summary report contains less industry-specific terminology. It is aimed at members of the broader community, and those interested in an overview of the work undertaken (Attachment A).
- 2 A full technical report documenting the concepts, data, and analysis relied upon in reaching the review outcomes. This report contains more industry-specific terminology, and is suitable for people working in the field of flood modelling and floodplain management, such as engineers, town planners and related expertise. Members of the public can find more in-depth explanations of various aspects of the review in this report if they are interested (due to the size of the Technical Report it not an attachment).

Pending endorsement by Council, both documents will be made available on Council's website.

## REVIEW PROCESS CONSULTATION AND COMMUNICATION

Two targeted consultation workshops were conducted where the proposed outcomes of the review were presented by the review authors and Council staff and participants were provided with copies of the draft summary and technical reports. The workshops were targeted at the following groups:

- 1 A joint session of Floodplain Management Committees for various catchment in Wollongong; and
- 2 An industry stakeholder workshop involving various practitioners of development in Wollongong, including flood modelling consultants, planners, developers, and Council staff involved in DA assessment.

Both workshops were well attended.

Participants in the workshops were encouraged to provide submissions with feedback on the draft review outcomes. Wollongong City Council collated the submissions and provided these, unedited to WMA Water. The received submissions are included in Appendix E of the full technical report, with a table listing each submission, a summary of the main issues raised in each submission, recommendations or suggestions provided in the submission, and a response by the review authors. A copy of the submissions is also included in Attachment B. There were some issues which were raised in several submissions, and which led to some adjustments to the recommended revised policy. A summary of these issues is provided in Section 5, pages 28-30 of the Summary Report (Attachment A).

Further broad scale community consultation will be undertaken as part of a future process of amending Council's DCP and LEP to make them consistent with the new blockage policy.

## RECOMMENDATIONS OF THE REVIEW

WMA Water provided the following recommendations (See Section 6 of the Summary Report p 31-36 - Attachment A):

- 1 Based on the outcomes of the policy review, data compilation and probabilistic modelling analysis, it is recommended that Council's blockage policy be revised. The main changes to blockage factors are reproduced below and are generally a reduction in blockage percentages, however there are many other changes to the way the factors are applied to flood modelling and it is recommended that the Section 6 of the Summary Report is read in full to understand the full suite of changes. The number of Classes of Conduit size was increased from 2 to 4 and two different sets of blockage factors were determined based on two different uses of the flooding information "Risk Management" and "Design".

100 year ARI blockage factors	Class 1	Class 2	Class 3	Class 4	Fences / Railings
Recommended "Risk Management"	95%	75%	60%	15%	75%
Recommended "Design"	70%	50%	40%	10%	50%
Existing Policy	100%	100%	100%	25%	100%

- 2 Additional data is required to increase confidence in the policy blockage factors. It is recommended that Council implement a comprehensive blockage data collection procedure, which can be implemented immediately following future major flood events. The procedure should be designed to:
  - a Collect photographic records of culverts and bridges as soon after flooding as possible, with shots taken looking directly into the culvert barrels from both upstream and downstream, as well as other angles.
  - b Survey maximum flood levels (where available, e.g. from debris marks) upstream and downstream of the culvert.
  - c Collect from all culverts within a particular area, not just those where blockage is perceived to have occurred. This is vital to improve the understanding of the underlying probability of blockage occurring.
  - d Utilise handheld GPS receivers to record the coordinates of photographs in the database, so that spatial analysis can be undertaken.
- 3 The blockage policy should be subject to periodic future review, particularly after any future extreme storms if additional data on blockage has been collected.
- 4 In light of the lack of experimental understanding about blockage mechanisms, further research involving physical modelling is encouraged. This recommendation is directed towards the broader flood modelling industry, not Council specifically.

It is proposed that all of the recommendations be implemented and in the future, to modify Wollongong DCP 2009, Wollongong LEP 2009, Wollongong LEP 1990 and Wollongong LEP No.38 (1984) as required, to make it consistent with the recommendations.

## IMPACT OF THE POLICY CHANGES ON FLOOD LEVELS

The impact of the changes to blockage factors on final flood levels cannot be known until each flood study is revised. However, it is expected that the changes to blockage parameters will not have significant impact on flood levels across the whole local government area. Any changes to flood level will generally be confined to the area immediately upstream of a culvert, especially in steeper parts of the catchment. In most cases any changes will be quite small.

When WMA Water undertook their research using a sample of 20 culverts, approximately 16 of the culverts showed little change in 1% Annual Exceedance Probability flood level when comparing between existing and proposed blockage policy factors. Of the remaining 4, some showed significant changes, where there was a significant height difference between the top of the railway or road embankment and the soffit (inside top) of the culvert or bridge. The site with the most significant change was in American Creek at the M1 culverts, affecting the area known as the Northview Estate.

It must be emphasised that any flood levels and flood level changes contained in the WMA Water reports do not supersede the design flood levels adopted by Council from flood studies undertaken as part of the NSW Flood Risk Management Program. **The WMA Water results are indicative only**, and are derived using an approximation of those flood study results that requires several simplifying assumptions. This analysis was undertaken to inform the relative influence of blockage parameters at a range of sites, but planning flood level calculations will require these parameters to be used in a full flood model. As a result, it is recommended that the flood levels contained in current flood studies continue to be used for the purposes of 149 Planning Certificates, Flood Certificates and Development assessment until each full flood study is reviewed and modified. An accelerated program of flood study review is proposed in the draft 2016/2017 Annual Plan.

## BLOCKAGE FACTORS THAT ARE FIT FOR DIFFERENT PURPOSES

Traditionally, the one 1% Annual Exceedance Probability flood level is used for all floodplain management purposes, including designing infrastructure and controlling development. This one flood level was derived to manage risk and to assist Council in fulfilling its floodplain risk management responsibilities. Given the widespread and catastrophic damage that occurred following the 1998 Flood and evidence that culvert blockage was a significant contribution to the damage it was appropriate to manage this risk using the blockage factors adopted at the time. When Council's conduit blockage policy was first developed flood insurance was not available and Council's conduit blockage policy was solely a tool to manage flood risk.

However since Council's original blockage policy was first adopted, flood insurance is now widely available, and following a series of significant and expensive natural disasters elsewhere in Australia, insurance companies have now dramatically increased flood insurance premiums, and in some instances, either priced flood insurance so high it is not economically viable to insure, or to refuse to ensure flood affected properties.

Insurance companies develop and cost their risk profiles independently of Council. However it is understood that Council's flood information to manage flood risk forms part of the material used by insurance companies for their own purposes.

Two sets of blockage factors have been developed by WMA Water. One "design" set of blockage factors have been developed as a "best estimate" for probability-neutral blockages. These factors are proposed to be applied for the following purposes:



- 1 Estimation of design flood levels, velocities, and depths for flood studies;
- 2 Flood hazard and hydraulic categories, including delineation of the High Flood Risk Precinct;
- 3 Infrastructure design;
- 4 Structural design of proposed development;
- 5 Impact assessment of proposed development;
- 6 Assessing the benefit of proposed flood mitigation works;
- 7 ***Estimating flood damages (i.e. Insurance Purposes); and***
- 8 Assessment of risk to life and evacuation considerations.

However, in light of the uncertainty surrounding the underlying historical blockage data, it is appropriate to undertake sensitivity analysis on the blockage assumptions. In those areas where changes in the blockage assumption make a very large difference to flood levels or there are other severe consequences, it is appropriate to adopt a factor of safety. In floodplain management for setting levels for development, this is referred to as freeboard.

To address this, it is proposed to use a second set of blockage factors for applications involving flood risk management. The proposed “risk management” blockage factors are an increase in the factor of safety for “high regret” decisions such as:

- Setting Flood Planning Levels (FPLs), such as floor levels for new development;
- Delineating the Medium and Low Flood Risk Precincts

The increases in blockage factors are shown below:

- 1 25% increase for Class 1 and 2 structures;
- 2 20% increase for Class 3 structures; and
- 3 5% increase for Class 4 structures.

Differentiating between different blockage factors for different purposes will enable Council to manage flood risks in the catchment, whilst also providing a “probability neutral” flood level which should be used for other purposes such as pricing insurance. In some instances, such as at the Northview Estate, new flood levels used for insurance purposes may be significantly lower than current flood levels, while new flood levels used for planning purposes will be closer to the current “one purpose fits all” blockage factors and flood levels. This in turn, may result in reduced insurance premiums for some properties, whilst also adequately controlling development and risk due to the potential for much higher flood levels due to culvert blockage.

The concept of differentiating between flood surface profiles for different purposes is relatively new and innovative to the industry. It could be argued that Council’s approach of having different flood surface profiles for different purposes is the equivalent of having a “variable freeboard”. The Department of Planning and Environment has issued circulars and directions in relation to the setting of freeboard and requires the Council’s gain approval to vary from a standard 0.5 metre freeboard. Accordingly it is recommended that Council write to the Department of Planning and Environment and

seek endorsement and approval, if required, for the concept of differentiating between flood surface profiles for different purposes.

## FIXED POLICY FOR WOLLONGONG AREA

A number of submissions from the development industry requested a flexible way of calculating blockage. While there would be some advantages to a flexible policy framework, there would also be significant drawbacks. Applying a completely flexible system, such as the Australian Rainfall and Runoff Blockage Guidelines and requiring a site-specific assessment for every development application would lead to an ad-hoc approach where neighbouring developments are based on different assumptions.

Given the sheer number of structures to which the policy applies within the Wollongong LGA, there are also advantages to a fixed assessment approach, in that there is more certainty about the requirements for those wishing to lodge development applications. It should also be noted that the ARR guidelines are not a blockage "policy," they are a qualitative set of criteria for use in areas where no local historical blockage data are available. The actual factors which are derived from the use of the Australian Rainfall and Runoff Blockage Guidelines, while based on a logical process, do not have any quantitative analysis in their development.

Accordingly it is recommended that Blockage Factors derived from the WMA Water reports is used and not any blockage factors derived from other sources such as the Australian Rainfall and Runoff Blockage Guidelines.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 under the objective Our coastal and waterways are protected and enhanced under the Community Goal We value and protect our environment.

It specifically addresses the Service Plan 2015 - 16 Key Deliverable Implement Council's Floodplain Risk Management Plans which forms part of the Five Year Action Plan. Implement a coordinated approach to floodplain and stormwater management contained within the Revised Delivery Program 2012-17.

Pending Council's endorsement and approval by the Department of Planning and Environment for the concept of differentiating between flood surface profiles for different purposes, flood levels contained in current flood studies will continue to be used for the purposes of 149 Planning Certificates, Flood Certificates Development assessment until each full flood study is reviewed and modified.

Pending Council and DPE endorsement of the revised Policy, the Wollongong DCP 2009, Wollongong LEP 2009, Wollongong LEP 1990 and Wollongong LEP No.38 (1984) will need to be amended as required, to make it consistent with the WMA Water recommendations.

In the interim, it is proposed that relevant Section 149 Certificates and Flood Certificates will be revised to include an additional note that flood levels may change due to a revised blockage policy and imminent flood study reviews.



## CONCLUSION

Wollongong LGA is highly susceptible to flooding, the impacts of which can be increased due to the impacts of conduit blockage. Council appointed WMA Water to undertake a comprehensive and detailed review of its existing Conduit Blockage Policy. The results and recommendations of the review, if endorsed, will enable the implementation of an accelerated review process of all Flood Studies and Flood Risk Management Plans to incorporate the revised blockage factors. Implementation of the review recommendations will result in Council using the most current and industry recognized process and parameters for flood management and development planning.

ITEM 2

A CITY FOR PEOPLE, WOLLONGONG PUBLIC SPACES PUBLIC LIFE

In 2014, Council committed to commence a review of the Revitalising Wollongong City Centre Plan (2007). To inform this important work, Council engaged Gehl Architects to partner in the preparation of a Public Spaces and Public Life Study.

The draft report “A City for People, Wollongong Public Spaces Public Life 2015” was exhibited between 14 November 2015 to 11 March 2016. A comprehensive engagement program gathered thousands of ideas from the community across a broad range of forums with 1,060 survey responses, 19 submissions and over 100 online comments received from a range of students, community groups, business, residents, government agencies and visitors. This feedback was overwhelmingly positive with the community indicating a readiness for action. Commentary received has informed the refinement of the report A City for People 2016, and influenced priorities in the accompanying Implementation Plan.

This report provides an overview of the engagement process and outlines how the report has been refined, recommending that Council adopt the final report A City for People 2016, and note the associated implementation plan and other relevant background documentation.

## RECOMMENDATION

- 1 The report “A City for People, Wollongong Public Spaces Public Life 2016” be adopted as the updated policy for the Wollongong City Centre (Attachment 1).
- 2 The accompanying Wollongong Public Spaces Public Life Study (Attachment 2), Wollongong Public Life Data (Attachment 3) and Wollongong Public Spaces Public Life; Engagement Report (Attachment 4), be noted.
- 3 The accompanying Implementation Plan (Attachment 5) be noted and be used to inform future Annual Planning priorities and budgeting processes.
- 4 The community be thanked for their involvement and contribution via Council’s website and social media.
- 5 The Revitalising Wollongong City Centre Vision (2007), Civic Improvement Plan (2007) and Wollongong CBD Action Plan (2010) be retired as policy documents and archived.

## ATTACHMENTS

- 1 A City for People 2016
- 2 Wollongong Public Spaces Public Life Study
- 3 Wollongong Public Life data
- 4 A City for People Engagement Report
- 5 City Centre Implementation Plan 2016

Due to the file size of this business paper, the attachments for this report are attached to the individual report for Item 2 - refer to the document library.

## REPORT AUTHORISATIONS

Report of: Renee Campbell, Manager Environmental Strategy and Planning  
Authorised by: Andrew Carfield, Director Planning and Environment, Future City and Neighbourhoods

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

### 2007 Vision

In 2007, Council endorsed the Revitalising Wollongong City Centre Plan (2007), also known as the City Centre Revitalisation Strategy, which had been prepared by the NSW Department of Planning. The Strategy is a suite of four documents setting the strategic framework for the City Centre: (1) City Centre Vision, (2) Local Environmental Plan, (3) Development Control Plan, and (4) Civic Improvement Plan. It works to inform and guide the delivery of a revitalised City Centre.

The 2007 Vision set a 25 year strategic framework for the City Centre aimed at attracting 6,000 new residents and 10,000 new jobs.

Eight years following the endorsement of the City Vision, it is important to review the progress to date and test how we are progressing.

### Key Achievements

There have been significant achievements made following the 2007 Vision, including implementation of the Green Bus; delivery of significant improvements along the Blue Mile; Crown Street Mall Revitalisation; Keira Street Revitalisation; Crown Street Façade Renewal Project; Town Hall upgrade and the Bathers' Pavilion. There has also been a range of footpath renewal work and other maintenance associated with City Centre Renewal.

Importantly, there have been a range of private industry led investments in the City Centre to deliver positive change. This includes the introduction of new small bars and cafes; GPT's major Wollongong Central retail redevelopment, private and public health investments and new mixed-use developments.

The Wollongong City Centre LEP 2007 introduced significant increase in building height and floor space ratios. In 2010, the LEP and City Centre DCP were incorporated into the Wollongong LEP 2009 and Wollongong DCP 2009, respectively.

### Approach to the review of the City Centre Vision

In March 2014, Council engaged Gehl Architects to partner in developing Wollongong Public Spaces Public Life. The partnership enabled staff to learn the methodology

developed by Jan Gehl over the past 40 years. Gehl Architects is based in Denmark and have extensive experience working with cities around the world to convert high-level liveability aspirations to on-the-ground, practical and tangible City change. The Gehl philosophy is based on encouraging life in a City, improving the public spaces, which will lead to improved building stock. If more people are using the City, the economics and life of the City will increase.

The approach is based on gathering data about our City to enable Council and the community to inform future planning of the City; strengthen a data driven approach to decision making and infrastructure delivery; and allow change in the City to be measured over time.

To inform the analysis, Council worked with Gehl Architects to gather a range of data about our City. A team of students and Council officers collected data about how people use the Wollongong City Centre. Pedestrian counts recorded the number of people moving through our streets and where people spent time and enjoyed the City.

Through field work and desktop research, over 60 data sets were collected and analysed, including quality assessments of City streets and buildings, data on traffic planning, urban planning, parks, recreation, and community, cultural and economic development. In February 2015 additional pedestrian counts were taken as a comparative exercise. These counts reinforced pedestrian patterns recorded in 2014 with minor variations. This information has been considered in the refinement of the analysis in the draft report.

### **November 2014 Sharing the Analysis**

In November 2014 Council shared the data gathered and early analysis with the community. The purpose of this process was to inform the community of the early analysis and data gathered about the City and explain the methodology.

Gehl Architect's Partner and Managing Director, Ms Henriette Vamberg, presented two City Talk Forums on 18 March and 5 November 2014. The first focussed on Gehl Architects and their approach, the second on the early City Centre Analysis.

### **The Lively City – Linkages Grant**

In 2014 the University of Wollongong was successful in being awarded a Linkages Grant, partnering with Wollongong City Council and the University of Tasmania, to undertake a qualitative research project investigating Wollongong City Centre as the Lively City.

This research spans two years and supports the quantitative data collected through Wollongong Public Spaces Public Life with qualitative data. While this work does not replace community consultation around Wollongong Public Spaces Public Life, it has supported and informed the project. Key research includes:

**Impressions of Wollongong** – A comprehensive survey to qualify community impressions of the City Centre. 250 respondents provided a range of informative feedback. The findings of this research support the recommendations of A City for

People 2016, and provides a benchmark to measure community perceptions about the City Centre into the future.

**Wollongong City Centre Parks** – A PhD Thesis exploring the qualitative insights to how residents living in low – and high-rise City Centre apartments make sense of parks as part of their everyday life

The project consulted with 341 respondents through a survey of adult residents living in low-rise and high-rise apartments in the Wollongong City Centre; semi-structured interviews to explore park narratives, and accompanied walks to explore the lived experience of City Centre parks in Wollongong.

The qualitative findings were used to provide valuable insight into the way people value City Centre parks and spaces, and their perceptions of these places.

**Sounding out the City** – The aim of the project was to provide insights into the different way sound shapes residents' perception of Wollongong City Centre. 56 participants provided responses through semi structured interviews. The qualitative findings were used to provide valuable insight into the way people perceive noise and the role of noise in the city centre.

**Pedestrian experiences in the Wollongong City Centre** – a project to better understand how adult residents of Wollongong experience and utilise Wollongong city centre as pedestrians. Investigating regular and weekly walking routes, routines and rhythms of residents and in doing so uncover what kinds of social interactions, thoughts and feelings people have in these spaces. 25 participants undertaking semi structured interviews and video recordings.

The information and feedback received from these research projects have directly informed the refinement of A City for People 2016. This work also sets a benchmark by which we can test and measure quantitative and perception change over time of the city centre from the perception of its residents and visitors.

## PROPOSAL

This report seeks Council endorsement of the final report A City for People 2016 and to note accompanying, supporting documents.

The suite of documents includes:

- A City for People 2016 (Attachment 1) - The report presents a City Centre vision, and the short, medium and long term aspirations for the City across six key public life projects.
- Wollongong Public Spaces Public Life Study 2015 (Analysis) (Attachment 2) – presents the analysis behind the Vision and actions, and outlines the challenges faced by the City to guide the way forward.
- Wollongong Public Spaces Public Life Data Report (2015) (Attachment 3) – presents the pedestrian data collected in early 2014 and again in early 2015.

- A City for People Engagement Report (2016) (Attachment 4) – a report which brings together the results of the engagement process informing the refinement and finalisation of the report A City for People 2016.
- Implementation Plan Wollongong Public Spaces Public Life (2016) (Attachment 5) – presents a list of proposed projects to deliver against the Plan, which will inform annual planning and budgeting processes.

## **A City for People**

A City for People 2016 presents an aspirational vision for the City Centre and key strategies and outcomes aspired to be achieved in the short, medium and long term.

### **The City Centre Vision**

The review of the City Centre Vision found that many aspects of the 2007 endorsed Vision remain relevant and appropriate to guide City revitalisation. The vision in A City for People 2016 refines elements of the 2007 Vision and builds on them, understanding current City challenges.

The vision presented in A City for People 2016 is about what Wollongong City Centre aspires to become. It is intended to set a clear direction to guide decision making and priorities in the city centre over time.

In the 21<sup>st</sup> century Wollongong City Centre will be a people orientated, sustainable and liveable city.

Wollongong City Centre is a thriving and unique Regional City, delivering a diverse economy and offering a high quality lifestyle. The city centre is nationally recognised as a liveable city and is the place where people want to live, learn, work and visit.

The Vision is underpinned by twelve aspirational goals for delivering the Wollongong City Centre of the future. These are themed as follows:

- Celebrate the uniqueness
- Develop a human scale City
- Grow a living City
- Create an accessible, pedestrian friendly City

The most significant changes/variations between the 2007 vision and the draft 2015 goals are:

- to include reference to the importance of the City's historical identity – Indigenous, European and Industrial heritage.
- to include an aspiration that the scale of the City Centre be reviewed to deliver a tightly defined City Centre, rather than the current area which extends from Stuart Park to Ross Street and west to Gwynneville.

The other variation is the approach to implementation. A number of the key actions of the 2007 Vision were focussed around large infrastructure investment projects including

Crown Street Mall, MacCabe Park, Station Precinct and the Foreshore which required significant capital investment.

A City for People 2016 promotes small interventions to align with longer term City aspirations, promoting a range of temporary and cheaper projects which step toward delivering the long term Vision for City places to demonstrate progress against the Vision, and balance expectations in delivering longer term capital investment and policy.

## **Realising the Vision**

Within the document, the Vision sets clear aspirations for the future of the City. This vision is then supported across six unique public life projects, which reveal more specific measures and priorities to deliver A City for People 2016.

For each of the six public life projects, Principles define long term aspirations, with short, medium and long term aspirations outlined.

The six public life projects include:

- 1 Rail Arrival
- 2 Western Crown
- 3 Crown Street Mall
- 4 MacCabe Park
- 5 Lower Crown Arts Precinct
- 6 Foreshore

Each project has a unique identity and role in the public life of Wollongong City Centre. The projects are supported by strategies that explore means to enhance the public life of these areas through offering short, medium and long term actions.

## **Guiding Implementation**

The specific actions/ projects identified to deliver A City for People 2016 are defined in the accompanying Implementation Plan. The implementation Plan itemises projects to deliver in the short, medium and long term and will inform the annual planning cycle. The implementation Plan will continuously evolve against the needs of the City Centre, to deliver against the area and city centre wide aspirations.

Providing a balance of shorter term/temporary actions alongside longer term/permanent change offers a flexible and achievable framework for delivering Wollongong City Centre as a City for people. The Vision will only be realised when the City works collaboratively to implement change.

## **CONSULTATION AND COMMUNICATION**

The draft report 'A City for People' was placed on public exhibition between 14 November 2015 and 11 March 2016.

A wide variety of promotional and engagement methods were used to seek the community and stakeholder's views on the draft Plan.



## How we engaged:

- **Online survey** was promoted to gather community input, incentivised with 5 chances to win a \$100 gift voucher.
- **Resident & Stakeholder Notification** 9,000 promotional postcards distributed in hard copy and sent to residents and landowners in the Wollongong suburb. 75 letters distributed to stakeholder and government agencies.
- **Engaging with Business** Staff door knocked local business, and distributed post cards.
- **Project Promotion through Social Media** The project was promoted on Council's social media platforms and included frequent posts on Facebook, Instagram and Twitter.
- **Newspaper Advertisements & Media** The project was advertised in the local paper with associated media articles relating to the project.
- **Information Kiosks** 4 kiosks were held in the Mall and at the Harbour and Viva La Gong.
- **Community and Stakeholder Forums** Staff presented and distributed information to Neighbourhood Forum 5, Council Reference Groups, the Retailers Forum and government agencies.
- **Project Webpage** Information was made available online, and a social media campaign shared links to the projects and promoted involvement.
- **Signage & Displays** Promotional material (signage on corflute) was displayed in key locations across the City Centre directing people to Council's webpage and the online survey.
- **Student Consultation Activities** Staff visited 5 schools and the University of Wollongong.
- **Engaging with Commuters** Postcard distribution at train stations in the morning peak.
- **Access to the draft document** Hard copies of the draft report and associated material was made available online and at all Council libraries and at Customer Service.
- **Workshops** Two stakeholder workshops were held on 16 March, bringing more than 60 people together representing private industry, government agencies (Department of Planning and Environment; Roads and Maritime Services; Sydney Trains), local business owners and residents.

## Feedback received:

- Hundreds of conversations generating suggestions and ideas about the draft Plan;
- 1,060 survey responses;
- 1,120 people viewed of the project online with over 306 downloads of the draft report;
- 19 written submissions received from 15 residents and agencies;



- 150 students offered comments and ideas for the future of Wollongong City Centre; and
- Social media campaign (Facebook, Instagram and twitter) and online forum with a reach of over 1,200 people.

### **Who we heard from:**

Respondents of the online survey were asked to identify their age to enable Council to evaluate the cross section of participants. The results indicate that the age of contributors was wide spread, reflective of each of the demographic profiles of the City Centre. A City for People 2016 – Engagement Report contains more detail on who we heard from.

### **Key themes derived from engagement feedback:**

A City for People 2016 – The Engagement Report accompanying, details the range of feedback received from various engagement activities. Overwhelmingly, the community confirmed support for the draft City Centre Vision and the focus across the six nominated Public Life Projects. No formal objections were received.

The following provides an overview of the themes in feedback received.

#### **A Connected City**

Strong support for increased connection to the Foreshore, while a marked lack of support for focus on MacCabe Park. The exception to this was the under 18 age group who identified MacCabe Park and Crown Street Mall as important sites, reflective of feedback that the city needs more family friendly spaces and activities.

#### **Activation**

Support for increasing activities in public space was a popular theme, with many submissions providing ideas on how to activate spaces and increase activity throughout the city. Popular ideas included: more markets, art and music events in the city, increased shade and seating throughout the city spaces, increased diversity of retail with a focus on boutique, niche retail, pop-up shops and kiosks/food trucks, activities such as outdoor chess, exercise classes, skate ramps, and extension of hours of trade and activities in the city.

#### **Celebrating Diversity**

People's experiences of the city were discussed; focusing on creating a vibrant and dynamic city, as well as one that is welcoming, inviting and diverse. A popular response was the potential of sites throughout the city that required urgent renewal and upgrade, most notably, the area around Wollongong train station and Western Crown Street.

#### **Connecting to our Natural Setting**

Support for increased development of sustainable practices and green spaces, including urban greening – the planting of more street trees, landscaping and planter boxes was a common theme. Connecting with our natural setting and reinforcing the city's proximity to beach and green environments was seen to provide aesthetic, environmental, economic and practical benefits.

## Pedestrian and Cycle Friendly

Support for making the Wollongong City Centre more pedestrian and cycle friendly. Many submissions highlighted issues with the city's existing pedestrian infrastructure (maintenance of the streetscape was another common theme), with requests for more shared paths, improved walkability, and greater use of public transport.

## Arts and Culture

Support for increased arts and cultural activities, including more public art, festivals, events, and celebration of multicultural diversity was another popular theme.

## Maintenance

A need to make the city centre clean, bright and fresh through greater use of colour and scheduled maintenance of the public domain.

## Accessibility

Support for improving the accessibility of the Wollongong City Centre for older people and people with a disability.

Other popular themes identified were: more outdoor dining; improving safety; upgrades to shopfronts/facades; and improved connectivity between the town centre and railway station and foreshore.

Importantly, the language and words used by the community to describe their aspiration for the city centre have informed the refinement of the language and wording of the final city centre vision and strategies.

## Submissions

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
Resident (Wollongong)	Supportive of introduction of colourful planting and flowers in the Crown Street Mall  Use tree guards to bring colour to the Mall.	This suggestion is aligned with the Crown Street Mall Unique Public Life Project.  Recent art projects in the Mall have used tree guards to display public art bringing colour and interest along the Mall.
Community Member (ACT)	Supportive. Wollongong CBD is dominated by a retail shopping mall. Importance of key spaces in the city centre such as Wollongong Train Station, MacCabe Park, Arts Precinct and the Foreshore	Noted. <i>A City for People 2016</i> highlights these locations within the six unique public life projects, highlighting their importance. The accompanying Implementation Plan identifies a range of relevant short, medium and long term actions within these locations.

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
Resident (email-suburb unknown)	<p>Brand Wollongong as a city rather than a town</p> <p>Encourage major retailers to the city</p> <p>Increased positive media stories to promote the city</p>	<p>Comments have been forwarded to Council's Media team and Destination Wollongong.</p> <p>The Vision recognises the Regional City role of Wollongong City Centre.</p> <p>Marketing and media is associated with action 1.9 City Centre Event Calendar.</p>
Resident (email - suburb unknown)	<p>Wollongong city centre requires increased input from local creatives to make it the fabulous place it deserves to be.</p>	<p>A City for People 2016 is aligned with the Cultural Plan, promoting an increased presence of arts and culture within our city centre. The final report has been guided by community input from local creatives, business and industry.</p> <p>Aligned with the delivery of Western Crown Public Life Project, and actioned via 1.10 of the Implementation Plan through delivering against Creative Spaces Strategy</p>
Resident (Wollongong)	<p>Concerns with signage and public facilities in the city centre identifying the need for signage to be upgraded to reflect Wollongong.</p> <p>Identifies confusion between City Beach and South Beach, recommends re branding and renaming to Bustle Beach</p> <p>Supports need to deliver sense of journey, representing heritage and arrival where Blue Mile meets Crown Street at the foreshore, suggesting an arch.</p> <p>Identifies a range of events to promote and celebrate the uniqueness of Wollongong.</p>	<p>The draft A City for People plan supports creating an increasing liveable city that puts public life at the centre of its planning.</p> <p>Aligned with the Foreshore Public Life Project and the accompanying Implementation Plan guides the delivery of a range of actions and investment to reinforce the identity of City Beach and to provide a sense of arrival.</p> <p>Noted. See above.</p> <p>Comments have been forwarded to Destination Wollongong.</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	<p>Requests an economic study to identify business opportunities for the City and Region.</p> <p>Identifies need for toilets through the city centre, noting inaccuracies with mapped areas in the Data Report.</p> <p>Identifies need for improved pedestrian and bicycle infrastructure through the city centre.</p>	<p>In accordance with Implementation Action 1.1 an economic analysis will inform the City Centre Planning review.</p> <p>Noted. Data was accurate at the time of Study and will be updated and refreshed over time.</p> <p>The Vision and supporting actions of A City for People promote a pedestrian and cycle friendly city.</p>
<p>Resident (Wollongong) (4 submissions)</p>	<p>Requests clarification as to the role of A City for People in future decision making.</p> <p>Requested clarity as to how the draft influences amendments to Wollongong LEP, particularly relating to building height controls</p> <p>Requested clarification as to the accuracy of the walkability measure (1km = 10min walk).</p> <p>Highlighting the importance of green open space in the Wollongong City Centre, particularly to support higher density residential areas.</p> <p>Provision of a neighbourhood park in Smith Hill area.</p>	<p>A City for People 2016 is not an Environmental Planning Instrument; it is a vision document which sets the strategic direction for the City Centre.</p> <p>In accordance with Implementation Action 1.1, A City for People 2016 will guide a review of city centre planning controls to inform amendments to Wollongong LEP.</p> <p>The walking time depicted in the report reflects an internationally recognised standard walking time for a 1km route. It is recognised that the time to walk 1km remains dependent on physical mobility, and is a guide only.</p> <p>A City for People 2016 supports the delivery of a network of connected and flexible open spaces within the Wollongong city centre. In accordance with Implementation Action 1.1 A City for People 2016 will include a review of the open space network across the City Centre.</p> <p>Smiths Hill is outside the PSPL study area. A park is not proposed at Smiths Hill as the area is well serviced by foreshore reserves.</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	Major events at Foreshore & Stuart Park	Foreshore activation is promoted by the vision and Foreshore Public Life Project. Stuart Park is outside the Wollongong City Centre boundary as defined by Wollongong LEP2009
Resident (Woonona)	<p>Need to change the perceptions and retail offer/ experience in Crown Street Mall.</p> <p>Mall refurbishment underwhelming, needs more shade.</p>	<p>A good retail mix is promoted through the Vision to deliver a living city, aspiring to deliver a city experience, beyond a retail focus. However, the type of shop is determined by the landowner and tenant.</p> <p>The Mall Public Life Project directs a range of activation projects and projects to improve comfort and amenity, shade is part of this.</p>
Illawarra Association for the Visual Arts	Requested the plan identify opportunities to promote local artists work by activating windows on Western Crown Street	Aligned with the delivery of Western Crown Public Life Project, and actioned via 1.10 of the Implementation Plan through delivering against Creative Spaces Strategy
National Trust NSW	<p>Recognition of the importance of heritage in the Wollongong City Centre and keen to be involved in future projects</p> <p>Investigate opportunity to promote heritage via a phone app</p> <p>Supportive of design review process. Culture of design excellence needs to be supported by a City Architect.</p> <p>Supportive of collaborative implementation, noting the need for various departments within Council to collaborate to deliver outcomes.</p>	<p>Aligned with the City Centre Vision, the importance of heritage is highlighted in accordance with Celebrate the Uniqueness. It is noted that items 1.9 and 4.3 Heritage Interpretation Projects are included in the Implementation Plan.</p> <p>Council is establishing a SEPP 65 Design Review Panel 2015/16. The future planning study as per item 1.1 and 1.6 of the Implementation Plan will further investigate built form and design.</p> <p>The Implementation Plan highlights internal working partnerships between council divisions to deliver projects.</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	Use of 'catchy phrases' alienates less sophisticated readers and reduces the authority of the document.	A series of changes have been made to the vision and associated public life projects to reflect community language received via the consultation process.
Neighbourhood Forum 5	<p>Supportive of the general thrust of the draft 'A city for people' report</p> <p>Concerns raised regarding Implementation and when planning policy (LEP) will be updated. Importance of character of city centre streets, requesting urgent review of planning policy LEP and DCP. Requesting clarification as to how the community be involved.</p> <p>Requests a public meeting to debate the issues following the full report.</p> <p>Raised concerns that the report would not lead to clear implementation. Consider quick wins appropriate but not at the expense of longer term initiatives.</p> <p>Raised alarm that the Council appear to continue to use a secretive in-house approach to planning and development in the City Centre without a reference group (specifically representative of the</p>	<p>Noted.</p> <p>A City for People 2016 supports high quality streetscapes with the Vision promoting streets that are comfortable, enjoyable and safe with excellent presentation that contributes to the development of a human scale city centre.</p> <p>In accordance with Implementation Action 1.1, A City for People 2016 will guide a review of city centre planning controls to inform amendments to Wollongong LEP and will lead to more detailed analysis on the design outcomes/ character of city blocks and streets. The community and key stakeholders will be involved throughout this process.</p> <p>Council facilitated public workshops to inform the refinement of A City for People 2016. These workshops engaged around 60 participants representing local residents, business and government agencies.</p> <p>The accompanying City Centre Implementation Plan itemises key actions to be delivered in the short medium and long term, and relevant budget to deliver these.</p> <p>To inform the final report, extensive community engagement was undertaken, bringing thousands of ideas, suggestions and included direct engagement with representative of the community, retailers, the Property Council, IBC and the National Trust. Over 1,060</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	<p>community, retailers, the Property Council, IBC and the National Trust).</p> <p>Great concern raised with mismatch between rhetoric of a pedestrian/ cycle dominated environment and the investment in roads and parking.</p> <p>Request clarification with regard to the City Centre Revitalisation Strategy Review.</p>	<p>surveys received, hundreds of online comments, 18 submissions and hundreds of face to face conversations informed the refinement of <i>A City for People 2016</i>.</p> <p>A City for People 2016 will guide strategic decision making and investment. A balance is required to accommodate a highly accessible and functional liveable city. Of relevance, the Implementation Plan identifies action 1.4 Review of the Access and Movement Strategy which will inform future investment.</p> <p>When endorsed, A City for People 2016 will supersede the Wollongong City Centre Vision, and Civic Improvement Plan, and CBD Action Plan.</p>
St Mary Star of the Sea College	<p>Consideration of using school facilities outside of school hours to support arts and culture in the city</p> <p>Support promotion of walking, cycling and use of public transport</p> <p>Reiterate importance of heritage in the city centre and history of St Mary's could form part of historic walks. Supportive of partnerships between Council and local industry and businesses</p>	<p>Comments have been forwarded to Council's Community and Cultural Services teams. A City for People 2016 aligns with Council's Cultural Plan, and is supportive of measures that will support and enhance arts and culture in the Wollongong city centre.</p> <p>The Vision and supporting actions of <i>A City for People</i> promote a pedestrian friendly city.</p> <p>Noted. Heritage is an important part of the Vision, with heritage actions included in action 1.9 of Implementation Plan. A City for People 2016 and the accompanying Implementation Plan acknowledge the importance of partnerships to assist with the delivery of outcomes.</p>
Illawarra Retirement Trust (first submission)	Provides an analysis of the Links IRT Pioneer Place development against the Vision	Noted.



AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	Supportive of the principles of liveability underpinning the draft plan	A City for People 2016 aspires to create an increasingly liveable city that establishes a range of health and lifestyle benefits and promotes economic growth.
Illawarra Retirement Trust (second submission)	<p>Supportive of principles of liveability underpinning the draft plan.</p> <p>Wollongong to be an international leader in age friendly cities</p> <p>Highlights importance of</p> <ul style="list-style-type: none"> <li>- accessible &amp; comfortable outdoor spaces</li> <li>- clear signage and wayfinding</li> <li>- efficient and accessible transport links</li> <li>- safe laneway networks</li> <li>- improved street lighting</li> <li>- clustering services for improved access</li> </ul> <p>Identifies need for Council planning instruments to</p> <ul style="list-style-type: none"> <li>- support housing density near transport, shopping and services,</li> <li>- deliver affordable housing models.</li> <li>- ensure older residents have opportunity for inner city living.</li> <li>- promotes diversity in resident population.</li> </ul>	<p>A City for People 2016 is underpinned by the principles of delivering a liveable city centre.</p> <p>The 12 Vision statements promote the delivery of a liveable, diverse and active city centre which includes a diverse residential community and creates an increasingly pedestrian friendly city.</p> <p>Actions around accessibility and comfort of the public domain are addressed through the Vision, and also through each Public Life Project.</p> <p>Key actions within the Implementation Plan addressing transport, public domain quality and land use include 1.4 Review Access and Movement Strategy and 1.1 City Centre Planning Review and 1.6 City Centre Design Review. The points raised will inform this work.</p>
Wollongong Sports and Entertainment Centre	<p>Overarching support for revitalising public infrastructure and activation at the Foreshore.</p> <p>Support to investigate improved heritage interpretation and awareness.</p>	<p>Noted</p> <p>Aligned with the City Centre Vision, the importance of heritage is highlighted in accordance with Celebrate the Uniqueness. It is</p>



AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
	<p><i>Foreshore Activation</i> Support to explore opportunity for day time activation. Support for vision of the foreshore to be an activated tourist precinct. Support need to deliver sense of arrival at the foreshore, noting suggestions of an arch or similar.</p> <p><i>City Beach Reference</i> Request referencing and promotion of City Beach as branded (not South Beach).</p> <p><i>Support for a Convention Centre</i> WSEC notes aspiration for WEC upgrade to convention centre and requests WCC support to attract future funding opportunities.</p> <p><i>Access and Movement</i> WSEC happy to consider pedestrian access through WSEC site from Stewart Street. WSEC requests ongoing exploration of multi-level car park.</p> <p>Support for further promotion of public transport.</p> <p><i>Implementation</i> Importance of long and short term implementation to deliver a range of activation elements.</p>	<p>noted that items 1.9 and 4.3 Heritage Interpretation Projects are included in the Implementation Plan.</p> <p>Aligned with the Foreshore Public Life Project and the accompanying Implementation Plan, WSEC is a key partner in delivering a range of projects to activate and enhance the Foreshore experience.</p> <p>The referencing of City Beach has been amended in the final report.</p> <p>Council notes the continued support for WSEC in delivering a convention centre. As noted in Council Community Strategic Plan (objective 2.3, Strategies 2.3.2 - <i>To support the promotion of the city centre as a preferred conference and events destination, and the place to live, learn, work and visit.</i></p> <p>Alignment with the access and movement comments is noted. The programmed Review of the Access and Movement Strategy (refer 1.4 Implementation Plan) will consider the range of parking and access issues raised by WSEC.</p> <p>The accompanying Implementation Plan sets out a series of short, medium and long term actions to deliver against the Vision.</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
Illawarra Business Chamber	<p>Support for heightened commercial activation in the Wollongong city centre. Reinforces the importance of relationships between Council and the private sector.</p> <p>IBC recommend: Enhance private sector engagement overall.</p> <p>Formally engage with private sector for Rail arrival master plan. Support pop up / flexible options for upcoming retail and hospitality industry.</p> <p>Investigate activities in the Mall to bolster local business and prosperity of local shop owners.</p> <p>Promote private sector presence along Foreshore and highlight the WEC as a key site for refurbishment.</p> <p>Consider a review of business rates in the Wollongong City Centre.</p>	<p>A City for People 2016 is underpinned by the fact that liveable cities delivering high quality environments attracting residents and visitors and driving investment. The Vision supports a tightly defined city centre that guides priorities for investment and a growing economy.</p> <p>Council recognises the importance of a collaborative approach to assist in delivering the future vision for the city centre and engaged widely with business, the community and government sector to refine and finalise <i>A City for People 2016</i>. It is also recognised that key to implementation are strong partnerships with local business.</p> <p>Noted and in progress.</p> <p>Key actions identified throughout the plan seek to support and improve local prosperity, and not compete with it. The focus is on building on what is working well, and complementing local business with high quality city experiences.</p> <p>Noted and included as key project.</p> <p>Rates are received annually as part of the Annual Plan.</p>

AUTHOR	MATTERS RAISED	COMMENT/ RESPONSE
Illawarra Shoalhaven Local Health District	Overall supportive of the draft plan, congratulating WCC on the approach and consultation.	Noted.
	Request consideration of Health Care Services Plan 2012-22.	A City for People 2016 supports creating a liveable city that has an overall focus on liveliness, health, attractiveness, sustainability & safety.
	Ensure there is a supply of healthy food in the City Centre and minimise alcohol outlet density.	Noted. Council has limited control but a healthy lifestyle is promoted in the Vision.
	Suggestion to include walking routes, bubblers and gym equipment in MacCabe Park.	Key actions within the Implementation Plan address public domain quality and provision of shade, lighting, seating and facilities in the city centre.
	Public domain improvements	The 12 Vision statements promote the delivery of a liveable, diverse and active city centre which includes a safe and increasingly pedestrian and cycle friendly city. Vision statement 11 specifically relates to improving connections to the Hospital.
	Promote affordable housing	The importance of delivering affordable housing is acknowledged. This is a broader issue that will be considered as part of LGA wide studies including the Housing Strategy.

A City for People 2016 has also been prepared with the input of Councillors through the allocation of resources for capital and operational projects and attendance at workshops and briefings. The most recent Councillor briefings occurred on 28 March and 26 April 2016.

### Changes to draft Report following exhibition

A number of changes were made to the final report A City for People 2016 following exhibition. These are outlined below.

## Developing a Suite of Documents

- Separation of Analysis and Vision

The draft report A City for People included both the analysis and vision. This document has now been split to have a standalone Analysis in Wollongong Public Spaces Public Life 2015 and A City for People 2016.

### Reason for Change

This change was made to streamline the documentation and allow the vision to read as a standalone document.

While the analysis is always relevant to inform the Vision, over time, as progress continues to be made and we measure change, the analysis will also change. It will be important to be able to adapt and report this separate to the long term vision.

- Actions to Aspirations + A separate Implementation Plan

Actions were taken from the draft report from both the city centre wide actions and each of the six public life projects and these actions were replaced by the outcomes we aspire to see in the short, medium and long term.

### Reason for Change

The actions, as refined by community input, were placed in the accompanying Implementation Plan. This Implementation plan will inform future resourcing and programming and will evolve over time, to identify key projects to deliver against A City for People 2016. It was deemed relevant to separate the endorsed Vision from day to day actions to ensure appropriate flexibility in delivering a range of projects over time.

- Arts Precinct Photomontage

The Arts Precinct Montage was revised in partnership with Community and Cultural Services.

### Reason for Change

To ensure quick wins and short term, temporary ideas were deliverable.

- New Introduction and Conclusion

In splitting the Vision from the Analysis, a range of changes were required to ensure the context remained appropriate. Minor changes include a new introduction and conclusion, and achievements page were prepared. Also a graphic was introduced to communicate the role of the suite of documents informing the Vision.

### Reason for Change

To ensure the context remained appropriate for a stand alone Vision document.

- Minor wording amendments

Throughout the document, a range of wording has evolved to include terminology and words consistently used by the community in defining aspirations for the Vision of the city centre.

## Reason for the Change

Wording has adapted to improve the accessibility of the document by the community and to better reflect community aspirations.

- Six Public Life Projects

While the Six Public Life Projects remain consistent, some edits have been made to the principles aspired to be delivered. These are typically small changes, with no significant edits made to intent.

## Foreword

An updated foreword has been provided by Jan Gehl of Gehl Architects in recognition of the progress Council has made on its City Centre journey.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal “*We have an innovative and sustainable economy*”. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
2.3.1 Wollongong's City Centre is revitalised and active	2.3.1.4 Improve policies and systems to support the revitalisation of the City Centre	Deliver the City Centre Revitalisation Strategy

*A City for People 2016 and Implementation Plan* are supporting documents under Council's Integrated Planning and Reporting framework. Supporting documents include Council endorsed strategies, plans, master plans, town and village plans, precinct plan and action plans that include short, medium and long-term outcomes to support the development of Council's *IPR Legislated Documents* (Wollongong 2022: Community Strategic Plan, Delivery Program and Annual Plan).

The annual delivery program planning process includes operational and capital budget allocations of people, finances and assets through a vigorous prioritisation and decision-making process. The role of *A City for People 2016* and accompanying Implementation Plan is to inform this process and set priorities for planning and delivery of projects within the Wollongong City Centre.

The vision and actions identified in *A City for People 2016* serve an important strategic function and should be used as a prompt for designers, architects, engineers, strategic and assessment planners, community groups and decision-makers in planning, assessing and delivering projects in the City Centre to deliver outcomes aligned to community aspirations and priorities.

In November 2015, the NSW Department of Planning and Environment released the Illawarra Shoalhaven Regional Plan 2015. The Plan identifies “Metro Wollongong” as a big driver for employment, housing, education and entertainment. Metro Wollongong extends from Fairy Meadow to Coniston and west to Gwynneville, and includes the City Centre. The draft *A City for People* (2015) informed the Regional Plan.

A City for People 2016 is aligned with the goals and aspirations of the Illawarra-Shoalhaven Regional Plan 2015. Direction 1.1. Grow the national competitiveness of Metro Wollongong to provide housing and jobs, specifically relates to aspirations to drive economic prosperity (Action 1.1.1), improve the attractiveness and livability of the city centre, increase the resident population and make the city a more attractive place to live, work and play (Action 1.1.2 and 1.1.3), and promote the revitalization of Western Crown Street (Action 1.1.4). The Department of Planning and Environment are a key stakeholder to collaborate and deliver a range of outcomes through the accompanying Implementation Plan.

A City for People 2016 has been informed by a number of Council strategies and policies, including:

- Wollongong Economic Development Strategy (2014)
- Wollongong Access and Movement Strategy (2013)
- Wollongong Bike Plan (2014) Strategy
- Draft Public Arts Strategy (2016)
- Wollongong Environment and Sustainability Policy and Strategy (2014-2022)

If Council endorses A City for People 2016, it will replace Revitalising Wollongong City Centre Plan (2007) as the vision/supporting document for the City Centre. The 2007 Vision covers a larger area, whereas A City for People 2016 is focused on the core of the City around Crown Street, between the railway station and the foreshore.

Projects and issues beyond the City for People 2016 area are incorporated into other studies and projects, including the Public Domain Manual and the South Wollongong Study.

Accompanying the 2007 Vision was the Civic Improvement Plan (2007) which identified works to be undertaken in the City to improve its appearance. Some of the projects have been completed, such as Crown Street Mall and the reopening of Keira Street (Crown Street – Burelli Street), whilst other projects which required significant investment have not yet occurred.

It is recommended that A City for People 2016 be endorsed as the City Centre policy document and replace Revitalising Wollongong City Centre Vision (2007) and Civic Improvement Plan (2007).

In 2010, Council released the Wollongong CBD Action Plan, which was a 5 year implementation strategy. The Plan was not formally endorsed by Council, although it has been used to guide capital projects and planning studies. Some of the priority projects have been completed, such as the Crown Street Mall upgrade and Keira Street upgrade. Other projects are still proposed and have been endorsed in the City Centre Implementation Plan (2016) such as the MacCabe Park Masterplan. The South Wollongong review is part of the current annual plan and is in preparation.

Although it was not formally adopted by Council it is recommended for clarity that the Wollongong CBD Action Plan (2010) be retired as a policy document and archived.

## FINANCIAL IMPLICATIONS

A City for People 2016 provides a vision for the future of the City Centre and sets direction for future planning and infrastructure priorities. The accompanying City Centre Implementation Plan provides more detail on actions, including staging; targeted delivery dates and estimated capital costs (refer to Attachment 2). Future design work and investigations will inform more detailed costings.

The Implementation Plan will be used to inform annual planning priorities and budgeting processes. Currently many actions require funding through the annual planning process – the role of the Implementation Plan is to align actions to strategic aspirations, clarify priorities and give weight to funding proposals, including Council's internal budgeting processes and external grant funding proposals.

## CONCLUSION

Since early 2014, Council has been working to better understand the City Centre, and critically analyse its achievements and weaknesses. The report A City for People 2016 sets out a critical analysis of the City Centre using a range of data about the people who use the City, its built form and transport networks.

A City for People 2016 sets the Vision and Strategic direction to guide the delivery of a people orientated, healthy and liveable Wollongong City Centre. By guiding city design to reflect a comfortable human scale, priority is given to the delivery of high quality city streets and spaces. Inviting people to explore their city and to appreciate the unique and beautiful qualities offered in Wollongong City Centre. Informing this final document has been extensive community input, confirming the direction of the report and refining the way forward. Turning ideas into actions requires collaboration, partnerships between the community, Council, industry and government agencies. The City needs to be flexible, open to new approaches and understand that over time, incremental changes will shape the City Centre's continuous journey of revitalisation. It is recommended that Council endorse A City for People 2016 as the updated vision for the Wollongong City Centre and note the accompanying, supporting documents.



ITEM 3

REVIEW OF WOLLONGONG DEVELOPMENT CONTROL PLAN 2009 - SUSTAINABILITY

A review of Wollongong Development Control Plan 2009 has occurred with the intent to revise development objectives and controls and enhance the sustainability of development occurring throughout Wollongong. This report presents issues raised during the preliminary consultation period, as well as research and benchmarking development provisions of other local government areas.

This report proposes amendment to certain chapters of the Wollongong Development Control Plan 2009 to improve sustainability outcomes, and recommends that the draft chapters be exhibited for a minimum 28 day period to allow community consultation.

RECOMMENDATION

- 1 The Wollongong DCP Sustainability Review (Attachment 2) and following chapters of the Wollongong Development Control Plan 2009, as detailed in Attachment 3, be exhibited for a minimum period of 28 days.
  - a A1 Introduction
  - b A2 Ecologically Sustainable Development
  - c B1 Residential Development
  - d B3 Mixed use Development
  - d B5 Industrial Development
  - f D13 Wollongong City Centre
  - g E3 Car Parking, Access, Servicing/Loading Facilities and Traffic Management
  - h E6 Landscaping
  - i Appendix 4 Definitions
- 2 The exhibition process include informing industry stakeholders as well as the broader community of the proposed amendments.

ATTACHMENTS

- 1 Preliminary stakeholder feedback
- 2 Discussion Paper, Sustainability and the Wollongong DCP 2009
- 3 Proposed amendments to the Wollongong DCP – Sustainability Review Wollongong DCP 2009 (Chapters A1, A2, B1, B3, B5, D13, E3, E6 and Appendix 4)



## REPORT AUTHORISATIONS

Report of: Renee Campbell, Manager Environmental Strategy and Planning  
Authorised by: Andrew Carfield, Director Planning and Environment – Future City and Neighbourhoods

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

To accompany the Wollongong Local Environment Plan 2009 (Wollongong LEP 2009), Council prepared, exhibited and adopted the Wollongong Development Control Plan in 2009. On the 15 December 2009, Council endorsed the DCP and it came into force on 3 March 2010.

An initial review of Wollongong DCP commenced in September 2010. The purpose of this review was to examine how the DCP was operating and to identify any provisions that require amendments, clarification, simplification or correction. Periodic review and amendment of Wollongong DCP 2009 has since occurred as required for individual projects.

On 14 July 2014 Council endorsed the Environmental Sustainability Strategy which includes a review of Wollongong DCP and identifies the need to enhance the sustainability of development occurring throughout Wollongong, encourage energy and water efficient development, improve resource recovery through the development process, support green roofs and encourage the use of light coloured building materials in our urban centres.

Council's Annual Plan 2015-16 includes an action to prepare a Sustainability Chapter for incorporation in the Wollongong DCP, to enhance provisions relating to sustainability.

### ***Sustainability***

Sustainability is considered an all-encompassing term applicable to Council and our community. Council's Environmental Sustainability Policy defines sustainability as "*meeting the need of present generations without compromising the ability of future generations to meet their own needs*" (Our Common Future, World Commission on Environment and Development 1987).

The *Environmental Planning and Assessment Act 1979* addresses sustainability and sustainability principles through its main objectives, encouraging:

- i the proper management, development and conservation of natural and artificial resources, including agricultural land, natural assets, forests, minerals, water,

cities, towns and villages, for the purpose of promoting the social and economic welfare of the community and a better environment... and

vii ecologically sustainable development

Ecologically sustainable development as defined by the *Environmental Planning and Assessment Act 1979*,

.....requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
  - (ii) an assessment of the risk-weighted consequences of various options,
- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
- (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
- (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
  - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
  - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
  - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The *Local Government Act 1993* (LG Act 1993) contains five overall purposes including the requirement for Councils, Councillors and Council employees to have regard to the

principle of ecologically sustainable development in carrying out their responsibilities. The principles of ecologically sustainable development as defined in the *LG Act 1993* are the same as that of the *EPA Act 1979*.

Council's Environmental Sustainability Policy acknowledges the principles of ecologically sustainable development in all Council decision making processes, including the precautionary principle, biological diversity and improved valuation, pricing and incentive mechanisms.

The definition of sustainability as defined by Council's Environmental Sustainability Policy, as well as the definition of ESD defined in accordance with *EPA Act 1979*, have informed the DCP review.

A Councillor briefing on the project occurred on 2 May 2016.

## PROPOSAL

A review of Wollongong DCP has been conducted and amendments proposed to strengthen sustainability related development objectives and controls for use in the development assessment process. This report details issues arising from research and benchmarking Wollongong DCP 2009 against other local government areas (LGA's), as well as preliminary stakeholder feedback. It details proposed amendments to Wollongong DCP 2009 and seeks endorsement for public exhibition.

### **Legislative Context**

A vast array of legislation influences development outcomes throughout Wollongong, including:

- Environmental Planning and Assessment Act 1979;
- Threatened Species Conservation Act 1995 (proposed to be replaced by the Biodiversity Conservation Act);
- Native Vegetation Act 2003 (proposed to be replaced by the Biodiversity Conservation Act);
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008;
- State Environmental Planning Policy No 65 – Design Quality for Residential Apartment Buildings;
- State Environmental Planning Policy (Building Sustainability index: BASIX) 2004
- SEPP (Affordable Rental Housing) 2009;
- SEPP (Housing for Seniors or People with a Disability) 2004; and
- SEPP (Infrastructure 2007).

### **Preliminary Stakeholder Feedback**

Initial feedback was sought from Council's Neighbourhood Forums and Environment and Sustainability Reference Group in August and September 2015 to identify issues and concerns for consideration in this sustainability DCP review (Attachment 1). Feedback received was wide-ranging but broadly based around the desire to:

- ✓ increase native vegetation and biodiversity cover;
- ✓ decrease permeable surfaces;
- ✓ improve the siting and operation of residential developments for increased operational efficiency;
- ✓ decrease the bulk and scale of development;
- ✓ go beyond the standard BASIX requirements; and
- ✓ review universal housing requirements.

A number of issues were concerned with factors outside the scope and role of Wollongong DCP. These issues revolved around the desire to require residential development to go beyond the minimum BASIX SEPP requirements, decreases to floor space ratio, and amendments to character statements.

### **Review Process**

As a consequence of the size of Wollongong DCP 2009 and taking into consideration the initial stakeholder feedback received, the sustainability review primarily focused on the following DCP chapters:

- Chapter A1 Introduction
- B1 Residential Development
- B2 Residential subdivisions
- B3 Mixed Use Developments
- B4 Development in Business Zones
- B5 Industrial Developments
- B6 Development in the Illawarra Escarpment
- D13 Wollongong City Centre precinct
- D16 West Dapto Release Area
- E6 Landscaping
- E7 Waste Management
- E17 Preservation and Management of Trees and Vegetation

A discussion paper (Attachment 2) has been prepared to support this sustainability review of the Wollongong DCP 2009. The discussion paper provides further information regarding the application of the Wollongong DCP 2009, legislation influencing development outcomes throughout Wollongong, as well as research and benchmarking.

The discussion paper addresses sustainability issues under 5 themes:

- 1 Biodiversity
- 2 Energy and Water
- 3 Waste
- 4 Transportation
- 5 Building Design - Materials

Wollongong DCP 2009 provisions were also benchmarked against other local government areas and the general housing code requirements for complying development. Benchmarked local government areas include:

- City of Sydney 2012
- Gosford DCP 2013
- The Hills DCP 2012
- Kiama DCP 2012
- Newcastle DCP 2012
- North Sydney 2013
- Penrith DCP 2014
- Shellharbour DCP 2013
- Sutherland Draft DCP 2015
- Willoughby DCP 2006

Additional Council projects currently underway which will contribute to the sustainability of development outcomes include biodiversity certification for the West Dapto Urban Release Area, and the development of an Urban Greening Strategy.

### **Proposed amendments**

This section of the report summarises the main changes to the relevant chapters of Wollongong DCP resulting from the review. Attachment 2 provides the detailed description of the proposed amendments to the Wollongong DCP 2009.

#### **A1 Introduction**

The A1 Introduction chapter is relevant to all Development Applications and addresses administrative issues as well as requiring site and context analysis, variation statement requirements, requirements for development applications and modifications to development consent.

**Issue:** A1 Introduction outlines the overall intent and direction of Wollongong DCP 2009 and contains a number of objectives for the Wollongong DCP 2009. There is no objective which specifically relates to the application of ESD.

**Amendment:** Amendment of the chapter A1 Introduction to insert a new objective, to encourage ecologically sustainable development.

#### **A2 Ecologically Sustainable Development**

This is a new proposed chapter for Wollongong DCP 2009.

**Issue:** The Wollongong DCP 2009 contains many provisions relating to ESD however no information is contained outlining the principles of ESD and Council's expectations in applying these principles.

**Amendment:** A new draft chapter A2 Ecologically Sustainable Development is proposed for inclusion in the Wollongong DCP 2009. This chapter details the principles

of ESD, objectives for development and encourages the application of ESD for all development. It also encourages applicants of residential development to go beyond the minimum BASIX SEPP requirements.

## B1 Residential Development

The B1 Residential Development chapter contains controls for dwellings houses, secondary dwellings, dual occupancy, semi-detached dwellings, attached dwelling, multi-dwelling housing, and residential flat buildings within separate sections of the chapter. The controls for each residential form of development relate to the provision of private open space, car parking, built form, solar access, front, side and rear building setbacks.

**Issues:** Preliminary stakeholder feedback received related to residential development and the need to increase permeable surfaces, increase vegetation cover, include provisions relating to green roofs and walls and ensure housing is universally designed.

Upon benchmarking the provisions of Wollongong DCP 2009 against those of other local government areas, as well as those contained in the general housing code for complying development, opportunities to amend Wollongong DCP 2009 and indirectly enhance sustainability outcomes for residential development have been identified. Opportunities relate to site coverage, landscaping, deep soil zones, green roofs and walls and the provisions for universally designed housing.

### 1 Site coverage

Site coverage is concerned with the overall footprint a building may occupy on a site. Site coverage objectives often seek to support landscaping and deep soil zone controls, and maintain a permeable proportion of the site. Defined by Wollongong LEP 2009, site coverage is the *proportion of a site area covered by buildings*. *The following are not included for the purpose of calculating site coverage:*

- a any basement;
- b any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary;
- c any eaves; and
- d unenclosed balconies, decks, pergolas and the like.

Other Wollongong DCP 2009 provisions which define the building envelope for development include setbacks, floor space ratio (Wollongong LEP 2009) and building height (Wollongong LEP 2009). Site coverage, introduced will guide the footprint of the subject development.

The General Housing Code for complying development specifies maximum site coverage requirements for dwellings assessed under complying development. Site coverage provisions were also present in five of benchmarked DCP's. The types of residential development subject to such provisions varied between benchmarked LGA's. For example:

- Kiama Municipal Council specifies a maximum of 60% site coverage for dwellings and residential development in certain release areas.



- North Sydney specifies site coverage for dwellings based on lot size (50% for lots 230m<sup>2</sup> – 499m<sup>2</sup>, 40% for lots 500-749m<sup>2</sup>), and 45% coverage for dual occupancy development.

Willoughby City Council specifies site coverage for attached dwellings, multi-dwelling housing, and residential flat buildings. Maximum site coverage is based on the number storeys proposed e.g. 1 storey – 50%, 2 storeys - 35%, 3 storeys – 30% etc).

**Amendment:** Proposed amendment to Wollongong DCP 2009 seeks introduction of site coverage objectives and controls for dwellings and dual occupancy development, as well as a combined maximum site coverage for a principle dwelling and secondary dwelling. The maximum site coverage has been adapted from that required in the general housing code for complying development:

- 55% of the area of the lot, if the lot has an area less than 450m<sup>2</sup>.
- 50% of the area of the lot, if the lot has an area of at least 450m<sup>2</sup> but less than 900m<sup>2</sup>.
- 40% of the area of the lot, if the lot has an area of at least 900m<sup>2</sup>.

## 2 Landscaping provisions

### Minimum landscaped areas for dwellings and dual occupancy development

Wollongong DCP 2009 currently requires 20% of the site area to be landscaped for dwelling and dual occupancies. This minimum landscaped area is the second smallest when compared to benchmarked DCP's, and is smaller than that required in the general housing code for complying development for lots greater than or equal to 450m<sup>2</sup>.

The General Housing Code for complying development adopts a sliding scale approach based on lot area to determine the minimum landscaped area. The minimum landscaped areas required for lots sized 450-600m<sup>2</sup> is 20%, 30% for lots 600-900m<sup>2</sup>, and 40% for lots 900-1500m<sup>2</sup>. The minimum landscaped area requirement of benchmarked DCP's varied between LGA's. Some Councils adopted the flat rate approach similar to Wollongong, while others adopted the sliding scale approach similar to that used for complying development. Wollongong's minimum landscaped area for dwellings and dual occupancies is 20%, second smallest to the City of Sydney.

The NSW Department of Planning and Environment released a discussion paper *Options for Low Rise Medium Density Housing as Comply Development* (November, 2015) which explores the expansion of complying development to include dual occupancy development. The minimum landscaped area for dual occupancy development specified in this discussion paper was 30%.

**Amendment:** This report proposes the minimum landscaped areas for dwellings and dual occupancies be amended and adopt a sliding scale adapted from the general housing code for complying development, based on the lot size. The minimum

landscape area is proposed to remain the same as present (20%), and increase with increasing lot size:

- lot area less than 600m<sup>2</sup> - minimum 20% landscaped area
- lot area from 600m<sup>2</sup> to 900m<sup>2</sup> – minimum 30% landscaped area
- lot area greater than 900m<sup>2</sup> - minimum 40% landscaped area.

#### Minimum number of trees per allotment

Initial stakeholder feedback raised concern for the need to increase vegetation cover and grassed areas. One additional avenue to achieve this is to make provisions for certain number of trees per allotment. Sutherland Shire Council includes provisions in their DCP requiring a minimum number of trees to per allotment. Wollongong DCP 2009 currently specifies the requirement for one semi mature small to medium sized tree for dual occupancy development. No requirement is specified for dwellings, attached dwellings, multi-dwelling housing or residential flat buildings. Opportunity exists to introduce a minimum number of trees for other classes of development, and enhance those required for dual occupancy development.

**Amendment:** This report also proposes amendment of relevant sections of B1 Residential Development to include a minimum number of trees per allotment. A summary of the proposed amendments is contained in the table below.

Type of development	Minimum number of trees
Dwellings	One (1) semi mature small to medium evergreen or deciduous tree is to be provided within the landscape area.
Dual occupancies	Current DCP provision requires one (1) semi mature small to medium evergreen or deciduous tree is to be provided in the front setback landscape bed.  Amendment proposed to introduce requirement for a second semi mature small to medium tree in the landscaped area or deep soil zone.
Attached dwellings and multi-dwelling housing	Two semi mature small to medium evergreen or deciduous trees to be provided onsite in the landscape area or deep soil zone.
Residential flat buildings	Minimum number of trees required to be planted onsite varies according to lot size and deep soil zone. The final ratios have been derived from the NSW Department of Planning and Environment's Apartment Design Guide (2015).



It is noted that requiring the planting of trees as part of a development does not guarantee their long term survival which is dependent upon landowner behaviour.

### 3 Deep soil zones

An additional avenue to enhance provisions relating to vegetation cover relates to deep soil zone provisions. A deep soil zone, as defined by Wollongong DCP 2009, is an area of the site that is not to be built upon, or underneath, thereby leaving an area of deep, soft soil for substantial deep-rooted vegetation, natural vegetation and natural drainage. This area may be included in private open space but is not included in the minimum private open space area calculations.

Wollongong DCP 2009 currently includes provisions relating to deep soil zones and deep soil planting for attached dwellings, multi-dwelling housing and residential flat buildings. Such provisions include requirement for 15% of the site to be provided as deep soil zone, and that the deep soil zone have a minimum width of 6m. No deep soil zone provisions exist for dual occupancy development.

Benchmarking deep soil zone provisions for dual occupancies with other LGA's indicated four LGA's contained some form of deep soil zone/ unbuilt upon/ soft landscaped area which required dense planting of vegetation. The minimum percentage for three of the LGAs ranged from 10-15%, with the fourth requiring a minimum of 25-60% dependent on lot size.

**Amendment:** Introduction of deep soil zone objectives and development controls is proposed for dual occupancy developments. Proposed objectives are derived from those detailed for attached dwellings, multi dwelling housing and residential flat buildings. The proposed development controls require half the landscaped area (e.g. 15% on a lot sized 600m<sup>2</sup>) to be provided as a deep soil zone, located in any position on the site (including within the front setback), provided the area has a minimum dimension of 3m. The deep soil zone may not be included in the minimum private open space required for the development.

No deep soil zone is proposed for dwelling house development.

### 4 Green roofs and walls

Green roofs and walls, also known as living roofs and walls, are important additions in urban environments. They are designed to support vegetation, improve the efficiency and performance of the development, and reduce its overall impact on our environment.

*A green roof may be defined as a surface that supports the growth of vegetation, comprised of a waterproofing membrane, drainage layer, organic growing medium (soil) and vegetation.* Green roofs can be classified as either extensive or intensive, depending on the depth of substrate used and the level of maintenance required. Intensive green roofs are generally greater than 300mm deep and are designed as accessible landscape spaces with pathways and other features. Extensive green roofs are generally less than 300mm deep and are generally not trafficable.

There are two main types of green walls: green facades and living walls. Green facades are simple systems where plants are grown directly into soil and trained up a frame or trellis system to cover the wall. Living walls are more complex systems where panels or pockets of vegetation are fixed directly to the wall. The use of soil in a living wall is generally minimal and plants are fed primarily through nutrients in the irrigation water.

The benefits of green roofs and walls are widespread and include improved sound and thermal insulation, reduced need for heating and cooling, reduced storm-water runoff, increased capture of particular pollution, and alleviation of urban heat island effects (Downton 2013, [www.yourhome.gov.au](http://www.yourhome.gov.au)).

Upon review of benchmarked DCP's, City of Sydney, North Sydney and Newcastle City Councils include provisions encouraging the use of green roofs and/or walls for certain types of development. North Sydney Council additionally requires applicants to address green roof objectives through the development application process.

The Department of Planning and Environment Apartment Design Guide 2015 highlights the use of green roofs and walls through their design guidance when landscaping, specifying landscape design should be environmentally sustainable and enhance environmental performance by incorporating ... green roofs and walls. Green roofs and walls are also identified as avenues to contribute to the quality and amenity of communal and public open space.

Wollongong DCP 2009 includes provisions relating to planting on a slab and podium, but is silent and does not indicate preference or not, in relation to green roofs and walls.

**Amendment:** Proposed amendment to Wollongong DCP 2009 include introduction of objectives and development controls which encourage the use of green roof and walls, particularly in communal open space areas, and to enhance the environmental performance of the development. Amendment of B1 Residential Development to include provision for green roofs and walls relates to residential flat building developments.

Additional proposed amendments include minor updates to the soil standards table for landscaping on a podium, planter or green roof, to reflect those detailed in the NSW Department of Planning and Environment's Apartment Design Guide 2015.

## 5 Universal design and adaptable housing

Universal design is an international design philosophy that when applied, enables people to continue living in the same home and ensures dwellings are able to change with the needs of the occupant. Universal design is different from adaptable design housing which is governed by *Australian Standard AS 4299-1995 Adaptable Housing*. Adaptable housing is concerned with design for future adaption of a dwelling to accommodate an occupants needs (NSW Department of Planning and Environment Apartment Design Guide, 2015).

There are no specified minimum requirements for universally designed dwellings in Wollongong DCP 2009.

Current provisions detailed in Wollongong DCP 2009 require application of *Australian Standard 4299-1995 Adaptable Housing* for attached dwellings, multi-dwelling housing and residential flat buildings, where there are greater than 6 dwellings. In this case 10% of dwellings (or a minimum of one dwelling) is required to be designed for adaption.

Benchmarking adaptable housing requirements against other DCP's indicates varied application. The percentage of dwellings required to be 'adaptable' and apply provisions of AS 4299-1995 varies from 5% for developments involving 20 or more dwellings (The Hills Shire Council) to 50% of all multi dwelling housing and residential flat buildings greater than 3 storeys, and 100% of all secondary dwellings (Willoughby City Council). Four benchmarked LGA's require between 20-25% of certain residential developments to be adaptable.

The requirement to ensure dwellings include universal design principles is a newer provision included in only a few benchmarked DCP's. Four benchmarked DCP's include references to universal design and/or encourage application of universal design principles. Sutherland Shire Council goes one step further and requires application of the Livable Housing Design Guideline (2015) silver level universal design features for multi – dwelling housing and residential flat buildings as below:

- 3-5 dwellings proposed, 1 dwelling is required to achieve the silver standard.
- 6 or more dwellings are proposed, 10% are required to achieve silver standard.

The NSW Department of Planning and Environment's Apartment Design Guide (2015) requires 20% of subject development to incorporate the Livable Housing Guideline's silver level universal design features.

**Amendment:** Proposed amendments to Wollongong DCP 2009 include an increase in percentage of adaptable housing required 10% to 20%. i.e. 20% of all dwellings (or a minimum of one) in an attached dwelling, multi-dwelling housing or residential flat building development, which include greater than 6 dwellings, will be required to be designed for adaptability in accordance with the *Australian Standard AS 4299-1995 Adaptable Housing*.

The introduction of new universal design DCP provisions is proposed and will require 10% of dwellings (or a minimum of one) where there is greater than 6 dwellings in an attached dwelling, multi-dwelling housing or residential flat building development, to incorporate the silver level of the Livable Housing Design Guideline (Livable Housing Australia, 2015). The Livable Housing Guideline includes three categories of universal design features platinum, gold and silver. The silver level features are the minimum universal design features required.

### **B3 Mixed Use Development**

This chapter of the DCP outlines the development standards which apply to mixed use development outside the Wollongong City Centre. Provisions for mixed use development relate to setbacks, built form, active street frontages, driveways and parking, landscaping, private open space, communal open space, privacy and adaptable housing.

**Issue:** The overall objectives for the mixed use development DCP chapter include aspects of ecologically sustainable development e.g. ensuring new development has regard to any trees or vegetation on the land for preservation. No particular objective is included relating to ESD. Likewise, the built form provisions do not contain any requirement for development to address ESD.

**Amendment:** An additional objective is proposed for inclusion in Wollongong DCP 2009 in the overall mixed used development objectives and in the built form objectives, to promote and encourage development that achieves the principles of ESD.

**Issue:** Additional issues relating to mixed use development are similar to those outlined for B1 Residential development and include:

- encouraging the use of green roofs and walls
- increasing the percentage of residential development requiring application of *Australian Standard AS 4299-1995 Adaptable Housing*
- introducing minimum universal housing design requirements for defined categories of residential development

**Amendment:** Proposed amendments are similar to those previously detailed in B1 Residential Development.

- Encouraging green roofs and walls – amendment is proposed to encourage use of green roofs and walls, particularly in communal open space areas. Green walls are also encouraged as an avenue to enliven blank facades.
- Adaptable housing – amendment to increase in the percentage of adaptable dwellings required in a mixed use development from 10% to 20% of dwellings. This increase is the same as that proposed for attached dwellings, multi-dwelling housing and residential flat buildings.
- Universal Housing Design: amendment to introduce additional provisions relating to universal design. New controls require 10% of dwellings (or a minimum of 1 dwelling) in a mixed use developments with more than six dwellings, to be universally designed and achieve the silver standards as specified in the Livable Housing Design Guideline (Livable Housing Australia 2015).

## **B5 Industrial Development**

This chapter provides objectives and detailed controls for the subdivision of industrial land and for industrial development.

**Issues:** The industrial development chapter of Wollongong DCP 2009 does not currently include provision relating to the energy and water efficiency of a development. Energy and water efficiency development objectives and controls for industrial development vary across benchmarked LGA's.

- Like Wollongong, three benchmarked DCP's do not require applicants to address any energy or water efficiency provisions.
- Three benchmarked DCP's require applicants to address general development objectives and controls, primarily relating to energy efficiency. E.g. installation of

dual flush toilet systems, compliance with minimum energy efficiency ratings for appliances and fixtures.

- Four benchmarked DCP's require some form of energy performance statement or compliance with minimum green star rating for industrial developments.

**Amendment:** Amendments proposed to B5 Industrial Development seeks to include general energy and water efficiency development objectives and controls.

### **D13 Wollongong City Centre**

This chapter of Wollongong DCP provides the site specific planning requirements applicable to all lands defined within the Wollongong City Centre.

**Issue:** Similar to B1 Residential Development and B3 Mixed Use Development, D13 Wollongong City Centre is currently silent and does not specify preference/ no preference for green roofs and walls. Incorporation of green roofs and walls in development within the Wollongong City Centre would provide benefit not only the owner, but will also assist in alleviating urban heat island effects for our city.

**Amendment:** Amendment is proposed to encourage the use of green roofs and walls, particularly in communal open space areas, and to enhance the environmental performance of the development. Minimum soil depths and areas for landscaping on podiums and planters have been revised, sourced from the NSW Department of Planning and Environment Apartment Design Guide 2015.

**Issue:** There are many sustainability and environmental building rating tools in use throughout NSW which assist in determining the efficiency or performance of a development. BASIX SEPP determines the minimum energy water and thermal efficiency requirements for residential developments and Council can only encourage residential developments to extend sustainability features beyond the minimum requirements.

Other sustainability and environmental rating tools exist which may be used to demonstrate the performance of non-residential development. Two common tools include:

- National Australian Built Environment Rating System (NABERS) – an Australian government tool which may be used for offices, homes, shopping centres, and indoor environments.
- Green Star – launched by the Green Building Council of Australia in 2003, green star is a voluntary environmental rating system which may be applied for many types of development.

There is no comprehensive government standard and building rating tool which can be used to assess the environmental performance of all non-residential developments.

The Environmental Management section of the D13 Wollongong City Centre includes minimum energy efficiency provisions for certain types of non-residential development. Current provisions require new commercial office development with a construction cost



of \$5 million of more, to provide an energy efficiency report demonstrating commitment to achieving a minimum 4 star under the Australian Building Greenhouse Rating System (now known as NABERS).

Benchmarking energy efficiency and conservation provisions for non-residential development with other LGA's reveals varied application of energy efficiency provisions. Of those benchmarked five required certain types of non-residential development to demonstrate commitment to or achieve a minimum green star or NABERS rating. This is similar to the existing approach adopted in D13 Wollongong City Centre. The remaining five contain only general provisions and/ or encourage the use of an environmental rating tool.

**Amendment:** Amendment of Wollongong DCP 2009 is proposed to include provisions for all forms of non-residential development with a construction cost of \$1 million or greater, to provide energy efficiency report which demonstrates commitment to a minimum of 4 stars green star rating or 4 star NABERS rating. This revised provision is similar to and based on that required by Penrith City Council.

Other minor amendments proposed to this chapter include encouraging applicants of residential developments to increase the efficiency of their development beyond the minimum BASIX requirements.

**Issue:** Additional issues relating to D13 Wollongong City Centre are similar to those outlined for B1 Residential development and B3 Mixed Use Development including:

- Encouraging the use of green roofs and walls.
- Increasing the percentage of residential development requiring application of *Australian Standard AS 4299-1995 Adaptable Housing*.
- Introducing minimum universal housing design requirements for defined categories of residential development.

**Amendment:** Additional amendments proposed for D13 Wollongong City Centre relate to: encouraging green roofs and walls; increasing the percentage of adaptable dwellings required from 10% to 20% where there are 6 or more dwellings proposed (or a minimum of one dwelling); and introducing a new minimum universal housing design provisions in line with the silver level in the Livable Housing Guideline (Livable Housing Australia, 2015).

### **E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management**

This chapter of Wollongong DCP 2009 details general requirements for the assessment and management of traffic impacts associated with development, and requirements for the design and provision of car parking, motorcycle parking, bicycle storage and storage facilities.

**Issues:** Green travel plans are specific plans for individual developments which provide details for residents/ customers/ workers about more sustainable forms of transport to/ from the site. Green travel plans encourage residents/ customers/ workers to make greater use of public transport by cycling, walking, and car sharing. Green travel plans

are a key action in the Metropolitan Plan for Sydney 2036 and are thus included in the City of Sydney and North Sydney Council DCP's.

Willoughby DCP 2009 and Newcastle DCP 2013 additionally contain provisions relating to and encouraging the implementation of green travel plans for certain development types.

Wollongong DCP 2009 is currently silent and does not indicate preference / or not for the use of green travel plans.

**Amendment:** Amendment of E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management chapter is proposed to encourage the use of green travel plans, particularly for larger residential developments, offices, recreation facilities, business and retail premises in the Wollongong City Centre.

## E6 Landscaping

This chapter outlines Council's requirements for the lodgement of landscaping plans and other information to support a development application.

**Issue:** in order to encourage the use of green walls and roofs throughout Wollongong, amendment of the landscaping DCP chapter is also required for consistency.

**Amendment:** Amendment of the landscaping chapter is proposed and includes:

- ✓ inclusion of a definition of green roof and green wall;
- ✓ requirement for a maintenance schedule for proposed green roofs and walls; and
- ✓ amendment of the soil depths table to reflect that detailed in the NSW Department of Planning and Environment's Apartment Design Guideline (2015).

The definition of a green wall is the same as that specified in the Department of Planning and Environment's Apartment Design Guideline (2015). Definition of a green wall has been adapted from the City of Sydney *Green Roofs and Walls Policy Implementation Plan (March, 2014)*.

## Appendix 4 Definitions

Amendment of the Appendix 4 Definitions of Wollongong DCP is proposed and includes the definition of a green roof and green wall.

## CONSULTATION AND COMMUNICATION

Preliminary stakeholder feedback was received from Council's Environment and Sustainability Reference Group and Neighborhood Forums in August and September 2015 and informed this review. Amendments summarised in this report and detailed in Attachment 2, as well as a supporting discussion paper were presented to Council's Environment and Sustainability Reference Group at its meeting on 27 April 2016.

This report proposes minimum public exhibition of the amended Wollongong DCP 2009 chapters (Attachment 2) for a period of 28 days. Submissions received during the

exhibition period will be reviewed. All submissions and post exhibition revised DCP amendments will subsequently be reported back to Council for adoption.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal 1 “We value and protect our environment”. It specifically delivers on the following:

Community Strategic Plan		Delivery Program 2012-2017	Annual Plan 2015-16
Strategy		5 Year Action	Annual Deliverables
1.6.3	Development is functional, attractive and sympathetic with the environment, and avoids unnecessary use of energy, water or other resources.	1.6.3.2 Maximise sustainability principles in the design and construction of Wollongong's built form	Prepare a Sustainability Chapter for incorporation in Wollongong Development Control Planning.

### *Ecological Sustainability*

The purpose of this report is to review Wollongong DCP 2009 to maximise the sustainability of development outcomes throughout Wollongong.

## CONCLUSION

Wollongong DCP 2009 has been undergone a review process with the intent to revise development objectives and controls and enhance the sustainability of development outcomes in Wollongong. Amendment of the Wollongong DCP 2009 is proposed as detailed in Attachment 3. This report recommends the amended DCP chapters be endorsed for public exhibition for a minimum period of 28 days.



ITEM 4

PROPOSED USE OF LOT 40 DP 5330 NO 24 BRIDGE STREET,  
CONISTON

Following a call for proposals in 2006, Council, on 29 May 2006, resolved to sell No 24 Bridge Street, Coniston to Illawarra Community Broadcasters Ltd (trading as Vox FM). One of the conditions of sale was that should Vox FM wish to sell the property, Council would have the first right of refusal. Vox FM sought to divest itself of the property and offered it to Council under a Deed of Pre-emption. Council accepted the property back, and on 28 April 2014 resolved to classify the property as *Operational Land* and seek a report considering future use of the site.

On 27 April 2015 Council resolved to commence a process which would seek proposals from interested parties to purchase or lease the property for continued use as a theatre and outlined the selection criteria for this process. This report provides an update on the process and a recommendation for proposed action.

## RECOMMENDATION

- 1 Council endorse the proposal from Phoenix Theatre Incorporated to purchase and manage the Bridge Theatre, located at Lot 40 DP 5330, 24 Bridge Street Coniston under a \$1.00 purchase arrangement in order to provide a community performance space.
- 2 Council to have first right of refusal to re-purchase the Bridge Theatre property for \$1.00, regardless of any site improvements that may have been made, if for any reason Phoenix Theatre Incorporated seek to dispose of the property.
- 3 The contract of sale conditions shall include that the first right of refusal back to Council is recorded as a caveat in the title registered at the Register General's Office and also that there cannot be a mortgage granted over the property without written Council consent.
- 4 Respective legal costs, including statutory charges, to be borne by each party, including GST payable on the purchase price of \$1.
- 5 Authority be granted for the use of the common seal of Council on the contract for sale and transfer documents between Phoenix Theatre Incorporated and Council.

## ATTACHMENTS

There are no attachments for this report.

## REPORT AUTHORISATIONS

Report of: Kerry Hunt, Manager Community, Cultural and Economic Development  
and Peter Coyte, Manager Property and Recreation  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative,  
Engaged and Innovative City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

In 2006, Council sought expressions of interest from the community for the operation of the Bridge Street Theatre and the Coniston Community Centre. The Theatre had returned to Council in 2003 following the demise of Theatre South, which had operated the Theatre for many years. The two buildings share a car park and Council sought to minimise management costs by licensing a single community group to manage both facilities. The building, at that time, did not meet the Building Code of Australia standards for a place of public entertainment.

Following the call for expressions of interest, at its meeting of 29 May 2006 Council resolved to transfer Lot 40 DP 5330 No 24 Bridge Street, Coniston to Illawarra Community FM Broadcasters Ltd (trading as Vox FM) for \$1, with a view Vox FM radio studios would relocate to this site from Ellen Street and on the basis of Vox FM (Vox) managing the Theatre. Vox FM also agreed to take on the licence for management of the Coniston Community Centre, which it undertook until mid 2001 when it withdrew from the arrangement.

A condition of the property sale was Council would have the ‘first right of refusal’ to reacquire the property for \$1 in the event of:

- 1 Vox FM resolved to dispose of the site, or
- 2 Vox FM was in breach of the obligation to operate the Theatre for the purpose of providing community performance space.

The Bridge Street Theatre was licensed by Vox FM to Phoenix Theatre Inc.

Vox notified Council of the Board’s decision that “*Vox FM desires to dispose of the site and under the terms of Deed of Option and Pre-emption between the Council of the City of Wollongong and Illawarra Community FM Broadcasters Limited (dated 2 February 2007)*” and under the Deed of Pre-emption (Clause 7).

Council’s Legal Counsel advised the transfer could proceed without any further resolution of Council as the resolution of its meeting of 29 May 2006 authorised this. Vox FM was subsequently advised Council would pursue this option and the property transferred to Council’s ownership. The May 2006 resolution also provided that “*if the property is returned to Council, a report be submitted to Council listing the options for the disposal of the property*”. In the interim, Phoenix Theatre Inc has been granted a short term licence to continue to occupy the Theatre pending a decision by Council on the future of the site. The original licence has been extended for Phoenix Theatre Inc until August 2016.

Phoenix Theatre Inc also holds a five year licence for Coniston Community Centre, which was granted on 1 December 2013 as a result of Council's community facilities allocation process. The licence requires Phoenix Theatre Inc to manage and operate this centre for community, educational, social, youth, seniors, welfare and cultural activities.

At Council's meeting of 28 April 2014 a report was presented proposing Lot 40 DP 5330 Bridge Street, Coniston be classified as Operational Land pursuant to Section 31 of the Local Government Act 1993. Council resolved:

- "1 Pursuant to Section 32(2) of the Local Government Act 1993, Lot 40 DP 5330 located at 24 Bridge Street, Coniston be classified Operational.*
- 2 A further report be provided to Council outlining options on the future use of this site.*
- 3 The classification proceed on the basis that Council has in principle support for the continued use of the site to include use as a theatre precinct."*

On 27 April 2015 Council resolved to classify the property as Operational Land and seek a report considering future use of the site. At this meeting Council resolved (Minute No 47):

- "1 Within 60 days, call for proposals from interested parties for the purchase, lease or licence for the continued use of the site, with a requirement for inclusion of a theatre precinct.*
- 2 The sale, lease or licence be considered under terms, each of which is for Council to maintain a buy-back option, including, but not limited to –*
  - a sale under the same arrangement as occurred with VOX FM;*
  - b sale at a nominated value, taking into consideration funds already expended by Phoenix Theatre on building compliance and development of the theatre, or funds allocated by an alternate potential purchaser for outstanding building compliance / maintenance works and development of the theatre;*
  - c sale at a nominated value;*
  - d sale at a nominated value under a loan agreement with Council;*
  - e sale at market value for a theatre site.*
- 3 The assessment of the above be based on the following criteria –*
  - Artistic and creative merit*
  - Community engagement and participation*
  - Business viability, planning and sustainability*
  - Financial viability*
  - Track record in delivery of community theatre program*

- *Demonstrated links to the delivery of Council's strategic outcomes*
  - *Financial offer [excluding fixtures and fittings].*
- 4 *Any proposal establish or maintain rights of way over both properties to preserve access to the Coniston Community Centre.*
  - 5 *Any sale, lease or licence of the property be referred to Council for a final decision.*
  - 6 *The lessee or licensee be responsible for all ongoing Capital and Operational costs.*

The call for proposals process commenced, through Tenderlink, using the above agreed criteria advertised on 11 and 18 July 2015. This included three inspection openings scheduled on 17, 21 and 31 July 2015. The advertised closing date for submissions was extended from 4 August 2015 to 10 August 2015, after the initial review of the proposals.

The panel reviewed and assessed the proposals, with one proposal being withdrawn on 9 August 2015. One applicant was deemed suitable by the panel. The board of the proposed successful applicant met with the assessment panel and subsequently a letter was received on 7 December 2015. This outlined two options by the successful applicant Phoenix Theatre Inc as:

- 1 Sale to Phoenix Theatre Inc for \$1, or
- 2 Sale to Phoenix Theatre Inc for \$30,000 with a proposed interest free repayment plan over 15 years.

Option	Potential Pros	Potential Cons
Sale to Phoenix Theatre for \$1	<ul style="list-style-type: none"> <li>- Result of a transparent process that allowed all interested parties to participate.</li> <li>- Phoenix Theatre were the successful applicant from the call for proposal process.</li> <li>- Allows an established operator who have invested in the building to continue to run a theatre from one site.</li> <li>- Continues the historical use of the space as a theatre.</li> <li>- Realises an asset and removes maintenance responsibility from Council.</li> <li>- Council maintains first right of refusal for buy back in the future.</li> <li>- Maintains access to the community of a theatre space and cultural infrastructure.</li> <li>- Acknowledges substantial investment by the current tenant (valued by Phoenix Theatre at \$438,000).</li> </ul>	<ul style="list-style-type: none"> <li>- Is this best value for money?</li> <li>- Issues regarding the right of way over both properties to preserve access will need to be finalised.</li> </ul>

Option	Potential Pros	Potential Cons
Sale to Phoenix Theatre Inc – purchase price of \$30,000, with a proposed interest-free loan	<ul style="list-style-type: none"> <li>- Result of a transparent process that allowed all interested parties to participate.</li> <li>- Phoenix Theatre were the successful applicant from the call for proposal process.</li> <li>- Allows an established operator who have invested in the building to continue to run a theatre from the site.</li> <li>- Continues the historical use of the space as a theatre.</li> <li>- Realises an asset and removes maintenance responsibility from Council.</li> <li>- Maintains access to the community of a theatre space and cultural infrastructure.</li> <li>- Acknowledges substantial investment by the current tenant (valued by Phoenix Theatre at \$438,000).</li> </ul>	<ul style="list-style-type: none"> <li>- Is this best value for money?</li> <li>- Council have no conditions re future right to the property.</li> <li>- Could set up a long payment process for Council to receive the funds from the loan.</li> <li>- Issues regarding the right of way over both properties to preserve access will need to be finalised.</li> </ul>
Reject both recommendations	<ul style="list-style-type: none"> <li>- Council could revisit past decisions and change use for this site.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential loss of existing tenant who has a history of significant achievement and investment in the site.</li> <li>- Council will have maintenance responsibility for the building until a further direction is established.</li> <li>- A further direction may see the loss of cultural infrastructure.</li> </ul>

## Property Details

- Lot 40 Deposited Plan [DP] 5330
- Classification: Operational Land
- Area: 1,214 square metres
- Zoning: R3 – Medium Density Residential
- Improvements: Theatre building and storage shed
- Current Lease: Phoenix Theatre (expires August 2016)

Issues regarding the right of way over both properties to preserve access to the Coniston Community Centre will need to be finalised.

Previous processes including sale or lease of a Council asset to a community theatre include the Arcadians in Corrimal and the Wollongong Workshop Theatre, Gwynneville. A brief description of these processes follow:

Group	Comment	Note
Arcadians, Corrimal	<ul style="list-style-type: none"> <li>- Purchase price of \$150,000 with payments of \$5,000 due 1 March / 1 July/ 1 November commencing 1 July 2015.</li> <li>- This arrangement was finalised in 2015 when the total amount was paid.</li> <li>- Arcadians were given an interest free loan for the purchase from Council. However, there was provision in the agreement for interest to be paid in the event that principal payments were paid late.</li> </ul>	<ul style="list-style-type: none"> <li>- Building was already operating as a theatre and did not require substantial infrastructure repair to commence usage as a theatre.</li> <li>- Council provided support to the group over the life of the loan to access funding opportunity for roof repairs.</li> <li>- Council Min No 4 of 10 February 2016 recommended sale to the Arcadians Theatre for \$270,000</li> </ul>
Wollongong Workshop Theatre, Gwynneville	<ul style="list-style-type: none"> <li>- Current 5 year lease, on part Lot 20 DP 852984</li> <li>- July 2012 to July 2017 - \$640 per annum fee</li> </ul>	<ul style="list-style-type: none"> <li>- Council has part ongoing responsibility for maintenance of the building.</li> </ul>

## PROPOSAL

The report makes the following recommendations:

- 1 Council endorse the proposal from Phoenix Theatre Incorporated to purchase and manage the Bridge Theatre, located at Lot 40 DP 5330, 24 Bridge Street Coniston under a \$1.00 purchase arrangement in order to provide a community performance space.
- 2 Council to have first right of refusal to re-purchase the Bridge Theatre property for \$1.00, regardless of any site improvements that may have been made, if for any reason Phoenix Theatre Incorporated seek to dispose of the property.
- 3 The contract of sale conditions shall include that the first right of refusal back to Council is recorded as a caveat in the title registered at the Register General's Office and also that there cannot be a mortgage granted over the property without written Council consent.
- 4 Respective legal costs, including statutory charges, to be borne by each party, including GST payable on the purchase price of \$1.

- 5 Authority be granted for the use of the common seal of Council on the contract for sale and transfer documents between Phoenix Theatre Incorporated and Council.

## CONSULTATION AND COMMUNICATION

Councillor Information Note – 8 November 2013

Councillor Briefing – 10 February 2014

Councillor Briefing – 2 February 2015

Councillor Briefing – 26 April 2016

Community, Cultural and Economic Development Division

Property and Recreation Division

Library and Community Services Division, Community Facilities Branch

Council has received letters from various individuals and community organisations requesting the site remains a theatre.

Several letters of support for Phoenix Theatre Inc, specifically, have also been received.

A number of stories have appeared in the local media regarding the future of this site.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal 3 “Wollongong is a creative, vibrant city”. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
3.1.2 Artists and innovators are employed, mentored and supported	3.1.2.2 Provide opportunities for local artists and performers to exhibit, promote and perform at Council venues and events	Deliver the key recommendations from the Cultural Plan and Live Music Task Force action plans

## FINANCIAL IMPLICATIONS

Retention of this older building has ongoing maintenance issue for Council.

## CONCLUSION

The property at No 24 Bridge Street, Coniston has a long history as a theatre and fills an important ‘niche’ in the performing arts sector of the city. The current tenant who submitted the winning proposal has invested substantially in refurbishment of the building enabling it to successfully re-open and operate as a theatre.

Council has sought to dispose of this site due to high maintenance costs. Council proceeded with a call for proposals process, which provided all parties with the opportunity to express interest in purchase or licence of the property. This course of action enabled Council to meet probity standards expected by the community.



ITEM 5

PROPOSED CLOSURE AND SALE OF PUBLIC PATHWAY ADJOINING  
NO 7 BYRARONG AVENUE, MANGERTON

At its meeting on 10 October 2011, Council resolved to approve the closure and sale of the public pathway adjoining No 7 Byrarong Avenue, Mangerton to the owner of that property for access and parking purposes.

Following Council approval, the application was submitted to the Department of Primary Industries – Crown Lands for approval. After a considerable delay, Crown Lands altered their process for assessing road closures and returned the application to Council for referencing and searching of the status of the creation of the road and public advertising.

Following the public advertising, a number of objections were received. This report seeks approval to the road closure, taking the objections into consideration.

RECOMMENDATION

- 1 Council consent to the closure of the public pathway adjoining Lot 43 DP 19917 No 7 Byrarong Avenue, Mangerton, as shown on Attachment 1 to this report and upon closure, the land be declared Operational land under the Local Government Act 1993.
- 2 Subject to formal closure, Council authorise the sale of the public pathway adjoining Lot 43 DP 19917 No 7 Byrarong Avenue, Mangerton, as shown on the attachment to this report, to the adjoining owners or their nominee, on the following conditions:
  - a Purchase price of \$25,000 (GST exc).
  - b The purchaser be responsible for all costs associated with the closure and sale including survey, plan lodgement, legal and transfer costs, including Council's reasonable legal fees.
  - c A Right of Footway be created over the subject land in favour of Lot 9 DP 18859 No 5 Byrarong Avenue, Mangerton, as shown on the attachment to this report.
- 3 Authority be granted to affix the Common Seal of Council to the plan of survey and transfer documents and any other documentation required to give effect to this resolution.

ATTACHMENTS

- 1 Plan of public pathway adjoining Lot 43 DP 19917 No 7 Byrarong Avenue, Mangerton
- 2 Photographs of pathway (x3)



## REPORT AUTHORISATIONS

Report of: Peter Coyte, Manager Property and Recreation  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

At its meeting on 10 October 2011, Council resolved to approve the closure and sale of the public pathway adjoining No 7 Byrarong Avenue, Mangerton, as shown on Attachment 1, to the owner of that property for access and parking purposes.

Following Council approval, the application was submitted to the Department of Primary Industries – Crown Lands for approval. After a considerable delay, Crown Lands altered their process for assessing road closures and returned the application to Council for referencing and searching of the status of the creation of the road and public advertising. The referencing and searching showed that the pathway was dedicated to the public on the registration of DP 19547.

During the public advertising period, a number of objections were received which are set out in Consultation and Communication. Given the previous 2011 report had no community objection, the matter is resubmitted for Council's reconsideration.

Taking the objections into account, Council obtained revised valuation advice from Walsh and Monaghan Valuers and based on this assessment, agreement was reached with the applicants on a purchase price of \$25,000 (GST exc) which is increased from \$22,000 previously resolved.

The valuation is assessed on a "before and after" basis, having regard to the added value of the pathway to the adjoining landholding. The addition of this parcel to the purchasers' existing property will not provide subdivision potential, therefore \$25,000 (GST exc) is considered to be fair and reasonable.

## PROPOSAL

Council re-apply to the Department of Primary Industries - Crown Lands to close the subject pathway. Upon closure, it is proposed that the land be transferred to the applicants for \$25,000 (GST exc) with the applicants being responsible for all costs in the matter.

## CONSULTATION AND COMMUNICATION

In July 2011, when this matter was first advertised, 32 letters were sent to local residents and no submissions were received.

Following the return of the road closure application from Crown Lands, the proposal was re-advertised in November 2015 and letters were sent to local residents in the vicinity of the subject pathway, along with letters and emails to service authorities.

15 objections and three letters/emails of support were received from residents. No objections were received from service authorities. The objections from residents were based on the following comments:

Objection	Response
As the local Bushcare group work in Mangerton Park, this entry point from Byrarong Avenue needs to stay open and be cleared for trucks to deliver materials.	The subject access is level for most of its length from the Byrarong Avenue end. It then slopes steeply at the eastern end, dropping approximately 5m in the last 18m. There are also large loose rocks on the slope down to the park which makes the path unsuitable for pedestrian or vehicular use (refer photographs Attachment 2).
Mangerton is a high risk bushfire area, therefore, this path needs to be available in the event of an emergency situation.	The path is unsuitable for pedestrian or vehicular use and there are four other entrances to the park.
Healthy Urban Planning includes “walkability” measures. One key factor to encourage walking is distance to access public green spaces.	<p>Apart from the subject pathway, there are four other access points to Mangerton Park from the surrounding streets. If the subject pathway were not available, to walk to Mangerton Park from properties in Byrarong Avenue via Eastern Avenue is only approximately 240m whilst via Macarthur Parade is only approximately 480m.</p> <p>In addition, walking from Heaslip Street to Byrarong Avenue through Mangerton Park using the subject pathway is an approximate distance of 310m, whilst walking from Heaslip Street to Byrarong Avenue via the streets and paths in the area is approximately 575m – adding only an extra 265m.</p>
There is only one access from Byrarong Avenue and the west. Removing this access would disadvantage residents.	There are currently five access points to Mangerton Park being from Eastern Avenue (from the north), Meares Avenue (from the northeast), Heaslip Street (from the south), Macarthur Parade (from the west) and the subject access from Byrarong Avenue (from the west). The closure and sale of the subject pathway will not significantly inconvenience local residents and visitors to the area. Having to access the park by walking an additional distance to another nearby entrance will promote and encourage better health.

Objection	Response
<p>The pathway is approximately 170m<sup>2</sup> or 1/3 of the minimum size residential block and therefore should be valued on a pro rata basis – much more than the agreed value.</p>	<p>Council's Valuer has assessed the land at its highest and best use, taking into consideration the creation of a Right of Footway over the land in favour of the adjoining property at No 5 Byrarong Avenue. The addition of the subject parcel of land to the purchasers' existing property will not provide any subdivision potential. Based on the valuation advice received by Council, the amount of \$25,000 (GST exc) is therefore considered to be a fair and reasonable amount for the land.</p>

## PLANNING AND POLICY IMPACT

This report is in line with Council's policy on Land and Easement Acquisition and Disposal.

This report contributes to the delivery of Wollongong 2022 goal "We are a healthy community in a liveable city".

It specifically delivers on core business activities as detailed in the Property Services Service Plan 2015-16.

## FINANCIAL IMPLICATIONS

If approval is granted to the road closure, Council will receive \$25,000 (GST exc) from the sale of the land. In addition, all costs incurred in the closure and sale will be the responsibility of the applicant.

## CONCLUSION

The subject pathway has been identified as surplus to Council requirements and serves no practical or physical purpose in being retained as road. It is therefore recommended that approval be granted for its closure and sale to the adjoining owner, as set out in this report.

## ITEM 6 PROPOSED SALE OF 40 AND 42 GEORGE AVENUE, BULLI

Council was approached by the owners of Lot 105 DP264369, 4 Yenda Avenue, Bulli, to purchase Lots 2 and 3 DP31838 known as 40 and 42 George Avenue, Bulli, to provide a secondary access to their property. Lot 105 adjoins Lots 2 and 3. Council advertised that it was considering the sale of Lots 2 and 3 to the owner of Lot 105, in the Wollongong Advertiser on 9 March 2016 and called for submissions from the general public. As a result of this, a counter offer was received from another adjoining land owner, the owner of Lot 1 DP31838, for 40 George Avenue only.

In the interests of fairness and transparency, this report recommends that both properties are placed on the open market for sale by public auction or private treaty, whichever is deemed the most appropriate method of sale by the appointed estate agent.

This report seeks approval from Council to place both properties on the open market for sale.

### RECOMMENDATION

- 1 Council authorise the sale of 40 and 42 George Avenue, Bulli, on the open market either by auction or by private treaty.
- 2 The General Manager be authorised to set the reserve price.
- 3 Based on geotechnical advice received, the lots be sold in one line, ie together.
- 4 Each party is responsible for their own costs associated with the sale.
- 5 Authority be granted to affix the Common Seal of Council to the transfer documents and any other documentation required to give effect to this resolution.

### ATTACHMENT

Aerial overhead map of Lots 2 and 3 DP31838, 40 and 42 George Avenue, Bulli

### REPORT AUTHORISATIONS

Report of: Peter Coyte, Manager Property and Recreation  
Authorised by: Greg Doyle, Director Corporate and Community Services - Creative Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

Nos 40 and 42 George Avenue, Bulli, are both classified as operational land, zoned R2 low density residential, unstable and have previously been affected by landslip. Council acquired both lots in the 1970's due to the land slippage. Council's senior geotechnical engineer advised "they and others to the west up to No 56 were acquired by Council following destruction of dwellings by landslide activity in 1974.... All the other acquired properties have since been sold as advances in foundation systems and site remediation now enable cost affective redevelopment of these sites".

As both lots fall very steeply from the road to the rear, they will require major remediation works before they could be considered suitable for the erection of a dwelling house. Council's senior geotechnical engineer has advised "Once remediated they should be suitable for residential development subject to the residual geotechnical constraints as detailed in a works-as-executed geotechnical report".

In July 2015, Council was approached by the owners of Lot 105 DP265369 known as 4 Yenda Ave, Bulli, to purchase Lots 2 and 3 DP31838 known as 40 and 42 George Avenue, Bulli, to provide a secondary access to their property.

Council informed the various internal sections of the request and no objections were received.

Council obtained a market valuation report from the registered property valuer Walsh and Monaghan for the land and agreement was reached with the applicant to purchase the land.

As a result of advertising the proposed sale of the two lots to the adjoining land owner of Lot 105 DP265369, in the Wollongong Advertiser on 9 March 2016 and calling for submissions, Council received a counter offer from another adjoining land owner, the owner of Lot 1 DP31838, for 40 George Avenue only.

## PROPOSAL

In the interests of fairness and transparency it is proposed that Lots 2 and 3 DP31838, 40 and 42 George Avenue, Bulli, be placed on the open market for sale by public auction or private treaty, whichever is deemed the most appropriate method of sale by the appointed estate agent.

It is also proposed that Council rely on the advice of its senior geotechnical engineer, that the properties should be sold in one line ie both lots together.

## CONSULTATION AND COMMUNICATION

Owners Owners of Lot 105 DP264369 and owners of Lot 1 DP31838;

Advertisement in the Wollongong Advertiser on 9 March 2016;

Walsh and Monaghan Valuers; and

Council's senior geotechnical engineer who advised that the lots will be suitable for residential development on completion of remediation works and that they should be sold in one line, ie together, for ease of remediation.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal under the objective *Carry out commercial business management of Council's Operational lands* (Community Goal *We are a health community in a liveable city*).

It specifically delivers on core business activities as detailed in the Property Services Service Plan 2015-16.

## FINANCIAL IMPLICATIONS

Council will receive funds at an amount set by the General Manager for both properties. The purchaser will be responsible for their own costs in association with the matter.

## CONCLUSION

The fact that the site was acquired because of geotechnical issues and difficulty in developing the lots individually, it lends itself to selling both lots in one line, ie together.

The proposed sale will also reduce Council's ongoing liability in maintaining these properties.

ITEM 7

CENTRAL LIBRARY - PROPOSED CHANGE TO OPENING HOURS

This report outlines proposed changes to the hours of operation of Council's Central Library. Customer feedback regularly includes requests for earlier opening hours and community engagement associated with the development of the draft Wollongong City Libraries Strategy 2016-2022 also highlighted demand for a more accessible service.

A review of Central Library's rostering and staffing levels conducted concluded that a 2.5 hour per week extension of opening hours would be achievable within Central Library's existing staffing establishment and operational budget.

At its meeting of 3 May 2016, EMC endorsed the preparation of a report to Council seeking approval for Central Library to open from 9.00 am Monday to Friday, as of Tuesday, 14 June 2016.

### RECOMMENDATION

Council approve extended operating hours for Central Library, to open from 9.00 am Monday to Friday, as of Tuesday, 14 June 2016.

### ATTACHMENT

There are no attachments for this report.

### REPORT AUTHORISATIONS

Report of: Jenny Thompson, Manager Library and Community Services  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

Wollongong Central Library's current hours of operation were established in 2012 as part of a review of opening hours across all Wollongong City Council Libraries. The objective of the review was to address growing demand for increased hours at libraries such as Helensburgh, without incurring additional cost to the libraries' budget.

A further review of the opening hours at Central Library was conducted during 2015/16 in response to customer requests (eg via library comment cards), benchmarking against other major, public libraries and formal feedback received through the community engagement process associated with the development of the new Wollongong City Council Libraries Supporting Document.



A Roster Review Team, comprising representatives from all Central Library job families, was formed via expressions of interest and met at regular intervals between April and December 2015. The team reviewed current rostering practice for the library's customer service activities and considered the opportunities afforded if changes to rostering practice freed up additional staff hours. This included assessing the option of an earlier opening time during the week in order to meet customer demand.

## PROPOSAL

It is proposed that Central Library will open from 9.00am Monday to Friday, from Tuesday, 14 June 2016. Table 1 shows proposed operating hours for Central Library.

Table 1 - Proposed Opening Hours – Central Library	
	Library Operating Hours
Monday to Thursday	9.00 am – 8.30 pm
Friday	9.00 am – 6.00 pm
Saturday	9.30 am – 5.00 pm

The earlier opening hours will be resourced from additional hours made available through the introduction of longer 'front of house' shifts for library staff, as recommended by the Central Library Roster Review.

It is acknowledged that in due course, implementation of the new Libraries Strategy and the proposed amalgamation with Shellharbour City Council, may prompt a further review of hours of operation across all Wollongong City Council Libraries. However the minimal change to the Central Library opening hours proposed - to open at 9.00am on week days - is achievable and justified in the short-term.

## CONSULTATION AND COMMUNICATION

All Central Library staff were consulted in relation to the proposed changes to their rostered hours and opening hours, via staff meetings, email updates and invitations to provide written feedback. A TRIM document was set up so that staff could record their feedback/questions for the Central Library Manager to respond to, on an ongoing basis.

Representatives of the United Services Union and Council's Human Resources Division, were consulted in relation to the proposed changes to staff rostering and the USU was provided with the Roster Review Proposal, staff feedback and the Central Library Manager's responses to staff questions.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022.

**Goal 4.** We are a connected and engaged community;

4.3 Residents have easy and equitable access to information resources and services.

It specifically delivers on core business activities as detailed in the Libraries Service Plan 2015-16:

- Deliver library services that meet the information, recreation, literacy and participation
- needs of the community by offering accessible print, audio-visual and electronic
- resources
- Provide collections including print, audio-visual, reference, local studies and multicultural
- Develop and deliver programs, events and activities to engage the community in the library service
- Provide enquiry and lending services, readers' advice and community information directory
- Provide safe and welcoming spaces for people to meet, connect, study and participate in community life

## FINANCIAL IMPLICATIONS

There are no financial implications. The proposed change to opening hours can be implemented within Central Library's existing budget and staffing establishment. The proposed changes to staff rostering practices provide a more efficient way to staff the Library's service points and provide staff with a 'block' of off-desk time for other responsibilities.

## CONCLUSION

The proposed change to Central Library's hours of operation will be of benefit to Library customers. It can be achieved at nil cost, has the support of the Central Library staff team and provides an opportunity to demonstrate that Council's Library Service has listened and responded to community feedback.

ITEM 8

LOCAL GOVERNMENT NSW - ELECTION OF BOARD OF DIRECTORS  
- NOMINATION OF VOTING DELEGATES

Arising from an election inquiry concerning the election of members of the Board at the Local Government NSW Association's 2015 Annual Conference, the Federal Court of Australia on 29 March 2016 made an order declaring the election of 13 persons on the Board void, and each such person not to have been elected. The offices of President and Treasurer were unaffected, and the Court determined that three other Directors were not impacted by the irregularity because of the size of their respective primary votes.

On 15 April 2016, the Australian Electoral Commission issued a Notice of Election and called for Councils to nominate voting delegates for the election of the vacant positions by noon on 2 June 2016.

### RECOMMENDATION

- 1 The Lord Mayor, Deputy Lord Mayor, and five (5) Councillors, be delegated as voting delegates to participate in the election of vacant positions for the Board of Directors of Local Government NSW.
- 2 The five (5) Councillor delegates be chosen on a show of hands.

### ATTACHMENTS

There are no attachments for this report.

### REPORT AUTHORISATIONS

Report of: Deanne Heidrich, Executive Officer to the Lord Mayor  
Authorised by: David Farmer, General Manager

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### PROPOSAL

Arising from the Federal Court's judgement declaring specified persons not to have been elected to the Board of Directors of the Association, the Fair Work Commission (FWC) has directed the Australian Electoral Commission (AEC) to conduct an election for the vacant positions by secret postal ballot.

On 15 April 2016, the AEC issued a Notice of Election for the following vacant positions:

- Vice President (Metro/Urban Council)
- Vice President (Regional/Rural Council)
- Five (5) Directors (Metro/Urban Council)
- Six (6) Directors (Regional/Rural Council)
- The number of voters each Council is entitled to is provided for in Rule 23 of the Association's Rules. Wollongong City Council is entitled to 7 votes.

## Options

Option 1: Council delegate (by show of hands) voting rights for the election of vacant positions for the Board to seven (7) Councillors, including the Lord Mayor and Deputy Lord Mayor.

Option 2: Council reaffirm the voting delegates nominated for the 2015 Annual Conference, as resolved on 3 August 2015; being the Lord Mayor, and Councillors Kershaw, Connor, Martin, Blicavs, Crasnich and Curran.

## PLANNING AND POLICY IMPACT

This report relates to the commitments of Council as contained within the Strategic Management Plans.

This report contributes to the Wollongong 2022 Objective 'our local Council has the trust of the community' under the Community Goal 'we are a connected and engaged community'.

It specifically delivers on core business activities as detailed in the Governance and Administration Service Plan 2015-16.

## ITEM 9 DRAFT WOLLONGONG COMMUNITY SAFETY PLAN 2016 - 2020

The Draft Community Safety Plan 2016-2020 provides a blueprint of crime prevention and community safety strategies and actions that contribute to a Wollongong Local Government Area (LGA) in which residents feel and are safer. It reflects Council's ongoing commitment to a vibrant, connected community and recognises the role that community safety plays in the development of a liveable city.

The Draft Community Safety Plan 2016-2020 shows in-depth crime trends affecting Wollongong and highlights the results of crime prevention strategies undertaken over the last four years. It provides information from consultations undertaken with community and partners/stakeholders and highlights details of crime prevention strategies that will focus on specific crimes over the next four years.

The Draft Wollongong Community Safety Plan 2012-2016 Snapshot provides a quick reference showing the results of the actions from the current Community Safety Plan 2012-2016.

### RECOMMENDATION

- 1 The Draft Wollongong Community Safety Plan 2016-2020 and Draft Wollongong Community Safety Plan 2012-2016 Snapshot be placed on public exhibition for 28 days commencing 1 June 2016.
- 2 Following the public exhibition period a final draft of the Wollongong Community Safety Plan 2016-2020 and the final draft Wollongong Community Safety Plan 2012-2016 Snapshot be presented to Council for adoption at the Council meeting on Monday, 15 August 2016.

### ATTACHMENTS

- 1 Draft Wollongong Community Safety Plan 2016-2020
- 2 Draft Wollongong Community Safety Plan 2012-2016 Snapshot

### REPORT AUTHORISATIONS

Report of: Kerry Hunt, Manager Community Cultural and Economic Development

Authorised by: Greg Doyle, Director Corporate and Community Services - Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

Wollongong City Council has developed and implemented Community Safety Plans incorporating crime prevention strategies since 1999. The current Wollongong Community Safety Plan 2012-2016 was adopted on 10 December 2012. A key component was the inclusion of an Action Plan targeting specific crimes impacting most significantly on the Wollongong community. The Action Plan provided Council the opportunity to be eligible for funding from the NSW Department of Justice.

The Draft Community Safety Plan 2016-2020 continues Council's commitment to community safety, partnership development and strategies to build the capacity of local communities to prevent crime. In December 2016 the Wollongong Community Safety Plan 2012-2016 expires necessitating the development of this new version.

Endorsement by the NSW Department of Justice of the Wollongong Community Safety Plan 2016-2020 will provide Council with the opportunity to apply for funding from that Department over the coming four years.

The Wollongong Community Safety Plan 2016-2020 comprises:

- Current crime trends relating to Wollongong LGA;
- A retrospective on the actions and initiatives undertaken over the last four years and the results of those actions to improve community safety and reduce crime; and
- A detailed action plan targeting specific crimes and perceptions of safety.

## PROPOSAL

Wollongong City Council endorsed the Draft Wollongong Community Safety Plan 2016-2020 and the Draft Wollongong Community Safety Plan 2012-2016 Snapshot to be placed on public exhibition for a period of 28 days.

Following community feedback, a final draft of the full Safety Plan and Snapshot, incorporating public comments, will be reported to Council for adoption.

Once adopted, the Wollongong Community Safety Plan 2016-2020 will be forwarded to the NSW Department of Justice for its endorsement for funding eligibility. The Snapshot is a quick reference guide only and is not required to go to the NSW Department of Justice for endorsement.

## CONSULTATION AND COMMUNICATION

Consultation regarding the Draft Wollongong Community Safety Plan 2016-2020 has occurred with the following divisions of Council:

- Regulation and Enforcement;
- Development Assessment and Certification;
- Community, Cultural and Economic Development;
- Property and Recreation;

- Environmental Strategy and Planning;
- City Works and Services; and
- Infrastructure Strategy and Planning

Further consultations were undertaken with external partners, stakeholders and community in 2015 and early 2016. A number of Neighbourhood Forums, Council Reference Groups and community focus groups have been consulted. The results of the Perceptions of Safety Survey, undertaken in 2014, were considered in the development of the Community Safety Plan.

Internally, Council managers and officers have been consulted, offering comments and a commitment to areas of their work that contribute to the strategies in the plan.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 Goal 5 “*We are a healthy community in a liveable city*”. It specifically delivers on the following:

Community Strategic Plan		Delivery Program 2012-2017	Annual Plan 2015-16
Strategy		5 Year Action	Annual Deliverables
5.3.2	Public facilities in key locations are clean & accessible	5.3.2.1 Manage and maintain public facilities	Coordinate the Graffiti Removal and Prevention Program
5.4.1	Partnerships continue to strengthen and achieve a safe and accessible community	5.4.1.1 Facilitate a range of partnerships and networks to develop community safety initiatives	Implement key strategies from the Community Safety Plan
5.4.2	Local crime continues to be prevented and levels of crime reduced	5.4.2.1 Council to liaise with Local Area Commands on key initiatives and crime reduction strategies	Monitor and maintain Alcohol Free Zones
5.4.2	Local crime continues to be prevented and levels of crime reduced	5.4.2.2 Deliver projects and programs to reduce crime in the Wollongong Local Government Area	Complete and finalise Safety Audits and relevant reports
5.4.3	Safety is considered in the planning and design of any development	5.4.3.1 Safety is considered in the planning and design of any development	Consider crime prevention through environmental design in the assessment of new developments

## FINANCIAL IMPLICATIONS

The majority of the strategies and actions contained within this plan fall within existing Council budgets. External funding will be sought from the NSW Department of Justice for projects that support other strategies within the plan. An additional budget of \$10,000 has been identified by the Community Cultural and Economic Development Division for 2016/17 to conduct a comparative LGA wide Perceptions of Safety Survey with Wollongong residents.

## CONCLUSION

The draft of the Wollongong Community Safety Plan 2016-2020 provides a whole of Council framework for Council’s continuing role in crime prevention and community safety. The plan will support Wollongong 2022: Community Strategic Plan Goal 5, “*We are a healthy community in a liveable city*”.



## ITEM 10 POLICY REVIEW: GLASS FREE AREAS

The Glass Free Areas Council Policy was last adopted by Council in April 2013 and, in line with Council's three year rolling review process, has now been reviewed.

### RECOMMENDATION

The revised Glass Free Areas Policy be adopted.

### ATTACHMENT

Draft Glass Free Areas Council Policy

### REPORT AUTHORISATIONS

Report of: Peter Coyte, Manager Property and Recreation  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

The Glass Free Areas Council Policy was due for review on 8 April 2016.

The existing Glass Free Areas Policy was adopted in April 2013 and designates all beaches, rock pools and public swimming pools within the Wollongong Local Government area as glass free areas for the interests of public safety.

The review of this policy has identified that the policy remains valid and that supporting signage located at Council's patrolled beaches, rock pools and public swimming pools, effectively assists in the policy's implementation.

It is recommended that the policy be amended to include 'all Council sportsgrounds' as designated glass free areas to align with all licences issued over Council sportsgrounds that prohibit the licensee from using glass bottles or containers. The proposed addition also aligns to Section 630 of the Local Government Act (1993) relating to the breaking of glass in public places.

This addition to the policy is considered to be a minor change that assists Council in addressing potential public safety hazards at Council sportsgrounds.

### PROPOSAL

Council adopt the amended Glass Free Areas Council Policy.

## CONSULTATION AND COMMUNICATION

Recreation Services staff, including Council's Beach Services Coordinator, Aquatic Services Coordinator and Coordinator Sportsfields and Council's Regulation Division have been consulted in the review of this policy and have indicated their strong support in retaining this policy and the inclusion of Council's sportsfields as designated glass free areas.

Council's Sports and Facilities Reference Group has been consulted and provided with the opportunity to comment on the review of the policy.

Executive Management Committee on 5 April 2016 endorsed the recommendation to adopt the amended Glass Free Areas Council Policy and the policy, is now referred to Council for consideration.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 Goal "4. We are a connected and engaged community". It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
4.4.4 Policies and procedures are simplified to ensure transparency and efficiency	4.4.4.1 Ensure policies and procedures are regularly reviewed, updated and promoted	Conduct rolling review of Council's policy register

The proposed addition to the Glass Free Areas Policy aligns to Section 630 of the Local Government Act (1993) relating to public places.

## FINANCIAL IMPLICATIONS

It is anticipated that any additional funding required to update signage at sportsgrounds will be sourced from current operational budgets.

## CONCLUSION

Council's Glass Free Areas Council Policy has been reviewed in providing safe recreation areas across the city. The updated and reviewed policy is recommended for Council's adoption.

ITEM 11

EXTENSION OF FUNDING CONTRACT - COMMUNITY TRANSPORT SERVICES

This report provides advice regarding the offer by Transport for NSW (TfNSW) of a funding contract extension for delivery of Community Transport services. The report seeks Council endorsement of acceptance of a short-term extension of Council's existing contract with TfNSW, until 30 September 2016.

## RECOMMENDATION

- 1 Council endorses acceptance of the extension to Council's existing contract with Transport for NSW for the delivery of Community Transport services, for the period 1 July 2016 to 30 September 2016.
- 2 Council delegates signature of the contract for extension of funding to the General Manager

## ATTACHMENTS

There are no attachments for this report.

## REPORT AUTHORISATIONS

Report of: Jenny Thompson, Manager Library and Community Services  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

Wollongong City Council has directly delivered Community Transport services to people in the community who are older, live with a disability and/or experience transport disadvantage, for more than 20 years. These services are funded by grants from Transport for NSW, which, since mid-2015, has administered the community transport funding program on behalf of the Commonwealth Government.

The Council of Australian Government embarked on long-term reform of Aged Services from 2012, while the National Disability Insurance Scheme (NDIS) commenced implementation from 2013. Over the next five to 10 years, these reform programs will transform the aged and disability care sector through the introduction of client centred, market-driven and competitive service models.

From 2018 agencies with existing funding agreements (including Council) will be required to re-tender for services or to become financially self-sufficient by implementing user pays, fee for service funding arrangements. For this reason, Council is engaged in a review of the future viability of delivering Community Transport services, including consideration of the option of novation of funded services to suitable alternative providers, prior to mid-2018.

Transport for NSW (TfNSW) has provided Council with a contract for extension of its existing funding agreement for the delivery of Community Transport services, for the period 1 July 2016 to 30 September 2016. TfNSW has advised that a new contract for service provision beyond 30 September 2016 will be made available to Council in due course, with a draft version of the new contract currently circulating among NSW Community Transport providers for comment.

## PROPOSAL

It is proposed that Council accepts the contract extension offered by TfNSW and delegates signature of the contract to the General Manager.

The contract requires the same service provision arrangements and outputs and provides the same level of funding as Council's existing contract with TfNSW.

To date Council has met all funding agreement requirements. Acceptance of the contract extension will enable Council to continue to deliver Community Transport services to the community, pending future consideration of a new contract and review of its position in relation to future direct service delivery.

## PLANNING AND POLICY IMPACT

This report relates to the commitments of Council as contained within Wollongong 2022 Community Strategic Plan:

- **Community Goal 5: We are a healthy community in a liveable city:**
  - Objective 5.1 There is an increase in the physical fitness, mental health and wellbeing of all our residents.
  - Objective: 5.5 Participation in recreational and lifestyle activities is increased
- **Community Goal 6: We have sustainable, affordable and accessible transport:**
  - Objective 6.3 Transport disadvantaged communities have increased access to services

## RISK ASSESSMENT

The chief risk in relation to acceptance of the offer of funding is that it may create an expectation of ongoing service delivery by Council. This will be mitigated by a clear and sustained communication strategy regarding the outcome of Council's review of future directions for delivery of Community Transport services.

## FINANCIAL IMPLICATIONS

The contract offered to Council for delivery of Community Transport is the same in terms of the quantum of funding and expected outputs as existing contracts.

All services will continue to be delivered on a cost neutral basis to Council.

There will be no financial implications should the contract be accepted.

## CONCLUSION

The services provided by Council to people in the community who are older and/or who have a disability are critical to enabling these citizens to maintain well-being and to participate in community life. Endorsement of the contract offered by Transport for NSW, with delegation of signature to the General Manager, will enable Council to continue to deliver this important service.

ITEM 12

TENDER T15/41 BULLI SURF LIFE SAVING CLUB EXTENSION AND BUILDING RENEWAL WORKS

This report recommends that Council decline to accept any of the tenders submitted for the extension and refurbishment of Bulli Surf Life Saving Club (SLSC) in accordance with clause 178(1) (b) of the Local Government (General) Regulation 2005.

Proposed works include additions and alterations, compliance upgrades and refurbishment of lifeguard facilities to Bulli Surf Life Saving Club.

The Tender Assessment Panel has concluded that none of the tenders is acceptable for the reason that the tendered cost exceeds the project budget and it is anticipated that negotiations with the tenderers or any other party in relation to a revised scope of works will result in a satisfactory outcome being achieved.

## RECOMMENDATION

- 1 a In accordance with clause 178(1) (b) of the Local Government (General) Regulation 2005, Council decline to accept any of the tenders received for the extension and refurbishment of Bulli Surf Life Saving Club and resolve to enter into negotiations with one or all of the tenderers or any other party with a view to entering into a contract in relation to the subject matter of the tender.
- b In accordance with clause 178(4) of the Local Government (General) Regulation 2005, the reason for Council hereby resolving to enter into negotiations with one or all of the tenderers or any other party and not inviting fresh tenders is that it is anticipated that a satisfactory outcome can be achieved with one of those parties who demonstrate a capacity and ability to undertake the works.
- 2 Council delegate to the General Manager the authority to undertake and finalise the negotiations, firstly with the tenderers, and, in the event of failure of negotiations with those tenderers, any other party, with a view to entering into a contract in relation to the subject matter of the tender.
- 3 Council grant authority for the use of the Common seal of Council on the contract and any other documentation, should it be required, to give effect to this resolution.

## ATTACHMENTS

Location Plan

## REPORT AUTHORISATIONS

Report of: Glenn Whittaker, Manager Project Delivery  
Authorised by: Mike Hyde, Director Infrastructure and Works – Connectivity, Assets and Liveable City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

Bulli Surf Life Saving Club has identified a need for expansion of their gear storage area and the provision of a clubroom for the club's functions. The club has prepared designs for a two-storey extension to the southern side of the existing club with gear storage on the ground floor and future club facilities on the second floor. The current proposal allows for the construction of the second floor outer shell to lock up stage with the club to be responsible for the later internal fitout of the clubroom and facilities.

The club has secured funding from a range of sources to contribute towards the cost of the project including direct contributions from the club itself.

Also included in this tender are building compliance and refurbishment works and provision of lifeguard storage and facilities. Council has also further developed the project documentation to a 'construction issue' level.

Tenders were invited by the selective tender method with a close of tenders of 10.00 am on 3 March 2016.

Four tenders were received by the close of tenders and all tenders have been scrutinised and assessed by a Tender Assessment Panel constituted in accordance with Council's Procurement Policies and Procedures and comprising representatives of the Property and Recreation, Finance, Governance and Information, Human Resources and Project Delivery Divisions.

The Tender Assessment Panel assessed all tenders in accordance with the following assessment criteria and weightings as set out in the formal tender documents:

- 1 Cost to Council - 60%
- 2 Appreciation of scope of works and construction methodology - 10%
- 3 Demonstrated experience and satisfactory performance in undertaking projects or a similar size, scope & risk profile - 10%
- 4 Demonstrated strengthening of local economic capacity - 5%
- 5 Project schedule – 5%
- 6 Demonstrated WH & S management system - 5%
- 7 Environmental management policies and procedures - 5%

As per the Invitation to Tender, the Tenderer has an obligation to honour their fixed price for 90 days which will expire on 1 June 2016. Council has requested an assurance that the Tenderers will honour their price for a further 60 days to allow for completion of negotiations.



## PROPOSAL

The Tender Assessment Panel has concluded that none of the tenders are currently acceptable and has recommended that all tenders be declined and negotiations be undertaken with one or all of the tenderers, or any other party, with a view to entering into a contract for the subject matter of the tender.

The Panel anticipates that a satisfactory outcome will be achieved through a negotiation process conducted in accordance with Council's Procurement Policies and Procedures.

## CONSULTATION AND COMMUNICATION

- 1 Members of the Tender Assessment Panel
- 2 Nominated Referees

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 under the Objective 5.5 "Participation in recreational and lifestyle activities is increased under Community Goal 5 'We are a healthy community and liveable city'"

It specifically delivers the Annual Plan 2015-16 Key Deliverable to provide funding for the Bulli Surf Life Saving Club extension and building renewal which forms part of the Five Year Action to implement Council's Planning, People, Places Strategy.

## RISK ASSESSMENT

The risk in accepting the recommendation of this report is considered low on the basis that the tender process has fully complied with Council's Procurement Policies and Procedures and the Local Government Act 1993.

The risk of the project works or services is considered low based upon Council's risk assessment matrix and appropriate risk management strategies will be implemented.

## FINANCIAL IMPLICATIONS

It is proposed that the total project be funded from the following sources as identified in the Management Plan –

2015/16 and 2016/17 Capital Budget

Bulli Surf Life Saving Club has committed to providing a total of \$640,000 towards this project which includes

- \$350,000 provided under the Surf Club Facility Development Program
- \$30,000 provided under the Community Building Partnership Grant
- The remainder has been raised by the Club.

## CONCLUSION

Council should endorse the recommendations of this report to allow for the negotiation of an acceptable price based on a revised scope of works for the extension and refurbishment of the Bulli Surf Life Saving Club.

## ITEM 13

## TENDER T16/14 – PEDESTRIAN BRIDGE UPGRADE AT FARRELL ROAD, BULLI

This report recommends acceptance of a tender for an upgrade of the pedestrian bridge over the railway on Farrell Road, Bulli in accordance with the requirements of the Local Government Act 1993 and the Local Government (General) Regulation 2005.

The existing three span timber deck and supporting steelwork on the bridge is in need of replacement due to its current condition. While undertaking this work Council will also install anti-throw screens on the replacement decking.

## RECOMMENDATION

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Abergeldie Contractors Pty Ltd for the Pedestrian Bridge Upgrade at Farrell Road, Bulli in the sum of \$326,541.00, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## ATTACHMENT

Location Plan

## REPORT AUTHORISATIONS

Report of: Glenn Whittaker, Manager Project Delivery  
Authorised by: Mike Hyde, Director Infrastructure and Works – Connectivity, Assets and Liveable City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

The pedestrian bridge adjacent to the Farrell Road Bridge over the Illawarra Rail Line at Bulli was installed circa 1968. A condition assessment conducted in late 2015 identified a number of issues relating to both the condition of the existing timber decking and corrosion of steel elements of the bridge. The assessment also identified a number of compliance issues relating to the existing handrail and the lack of anti-throw screens. Further investigations and consultation with Sydney Trains determined that the most

cost effective solution was to replace the decking with a prefabricated system incorporating anti-throw screens.

Tenders were invited by the open tender method with a close of tenders of 10.00 am on 26 April 2016.

Three tenders were received by the close of tenders and all tenders have been scrutinised and assessed by a Tender Assessment Panel constituted in accordance with Council's Procurement Policies and Procedures and comprising representatives of the Finance, Infrastructure Strategy and Planning, Project Delivery and Governance and Information Divisions.

The Tender Assessment Panel assessed all tenders in accordance with the following assessment criteria and weightings as set out in the formal tender documents:

Mandatory – RMS pre-qualification (B2 or higher)

- 1 Cost to Council - 40%
- 2 Demonstrated strengthening of local economic capacity - 5%
- 3 Demonstrated experience and satisfactory performance in undertaking projects of similar size and scope, in particular over railways - 10%
- 4 Appreciation of Scope and Methodology – 10%
- 5 Staff qualifications and experience -10 %
- 6 Demonstrated WH & S Management System - 5%
- 7 Environmental management policies and procedures - 5%
- 8 Project Schedule - 15%

The Tender Assessment Panel utilised a weighted scoring method for the assessment of tenders which allocates a numerical score out of 5 in relation to the level of compliance offered by the tenders to each of the assessment criteria as specified in the tender documentation. The method then takes into account pre-determined weightings for each of the assessment criteria which provides for a total score out of 5 to be calculated for each tender. The tender with the highest total score is considered to be the tender that best meets the requirements of the tender documentation in providing best value to Council. Table 1 below summarises the results of the tender assessment and the ranking of tenders.

TABLE 1 – SUMMARY OF TENDER ASSESSMENT

Name of Tenderer	Ranking
Abergeldie Contractors Pty Ltd	1
Fernandes Constructions Pty Ltd	2
WGE Pty Ltd	NC

The tender submitted by WGE Pty Ltd was deemed to be non-conforming as it did not meet the mandatory criteria specified in the form of tender.

## PROPOSAL

Council should authorise the engagement of Abergeldie Contractors Pty Ltd to carry out the Pedestrian Bridge Upgrade at Farrell Road, Bulli in accordance with the scope of works and technical specifications developed for the project.

The recommended tenderer has satisfied the Tender Assessment Panel that it is capable of undertaking the works to Council's standards and in accordance with the technical specification.

Referees nominated by the recommended tenderer have been contacted by the Tender Assessment Panel and expressed satisfaction with the standard of work and methods of operation undertaken on their behalf.

## CONSULTATION AND COMMUNICATION

During the design phase, Council has communicated regularly with Sydney Trains to determine the requirements of working within and over the rail corridor.

During the installation of the footbridge deck, which will occur during a programmed Sydney Trains shutdown, Council will be required to close Farrell Road and a draft communication plan has been prepared to ensure local residents and users of the road are aware of the programmed closure. This plan will be enacted when the closure date is confirmed.

During the tender phase, the following people were consulted.

- 1 Members of the Tender Assessment Panel
- 2 Nominated Referees

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 Goal 6 - We have sustainable, affordable and accessible transport. It specifically delivers on the following:

Community Strategic Plan		Delivery Program 2012-2017	Annual Plan 2015-16
Strategy		5 Year Action	Annual Deliverables
5.3.3	Well maintained assets that meet the needs of current and future communities are provided.	5.3.3.1 Manage and maintain community infrastructure portfolio with a focus on asset renewal.	Deliver 85% of Council's capital investment into our asset renewal program.

## RISK ASSESSMENT

The risk in accepting the recommendation of this report is considered low on the basis that the tender process has fully complied with Council's Procurement Policies and Procedures and the Local Government Act 1993.

The risk of the project works or services is considered high based upon Council's risk assessment matrix and appropriate risk management strategies will be implemented.

## FINANCIAL IMPLICATIONS

It is proposed that the total project be funded from the following source/s as identified in the Management Plan –

2015/2016 and 2016/2017 Capital Budget

## CONCLUSION

Abergeldie Contractors Pty Ltd has submitted an acceptable tender for this works. Council should endorse the recommendations of this report.

ITEM 14

TENDER T15/29 - SCHEDULED RESEALING OF PAVERS IN THE CROWN STREET MALL

This report recommends acceptance of a tender for resealing of pavers in the Crown Street Mall in accordance with the requirements of the Local Government Act 1993 and the Local Government (General) Regulation 2005.

Resealing of the pavers will improve stain resistance, make cleaning easier and improve the appearance of the Crown Street Mall.

## RECOMMENDATION

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Enviropath Pty Ltd for resealing of pavers in the Crown Street Mall in the sum of \$133,407.00, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## ATTACHMENTS

There are no attachments for this report.

## REPORT AUTHORISATIONS

Report of: Glenn Whittaker, Manager Project Delivery  
Authorised by: Mike Hyde, Director Infrastructure and Works – Connectivity, Assets and Liveable City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

In late 2014, the Crown Street Mall refurbishment works were completed which included the installation of new pavers which were laid with a pre-coated sealer to protect them during installation. In order to maintain aesthetics and operational acceptability of the paver assets into the future, the pavers need to be resealed. The original works program envisaged a reseat of pavers being required immediately after the completion of mall construction.

Council has prepared contract documentation which requires contractors to carry out this work outside of the Crown Street Mall normal trading hours and includes a number



of conditions incorporated after consultation with authorities who undertake work of similar size and scope.

The budget for the resealing of the pavers has been allowed for in the overall project budget.

Tenders were invited by the open tender method with a close of tenders of 10.00 am on Tuesday, 19 April 2016.

Six tenders were received by the close of tenders and all tenders have been scrutinised and assessed by a Tender Assessment Panel constituted in accordance with Council's Procurement Policies and Procedures and comprising representatives of the Finance, Governance and Information, City Works and Services, Human Resources and Project Delivery Divisions.

The Tender Assessment Panel assessed all tenders in accordance with the following assessment criteria and weightings as set out in the formal tender documents:

- 1 Cost to Council – 45%
- 2 Demonstrated experience and satisfactory performance in undertaking projects of similar size and scope, and appreciation of scope of works - 40%
- 3 Demonstrated strengthening of local economic capacity - 5%
- 4 Project Schedule and Staging Plan - 5%
- 5 Demonstrated Workplace Health and Safety, Environmental and Quality Management Systems - 5%.

The Tender Assessment Panel utilised a weighted scoring method for the assessment of tenders which allocates a numerical score out of 5 in relation to the level of compliance offered by the tenders to each of the assessment criteria as specified in the tender documentation. The method then takes into account pre-determined weightings for each of the assessment criteria which provides for a total score out of 5 to be calculated for each tender. The tender with the highest total score is considered to be the tender that best meets the requirements of the tender documentation in providing best value to Council. Table 1 below summarises the results of the tender assessment and the ranking of tenders.

TABLE 1 – SUMMARY OF TENDER ASSESSMENT

Name of Tenderer	Ranking
Enviropath Pty Ltd	1
Otani Pty Ltd (EnviroClean + Capture)	2
Vernell Pty Ltd (Select Stone Care)	3
Hydra-Wash	4
Dustless Eco Blast	5
Choice Ceramics	6

## PROPOSAL

Council should authorise the engagement of Enviropath Pty Ltd to carry out the works in accordance with the scope of works and technical specifications developed for the project.

The recommended tenderer has satisfied the Tender Assessment Panel that it is capable of undertaking the works to Council's standards and in accordance with the technical specification.

Referees nominated by the recommended tenderer have been contacted by the Tender Assessment Panel and expressed satisfaction with the standard of work and methods of operation undertaken on their behalf.

## CONSULTATION AND COMMUNICATION

- 1 Members of the Tender Assessment Panel
- 2 Nominated Referees

## PLANNING AND POLICY IMPACT

This report relates to the commitments of Council as contained within the Strategic Management Plans:

Wollongong 2022 Community Goal and Objective – This report contributes to the Wollongong 2022 objective 2.3 - The profile of Wollongong as the Regional City of the Illawarra is expanded and improved under the Community Goal of creating an innovative and sustainable economy.

It specifically addresses the Annual Plan 2012-13 Key Deliverables - Establish the key infrastructure priorities for the City Centre to undertake the Crown Street Mall Refurbishment and deliver the Crown Street Activation Project which forms part of the Five Year Action - Undertake major refurbishment works in the City Centre contained within the Delivery Program 2012-17.

## RISK ASSESSMENT

The risk in accepting the recommendations of this report is considered low on the basis that the tender process has fully complied with Council's Procurement Policies and Procedures and the Local Government Act 1993.

The risk of the project works or services is considered medium based upon Council's risk assessment matrix and appropriate risk management strategies will be implemented.

## FINANCIAL IMPLICATIONS

It is proposed that the total project be funded from the following source/s as identified in the Management Plan –

2015/16 Capital Budget

## CONCLUSION

Enviropath Pty Ltd has submitted an acceptable tender for this works. Council should endorse the recommendations of this report.

ITEM 15

TENDER T16/16 - DEBRIS CONTROL STRUCTURE ADJACENT TO  
COSGROVE AVENUE, KEIRAVILLE

This report recommends acceptance of a tender for the provision of a debris control structure within a tributary of Fairy Creek at Cosgrove Avenue, Keiraville in accordance with the requirements of the Local Government Act 1993 and the Local Government (General) Regulation 2005.

The purpose of the construction of the debris control structure at Cosgrove Avenue, Keiraville is to allow for the convenient capture and removal of large debris that has the potential to block the downstream culvert in large flood events.

## RECOMMENDATION

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Cadifern Pty Ltd for the provision of a debris control structure for Cosgrove Avenue, Keiraville, in the sum of \$150,208.45, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required, to give effect to this resolution.

## ATTACHMENT

Location Plan

## REPORT AUTHORISATIONS

Report of: Glenn Whittaker, Manager Project Delivery  
Authorised by: Mike Hyde, Director Infrastructure and Works – Connectivity, Assets and Liveable City

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

In December 2010, Council prepared a Floodplain Risk Management Study and Plan for the Fairy and Cabbage Tree Creeks catchment. In response to major flood events, such as the August 1998 flood where culvert blockage had a significant impact on damage to both public and private property, it was recommended in that Study and Plan that 15 debris control structures be designed and constructed in the catchment to

mitigate this risk. Cosgrove Avenue, Keiraville, located on a tributary of Fairy Creek was part of that recommendation.

A design was prepared for the construction of a debris control structure upstream of the culvert entrance including an access track to facilitate clearing of debris when required.

Tenders were invited by the open tender method with a close of tenders of 10.00 am on Tuesday, 26 April 2016.

Six (6) tenders were received by the close of tenders and all tenders have been scrutinised and assessed by a Tender Assessment Panel constituted in accordance with Council's Procurement Policies and Procedures and comprising representatives of the Project Delivery, Infrastructure Strategy and Planning, Governance and Information, Finance and Human Resources Divisions.

The Tender Assessment Panel assessed all tenders in accordance with the following assessment criteria and weightings as set out in the formal tender documents:

- 1 Cost to Council – 40%
- 2 Appreciation of scope of works and construction methodology – 15%
- 3 Demonstrated experience and satisfactory performance in undertaking projects of similar size and scope – 15%
- 4 Demonstrated strengthening of local economic capacity – 5%
- 5 Project Schedule – 5%
- 6 Workplace Health and Safety Documentation – 5%
- 7 Environmental management documentation – 15%.

The Tender Assessment Panel utilised a weighted scoring method for the assessment of tenders which allocates a numerical score out of 5 in relation to the level of compliance offered by the tenders to each of the assessment criteria as specified in the tender documentation. The method then takes into account pre-determined weightings for each of the assessment criteria which provides for a total score out of 5 to be calculated for each tender. The tender with the highest total score is considered to be the tender that best meets the requirements of the tender documentation in providing best value to Council. Table 1 below summarises the results of the tender assessment and the ranking of tenders.

TABLE 1 – SUMMARY OF TENDER ASSESSMENT

Name of Tenderer	Ranking
Cadifern Pty Ltd	1
Kenpass Pty Ltd	2
GC Group Company Pty Ltd	3
Malsave Pty Ltd	4
GT Civil Trust Pty Ltd	5
Affective Services Australia Pty Ltd	6

## PROPOSAL

Council should authorise the engagement of Cadifern Pty Ltd to carry out the construction of a debris control structure upstream of the culvert entrance including an access track in accordance with the scope of works and technical specifications developed for the project.

The recommended tenderer has satisfied the Tender Assessment Panel that it is capable of undertaking the works to Council's standards and in accordance with the technical specification.

Referees nominated by the recommended tenderer have been contacted by the Tender Assessment Panel and expressed satisfaction with the standard of work and methods of operation undertaken on their behalf.

## CONSULTATION AND COMMUNICATION

The design for the debris control structure adjacent to Cosgrove Avenue, Keiraville was optimised to incorporate feedback from community consultation including local residents and a volunteer group who maintain an established Bushcare site in the vicinity of the proposed works.

Following written feedback for the original design, the project team organised four (4) site meetings with the local residents, Bushcare volunteers, Council's Bushcare Coordinator and Council surveyors in order to establish a scope of works which would achieve the required floodplain risk management objectives whilst having a measured and agreed impact upon the established Bushcare area.

The final configuration of works is supported by representatives from the Bushcare Group with aspects of works including tree relocation and site rehabilitation to be conducted with the supervision and physical assistance of Bushcare volunteers and Council's Bushcare Coordinator.

In relation to the tender:

- 1 Members of the Tender Assessment Panel
- 2 Nominated Referees

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal “We value and protect our natural environment”. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
1.1.3 The potential impacts of natural disasters, such as those related to bushfires, flood and landslips are managed and risks are reduced to protect life, property and the environment.	1.1.3.2 Implement a coordinated approach to floodplain and stormwater management.	Implement Council's Floodplain Risk Management Plans

## RISK ASSESSMENT

The risk in accepting the recommendation of this report is considered low on the basis that the tender process has fully complied with Council's Procurement Policies and Procedures and the Local Government Act 1993.

The risk of the project works or services is considered medium based upon Council's risk assessment matrix and appropriate risk management strategies will be implemented.

## FINANCIAL IMPLICATIONS

It is proposed that the total project be funded from the following source/s as identified in the Management Plan –

Capital Program 2015/16 and 2016/17

## CONCLUSION

Cadifern Pty Ltd has submitted an acceptable tender for this project. Council should endorse the recommendations of this report.



ITEM 16

PROPOSED RENEWAL OF LEASE OF PART OF WOLLONGONG GOLF COURSE - PART LANG PARK FORESHORE (D580076) RESERVE

The lease between Council as Lang Park Foreshore (D580076) Reserve Trust and Wollongong Golf Club Limited was granted for a period of 20 years and expired on 30 June 2015. The lease continues to operate on a monthly holding over provision pursuant to Clause 12.4 of the Lease Agreement for a period of 12 months.

In a letter dated 14 October 2014, Wollongong Golf Club Limited requested Council approve a new lease for a further period of 20 years to ensure the continuing operation of the golf club and course.

### RECOMMENDATION

- 1 Council provide approval to enter into a new Lease Agreement with Wollongong Golf Club Limited for a period of 20 years commencing on 1 January 2016.
- 2 Council delegate to the General Manager the authority to finalise and execute the Lease Agreement and any other documentation to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the Lease Agreement and any other documentation, should it be required to give effect to this resolution.

### ATTACHMENT

Aerial plan of leased area of Wollongong Golf Club Limited

### REPORT AUTHORISATIONS

Report of: Peter Coyte, Manager Property and Recreation  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

In July 2015, Council submitted a request for Ministerial Approval to NSW Department of Primary Industries – Crown Lands to directly negotiate with the Wollongong Golf Club Limited for a new lease agreement for a 20 year term. Council clearly demonstrated consideration to the 2006 ICAC Guidelines for managing risks in line with Chapters 1 and 2 of the Guidelines and provided supporting evidence including a business case provided by the Club, a Probity Plan and a Negotiation Protocol.

NSW Department of Primary Industries – Crown Lands granted approval for Council to directly negotiate with the Wollongong Golf Club on the proviso that Council confirm how the market rental was assessed, the Trust advertising the proposed lease in accordance with Statutory requirements under the Crown Lands Act and the draft lease be provided to Crown Lands for final approval.

Council instructed Registered Valuers, Walsh and Monaghan, to carry out a market rental determination on the portion of the Lang Park Foreshore (D580076) Reserve which is utilised at part of the Golf Course.

Statutory advertising of the proposed lease will proceed once Council resolves to give approval for Council to enter into a new lease with Wollongong Golf Club Limited.

The draft Lease Agreement is currently being prepared by Council's Legal Section which will be sent to Crown Lands for its approval once Council resolves to give approval for Council to enter into a new lease with Wollongong Golf Club Limited.

## PROPOSAL

Lessor	The Lang Park Foreshore (D580076) Reserve Trust, a corporation established, constituted and appointed as trustee of land dedicated for public recreation on 12 July 1911, the affairs of which are managed by Wollongong City Council.
Lessee	Wollongong Golf Club Limited ACN:000 740 983 PO BOX 2084 WOLLONGONG NSW 2500
Property	Part Lang Park Foreshore (D580076) Reserve being part of Lot 7300 DP1148793
Commencing Date	1 January 2016
Lease Term	20 Years
Permitted Use	Golf Links
Annual Rent	\$26,500.00 per annum (plus GST)  <i>Market Rental determination provided by Registered Valuers, Walsh &amp; Monaghan, report dated 29 September 2015</i>
Rent Reviews	On the fifth, tenth and fifteenth anniversary of the commencement date of the lease, a market rental determination by a Registered Valuer will be undertaken.  In every other year of the lease, the rental will increase by Consumer Price Index (CPI).

Outgoings	100% of all outgoings related to the leased area will be the responsibility of the Lessee.
Maintenance	The Lessee is to maintain the lease property. The Lessor does not have to maintain or repair the property.
Special Conditions	The Lessee is to comply with all conditions of DA-2003/745 and the Ross Watson Master Plan for the Golf Course.
Legal Fees	The Lessee is to pay \$810.00 (including GST) towards the Lease preparation fee.

## CONSULTATION AND COMMUNICATION

NSW Department of Primary Industries – Crown Lands

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal “5 We are a healthy community in a liveable city – 5.5 Participation in recreational and lifestyle activities is increased.”

It specifically delivers on core business activities as detailed in the Property Services Service Plan 2015-2016 – Achieve market return on commercial leases.

## RISK ASSESSMENT

The risk in accepting the recommendations of this report is considered low on the basis that Crown Lands’ approval was sought and granted prior to the negotiations with the Club and all aspects of the Probity Plan and Negotiation Protocol have been followed.

## FINANCIAL IMPLICATIONS

Council will receive annual income of \$26,500.00 (plus GST) in the first year of the Lease term; an increase from the previous rent of \$11,780 per annum (plus GST). The rental will increase annually by Consumer Price Index in years 2 to 9 and years 11 to 20 of the Lease term. In year 10 of the Lease term, a market rental determination by a Registered Valuer will be carried out.

## CONCLUSION

The renewal of this lease will continue a long term arrangement between Council and the Golf Club which allows the Club to operate its golf course successfully. It also provides additional revenue to the Council and contributes to the local economy and amenity of the city.

ITEM 17

2016 NATIONAL GENERAL ASSEMBLY OF LOCAL GOVERNMENT –  
COUNCILLOR ATTENDANCE

Councillors Bradbery, Kershaw and Blicavs request Council's approval to attend 2016 National General Assembly of Local Government in Canberra from 19 to 22 June 2016.

RECOMMENDATION

Council endorse:

- 1 The attendance of Councillors Bradbery, Kershaw and Blicavs at the 2016 National General Assembly of Local Government in Canberra staying four nights on business.
- 2 The Lord Mayor as the voting delegate.

ATTACHMENT

Program: 2016 National General Assembly of Local Government

REPORT AUTHORISATIONS

Report of: Deanne Heidrich, Executive Officer to Lord Mayor  
Authorised by: David Farmer, General Manager

COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL  
DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

BACKGROUND

The 2016 National General Assembly of Local Government (NGA) is an opportunity for attending Councillors to deliver the views and concerns of Council as well as contribute their own experiences and knowledge to debate on a broad set of national issues. The theme for this year's NGA is 'Partners in an Innovative and Prosperous Australia'. It reflects not only the dominant debate being pursued by the Australian Government, but also an opportunity to dig much deeper to discuss and debate the role of local government not just in the larger Federation, but in our communities.

This is also an opportunity to contribute to policy discussions at a national level and a key opportunity to engage with key decision makers, such as the Prime Minister, the Leader of the Opposition, the Deputy Prime Minister and the Leader of the Australian Greens.

## CONSULTATION AND COMMUNICATION

Consultation was undertaken with the Lord Mayor and Councillors, asking Councillors to indicate interest in attending the Conference for inclusion in the report.

## PLANNING AND POLICY IMPACT

This report contributes to the Wollongong 2022 Objective 'our local Council has the trust of the community' under the Community Goal 'we are a connected and engaged community'.

## FINANCIAL IMPLICATIONS

Council has provided funds in its budget to enable Councillors to attend conferences and meet costs associated with such attendance.

2015/16 Councillor Conference Attendance and Travel Budget			
Description	Budget	Expended	Funds Available
<b>Training, Seminars &amp; Travel</b>	\$35,000	\$23,980	\$11,020

The estimated total cost, excluding GST, of attendance at the 2016 National General Assembly of Local Government in Canberra for three delegates including travel, registration, accommodation and incidental expenses is \$8,415. Travel is to be undertaken in accordance with the Payment of Expenses and Provision of Facilities to Lord Mayor and Councillors policy.

The estimated individual costs of attendance at the 2016 National General Assembly of Local Government in Canberra are as follows:

Delegate	Travel	Reg.	Accomm	Incidental	Total
Cr Bradbery	\$0	\$1,425	\$1,380	\$0	\$2,805
Cr Kershaw	\$0	\$1,425	\$1,380	\$0	\$2,805
Cr Blicavs	\$0	\$1,425	\$1,380	\$0	\$2,805
<b>Total</b>	<b>\$0</b>	<b>\$4,275</b>	<b>\$4,140</b>	<b>\$0</b>	<b>\$8,415</b>

## CONCLUSION

This report includes estimated costs for the three Councillors who indicated they would be requesting approval to attend, although it does not preclude any other Councillor who may wish to attend from nominating at the time of consideration of this report by Council.

ITEM 18

ANNUAL FEES PAYABLE TO THE LORD MAYOR AND COUNCILLORS  
FOR 2016/2017

The Local Government Remuneration Tribunal has made determinations under Section 241 of the Local Government Act 1993 in respect of the annual fees payable to the Lord Mayor and Councillors effective from 1 July 2016.

RECOMMENDATION

The annual fees payable for the period 1 July 2016 to 30 June 2017 be:

- 1 \$28,240 for all Councillors; and
- 2 \$82,270 additional fee for the Lord Mayor.

ATTACHMENT

2016 Report and Determinations of the Local Government Remuneration Tribunal

REPORT AUTHORISATIONS

Report of: Kylee Cowgill, Manager Governance and Information  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative Engaged and Innovative City

COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL  
DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

BACKGROUND

The Local Government Act 1993 (the Act) provides for the establishment of a Local Government Remuneration Tribunal to determine categories for councils, together with annual fees payable to Mayors and Councillors. The Tribunal, in accordance with Section 241 of the Act, must determine no later than 1 May each year the minimum/maximum fees payable for Councillors and Mayors for each category.

Council is required under the Act to determine the fee to be paid to the Lord Mayor and Councillors. Section 248 of the Act stipulates that a council must pay each Councillor an annual fee in accordance with the Tribunal's determinations, the annual fee is to be the same for each Councillor and Council is able to pay that fee having regard to the category established by the Tribunal.

In setting the fee Council may fix a fee that is equal to or greater than the minimum but not greater than the maximum for the appropriate category. When Council declines to fix a fee, it must pay the appropriate minimum fees as determined by the Tribunal.

On 6 January 2016, the Minister for Local Government announced 35 proposals for council mergers, and on 8 January 2016 the NSW Government announced the commencement of the first phase of consultation on proposed Act changes.

Further, it was not expected that a decision on, or implementation of structural or legislative reforms to local government would be finalised prior to the Tribunal making its determination on or before 30 April 2016.

On that basis, and given the limitations placed on the Tribunal in respect of determining increases in fees, mayors were advised on 20 January 2016 that general submissions from individual councils were not required for the 2016 review. The Tribunal did however seek a submission from Local Government NSW (LGNSW).

## PROPOSAL

This report recommends the full 2.5% increase be applied to Lord Mayoral and Councillors' fees for 2016/17, with the maximum fee being paid.

Wollongong City Council is categorised as a Major City. Pursuant to s.241 of the Local Government Act 1993, the annual fees to be paid to Councillors and Lord Mayor, effective on and from 1 July 2016 are determined as follows:

Category	Councillor Annual Fee		Lord Mayor Additional fee	
	Minimum	Maximum	Minimum	Maximum
Major City	17,110	28,240	36,360	82,270

## CONSULTATION AND COMMUNICATION

This report has been prepared on the basis of advice received from the Local Government Remuneration Tribunal and in accordance with the provisions of the Local Government Act 1993.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal "We are a connected and engaged community".

It specifically delivers on core business activities as detailed in the Governance and Administration Service plan 2015-16.

## FINANCIAL IMPLICATIONS

There are sufficient funds in the 2016/2017 budget to meet a determination within the ranges set by the Tribunal.

## CONCLUSION

The Tribunal determined that an increase of 2.5 per cent in the maximum and minimum fee for each category of councillor and mayoral office is appropriate.



REF: CM100/16 File: GI-70.001

ITEM 19

ANNUAL FEES PAYABLE TO INDEPENDENT MEMBERS OF THE  
AUDIT AND CORPORATE GOVERNANCE COMMITTEES FOR  
2016/2017

Independent members of Council's Audit Committee and Corporate Governance Committee are entitled to remuneration on the basis of a Committee meeting fee as determined by the Council.

This report requests Council to review and set the meeting fee for the 2016-2017 financial year.

### RECOMMENDATION

The annual fees payable for the period 1 July 2016 to 30 June 2017 be:

- 1 \$3,321 (ex GST) for Independent Chairpersons; and
- 2 \$2,230 (ex GST) for Independent Members.

### ATTACHMENT

There are no attachments for this report.

### REPORT AUTHORISATIONS

Report of: Kylee Cowgill, Manager Governance and Information  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

Independent members' meeting fees are paid for the period 1 July to 30 June and include all expenses incurred by the independent members in relation to their responsibilities as members of the Audit or Corporate Governance Committee.

The fee is subject to an annual review in accordance with the percentage increase in the fee payable to Councillors as determined by the Local Government Remuneration Tribunal.

## PROPOSAL

This report recommends a 2.5% increase in the annual fees paid to the independent Chairpersons and Members of the Council's Audit Committee and Corporate Governance Committee. This amount excludes GST and is paid for attendance at quarterly meetings.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal "We are a connected and engaged community". It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-17	Annual Plan 2015-2016
Strategy	5 Year Action	Annual Deliverables
4.4.4 Policies and procedures are simplified to ensure transparency and efficiency	4.4.4.1 Ensure policies and procedures are regularly reviewed, updated and promoted	Support the effective operation of the Audit and Corporate Governance Committees

## FINANCIAL IMPLICATIONS

There are sufficient funds in the 2016/2017 budget to meet the proposed increase in annual fees.

## ITEM 20 APRIL 2016 FINANCIALS

The result for the year to date to April is favourable compared to phased budget over most indicators. The Operating Result (pre capital) is favourable by \$3.4M while the Funds Result shows a favourable variance compared to the phased budget of \$6.9M.

The Cash Flow Statement at the end of the period indicates that there is sufficient cash to support external restrictions.

Council has expended \$53.8M on its capital works program representing 64% of the annual budget. The year to date budget for the same period was \$57.3M.

The financial reports and variances presented include the March 2016 Quarterly Review adjustments.

### RECOMMENDATION

- 1 The report be received and noted.
- 2 Proposed changes in the Capital Works Program be approved.

### ATTACHMENTS

- 1 Income and Expense Statement – April 2016
- 2 Capital Project Report – April 2016
- 3 Balance Sheet – April 2016
- 4 Cash Flow Statement – April 2016

### REPORT AUTHORISATIONS

Report of: Brian Jenkins, Manager Finance  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendations in this report satisfy the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

This report presents the Income and Expense Statement, Balance Sheet and Cash Flow Statement for April 2016. Council's current budget has a Net Funding (cash) deficit of \$10.2M, an Operating Deficit [Pre Capital] of \$1.2M and a capital expenditure of \$84.1M. At the end of April, Council remains on target to meet or exceed the operational components of this result.

The following table provides a summary view of the organisation's overall financial results for the year to date.

FORECAST POSITION		Original Budget	Revised Budget	YTD Forecast	YTD Actual	Variation
KEY MOVEMENTS		1-Jul	29-Apr	29-Apr	29-Apr	
Operating Revenue	\$M	249.5	251.6	209.2	209.5	0.3
Operating Costs	\$M	(255.9)	(252.7)	(206.4)	(203.4)	3.0
<b>Operating Result [Pre Capital]</b>	\$M	<b>(6.4)</b>	<b>(1.2)</b>	<b>2.7</b>	<b>6.1</b>	<b>3.4</b>
Capital Grants & Contributions	\$M	14.5	24.1	22.1	22.9	0.8
<b>Operating Result</b>	\$M	<b>8.1</b>	<b>23.0</b>	<b>24.8</b>	<b>29.0</b>	<b>4.2</b>
<b>Funds Available from Operations</b>	\$M	<b>54.6</b>	<b>53.6</b>	<b>46.5</b>	<b>48.4</b>	<b>1.9</b>
<b>Capital Works</b>		<b>86.3</b>	<b>84.1</b>	<b>57.3</b>	<b>53.8</b>	<b>3.5</b>
<b>Contributed Assets</b>		<b>-</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>	<b>-</b>
Transfer to Restricted Cash		-	7.1	7.1	7.1	-
Funded from:						
- Operational Funds	\$M	54.6	53.6	46.5	48.4	1.9
- Other Funding	\$M	34.9	37.9	29.1	30.7	1.6
<b>Total Funds Surplus/(Deficit)</b>	\$M	<b>(3.1)</b>	<b>(10.2)</b>	<b>1.6</b>	<b>8.5</b>	<b>6.9</b>

## Financial Performance

The April 2016 Operating Result [pre capital] shows a positive variance of \$3.4M compared to budget.

The improvement in Operational Costs (\$3.0M) is considered to be due to timing, and includes an amount of \$1.2M relating to funded projects. This favourable overall variance includes an unfavourable variance relating to lower utilisation of internal resources on capital works (\$0.7M). The under expenditure relating to funded projects are offset by a lower transfer from Restricted Cash and so do not flow on to the funds result.

## Funds Result

The Total Funds result as at 29 April 2016 shows a positive variance of \$6.9M that is due to the cash component of the operating variance and a lower level of Council funded capital expenditure compared to phased budget.

## Capital Budget

As at 29 April 2016, Council had expended \$53.8M or 64% of the approved annual capital budget of \$84.1M.

## Liquidity

Council's cash and investments decreased during April 2016 to holdings of \$155.7M compared to \$163.3M at the end of March 2016. This reflects normal trends for this time of the year.

Council's cash, investments and available funds positions for the reporting period are as follows:

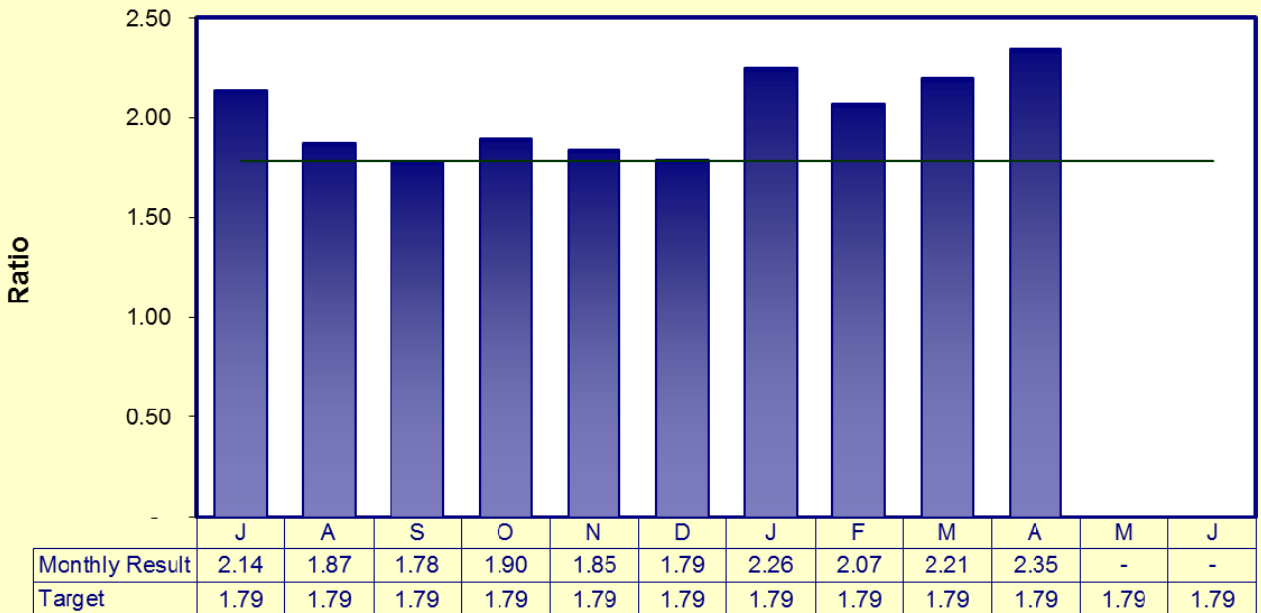
CASH, INVESTMENTS & AVAILABLE FUNDS					
	Actual 2014/15 \$M	Original Budget 2015/16 \$M	December QR 2015/16 \$M	March QR 2015/16	Actual Ytd 29 April 2016 \$M
Total Cash and Investments	144.7	109.6	129.8	134.4	155.7
Less Restrictions:					
External	77.7	60.9	68.6	74.3	71.7
Internal	42.0	41.9	48.9	51.3	60.1
Total Restrictions	119.7	102.8	117.5	125.5	131.8
Available Cash	25.0	6.9	12.3	8.9	24.0
Adjusted for :					
Current payables	(29.9)	(23.0)	(25.5)	(22.7)	(22.2)
Receivables	26.4	27.7	27.2	25.9	22.2
Other	4.3	1.7	4.4		6.1
Net Payables & Receivables	(3.4)	4.7	1.7	3.2	6.2
Available Funds	21.6	11.5	14.0	12.1	30.2

The available funds position excludes restricted cash. External restrictions are funds that must be spent for a specific purpose and cannot be used by Council for general operations. Internal restrictions are funds that Council has determined will be used for a specific future purpose.

The Available Funds forecast is above Council's Financial Strategy target of 3.5% to 5.5% of Operational Revenue [pre capital]. Based on the Adopted 2015-16 Annual Plan, the target Available Funds is between \$8.7M and \$13.7M for year ending 30 June 2016. The actual Available Funds at 29 April 2016 is impacted by the progress of planned expenditure to date.

The Unrestricted Current Ratio measures the cash/liquidity position of an organisation. This ratio is intended to disclose the ability of an organisation to satisfy payment obligations in the short term from the unrestricted activities of Council. Council's current ratio is above the Local Government Benchmark of >2:1, however, the strategy is to maximise the use of available funds for asset renewal by targeting a lean unrestricted current ratio.

## Unrestricted Current Ratio



### Receivables

Receivables are the amount of money owed to Council or funds that Council has paid in advance. At April 2016, receivables totalled \$22.2M, compared to receivables of \$23.9M at April 2015.

### Payables

Payables (the amount of money owed to suppliers) of \$22.2M were owed at April 2016 compared to payables of \$20.2M at April 2015. The difference in payables relate to goods and services and capital projects delivered but not yet paid for, rating income received in advance and timing of the Financial Assistance Grant payments.

### Debt

Council continues to have financial strength in its low level of borrowing. The industry measure of debt commitment is the Debt Service Ratio that measures the proportion of revenues that is required to meet annual loan repayments.

Council's Financial Strategy includes provision for additional borrowing in the future and Council will consider borrowing opportunities from time to time to bring forward the completion of capital projects where immediate funding is not available. In 2009-10, Council borrowed \$26M interest free to assist in the delivery of the West Dapto Access Plan. Council has also been successful in securing loan funds under the Local Government Infrastructure Renewal Scheme of \$20M in 2012-13 and \$4.3M in 2013-14 that will be used over a five year period to accelerate the Citywide Footpaths and Shared Path Renewal and Missing Links Construction Program and building refurbishment works for Berkeley Community Centre, Corrimal Library and Community

Centre and Thirroul Pavilion and Kiosk respectively. A further \$15M was drawn down in 2014-15 under Round Three of the LIRS program that provides a subsidy of 3% that will be used to support the West Dapto Access – Fowler’s Road to Fairwater Drive project.

Council will draw down a further \$5.5M in June 2016 as an additional part of Round 3 of the LIRS Program that will also support the West Dapto Access – Fowler’s Road project.

Council’s Debt Service Ratio forecast for 2015-16 is approximately 1.9% which is still below Council’s target of 4% and remains low in comparison to the Local Government’s benchmark ratio of <10%. It is noted that non-cash interest expense relating to the amortisation of the income recognised on the West Dapto Access Plan Loan is not included when calculating the Debt Service Ratio.

## Assets

The Balance Sheet shows that \$2.5B of assets are controlled and managed by Council for the community as at 29 April 2016. The 2015-16 capital works program includes projects such as the Cordeaux Road shared path, Berkeley Community Centre upgrade, civil asset renewals including roads, car parks and buildings and purchase of library books. At the end of April, capital expenditure amounted to \$53.8M.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal ‘*We are a connected and engaged community*’. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-17	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
4.4.5 Finances are managed effectively to ensure long term financial sustainability	4.4.5.1 Effective and transparent financial management systems are in place	Provide accurate and timely financial reports monthly, quarterly and via the annual financial statement
		Continuous Budget Management is in place, controlled and reported
		Manage and further develop compliance program
		Monitor and review achievement of Financial Strategy

## CONCLUSION

The results for April 2016 are generally within projections over a range of financial indicators and it is expected that Council will achieve the forecast annual results.



## ITEM 21 STATEMENT OF INVESTMENTS - APRIL 2016

This report provides an overview of Council's investment portfolio performance for the month of April 2016.

Council's average weighted return for April 2016 was 3.38% which was above the benchmark return of 2.47%. The result was primarily due to the positive marked to market valuation of the Floating Rate Notes and the NSW Treasury Corp Growth Facility. The remainder of Council's portfolio continues to provide a high level of consistency in income and a high degree of credit quality and liquidity.

### RECOMMENDATION

Council receive the Statement of Investments for April 2016.

### ATTACHMENTS

- 1 Statement of Investments – April 2016
- 2 Investment Income Compared to Budget 2015-16

### REPORT AUTHORISATIONS

Report of: Brian Jenkins, Manager Finance  
Authorised by: Greg Doyle, Director Corporate and Community Services – Creative, Engaged and Innovative City

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines - *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

Council is required to invest its surplus funds in accordance with the Ministerial Investment Order and Division of Local Government guidelines. The Order reflects a conservative approach and restricts the investment types available to Council. In compliance with the Order and Division of Local Government guidelines, Council adopted an Investment Policy on 19 October 2015. The Investment Policy provides a framework for the credit quality, institutional diversification and maturity constraints that Council's portfolio can be exposed to. Council's investment portfolio was controlled by Council's Finance Division during the period to ensure compliance with the Investment Policy. Council's Governance Committee's role of overseer provides for the review of the Council's Investment Policy and Management Investment Strategy.

Council's Responsible Accounting Officer is required to sign the complying Statements of Investments contained within the report, certifying that all investments were made in

accordance with the Local Government Act 1993 and the Local Government Regulation 2005.

Council's investment holdings as at 29 April 2016 were \$156,466,455 (Statement of Investments attached) [24 April 2015 \$134,094,217].

During April, Council posted a weighted average return of 3.38% (annualised) compared to the benchmark return of 2.47% (annualised Bloomberg Bank Bill Index). The result was primarily due to the positive marked to market valuation of the Floating Rate Notes and the NSW Treasury Corp Growth Facility. The remainder of Council's portfolio continues to provide a high level of consistency in income and a high degree of credit quality and liquidity.

At 29 April 2016, year to date interest and investment revenue of \$4,168,481 was recognised compared to the year to date budget of \$3,947,663.

Council's CBA Zero Coupon Bond recorded an increase in value for April of \$17,600. The valuation methodology used by Laminar (Council's investment consultants) discounts the bond using a margin for a straight four year CBA obligation but also considers the illiquidity premium, this being a restructured deal and there being limited bids on the security. As this bond gradually nears maturity, movements in interest rates and liquidity will have less of an impact on the securities valuation. While there will be short term fluctuations along the way, the investments valuation will gradually increase to its \$4M maturity value. During the month, Council purchased a 3 year \$3M CUA floating rate note; and a 5 year \$2M SUN floating rate note. Council's ten floating rate notes had a net increase in value of \$29,155 for April.

Council holds two Mortgaged Backed Securities (MBS) recorded a net increase in value of \$14,361 for April. These investments continue to pay higher than normal variable rates. While the maturity dates are outside Council's control, the investment advisors had previously indicated that capital is not at risk at that stage and recommended a hold strategy due to the illiquid nature of the investment.

The NSW T-Corp Long-Term Growth Facility recorded an increase in value of \$24,368 in April. The fluctuation is a reflection of the current share market volatility both domestically and internationally.

During the May 2016 RBA meeting, the official cash rate was cut by a further 25 points down to a record low of 1.75%. The RBA has advised that it would continue to assess the outlook and adjust policy as needed to foster sustainable growth in demand and inflation outcomes consistent with the inflation target over time. The current inflation rate is below the 2 to 3% target.

This report complies with Council's Investment Policy which was endorsed by Council on 19 October 2015. Council's Responsible Accounting Officer has signed the complying Statements of Investments contained within the report, certifying that all investments were made in accordance with the Local Government Act 1993 and the Local Government Regulation 2005.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal '*We are a connected and engaged community*'. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-17	Annual Plan 2015-16
Strategy	5 Year Action	Annual Deliverables
4.4.5 Finances are managed effectively to ensure long term financial sustainability	4.4.5.1 Effective and transparent financial management systems are in place	Provide accurate and timely financial reports monthly, quarterly and via the annual financial statement
		Continuous Budget Management is in place, controlled and reported
		Manage and further develop compliance program
		Monitor and review achievement of Financial Strategy

## ITEM 22 DRAFT QUARTERLY REVIEW STATEMENT - MARCH 2016

The draft Quarterly Review Statement March 2016 outlines progress made to achieve Council's Wollongong 2022 Strategic Management Plans, in particular the Delivery Program 2012-17 and Annual Plan 2015-16. It addresses the financial and operational performance of Council for the third quarter of 2015-16. The draft Quarterly Review also includes the Quarterly Review Budget Report.

### RECOMMENDATION

- 1 The draft Quarterly Review Statement March 2016 be adopted.
- 2 The Budget Review Statement as at March 2016 be adopted and revised totals of income and expenditure be approved and voted.

### ATTACHMENT

Draft Quarterly Review Statement March 2016.

### REPORT AUTHORISATIONS

Report of: Clare Phelan, Executive Strategy Manager  
Authorised by: David Farmer, General Manager

### COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

### BACKGROUND

Council's draft Quarterly Review Statement March 2016 outlines the operational and financial performance of Council's Wollongong 2022 Strategic Management Plans, in particular the Delivery Program 2012-17 and Annual Plan 2015-16.

This report also provides an overview of the significant achievements against priority areas and demonstrates organisational performance through the inclusion of performance indicators.

During the quarter there were a number of significant highlights:

- 1 The official reopening of the newly refurbished Berkeley Community Centre.
- 2 Successful Australia Day event with over 35,000 attendees.
- 3 Clean Up Australia Day activities were held across the Local Government Area.
- 4 Wollongong Sculpture in the Garden exhibition and design award was launched.

## CONSULTATION AND COMMUNICATION

Executive Management Committee

Senior Management Group

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal 4 “*We are a connected and engaged community*”. It specifically delivers on the following:

It specifically delivers on core business activities as detailed in the Corporate Strategy Service Plan 2015-16.

## FINANCIAL IMPLICATIONS

Full financial performance details and implications on Council’s financial position are contained within the attached Budget Review Statement. The following is a summary of impacts on key result points for year ending 30 June 2016:

**Operating Result [pre capital]** – The revised projections at the March Quarterly Review for the year indicate an improvement of \$1.6M that is mainly due to improved forecasts for net operating result at Whytes Gully and a range of smaller adjustments that are largely due to timing.

**Operating Result** – This proposes an improvement of \$6.1M, that in addition to the above changes, includes the impact of contributed assets (\$4.2M), increase in developer contributions (\$0.7M) and a net decrease in capital grants of \$0.4M.

**Funds Result** – Variations identified through the review process resulted in an improvement to the forecast Fund Result of \$2.3M. It is proposed this be transferred to Strategic Projects restricted cash.

This Quarterly Review does include a number of recurrent adjustments, the most significant being an increase in depreciation that is mainly the result of recognition of additional assets, reassessment of asset lives and unit rates. These will be further reviewed as part of the current end of year process. Adjustments relating to depreciation impact the operating result but will not impact Funds Result.

## CONCLUSION

This draft Quarterly Review Statement March 2016 has been prepared following input and assistance from all Divisions within the organisation. It is submitted for consideration by Council.

ITEM 23

QUARTERLY REPORT ON DEVELOPMENT APPLICATIONS  
INVOLVING VARIATIONS TO DEVELOPMENT STANDARDS

This report outlines that no Development Applications have been determined during the quarterly period 1 January 2016 to 31 March 2016, where variations to development standards were granted.

## RECOMMENDATION

Council note the report.

## ATTACHMENTS

There are no attachments for this report.

## REPORT AUTHORISATIONS

Report of: Mark Riordan, Manager Development Assessment and Certification  
Authorised by: Andrew Carfield, Director Planning and Environment – Future City and Neighbourhoods

## COMPLIANCE WITH OFFICE OF LOCAL GOVERNMENT GUIDELINES ON COUNCIL DECISION MAKING DURING MERGER PROPOSAL PERIODS

The recommendation in this report satisfies the requirements of the OLG Guidelines – *Council Decision Making During Merger Proposal Periods*.

## BACKGROUND

Development Applications involving variations to development standards may be made under clause 4.6 of Wollongong Local Environmental Plan 2009 (WLEP 2009). Relevant criteria is prescribed under clause 4.6 of WLEP 2009 for the assessment of variations to development standards.

Any variations approved require reporting on a quarterly basis to Department of Planning and Environment (DP&E), in accordance with procedural guidelines. Council and DP&E may in turn consider the extent and nature of variations granted when reviewing relevant planning controls or instruments.

Wollongong City Council provides further transparency and oversight of applications seeking development standard departures via:

- Independent Hearing and Assessment Panel (IHAP) peer review;
- Declaration of any variation during public exhibition; and
- Maintaining an ongoing public record of all variations approved.

## QUARTERLY RESULT

During the last quarter (1 January 2016 to 31 March 2016) no Development Applications were approved which included variations to development standards.

## PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 under the objective 1.6: *The sustainability of our urban environment is improved under the Community Goal We value and protect our environment Community Goal.*

It specifically addresses the Annual Plan 2015-16 Key Deliverables: *Development is functional, attractive and sympathetic with the environment and avoids unnecessary use of energy, water or other resources* which forms part of the Five Year Action: *Provide high quality development assessment and certification based on QBL principles* contained with the Revised Delivery Program 2012-2017.





## MINUTES

# ORDINARY MEETING OF COUNCIL

at 6.00 pm

**Monday 9 May 2016**

### Present

Lord Mayor – Councillor Bradbery OAM (in the Chair), Councillors Kershaw, Connor, Brown, Takacs, Martin, Merrin, Dorahy, Colacino, Crasnich, Curran and Petty

### In Attendance

General Manager – D Farmer, Director Corporate and Community Services – Creative, Engaged and Innovative City – G Doyle, Director Infrastructure and Works – Connectivity, Assets and Liveable City – M Hyde, Director Planning and Environment – Future, City and Neighbourhoods – A Carfield, Manager Governance and Information – K Cowgill, Manager Finance – B Jenkins, Manager Property and Recreation – P Coyte, Manager Environmental Strategy and Planning – R Campbell, Manager Project Delivery – G Whittaker and Manager Infrastructure Strategy and Planning – M Dowd

### Apology

Min No.

**37**

**COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Crasnich seconded Councillor Connor that the apology tendered on behalf of Councillor Blicavs be accepted.

## INDEX

	PAGE NO.
Disclosures of Interests.....	1
National Trust Heritage Awards – Ghost of Courtney Puckey Tours.....	1
Public Access Forum – Draft Planning Proposal for Lot 1 DP534849 Staff Road, Cordeaux Heights.....	2
Call of the Agenda.....	2
ITEM A Notice of Motion Councillor Martin - Port Kembla Community Investment Fund.....	2
ITEM B Notice of Motion Councillor Crasnick - NSW State Government Initiative for Port Kembla and Region - Port Kembla Community Investment Fund.....	3
ITEM C Item Laid on Table - Council Meeting 14 March 2016 - Policy Review: Privacy Management Plan.....	4
ITEM 1 Beaton Park Precinct Needs Assessment.....	4
ITEM 2 Draft Planning Proposal: Lot 1 DP 534849 Staff Road, Cordeaux Heights.....	5
ITEM 3 Stewart Street East Car Park - Licence to WIN Sports and Entertainment Centres.....	6
ITEM 4 Extension of Funding Agreement for the Round 3 Local Infrastructure Renewal Scheme - West Dapto Access.....	6
ITEM 5 IPART Review of the Local Government Rating System.....	7
ITEM 6 Financial Assistance Policy - Large Cultural Grants.....	7
ITEM 7 Tender T16/11 – Construction of a Sea wall and Rock Wall at Judbooley Parade, Windang .....	7
ITEM 8 Tender T16/07 – Lease of the Market Street Car Park.....	8
ITEM 9 Tender T15/26 – Telephone Interactive Voice Response (IVR) and Web Payment Services .....	8
ITEM 10 Tender T16/12 – Keira Cricket Club Pavilion and Amenities .....	9

PAGE NO.

ITEM 11	March 2016 Financials .....	9
ITEM 12	Statement of Investments - March 2016.....	9
ITEM 13	City of Wollongong Traffic Committee - Minutes of Meetings held on 13 April and 4 May 2016.....	10
ITEM 14	Bi-Monthly Tabling of Returns of Disclosures of Interests and Other Matters .....	10

## **DISCLOSURES OF INTERESTS**

Councillor Martin declared a non-significant, non-pecuniary interest in Item 2 as she works for the Department of Planning and Environment. However, Councillor Martin advised that she did not work on any programs or projects within the Wollongong Local Government Area and would therefore remain at the meeting during debate and voting on this matter.

Councillor Dorahy declared an interest in Item 3 as he is a Board Member of Venues New South Wales. Councillor Dorahy advised that he would depart the meeting during debate and voting on this Item.

Councillor Curran declared a non-significant, non-pecuniary conflict of interest in Item 7 as a family member is employed by one of the tenderers. Councillor Curran advised that she would depart the meeting during debate and voting on this matter.

## **NATIONAL TRUST HERITAGE AWARDS – ‘GHOST OF COURTNEY PUCKEY’ TOURS**

Councillor Curran attended the National Trust Heritage Awards and advised that Council had received a Highly Commended Award for the ‘Ghost of Courtney Puckey’ tours, due to the excellent work of Michael Connor, Council’s Education Officer - Botanic Garden.

Awards for the Wollongong area were also received for the Migrant Heritage Project and the Thirroul Railway Station upgrade.

## **CONFIRMATION OF MINUTES OF ORDINARY MEETING OF COUNCIL HELD ON MONDAY, 4 APRIL 2016**

**38** **COUNCIL’S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Kershaw that the Minutes of the Ordinary Meeting of Council held on Monday, 4 April 2016 (a copy having been circulated to Councillors) be taken as read and confirmed.

## **PUBLIC ACCESS FORUM – DRAFT PLANNING PROPOSAL FOR LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS**

Mr D Thompson from Cardno supported the recommendations in the report and reiterated the following key benefits of the proposal -

- 17.3 ha of rehabilitated and/or revegetated lands would be protected in perpetuity through a Biobanking scheme at the landowner's cost;
- Enhanced onsite biodiversity and reduction of the current eroding processes;
- Improved bushfire hazard protection measures; and,
- Potentially enhanced access to the Illawarra Escarpment for recreational activities.

**39** **COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Connor that Mr Thompson be thanked for his presentation and invited to table his notes.

## **CALL OF THE AGENDA**

**40** **COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Crasnich that the staff recommendations for Items 4, 6, 8 to 12, and 14 inclusive, be adopted as a block.

## **ITEM A – NOTICE OF MOTION - COUNCILLOR MARTIN - PORT KEMBLA COMMUNITY INVESTMENT FUND**

MOVED Councillor Martin seconded Councillor Curran that –

- 1 Council initiate a proactive program to ensure the maximum benefit to the community of Port Kembla and the wider Wollongong community from the newly-established Port Kembla Community Investment Fund (PKCIF).
- 2 The program include, but not be limited to –
  - a A Community Planning Workshop to establish –
    - i Opportunities for community, business and Council-led projects that could be considered for funding over the years of the funding program and to ensure the funds are utilised to the maximum benefit of the community of Port Kembla and the wider Wollongong community, wherever possible;

- ii Project ideas and opportunities where Council and the community could develop future projects, especially over the early years of the program.
- b An annual Community Assist education and support program to assist communities in preparing their eligible applications so as to ensure the best possible results and ensure that applicants are provided with the maximum opportunity to be successful with eligible projects.
- c A Project Partner Program between potential community fund applicants and Council to ensure –
  - i Project development and implementation in the Port Kembla Investment Fund area, especially where the project is developed in partnership with Council, on Council-owned land, or Council-managed sites; and,
  - ii Maximum benefit of projects; and
  - iii Projects are in keeping with Council's commitment to work in partnership with the community wherever possible.

A PROCEDURAL MOTION was MOVED by Councillor Martin that the matter lay on the table. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

*Note: Councillor Martin requested that this matter lay on the table until Councillors are briefed by the government agencies involved with establishing the Fund.*

## **ITEM B – NOTICE OF MOTION - COUNCILLOR CRASNICH - NSW STATE GOVERNMENT INITIATIVE FOR PORT KEMBLA AND REGION - PORT KEMBLA COMMUNITY INVESTMENT FUND**

**41 COUNCIL'S RESOLUTION** – RESOLVED on the motion of Councillor Crasnich seconded Councillor Colacino that Council write to the Member for Kiama, and Parliamentary Secretary for the Illawarra and South Coast, Mr Gareth Ward MP acknowledging his work in helping secure the Port Kembla Community Investment Fund monies.

In favour Councillors Kershaw, Connor, Brown, Martin, Takacs, Dorahy, Colacino, Crasnich, Curran, Petty and Bradbery  
Against Councillor Merrin

## **ITEM C - ITEM LAID ON TABLE - COUNCIL MEETING 14 MARCH 2016 - POLICY REVIEW: PRIVACY MANAGEMENT PLAN**

On 14 March 2016 the following motion was MOVED by Councillor Colacino seconded Councillor Crasnich that -

- 1 The revised Privacy Management Plan be adopted.
- 2 A copy of the adopted Policy be forwarded to the Privacy Commissioner.

A PROCEDURAL MOTION was MOVED by Councillor Brown seconded Councillor Curran that this matter be taken off the table and the speakers list be recommenced. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

**42 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Colacino seconded Councillor Crasnich that –

- 1 The revised Privacy Management Plan be adopted.
- 2 A copy of the adopted Policy be forwarded to the Privacy Commissioner.
- 3
  - a When this Plan comes back to Council for review in 2018, and in subsequent years, it will include information that outlines the number of applications received from employees who have asked to review, and have then challenged, the opinions that are held regarding their details.
  - b This information will not include the names of those who enquired.

## **ITEM 1 - BEATON PARK PRECINCT NEEDS ASSESSMENT**

**43 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Curran that –

- 1 Council note the Beaton Park Needs Assessment.
- 2 A review of the Plan of Management be included in the 2016/17 Annual Plan and appropriately resourced.
- 3 Investigations into the reclassification of identified land be commenced.
- 4 Investigations into the feasibility of acquisition of Defence Lands be commenced.



- 5 A staging plan be developed for implementation of the Plan.
- 6 A further progress report be submitted to Council.
- 7 The community-developed concept plans for Wiseman's Park and related elements of the Gwynneville-Keiraville Community Planning Project, be included in the documents that help inform the future character of that site.
- 8 Consideration be given to including Gilmore Park within the study area.

## **ITEM 2 - DRAFT PLANNING PROPOSAL: LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS**

**44 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Dorahy that –

- 1 A draft Planning Proposal be submitted to the NSW Department of Planning and Environment for Lot 1 DP 534849 Staff Road, Cordeaux Heights, seeking a Gateway determination to:
  - a rezone 7.3 hectares of the site from E3 Environmental Management to E4 Environmental Living with a Minimum Lot Size of 1,000m<sup>2</sup> and Floor Space Ratio of 0.3:1;
  - b retain 30.4 hectares of the site as E3 Environmental Management zoning, changing the minimum lot size to 5,000m<sup>2</sup>;
  - c rezone the southern riparian corridor and part of the site in the north west and north east (17.3 hectares) from E3 Environmental Management to E2 Environmental Conservation with a Minimum Lot Size of 39.99ha; and
  - d update the Riparian Land and Natural Resource Sensitivity–Biodiversity Maps.
- 2 A BioBanking Agreement be established between the landowner and the Office of Environment and Heritage for the riparian corridor area in the south of the site to be rezoned E2 Environmental Conservation to re-vegetate and protect in perpetuity the riparian corridor (to be dedicated to Council once the BioBank site is under full active management);
- 3 The draft Planning Proposal be exhibited for a minimum period of 28 days; and

- 4 The Department of Planning and Environment be requested to issue authority to the General Manager to exercise plan making delegations in accordance with Council's resolution of 26 November 2012.

## DEPARTURE OF COUNCILLOR

Due to a prior disclosure of interest, Councillor Dorahy departed the meeting and was not present for the debate and voting on Item 3.

## ITEM 3 - STEWART STREET EAST CAR PARK - LICENCE TO WIN SPORTS AND ENTERTAINMENT CENTRES

- 45 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Takacs that Council agree to the request from WIN Sports and Entertainment Centres to increase the parking charge at Stewart Street East Car Park to \$10 per vehicle, during WSEC major event nights.

## ITEM 4 - EXTENSION OF FUNDING AGREEMENT FOR THE ROUND 3 LOCAL INFRASTRUCTURE RENEWAL SCHEME - WEST DAPTO ACCESS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION** –

- 1 The information contained in the report, relating to the variation of the LIRS borrowing program interest subsidy, be received.
- 2 Council approve the borrowing of an amount of \$5.5M at a fixed rate over an 8.25 year term with a quarterly repayment schedule.
- 3 Council's General Manager be delegated authority to negotiate appropriate loan terms in accordance with this report and resolution.
- 4 Authority be granted to affix the Common Seal of Council to the loan documents, LIRS (Round 3) 'Variation of Agreement' and Loan Interest Subsidy Variation and any other documents required to give effect to the loan agreement.

## ITEM 5 - IPART REVIEW OF THE LOCAL GOVERNMENT RATING SYSTEM

- 46 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Crasnich that Council endorse the Draft Submission (Attachment 2 of the report) as Council's response to the call for submissions from the IPART.

## ITEM 6 - FINANCIAL ASSISTANCE POLICY - LARGE CULTURAL GRANTS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council receive the report and note the successful recipients/projects (Attachment 1 of the report).

## DEPARTURE OF COUNCILLOR

Due to a prior disclosure of interest, Councillor Curran departed the meeting and was not present for the debate and voting on Item 7.

## ITEM 7 - TENDER T16/11 – CONSTRUCTION OF A SEA WALL AND ROCK WALL AT JUDBOOLEY PARADE, WINDANG

- 47 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Connor seconded Councillor Martin that –

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Dynamic Civil Pty Ltd for construction of a Sea wall and Rock Wall at Judbooley Parade, Windang, in the sum of \$499,270.00, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required, to give effect to this resolution.
- 4 Councillors receive a monthly report via the Information Folder, on the progress and full financial cost of the project.

**Variation** *The variation moved by Councillor Petty (the addition of Part 4) was accepted by the mover and seconder.*

## **ITEM 8 - TENDER T16/07 – LEASE OF THE MARKET STREET CAR PARK**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with Clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Secure Parking Australia Pty Ltd for the lease of the Market Street Car Park, in the sum of \$585,000.00 (GST Exclusive) plus outgoings.
- 2 Council delegate to the General Manager the authority to finalise and execute the agreement and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 9 - TENDER T15/26 – TELEPHONE INTERACTIVE VOICE RESPONSE (IVR) AND WEB PAYMENT SERVICES**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of the Commonwealth Bank for Telephone (IVR) and Web payment services, in the sum of \$72,033.44 per year for a two year contract with an option of one plus one, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 10 - TENDER T16/12 – KEIRA CRICKET CLUB PAVILION AND AMENITIES**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Patterson Building Group Pty Ltd for the construction of the Keira Cricket Club Pavilion and Amenities project, in the sum of \$298,118.00 excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 11 - MARCH 2016 FINANCIALS**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 The report be received and noted.
- 2 Proposed changes in the capital works program be approved.

## **ITEM 12 - STATEMENT OF INVESTMENTS - MARCH 2016**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council receive the Statement of Investments for March 2016.

## **ITEM 13 - CITY OF WOLLONGONG TRAFFIC COMMITTEE - MINUTES OF MEETINGS HELD ON 13 APRIL AND 4 MAY 2016**

**48 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Colacino seconded Councillor Crasnich that –

- 1 In accordance with the powers delegated to Council, the minutes and recommendations of the City of Wollongong Traffic Committee Meetings held on 13 April and 4 May 2016 in relation to Regulation of Traffic be adopted.
- 2 The Traffic Committee be requested to review constraints relating to the Council car park opposite North Wollongong Surf Club, with the intention of having the timed curfew removed from the area.

## **ITEM 14 - BI-MONTHLY TABLING OF RETURNS OF DISCLOSURES OF INTERESTS AND OTHER MATTERS**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council note the tabling of the Returns of Disclosures of Interest as required by Section 450A of the Local Government Act 1993.

## **THE MEETING CONCLUDED AT 7.01 PM**

Confirmed as a correct record of proceedings at the Ordinary Meeting of the Council of the City of Wollongong held on 30 May 2016.

---

Chairperson



## MINUTES

# ORDINARY MEETING OF COUNCIL

at 6.00 pm

**Monday 9 May 2016**

### Present

Lord Mayor – Councillor Bradbery OAM (in the Chair), Councillors Kershaw, Connor, Brown, Takacs, Martin, Merrin, Dorahy, Colacino, Crasnich, Curran and Petty

### In Attendance

General Manager – D Farmer, Director Corporate and Community Services – Creative, Engaged and Innovative City – G Doyle, Director Infrastructure and Works – Connectivity, Assets and Liveable City – M Hyde, Director Planning and Environment – Future, City and Neighbourhoods – A Carfield, Manager Governance and Information – K Cowgill, Manager Finance – B Jenkins, Manager Property and Recreation – P Coyte, Manager Environmental Strategy and Planning – R Campbell, Manager Project Delivery – G Whittaker and Manager Infrastructure Strategy and Planning – M Dowd

### Apology

Min No.

**37**

**COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Crasnich seconded Councillor Connor that the apology tendered on behalf of Councillor Blicavs be accepted.

## INDEX

	PAGE NO.
Disclosures of Interests.....	1
National Trust Heritage Awards – Ghost of Courtney Puckey Tours.....	1
Public Access Forum – Draft Planning Proposal for Lot 1 DP534849 Staff Road, Cordeaux Heights.....	2
Call of the Agenda.....	2
ITEM A Notice of Motion Councillor Martin - Port Kembla Community Investment Fund.....	2
ITEM B Notice of Motion Councillor Crasnich - NSW State Government Initiative for Port Kembla and Region - Port Kembla Community Investment Fund.....	3
ITEM C Item Laid on Table - Council Meeting 14 March 2016 - Policy Review: Privacy Management Plan.....	4
ITEM 1 Beaton Park Precinct Needs Assessment.....	4
ITEM 2 Draft Planning Proposal: Lot 1 DP 534849 Staff Road, Cordeaux Heights.....	5
ITEM 3 Stewart Street East Car Park - Licence to WIN Sports and Entertainment Centres.....	6
ITEM 4 Extension of Funding Agreement for the Round 3 Local Infrastructure Renewal Scheme - West Dapto Access.....	6
ITEM 5 IPART Review of the Local Government Rating System.....	7
ITEM 6 Financial Assistance Policy - Large Cultural Grants.....	7
ITEM 7 Tender T16/11 – Construction of a Sea wall and Rock Wall at Judbooley Parade, Windang .....	7
ITEM 8 Tender T16/07 – Lease of the Market Street Car Park.....	8
ITEM 9 Tender T15/26 – Telephone Interactive Voice Response (IVR) and Web Payment Services .....	8
ITEM 10 Tender T16/12 – Keira Cricket Club Pavilion and Amenities .....	9



PAGE NO.

ITEM 11	March 2016 Financials .....	9
ITEM 12	Statement of Investments - March 2016.....	9
ITEM 13	City of Wollongong Traffic Committee - Minutes of Meetings held on 13 April and 4 May 2016.....	10
ITEM 14	Bi-Monthly Tabling of Returns of Disclosures of Interests and Other Matters .....	10

## **DISCLOSURES OF INTERESTS**

Councillor Martin declared a non-significant, non-pecuniary interest in Item 2 as she works for the Department of Planning and Environment. However, Councillor Martin advised that she did not work on any programs or projects within the Wollongong Local Government Area and would therefore remain at the meeting during debate and voting on this matter.

Councillor Dorahy declared an interest in Item 3 as he is a Board Member of Venues New South Wales. Councillor Dorahy advised that he would depart the meeting during debate and voting on this Item.

Councillor Curran declared a non-significant, non-pecuniary conflict of interest in Item 7 as a family member is employed by one of the tenderers. Councillor Curran advised that she would depart the meeting during debate and voting on this matter.

## **NATIONAL TRUST HERITAGE AWARDS – ‘GHOST OF COURTNEY PUCKEY’ TOURS**

Councillor Curran attended the National Trust Heritage Awards and advised that Council had received a Highly Commended Award for the ‘Ghost of Courtney Puckey’ tours, due to the excellent work of Michael Connor, Council’s Education Officer - Botanic Garden.

Awards for the Wollongong area were also received for the Migrant Heritage Project and the Thirroul Railway Station upgrade.

## **CONFIRMATION OF MINUTES OF ORDINARY MEETING OF COUNCIL HELD ON MONDAY, 4 APRIL 2016**

**38** **COUNCIL’S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Kershaw that the Minutes of the Ordinary Meeting of Council held on Monday, 4 April 2016 (a copy having been circulated to Councillors) be taken as read and confirmed.

## **PUBLIC ACCESS FORUM – DRAFT PLANNING PROPOSAL FOR LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS**

Mr D Thompson from Cardno supported the recommendations in the report and reiterated the following key benefits of the proposal -

- 17.3 ha of rehabilitated and/or revegetated lands would be protected in perpetuity through a Biobanking scheme at the landowner's cost;
- Enhanced onsite biodiversity and reduction of the current eroding processes;
- Improved bushfire hazard protection measures; and,
- Potentially enhanced access to the Illawarra Escarpment for recreational activities.

**39** **COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Connor that Mr Thompson be thanked for his presentation and invited to table his notes.

## **CALL OF THE AGENDA**

**40** **COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Crasnich that the staff recommendations for Items 4, 6, 8 to 12, and 14 inclusive, be adopted as a block.

## **ITEM A – NOTICE OF MOTION - COUNCILLOR MARTIN - PORT KEMBLA COMMUNITY INVESTMENT FUND**

MOVED Councillor Martin seconded Councillor Curran that –

- 1 Council initiate a proactive program to ensure the maximum benefit to the community of Port Kembla and the wider Wollongong community from the newly-established Port Kembla Community Investment Fund (PKCIF).
- 2 The program include, but not be limited to –
  - a A Community Planning Workshop to establish –
    - i Opportunities for community, business and Council-led projects that could be considered for funding over the years of the funding program and to ensure the funds are utilised to the maximum benefit of the community of Port Kembla and the wider Wollongong community, wherever possible;

- ii Project ideas and opportunities where Council and the community could develop future projects, especially over the early years of the program.
- b An annual Community Assist education and support program to assist communities in preparing their eligible applications so as to ensure the best possible results and ensure that applicants are provided with the maximum opportunity to be successful with eligible projects.
- c A Project Partner Program between potential community fund applicants and Council to ensure –
  - i Project development and implementation in the Port Kembla Investment Fund area, especially where the project is developed in partnership with Council, on Council-owned land, or Council-managed sites; and,
  - ii Maximum benefit of projects; and
  - iii Projects are in keeping with Council's commitment to work in partnership with the community wherever possible.

A PROCEDURAL MOTION was MOVED by Councillor Martin that the matter lay on the table. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

*Note: Councillor Martin requested that this matter lay on the table until Councillors are briefed by the government agencies involved with establishing the Fund.*

## **ITEM B – NOTICE OF MOTION - COUNCILLOR CRASNICH - NSW STATE GOVERNMENT INITIATIVE FOR PORT KEMBLA AND REGION - PORT KEMBLA COMMUNITY INVESTMENT FUND**

**41 COUNCIL'S RESOLUTION** – RESOLVED on the motion of Councillor Crasnich seconded Councillor Colacino that Council write to the Member for Kiama, and Parliamentary Secretary for the Illawarra and South Coast, Mr Gareth Ward MP acknowledging his work in helping secure the Port Kembla Community Investment Fund monies.

**In favour** Councillors Kershaw, Connor, Brown, Martin, Takacs, Dorahy, Colacino, Crasnich, Curran, Petty and Bradbery  
**Against** Councillor Merrin

## **ITEM C - ITEM LAID ON TABLE - COUNCIL MEETING 14 MARCH 2016 - POLICY REVIEW: PRIVACY MANAGEMENT PLAN**

On 14 March 2016 the following motion was MOVED by Councillor Colacino seconded Councillor Crasnich that -

- 1 The revised Privacy Management Plan be adopted.
- 2 A copy of the adopted Policy be forwarded to the Privacy Commissioner.

A PROCEDURAL MOTION was MOVED by Councillor Brown seconded Councillor Curran that this matter be taken off the table and the speakers list be recommenced. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

**42 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Colacino seconded Councillor Crasnich that –

- 1 The revised Privacy Management Plan be adopted.
- 2 A copy of the adopted Policy be forwarded to the Privacy Commissioner.
- 3
  - a When this Plan comes back to Council for review in 2018, and in subsequent years, it will include information that outlines the number of applications received from employees who have asked to review, and have then challenged, the opinions that are held regarding their details.
  - b This information will not include the names of those who enquired.

## **ITEM 1 - BEATON PARK PRECINCT NEEDS ASSESSMENT**

**43 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Curran that –

- 1 Council note the Beaton Park Needs Assessment.
- 2 A review of the Plan of Management be included in the 2016/17 Annual Plan and appropriately resourced.
- 3 Investigations into the reclassification of identified land be commenced.
- 4 Investigations into the feasibility of acquisition of Defence Lands be commenced.

- 5 A staging plan be developed for implementation of the Plan.
- 6 A further progress report be submitted to Council.
- 7 The community-developed concept plans for Wiseman's Park and related elements of the Gwynneville-Keiraville Community Planning Project, be included in the documents that help inform the future character of that site.
- 8 Consideration be given to including Gilmore Park within the study area.

## **ITEM 2 - DRAFT PLANNING PROPOSAL: LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS**

**44 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Dorahy that –

- 1 A draft Planning Proposal be submitted to the NSW Department of Planning and Environment for Lot 1 DP 534849 Staff Road, Cordeaux Heights, seeking a Gateway determination to:
  - a rezone 7.3 hectares of the site from E3 Environmental Management to E4 Environmental Living with a Minimum Lot Size of 1,000m<sup>2</sup> and Floor Space Ratio of 0.3:1;
  - b retain 30.4 hectares of the site as E3 Environmental Management zoning, changing the minimum lot size to 5,000m<sup>2</sup>;
  - c rezone the southern riparian corridor and part of the site in the north west and north east (17.3 hectares) from E3 Environmental Management to E2 Environmental Conservation with a Minimum Lot Size of 39.99ha; and
  - d update the Riparian Land and Natural Resource Sensitivity–Biodiversity Maps.
- 2 A BioBanking Agreement be established between the landowner and the Office of Environment and Heritage for the riparian corridor area in the south of the site to be rezoned E2 Environmental Conservation to re-vegetate and protect in perpetuity the riparian corridor (to be dedicated to Council once the BioBank site is under full active management);
- 3 The draft Planning Proposal be exhibited for a minimum period of 28 days; and

- 4 The Department of Planning and Environment be requested to issue authority to the General Manager to exercise plan making delegations in accordance with Council's resolution of 26 November 2012.

## DEPARTURE OF COUNCILLOR

Due to a prior disclosure of interest, Councillor Dorahy departed the meeting and was not present for the debate and voting on Item 3.

## ITEM 3 - STEWART STREET EAST CAR PARK - LICENCE TO WIN SPORTS AND ENTERTAINMENT CENTRES

- 45 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Takacs that Council agree to the request from WIN Sports and Entertainment Centres to increase the parking charge at Stewart Street East Car Park to \$10 per vehicle, during WSEC major event nights.

## ITEM 4 - EXTENSION OF FUNDING AGREEMENT FOR THE ROUND 3 LOCAL INFRASTRUCTURE RENEWAL SCHEME - WEST DAPTO ACCESS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION** –

- 1 The information contained in the report, relating to the variation of the LIRS borrowing program interest subsidy, be received.
- 2 Council approve the borrowing of an amount of \$5.5M at a fixed rate over an 8.25 year term with a quarterly repayment schedule.
- 3 Council's General Manager be delegated authority to negotiate appropriate loan terms in accordance with this report and resolution.
- 4 Authority be granted to affix the Common Seal of Council to the loan documents, LIRS (Round 3) 'Variation of Agreement' and Loan Interest Subsidy Variation and any other documents required to give effect to the loan agreement.

## ITEM 5 - IPART REVIEW OF THE LOCAL GOVERNMENT RATING SYSTEM

- 46 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Crasnich that Council endorse the Draft Submission (Attachment 2 of the report) as Council's response to the call for submissions from the IPART.

## ITEM 6 - FINANCIAL ASSISTANCE POLICY - LARGE CULTURAL GRANTS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council receive the report and note the successful recipients/projects (Attachment 1 of the report).

## DEPARTURE OF COUNCILLOR

Due to a prior disclosure of interest, Councillor Curran departed the meeting and was not present for the debate and voting on Item 7.

## ITEM 7 - TENDER T16/11 – CONSTRUCTION OF A SEA WALL AND ROCK WALL AT JUDBOOLEY PARADE, WINDANG

- 47 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Connor seconded Councillor Martin that –

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Dynamic Civil Pty Ltd for construction of a Sea wall and Rock Wall at Judbooley Parade, Windang, in the sum of \$499,270.00, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required, to give effect to this resolution.
- 4 Councillors receive a monthly report via the Information Folder, on the progress and full financial cost of the project.

**Variation** *The variation moved by Councillor Petty (the addition of Part 4) was accepted by the mover and seconder.*



## **ITEM 8 - TENDER T16/07 – LEASE OF THE MARKET STREET CAR PARK**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with Clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Secure Parking Australia Pty Ltd for the lease of the Market Street Car Park, in the sum of \$585,000.00 (GST Exclusive) plus outgoings.
- 2 Council delegate to the General Manager the authority to finalise and execute the agreement and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 9 - TENDER T15/26 – TELEPHONE INTERACTIVE VOICE RESPONSE (IVR) AND WEB PAYMENT SERVICES**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of the Commonwealth Bank for Telephone (IVR) and Web payment services, in the sum of \$72,033.44 per year for a two year contract with an option of one plus one, excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 10 - TENDER T16/12 – KEIRA CRICKET CLUB PAVILION AND AMENITIES**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Patterson Building Group Pty Ltd for the construction of the Keira Cricket Club Pavilion and Amenities project, in the sum of \$298,118.00 excluding GST.
- 2 Council delegate to the General Manager the authority to finalise and execute the contract and any other documentation required to give effect to this resolution.
- 3 Council grant authority for the use of the Common Seal of Council on the contract and any other documentation, should it be required to give effect to this resolution.

## **ITEM 11 - MARCH 2016 FINANCIALS**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

### **COUNCIL'S RESOLUTION –**

- 1 The report be received and noted.
- 2 Proposed changes in the capital works program be approved.

## **ITEM 12 - STATEMENT OF INVESTMENTS - MARCH 2016**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council receive the Statement of Investments for March 2016.

## **ITEM 13 - CITY OF WOLLONGONG TRAFFIC COMMITTEE - MINUTES OF MEETINGS HELD ON 13 APRIL AND 4 MAY 2016**

**48 COUNCIL'S RESOLUTION** – RESOLVED UNANIMOUSLY on the motion of Councillor Colacino seconded Councillor Crasnich that –

- 1 In accordance with the powers delegated to Council, the minutes and recommendations of the City of Wollongong Traffic Committee Meetings held on 13 April and 4 May 2016 in relation to Regulation of Traffic be adopted.
- 2 The Traffic Committee be requested to review constraints relating to the Council car park opposite North Wollongong Surf Club, with the intention of having the timed curfew removed from the area.

## **ITEM 14 - BI-MONTHLY TABLING OF RETURNS OF DISCLOSURES OF INTERESTS AND OTHER MATTERS**

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 40).

**COUNCIL'S RESOLUTION** – Council note the tabling of the Returns of Disclosures of Interest as required by Section 450A of the Local Government Act 1993.

## **THE MEETING CONCLUDED AT 7.01 PM**

Confirmed as a correct record of proceedings at the Ordinary Meeting of the Council of the City of Wollongong held on 30 May 2016.

---

Chairperson

## Review of Conduit Blockage Policy Summary Report

FINAL DRAFT





Level 2, 160 Clarence Street  
Sydney, NSW, 2000

Tel: (02) 9299 2855  
Fax: (02) 9262 6208  
Email: [wma@wmawater.com.au](mailto:wma@wmawater.com.au)  
Web: [www.wmawater.com.au](http://www.wmawater.com.au)

## REVIEW OF CONDUIT BLOCKAGE POLICY SUMMARY REPORT

### DRAFT

MAY 2016

<b>Project</b> Review of Conduit Blockage Policy Summary Report		<b>Project Number</b> 115040	
<b>Client</b> Wollongong City Council		<b>Client's Representative</b> Peter Garland Peter Nunn	
<b>Authors</b> Rhys Hardwick Jones Dr William Weeks Mark Babister		<b>Prepared by</b> TO BE SIGNED FOR FINAL REPORT	
<b>Date</b> 8 May 2016		<b>Verified by</b> TO BE SIGNED FOR FINAL REPORT	
Revision	Description	Distribution	Date
1	Draft	Authors Wollongong City Council	Feb 2016
2	Draft	Authors Wollongong City Council Targeted Consultation Groups	Mar 2016
3	Final Draft	Wollongong City Council	May 2016

# REVIEW OF CONDUIT BLOCKAGE POLICY SUMMARY REPORT

## TABLE OF CONTENTS

	PAGE
<b>FOREWORD .....</b>	<b>v</b>
<b>1. INTRODUCTION .....</b>	<b>6</b>
1.1. Overview .....	6
1.2. Scope of Review .....	6
1.3. Causes for the Review .....	7
1.4. Wollongong and Culvert / Bridge Blockage .....	7
<b>2. BACKGROUND .....</b>	<b>8</b>
2.1. Challenges for Predicting and Managing Blockage Risk .....	8
2.2. Uses of Design Flood Information .....	8
2.3. Differences between Visual and Hydraulic Blockage .....	9
2.4. Factors Contributing to Hydraulic Blockage .....	10
2.5. Other Flood Drainage Concepts .....	12
<b>3. EXISTING BLOCKAGE POLICY .....</b>	<b>14</b>
3.1. Initial Formulation .....	14
3.2. Relevant Developments in Assessing and Mitigating Flood Risk .....	14
3.2.1. General Guidance on Estimating Blockage .....	14
3.2.2. Probability neutrality. ....	15
3.2.3. Floodplain Management Developments .....	17
3.2.4. Computer Modelling Developments .....	17
3.3. Identified Refinements for the Blockage Policy .....	18
<b>4. REVIEW AND ANALYSIS OF AVAILABLE DATA .....</b>	<b>20</b>
4.1. Analysis of Historical Records .....	20
4.2. Blockage Inferred from Modelling Analysis .....	21
4.3. Probabilistic Modelling Analysis .....	22
4.4. Dealing with Uncertainty and Risk Management .....	26
<b>5. CONSULTATION .....</b>	<b>28</b>
<b>6. CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>31</b>
6.1. Recommendations .....	31
6.2. Objectives of the Blockage Policy .....	32
6.3. Recommended Revised Blockage Policy .....	33
<b>7. REFERENCES .....</b>	<b>37</b>

## **LIST OF TABLES**

Table 1: “Design” blockage factors.....	36
Table 2: “Risk Management” blockage factors .....	36

## **LIST OF DIAGRAMS**

Diagram 1: Fitted probability distribution for structures smaller than 3 m diagonal opening size	22
Diagram 2: Fitted probability distribution for structures from 3 m to 6 m diagonal opening size .	23
Diagram 3: Fitted probability distribution for structures larger than 6 m diagonal opening size ..	23
Diagram 4: Probability neutral blockage versus structure opening size from probabilistic modelling results .....	25
Diagram 5: Blockage Sensitivity Compared to Revised Design Blockage Values.....	27

## **LIST OF PHOTOGRAPHS**

Photo 1: Small bridges affected by varying levels of debris blockage.....	10
Photo 2: Examples of floating debris in Wollongong.....	11
Photo 3: Examples of sedimentation within culverts .....	11
Photo 4: Example of backwater flooding at a culvert (Swan Street).....	12

## FOREWORD

This report is one of two reports produced for the review:

1. A condensed summary report (this report), highlighting the key elements of the review. This report contains less industry-specific terminology. It is aimed at members of the broader community, and those interested in an overview of the work undertaken.
2. A full technical report documenting the concepts, data, and analysis relied upon in reaching the review outcomes. The technical report contains more industry-specific terminology, and is suitable for people working in the field of flood modelling and floodplain management, such as engineers, town planners and other experts. Members of the public can find more in-depth explanations of various aspects of the review in the full technical report if they are interested.

DRAFT



## 1. INTRODUCTION

### 1.1. Overview

Blockage of bridges, culverts and other stormwater conduits is a key consideration for Wollongong City Council (Council, or WCC) in fulfilling its floodplain management responsibilities. WCC was a leader in the field through its implementation of a Conduit Blockage Policy for flood assessment and development control purposes. The current policy was established in 2002, primarily in response to major flooding that occurred in the LGA in August 1998 and October 1999. The policy is implemented as part of Council's Development Control Plan (DCP). Wollongong City Council appointed a project team led by WMAwater, including independent consultant Dr Bill Weeks, to undertake an independent review of the policy.

The primary focus of this review was to:

- Undertake a comprehensive investigation of available historical records of blockage in the Wollongong area;
- Review the existing blockage policy implemented in the Wollongong DCP (WCC 2009a);
- Undertake detailed probabilistic modelling analysis of the available data;
- If appropriate, recommend an alternative policy based on robust technical analysis, and in line with best practice for design flood estimation, to the extent that the data allows.

### 1.2. Scope of Review

The overall objective was to review and if necessary provide recommended revisions to the WCC Conduit Blockage Policy, with regard to the following principles:

- The policy should be evidence based, relying on sound technical analysis using current best practice floodplain management techniques;
- The outcomes of the review should be explained clearly for all stakeholders, including detailed justification for any recommended changes; and
- The process should aim to obtain broad acceptance of any updated policy by all stakeholders.

This report provides a summary of the key issues and outcomes from the review. The report is laid out as follows:

- Section 1. Introduction and overview of the review project.
- Section 2. Provides background information about blockage, and developments in floodplain management and flood modelling relevant to the review.
- Section 3. Discussion about the current blockage policy.
- Section 4. Overview of WMAwater's review and analysis of available blockage data.
- Section 5. Summary of conclusions and recommendations arising from the review.

### 1.3. Causes for the Review

Council has recognised that a review of the existing blockage policy is appropriate, to ensure that the policy meets the current and future requirements of Council and the community in a fair and reasonable way, and is based on sound technical fundamentals. There are several key drivers which contribute to the need for a review, such as the following:

- Advancements in data techniques and modelling tools used for flood estimation and floodplain management – it is important that the policy can be implemented using industry standard practice.
- Development pressures – Wollongong faces significant development pressures for both “greenfield” urban release areas and infill development of existing urban areas. The policy must facilitate best practice flood risk management both for existing flood affected communities and future development areas.
- Broader industry guidelines – Guidelines for blockage have been released as part of the Project 11 work for the Australian Rainfall & Runoff revision (Weeks & Rigby 2015). It is appropriate to review whether any aspects of these guidelines should be incorporated into the Council policy.
- There are concerns with the current policy from parts of the engineering profession, development industry stakeholders, and community floodplain action groups.

There have been significant developments in the capability of industry flood modelling tools to address different aspects of flow behaviour in and around culverts and bridges. Furthermore, Council has accrued years of experience with the operation of the existing policy, and additional insight has been gathered from this experience. It is now an appropriate time to critically review its appropriateness for present and future use.

### 1.4. Wollongong and Culvert / Bridge Blockage

As far as the authors are aware, WCC was the first jurisdiction in Australia to introduce a floodplain management policy specifically related to culvert and bridge blockage. Comparable policies are not widespread in Australia and overseas, at least partly because of the difficulties in collecting and quantifying blockage data during or after floods.

There are several contributing factors why blockage is a major focus of floodplain management policy in Wollongong. The Illawarra escarpment causes orographic effects leading to relatively high extreme rainfall intensities. The LGA contains multiple parallel catchments running from the escarpment to the coast, and development has primarily occurred in the flatter lower parts of the catchment, leading to a relatively high proportion of flood prone land. Most of the upper catchment areas are forested, so there is a relatively high availability of debris. Furthermore, there are several major arterial roads and railway lines along the coast, aligned perpendicular to the flow direction in the majority of catchments. This results in a relatively high number of major bridge and culvert structures with high embankments crossing the floodplain, in close proximity to developed areas.

## 2. BACKGROUND

### 2.1. Challenges for Predicting and Managing Blockage Risk

Blockage of culverts and bridges can have severe consequences, potentially increasing the damage to property or risk to life associated with flooding in affected areas. However it is inherently difficult to include consideration of culvert blockage as part of a floodplain management framework. This difficulty arises for several reasons:

- The degree of blockage in a culvert and its effect on surrounding water levels is almost impossible to measure for short duration flash-flood events, due to the difficulty in getting qualified personnel and appropriate equipment on-site during the flood event;
- There are a lot of random factors that determine whether blockage occurs, and how severe it is, in any given flood event;
- The physical flow behaviour and turbulence around culvert inlets is complex, and blockage introduces additional complexities that can be different to represent in computer models;
- In some locations, peak flood levels can change dramatically (e.g. several metres) depending on the blockage assumption, so there can be severe consequences if the risk of blockage is not considered.

Due to the above factors, there is generally a lack of high quality data to quantify the historical effect of blockage on floodplains, particularly in urban areas. The uncertainty surrounding blockage makes it difficult to implement effective policies for its consideration.

One of the key recommendations of the review is to implement a data collection procedure for implementation immediately after future major flood events in Wollongong. The intent is to obtain additional comprehensive data relating specifically to blockage of culverts and bridges in the area. This data may be used for future review and refinement of the blockage policy for modelling flood behaviour and managing flood risk.

### 2.2. Uses of Design Flood Information

Flood modelling is used for a wide range of purposes. When flood modelling is used to quantify flood behaviour for a given probability – such as the 1% AEP (1% chance of being equalled or exceeded in any given year), this is referred to as design flood modelling.

Design flood modelling is used for a range of purposes including:

- Planning, such as land-use zoning and development control.
- Infrastructure design, such as sizing of stormwater pipes, culverts and bridge crossings.
- Design of buildings on land subject to flooding, such as appropriate floor levels and structural design.
- Transport and road safety.
- Home and business insurance, particularly as a result of an industry move towards full

insurance cover for flooding in the aftermath of the 2011 Queensland floods.

The main objective is to make a best estimate of flood risk. Being conservative by over-estimating flood risk does not necessarily produce beneficial results in the long term. Likewise, under-estimating flood risk, while potentially providing short term benefits, can produce adverse outcomes in the long term due to the ongoing costs inflicted by flooding. However there is inherent uncertainty in all flood risk estimates, and when the consequences of this uncertainty create large changes in flood levels (as is the case with blockage in some locations), it is far more challenging to achieve the right balance. This is particularly the case with development with a longer design life, such as residential construction.

If there is a low tolerance for flood damage, this should be designed for specifically by using larger (rarer) design floods. The typical design flood risk standard for most new residential development in NSW is the 1% AEP flood. The blockage policy therefore needs to result in the best estimate for the likelihood of occurrence for given flood levels (such as the 1% AEP), while still identifying locations where flood levels could change significantly based on the blockage assumption. At these locations, it is appropriate to apply caution in light of the uncertainty and the associated flooding consequences. This consideration of effects of uncertainty can then be used for risk management and planning decisions, such as setting floor levels for development on flood-prone land.

## 2.3. Differences between Visual and Hydraulic Blockage

The term “blockage” requires some clarification, as its definition can vary in different contexts. The quantification and measurement of blockage is not straightforward. When talking about the inside of a pipe or culvert, there are two main ways we can describe the amount of blockage:

- Visual blockage – the amount of blockage estimated from personal observations or photos, by estimating the size of the obstruction as a percentage of the total flow area. Unfortunately, this method provides relatively little insight into the effect of the blockage on flood behaviour. A dramatic looking “blockage” may have almost no influence on flood levels if the debris is highly porous, and the flow velocity is relatively low. Vegetation growing in front of a culvert can be knocked flat and provide little hindrance during a flood. Another common example is that post-flood photos often show a debris mat which would have floated during the flood then subsided into the waterway, and does not accurately reflect the blockage at the peak.
- Hydraulic blockage – more complex to quantify, this is based on the impact that blockage has on flood peak levels during a flood. It is essentially impossible to measure in most situations, because it requires a comparison against the unblocked culvert behaviour under exactly the same flow behaviour. Large flood-producing storms are relatively rare, and in flash flood environments it is extremely difficult to get qualified personnel to the site of flooding to take measurements, particularly at the peak of the event. As well, there are large variations from one event to another. Even if qualified personnel are present, there are usually more pressing concerns like assisting with protection of people and property from flood risk and damage.

Hydraulic blockage is the required parameter for the flood studies of concern to this report. It is important to recognise that the amount of hydraulic blockage that occurs in a flood can be significantly different from the visual blockage observed during or after a flood.

## 2.4. Factors Contributing to Hydraulic Blockage

Although there are difficulties in quantifying blockage, through photographs and direct observations we can develop a qualitative understanding of the general factors influencing blockage and how they play a role in Wollongong. The typical factors influencing blockage throughout Australia are described in the ARR Project 11 Research Report (Weeks and Rigby, 2015).

To summarise, the main factors for consideration are:

- characteristics of the culvert or bridge, such as its size, shape, orientation to the creek flow direction, etc.
- debris type, size and availability (e.g. vegetation, urban debris, building materials, cars, etc.);
- debris mobility and transportability (how easy it is for the debris to be washed into the creek to cause blockage);
- interactions with other culverts and bridges upstream and downstream;
- the way that the debris interacts with the culvert (e.g. does it float and become lodged against bridge piers in the top of the flow, or does it settle or become lodged inside a culvert?)
- other random factors such as wind speeds, which affect the amount of leaves and branches in the creek system.

Photo 1: Small bridges affected by varying levels of debris blockage



There are some local characteristics of particular relevance to Wollongong which are discussed in more detail in the full technical report (Section 2.2).



Photo 2: Examples of floating debris in Wollongong

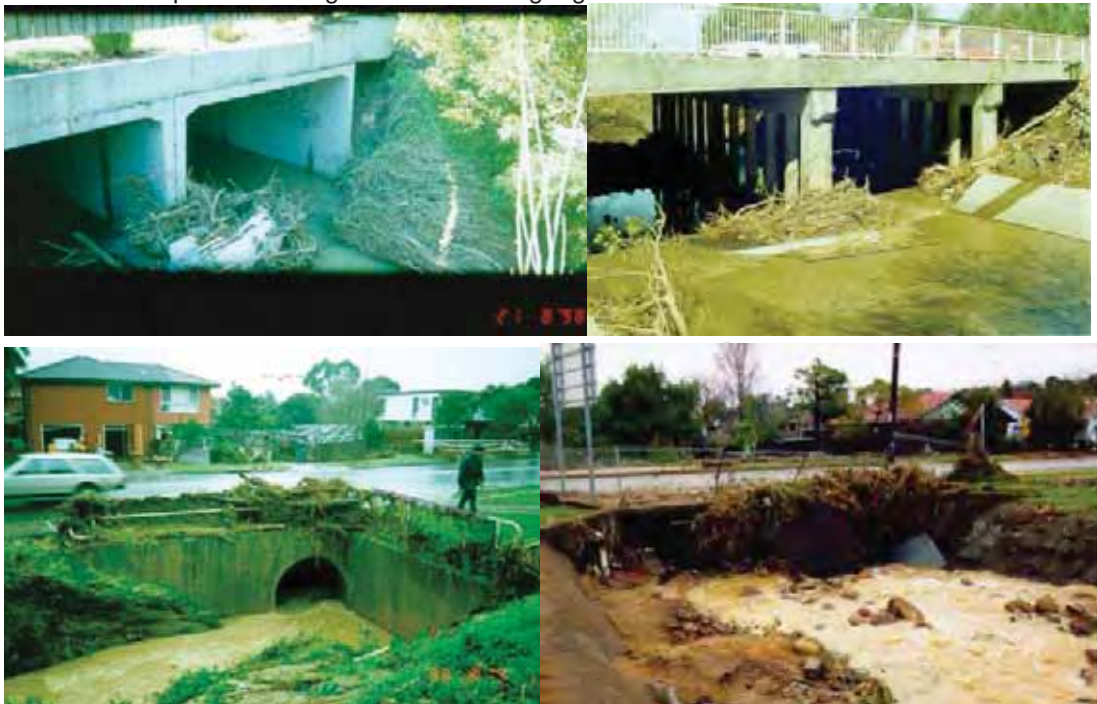


Photo 3: Examples of sedimentation within culverts



## 2.5. Other Flood Drainage Concepts

While the focus of the review is on blockage, it is important to recognise that there are several other factors which can influence flood behaviour. Some of these concepts tend to be less well understood by the wider public, particularly the ideas of “backwater,” and the principles which drive how urban drainage is designed (i.e. how big do the pipes and open channels need to be?). As found in the Newcastle storm of June 2007 (Vernon-Kidd *et. al.* 2010), people affected by flooding often attribute the cause of flooding to some sort of “blockage,” either of a culvert or an open channel, when other factors may be the dominant cause, such as high rainfall intensity causing runoff greater than the flow capacity of the drainage system.

It is important to emphasise that floods larger than the design capacity for drainage systems will occur, and overtopping of creeks and culverts can happen even without blockage. This was certainly the case in many locations in the August 1998 flood. The fact that a culvert overtops or unexpected places are flooded is not necessarily related to blockage. It may just be that the storm was more intense than any previously experienced by the observer at that location, or larger than the flood size used for design and planning.

Another crucial concept is backwater. Backwater refers to areas where the drainage of water from an area is held up by a downstream influence. In some cases this might be an obstruction (such as a road embankment) or another culvert further downstream, but backwater can also occur without the presence of any man-made obstruction. For example, where a smaller creek tributary flows into a much larger creek or lake (or the ocean), the water level in that receiving body may be high enough to flood back up into the tributary creek. This will prevent drainage of water from the tributary creek. Backwater conditions are characterised by little or no current (low velocities), and a low hydraulic gradient (a flat water surface).

Photo 4: Example of backwater flooding at a culvert (Swan Street)



If the water levels upstream and downstream of a culvert or bridge are very similar, and the water is moving very slowly or not at all, this is an indication that backwater is the controlling influence on the flood level. By definition, if levels upstream and downstream of a culvert are very similar, hydraulic blockage of the structure is low, and blockage is not a critical consideration for the culvert in that circumstance, even if there is significant debris such as silt

and vegetation present within the structure.

An example of backwater is shown in Photo 4, where water levels on the downstream side (left photo) are very similar to those on the upstream side (right photo), and the water velocity is very low (standing still).

These concepts are outlined in more detail in the full technical report (Section 2.3).

DRAFT



### **3. EXISTING BLOCKAGE POLICY**

#### **3.1. Initial Formulation**

The existing WCC policy arose primarily in response to widespread flooding that occurred in August 1998 throughout the Wollongong region, and also in October 1999 when severe flooding was more limited to the area around West Wollongong, Figtree and Unanderra. Council undertook a broad data collection exercise in response to these storms, not specifically focussed on blockage, but rather on collating information about flood levels, damages, and general flow behaviour in affected areas. As a result of this data collection, blockage was identified as having played a role in some of the observed flood behaviour. This was not just blockage of culverts and bridges with vegetation and urban debris, but also blockage of overtopping flow paths.

Due to the factors identified in Section 1.4, it was recognised that flood levels in some areas could vary significantly depending on the amount of blockage occurring at certain culverts or bridges. This was particularly true at major road and rail crossings, where the embankment across the floodplain is in some instances much higher than the top of the culvert passing underneath. It was also recognised that in some areas, flow diversions occurred and created flow paths which were unexpected.

The policy requires that flood modelling should assume bridge and culverts with a diagonal opening span less than 6 m should be assumed completely blocked, and the bottom 25% of the area of larger openings should be assumed blocked. Although there was significant uncertainty about the amount of blockage to apply, and whether this blockage would always occur to the same degree in subsequent floods, the policy as it was implemented has been effective in identifying and planning for flood risks at locations potentially sensitive to blockage.

However there have been several developments in industry practices for modelling, assessing, and planning for flood risk. There have also been developments in the way design flood modelling is used, for example within the insurance industry. In light of these developments, which are discussed below, it is appropriate to consider updating and refining the blockage policy to reflect current practices.

#### **3.2. Relevant Developments in Assessing and Mitigating Flood Risk**

##### **3.2.1. General Guidance on Estimating Blockage**

“Australian Rainfall and Runoff” (ARR) is a guidance document published by Engineers Australia, which outlines methods for estimating flood risk in Australia. A major revision of ARR is currently underway, and due for release in 2016. Detailed guidance has not been provided in previous editions of ARR, but preparation of the current revision has included investigations into implementation of blockage for design flood estimation.

These guidelines will be incorporated into the new edition of ARR when it is released, as part of Book 6 on Flood Hydraulics, and an outline of the key methodology is included in a guideline by Weeks and Rigby (2015).

The lack of coverage of blockage issues in the current edition of ARR led the committee responsible for upgrading Australian Rainfall and Runoff to form a project subcommittee to investigate and report on structure blockages, appropriate for conditions throughout Australia. Local and international literature reviews confirmed that little documented material or quantitative data was available on this subject, the most relevant being associated with the impact of blockages during flooding in Wollongong and Newcastle. Despite broad enquiry, only Wollongong City Council was found to have recorded blockage information after a major flood event and this information was largely based on debris levels and interviews. There were however many photographs provided of blockages that provided additional information on blockage mechanisms and extents in most states.

Generic comments on blockage are included in a number of other guidelines such as the Queensland Urban Drainage Manual, but these are inconsistent and not based on observations or data. Together with inputs from committee members, the available materials were used to develop guidelines for the assessment of likely blockage levels at culverts or small bridges in a design event and their impacts on flood hydraulics. These guidelines considered the type and quantum of debris available in the source area, the ability of floodwater to mobilise the debris into a stream and the transportability of that debris in the stream, in order to establish the debris potential at the target structure. This debris potential was then combined with details of the structure to estimate a design blockage level at that structure.

A preliminary release of the guidelines was tested on a range of catchments around Australia (in Queensland, New South Wales in Wollongong, Victoria and in Western Australia) and this demonstrated that the procedure could be applied consistently and resulted in blockage values that appeared reasonable for practitioners with relevant local experience.

The ARR guidelines therefore provide a generic approach to allow blockage to be estimated for any location in Australia. However the guidelines recommended that if there is any recorded history of blockage for a particular location, this history should be taken into account in the relevant hydraulic analysis (Section 4.3 of the guidelines).

The guidelines are designed to allow a probability neutral estimate of blockage that can be used for design flood estimation throughout Australia. However where local data are available, it is recognised that it is appropriate to develop more definitive guidance for blockage factors. The extensive data assessment undertaken for this review allows for a more detailed policy to be developed for Wollongong Council based on local catchment considerations.

### **3.2.2. Probability neutrality.**

One of the key concepts underpinning the blockage guidance introduced in the ARR revision is

“probability neutrality.”

It is typical for flood investigations to apply a rainfall-runoff model to a catchment to convert rainfall of a given probability (e.g. 1% AEP) into a runoff flow, expressed as volume per unit of time (typically cubic metres or litres per second). Further modelling, termed hydraulic modelling, is then utilised to convert this flow into water levels and velocities at specific locations of interest. A key assumption of the design flood process is that 1% AEP rainfall will provide design flood levels for a 1% AEP flood, 5% AEP rainfall will give 5% AEP flood levels, and so on. This is referred to as probability neutrality.

The basic premise behind this term is to address the following question: *when there is inherent variability in some aspect of flood behaviour such as blockage, should we assume the worst-case, best-case, or somewhere in the middle?* Probability neutrality is the industry term for saying that we should assume neutral conditions, not best or worst case, so that when we apply a 1% AEP rainfall to a catchment, we get a 1% AEP flood level surface throughout the catchment.

While superficially this seems a simple assumption, there are several uncertainties which can cause complications. There are a range of different model parameters, representing various physical processes, which are a part of the transfer from rainfall to flood discharge and then to flood levels. Examples include:

- the amount of rainfall that infiltrates into the soil, which depends on the soil characteristics and the amount of rainfall received in the previous weeks or even months;
- catchment characteristics that may change over time such as density of vegetation;
- joint flooding from different flood mechanisms, such as ocean inundation from tides and storm surge, or interactions between smaller tributary catchments and larger receiving catchments;
- characteristics of the design rainfall used, such as the duration and the changes in rainfall intensity throughout the storm;
- for dams and lakes, the amount of water stored at the start of flood-producing rains; and
- other localised factors that can vary between different floods, such as hydraulic blockage of a culvert or bridge.

Probability neutrality can only hold if “probability neutral” conditions are assumed for each of the above factors. In the face of uncertainty over what assumption to use, and there is often significant uncertainty, it is tempting to adopt a worst-case assumption for one or more of the processes involved in flooding. This approach however will lead to the predicted flood levels having a lower AEP than the design rainfall (i.e. the 1% AEP rainfall will produce flood levels greater than the true 1% AEP flood level at a given location).

For example, it is possible that a given site, the following combinations of factors could produce the local 1% AEP peak design flood level:

- Very severe blockage (complete blockage), with less intense rainfall (say the 2% AEP

rainfall);

- No blockage at all, with more intense rainfall (say the 0.2% AEP rainfall);
- 1% AEP rainfall, with “probability neutral” blockage.

For design flood assessment therefore, the analysis should include the blockage condition that produces the flood level that matches the rainfall AEP. Actual blockage levels can vary greatly from event to event with a potential spread from all clear to completely blocked, even in storms of comparable rainfall intensity. Catchment conditions and pure random chance are major factors in determining blockage levels in an actual event. As with other similar aspects of design flood estimation, such as losses, each individual historical flood may have quite different amounts of blockage compared to the design event.

The challenge is to determine what the “probability neutral” blockage should be for various culverts. The technical analysis undertaken as part of this review, and documented in the full technical report, was designed to address this challenge.

### **3.2.3. Floodplain Management Developments**

In 1986 the NSW Government released the first Floodplain Development Manual (FDM) to assist consent authorities in managing flood liable land. The 1986 manual was successful in overcoming the sterilisation of floodplains resulting from “rigorous planning controls introduced in the 1977 Environment and Planning Circular No. 15” (NSW Government, 2005).

Further refinements were introduced to a revised version of the manual in 2001, around the time the Wollongong blockage policy was developed, and further updates to clarify intent were introduced in the most recent version, published in 2005.

The 2001 and 2005 versions in particular increased emphasis on the need to consider flood sizes up to and including the Probable Maximum Flood (PMF), and to manage local overland flooding in a similar manner to riverine flooding. In some regards these updates were designed to identify similar risks to those targeted by the Wollongong blockage policy, such as overland flow path diversions observed in the August 1998 events.

Current floodplain management practice has evolved further with the widespread use of 2D modelling techniques (see below), which has resulted in some practical changes to the way the framework from the FDM is implemented. It is appropriate that the blockage policy should be revised to reflect these developments.

### **3.2.4. Computer Modelling Developments**

At the time the blockage policy was developed and implemented (between 2000 and 2002), the available computational tools for modelling flooding had limited capability to represent some of the complexities of culvert and bridge blockage. The one-dimensional (1D) models primarily in use at the time required the modeller to define the flow paths, leading to particular difficulties in

identifying unexpected flow diversions resulting from blockage of overland flow paths. The policy as it was formulated enabled this issue to be addressed by forcing consideration of alternative flow paths if a culvert or its immediate overtopping point were blocked.

Modern computer modelling tools have more advanced features for modelling different aspects of culverts and bridges and their interaction with flow paths near the structures. One major advance is the common use of two-dimensional models (2D), and the widespread availability of aerial survey data. These models are capable of identifying flow breakouts and flow path diversions without a requirement for the modeller to define them in advance. 2D models can also resolve the contraction and expansion of flows through bridges and around bends, where simplifying assumptions were required with 1D models. Current industry standard models also have features to model the obstruction caused by railings and fences across the bridge or culvert, or flows around buildings and other obstructions, in more detail than was previously possible.

The relevance of these modelling advances is that it enables the blockage policy to be refined to focus solely on the likelihood and effect of debris blockage of the structure. The effect of road or rail embankments, noise barriers, kerbs, and other structural features of waterway crossings can be modelled separately from blockage considerations.

### 3.3. Identified Refinements for the Blockage Policy

While the existing policy has been effective in identifying and managing flood risks at locations potentially sensitive to blockage, it uses a relatively broad-brush approach. There is scope for refinement of the policy based on the detailed probabilistic analysis of blockage data undertaken as part of this review.

The recommended revised policy, which is outlined in full in Section 6.3, is based on the following updates:

- Clarification of policy wording – Some elements of the policy require rewording to clarify the intent, and improve consistency with current modelling and design practice.
- Refinement of culvert and bridge size categories – additional categories are required, beyond the current division of structures into two categories based on a diagonal opening size of 6 m. The expense of handling and constructing culverts with a 6 m diagonal dimension makes the provision of such structures unfeasible for the majority of local government or private developments, and would typically only apply for larger state government infrastructure like major roads and railways.
- Revised blockage factors – recommended revisions to the design blockage factors have been developed based on the data analysis and modelling undertaken for this review. These updated factors are to be applied for most design flood modelling purposes, such as:
  - infrastructure design,
  - assessing changes to flood behaviour resulting from proposed development ,
  - assessing the benefit of proposed flood mitigation works,

- estimating flood damages, and
  - assessing flood risk for insurance purposes.
- “Risk Management” blockage factors – to account for uncertainty, higher blockage factors are recommended to determine:
  - Flood Planning Levels (FPLs), such as floor levels for new development.
  - Determining the Flood Planning Area (FPA) identifying land subject to floodplain related development controls.
  - Delineating the Flood Risk Precincts (FRPs) in accordance with Council’s DCP definition.

DRAFT

## 4. REVIEW AND ANALYSIS OF AVAILABLE DATA

### 4.1. Analysis of Historical Records

The main new contributions of this review are two-fold:

1. Development of a comprehensive database of historical flood photographs related to culvert or bridge blockage. This database, which is supplied in full in Appendix B of the full technical report, contains over 130 hydraulic blockage estimates from photographs for a range of locations and events.
2. This sample was used to estimate a probability distribution for the blockage likely to occur at a hydraulic structure of a given size. A stochastic modelling analysis was completed at twenty example locations throughout the Wollongong LGA, to investigate the joint probability of rainfall AEP and blockage likelihood. The analysis involved synthesis of over 1,000 storm event and blockage combinations for each site, and used hydraulic model results to determine the outcomes for flood level upstream of the structure. This analysis was used to determine appropriate design blockage factors aimed at providing a probability neutral outcome for design flood estimation.

The blockage estimates in Appendix B of the full technical report are based on the visual information available from the photographs, and therefore have a high level of uncertainty since post-flood visual blockage and hydraulic blockage during the event can differ significantly. However the framework developed provides a robust methodology for future refinements of policy blockage factors, if new blockage data is obtained. From this process, we have estimated historical blockage for over 130 structures, covering a range of different structure types, locations, and flood events (except it is mostly the 1998 event).

The logic and justification of the analysis of the photos has been clearly described to allow alternative interpretations. A logical process for reaching the conclusions adopted from the review is also provided in the report. On a case by case basis, different technical specialists are likely to interpret some of the photographs differently. It is intended that transparency about uncertainties in the process should provide incentive for future data collection to improve collective knowledge and understanding.

In estimating the average hydraulic blockage, it is necessary to rely on the data available. It is also essential that any analysis of historical data includes sites where no blockage was observed, not just the problematic sites. The number of “no blockages” has similar if not more influence than the relatively small number of sites that did block to some degree. This is investigated in the statistical analysis of the data provided in the full technical report.

The review has found that some of the original blockage records from the August 1998 floods appear to be over-estimated for locations where photographic evidence is available. This may have been an interpretation issue – the original database identified locations where blockage may have played a role and then a value of 100% blockage was assigned at a later date, where investigation of the photographs now available indicates there was not 100% *hydraulic*



blockage. It is also noted that in some cases it is not known whether clearing of the culvert took place between the end of the flood and the photograph being taken.

There is evidence that blockage is less of an issue for small AEP events, due to reduced mobilisation of debris from overbank flow, and as there are simply fewer photographs of blockage available from these events, suggesting there were less blockages to take photographs of. There have been numerous smaller floods than August 1998 in Wollongong in the last ten years, when portable digital cameras have been readily available, and to some degree it should be assumed that if there was serious and wide ranging evidence of blockage from these events there would be more photographic evidence.

The dataset does not indicate conclusive correlations between hydraulic blockage and other factors such as catchment location, debris type/availability, land-use etc. However there are some examples of specific locations that are highly prone to repeated blockage, and these are often smaller structures in steeper areas with significant vegetation upstream.

Additional details of the historical blockage analysis are discussed in Section 5 of the full technical report.

This dataset has been an important part of this review, and the estimated blockage values have been used in the analysis discussed below.

## **4.2. Blockage Inferred from Modelling Analysis**

Apart from observations during or after the event, another source of information for estimating historical blockage is from computer models. The general approach, which forms part of a process known as model calibration, is to:

1. Measure the flood level reached near the culvert, preferably on both upstream and downstream sides (flood marks);
2. Model the storm using hydrological and hydraulic models of the catchment, with input rainfall taken from nearby rainfall stations;
3. Determine appropriate model parameters that produce a reasonable fit to flood level marks elsewhere in the catchment;
4. If the flood level at the structure does not match using the catchment-wide modelling parameters, assume some level of blockage that produces a closer match to the observed flood levels.

A significant limitation of this process is that often there are other aspects of the flow behaviour near the culvert which are difficult to model (due to the complexity of the physics involved), and a blockage factor is often used to encompass a range of local flow effects which are also difficult to quantify. For example, the following flow effects are often lumped in with blockage for the purposes of model calibration:

- Energy losses from bends immediately upstream of the culvert, which are otherwise not accounted for by 1D modelling schemes (even in 2D models, the channel and

culvert/bridge will often be modelled using a 1D scheme).

- Energy losses from drag and vertical turbulence induced by flow reaching the top of a culvert, overtopping the embankment, and obstructions from handrails and fences above the culvert. Such losses are generally included in model formulations for bridges over natural channels, but not necessarily for precast concrete pipe and box culverts, which are often modelled using different techniques.
- Energy losses from turbulence flow contraction and expansion at the culvert inlet/outlet. 2D schemes can inherently represent this behaviour better than 1D schemes, but both schemes usually require detailed attention to estimate parameters based on the characteristics of a particular bridge or culvert.

While model calibration results were found to provide some indication of where blockage may have played a role in historical flood behaviour, the results did not provide insight into the quantitative probability of blockage required to complete the probabilistic analysis as part of this review. Where photographic evidence is available, the blockage values “back-calculated” from model calibration were found to be inconclusive. The values adopted do not provide insight into the underlying likelihood of structure blockage throughout the region.

### 4.3. Probabilistic Modelling Analysis

WMAwater explored possible statistical distributions that could be fitted to the blockage dataset developed as part of the review and discussed above, with the complete description provided in the technical report. The fitted distribution (red line) compared to the sample distribution (orange bars) is shown in Diagram 1 to Diagram 3.

Diagram 1: Fitted probability distribution for structures smaller than 3 m diagonal opening size

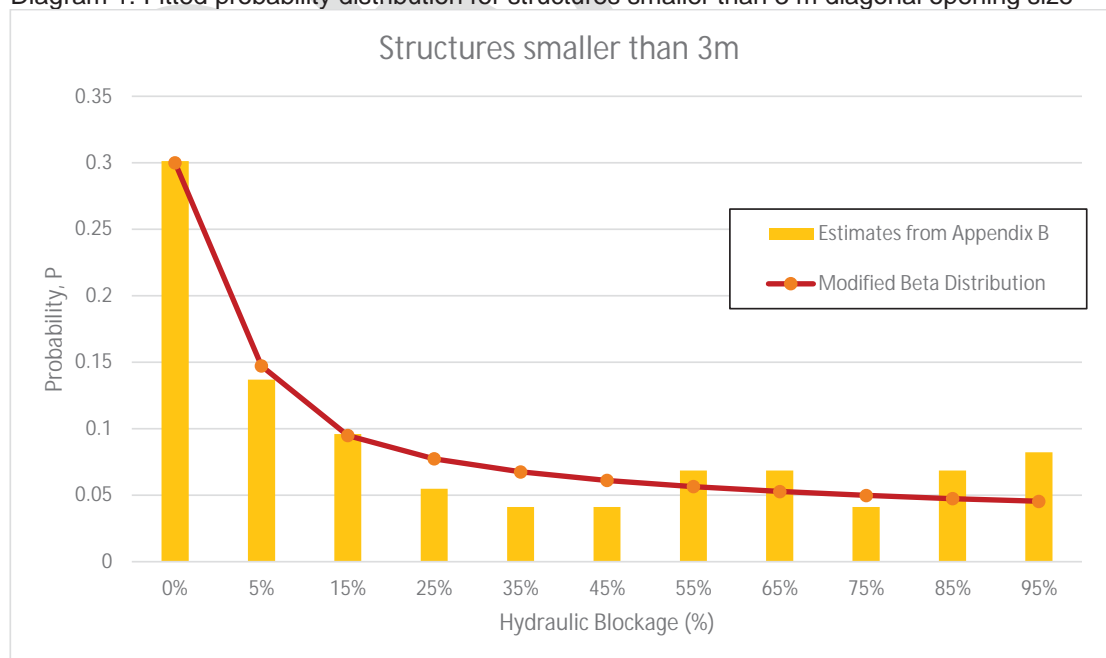


Diagram 2: Fitted probability distribution for structures from 3 m to 6 m diagonal opening size

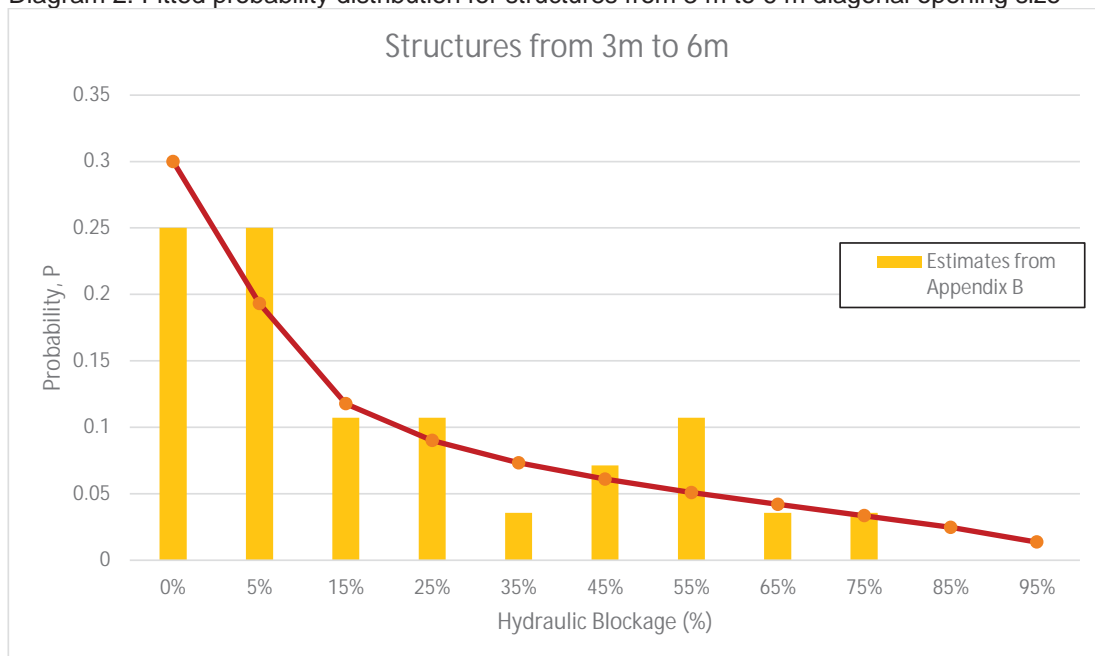
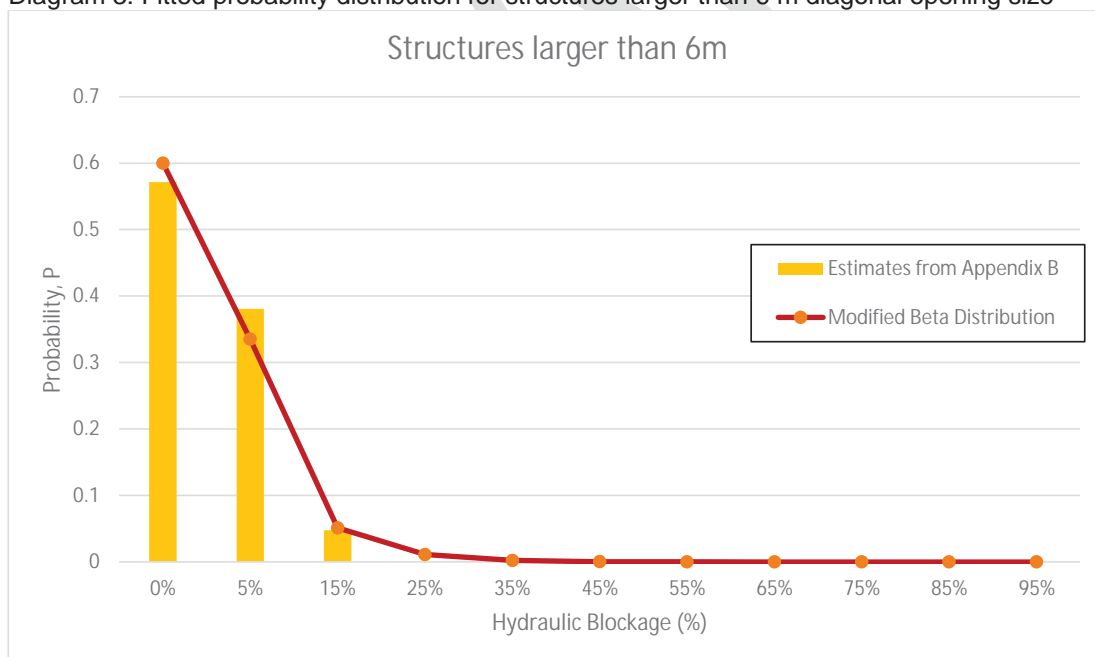


Diagram 3: Fitted probability distribution for structures larger than 6 m diagonal opening size



These fitted distributions were used to undertake probabilistic modelling to understand the interactions between rainfall probability and blockage probability in producing a flood level of a given probability. The modelling, which was completed for a range of sample locations within Wollongong, is described in the following sections.

It is possible for the same flood level to be produced by different combinations of rainfall and blockage. For example, the 1% AEP flood level might be produced by the combination of:

- 5% AEP rainfall and 90% blockage;
- 0.5% AEP rainfall and 0% blockage; or
- 1% AEP rainfall and 30% blockage.

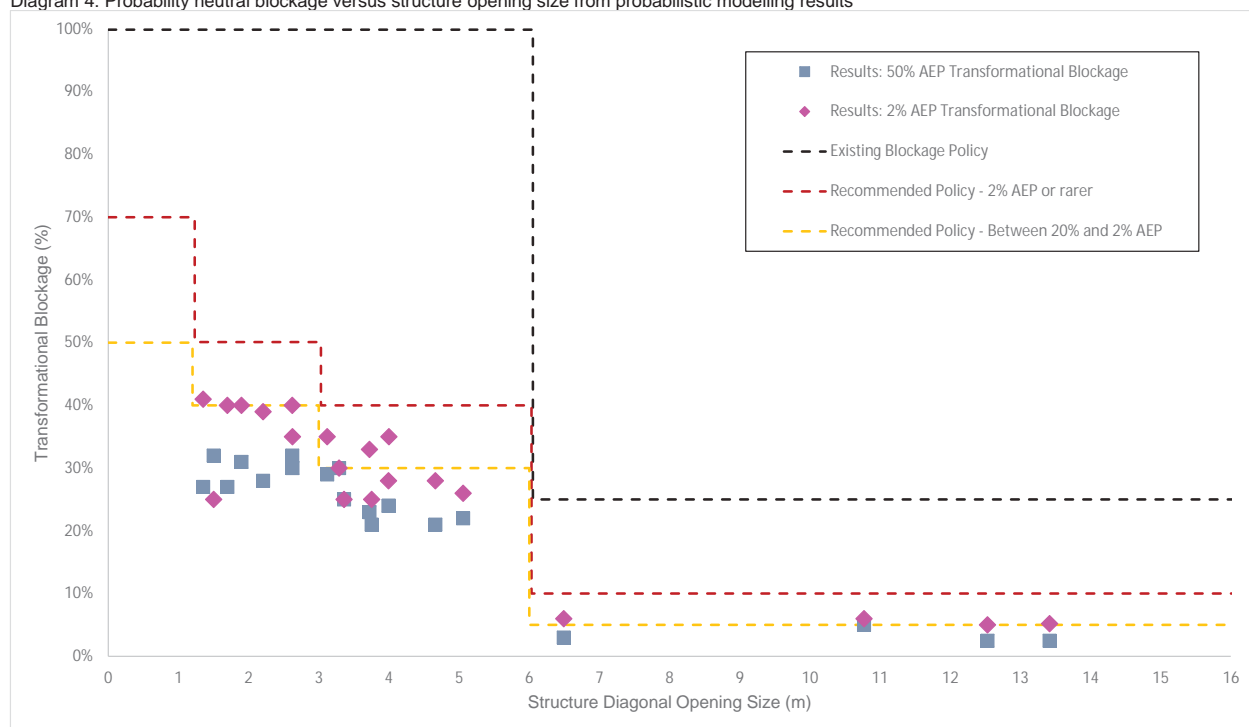
The purpose of the modelling was to determine the “probability neutral blockage” – i.e. the blockage that when combined with the 1% AEP rainfall, will produce the 1% AEP flood level at a given location. This blockage would be 30% in the hypothetical example above, but will vary for different sites depending on a range of factors. The modelling undertaken for this report incorporates thousands of these potential combinations at several example sites to identify the probability neutral blockage.

The probabilistic modelling assessment was completed for 20 locations. These locations were chosen to give a representative sample for a range of different catchments, structure sizes, land use, catchment slope, position within the catchment, and other factors. The outcomes of the modelling were used to derive the blockage factors presented in the recommended policy revisions.

Note that this full probabilistic analysis would not be required to be repeated as part of regular design flood modelling. This would be impractical as it requires consideration of thousands of different rainfall/blockage combinations to be assessed at every structure. However this analysis framework could be applied in other regions to develop similar policies, if sufficient blockage data was collected in those regions.

A summary of the “probability neutral” blockage results, for all 20 sites analysed, is plotted against structure opening size on Diagram 4. Full discussion of the modelling is provided in Section 7 of the full technical report.

Diagram 4: Probability neutral blockage versus structure opening size from probabilistic modelling results



The proposed probability neutral design blockage factors for the revised blockage policy were based on these results (see Section 6.3).

#### 4.4. Dealing with Uncertainty and Risk Management

The blockage factors developed from the modelling analysis are a “best estimate” for the probability neutral blockages. However, in light of the uncertainty surrounding the underlying historical blockage data, it is appropriate to undertake sensitivity analysis on the blockage assumptions. In those areas where changes in the blockage assumption make a very large difference to flood levels or there are other severe consequences, it is appropriate to adopt a factor of safety. In floodplain management for setting levels for development, this is referred to as freeboard.

This applies equally for other uncertainties in the flood estimation process such as rainfall intensities, joint probability of other catchment flooding, changes in channel condition (such as vegetation growth), and future changes in climate. As with these other uncertainties, the most appropriate way to address sites where there are high consequences associated with possible inaccuracy of flood estimates, is through local factors of safety (typically applied as freeboard for flood levels) for the purpose at hand.

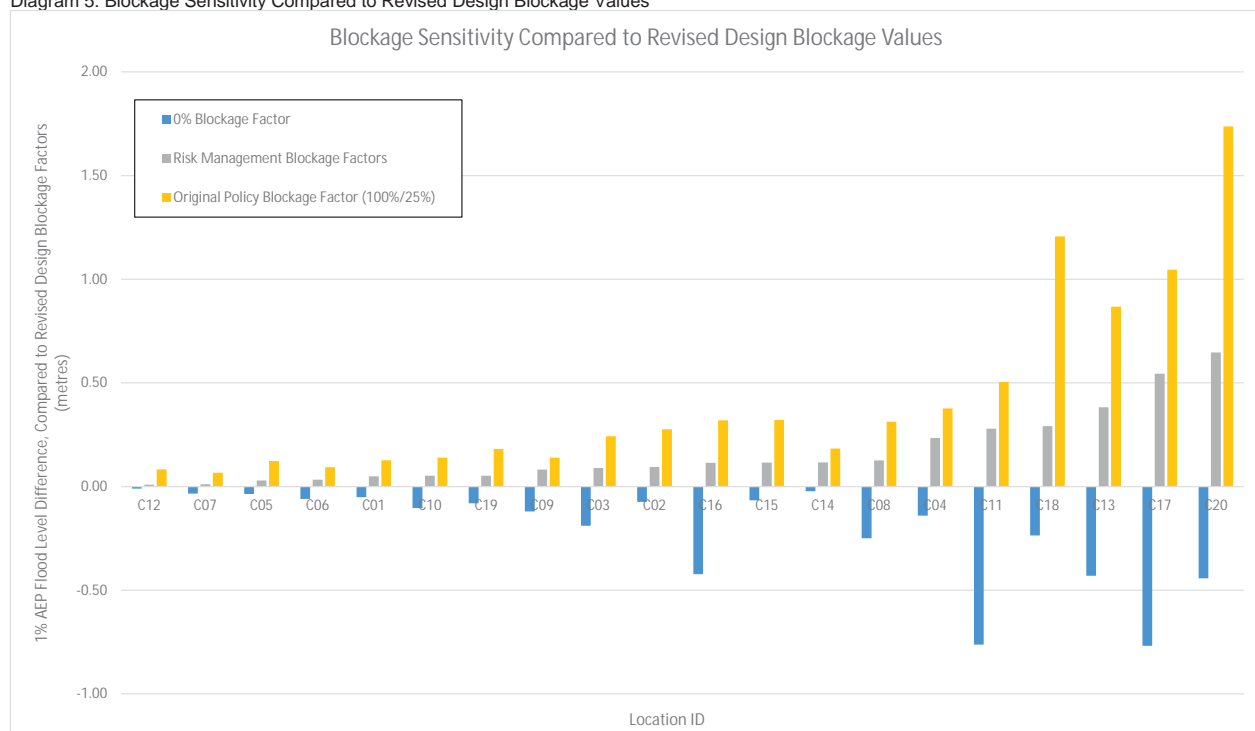
To address this, it is proposed to run an alternative set of blockage factors for applications involving flood risk management, such as setting development floor levels. In many locations these factors are expected to make little difference to the peak flood level (i.e. less than 0.1 m or 0.2 m, which would typically be accommodated as part of existing freeboard allowances). The proposed “risk management” blockage factors are outlined in Section 6.3. These blockage factors are consistent with an increase of approximately one standard deviation from the blockage probability distributions (see Diagram 1 to Diagram 3). This corresponds to the following increase in the blockage factor above the probability neutral values. Definitions of each class are given in Section 6.3.

- 25% increase for Class 1 and 2 structures;
- 20% increase for Class 3 structures;
- 5% increase for Class 4 structures.

Diagram 5 shows the variation in flood levels produced by various proposed blockage factors at each of the 20 sites where detailed analysis was undertaken. The base case is the proposed probability neutral design blockage factors. The bars show the increase or decrease in flood level resulting from higher or lower blockage assumptions.

It can be seen for the majority of locations, the variation between the proposed design and “risk management” factors is relatively small (less than 0.2 m). In two cases it is over 0.5 m. It should be noted that these more sensitive locations are over-represented in the sample of sites selected for analysis. It is expected that for most culverts in the LGA, the difference in flood levels between the design and risk management scenarios will be relatively small.

Diagram 5: Blockage Sensitivity Compared to Revised Design Blockage Values





## 5. CONSULTATION

WMAwater prepared draft reports (a summary report and full technical report) summarising the outcomes of the review and recommending a revised blockage policy for implementation. A briefing was provided for Wollongong City Councillors, and two targeted consultation workshops were conducted where the outcomes were presented by the review authors, and participants were provided with copies of the reports. The workshops were targeted at the following groups:

- A joint session of Floodplain Management Committees for various catchment in Wollongong; and
- An industry stakeholder workshop involving various practitioners of development in Wollongong, including flood modelling consultants, planners, developers, and Council staff involved in DA assessment.

Participants in the workshops were encouraged to provide submissions with feedback on the draft review outcomes. Wollongong City Council collated the submissions and provided them to WMAwater. The received submissions are included in Appendix E of the full technical report, with a table listing each submission, a summary of the main issues raised in each submission, recommendations or suggestions provided in the submission, and a response by the review authors.

There were some issues which were raised in several submissions, and which led to some adjustments to the recommended revised policy. A summary of these issues is provided in Table A below.

Table A: Summary of Main Issues Raised in Consultation Process

Issue Raised	Response
Several submissions expressed concern that the specification of two sets of blockage factors ("design" and "risk management") would cause confusion and complexity. The submissions generally requested additional clarification about the application of these factors.	<p>WMAwater updated the recommended policy text to make it clearer that the "design" factors, which are the estimated probability neutral blockage arising from the analysis, should be used for most flood modelling tasks. The "risk management" factors are only for "high regret" planning decisions, such as setting levels and of new development, to account for uncertainty in the blockage factors, essentially like an extra freeboard component.</p> <p>Therefore, the "risk management" factors should primarily be used to set FPLs, and for structural design of portions of new buildings below the FPL. There are follow on consequences from this that the boundary between Medium and Low Flood Risk Precincts is essentially set by where the FPL is. The High Risk Precinct boundary is set by hazard categorisation, for which "design" blockage factors should be used.</p>

Issue Raised	Response
	<p>With regards to assessing impacts of new development on existing flood behaviour, the recommended approach (using "design" blockage factors) is consistent with standard floodplain management practice, and current practice by Council. Current practice does not require development to assess the impact on the FPL/FPA of neighbouring development, only on the design flood levels/velocities. For example, if a development has a small impact within the creek channel, it may be approved, even if it does "use up" some of the freeboard that adjacent dwellings have above the design flood level. The NSW Floodplain Development Manual is clear that that one of the purposes of freeboard is for "the cumulative effect of subsequent infill development of existing zoned land." (refer to Section K5 of the FDM)</p>
<p>Submissions from both industry representatives indicated that the compulsory requirement for debris control structures would be too onerous, and would lead to unnecessary expenditure in many cases. Submissions from Council suggested that the wording be changed to allow some discretion on the part of Council.</p>	<p>WMAwater agrees that due to the localised factors influencing the design and effectiveness of debris control measures, their use should be encouraged but based on assessment of individual circumstances. It important to provide some incentive to install such devices where appropriate, which may potentially be achieved by reduction of localised blockage factors in some instances..</p> <p>The recommended policy was revised to be less prescriptive about debris control structure requirements. The revised wording allows some flexibility on Councils part to assess these requirements.</p>
<p>Some submissions identified issues about equivalency between treatment of box culverts and pipes, and inconsistency between box culverts and bridge structures.</p>	<p>The classification of culverts nad bridges in the recommended policy was simplified and clarified, to be more consistent between different types of culverts and with dimensions of commercially available culvert structures. The key feature of the classifications, the primary opening size, did not change significantly and is in line with the underlying data for our analysis.</p>
<p>Some submissions expressed a preference for a more flexible policy approach, whereby different blockage factors could be assessed for individual structures based on at-site observations.</p>	<p>While there would be some advantages to a flexible policy framework, there would also be significant drawbacks. Applying a completely flexible system and requiring a site-specific assessment for every development application could lead to an ad-hoc approach where neighbouring developments are based on different assumptions. Given the sheer number of structures to which the policy applies within</p>

Issue Raised	Response
	<p>the Wollongong LGA, there are also advantages to a fixed assessment approach, in that there is more certainty about the requirements for those wishing to lodge development applications.</p> <p>It should also be noted that the ARR guidelines are not a blockage "policy," they are a qualitative set of criteria for use in areas where no local historical blockage data are available. The actual factors which are derived from the use of the guidelines, while based on a logical process, do not have any quantitative analysis in their development. The analysis undertaken on Wollongong did not identify strong spatial correlations which would support localised modifications of the blockage factors.</p> <p>There are trade-offs between a completely flexible system and a more prescriptive framework. WMAwater believes the factors presented provide a pragmatic approach that will simplify the assessment of blockage for design flood modelling in the Wollongong LGA, and lead to improved certainty for developers and Council for planning development in the floodplain.</p>
Some submissions provided alternative blockage estimates to those prepared by WMAwater for the photographs in Appendix B.	Changes to a relative minority of the locations analysed (e.g. 10%) does not have a significant effect on the overall outcomes of the probabilistic modelling analysis. The key input assumption for the analysis is the "blockage likelihood" distribution developed for each group of structure sizes. This distribution was modified slightly for the final draft report for the 3 m to 6 m opening size, but the modifications did not change the outcomes or the recommended design blockage factors.

## 6. CONCLUSIONS AND RECOMMENDATIONS

### 6.1. Recommendations

- 1) Based on the outcomes of the policy review, data compilation and probabilistic modelling analysis, it is recommended that Council's blockage policy be revised. A full recommended replacement for the relevant section of the DCP is provided in Section 6.3 below.
- 2) The review identified significant uncertainties relating to the blockage data collected in the aftermath of the August 1998 flood event. The modelling analysis completed as part of the review and the blockage factors developed for the revised policy are heavily reliant on re-interpretation of available photographic records from the August 1998 flooding. Additional data is required to increase confidence in the policy blockage factors. It is recommended that Council implement a comprehensive blockage data collection procedure, which can be implemented immediately following future major flood events. The procedure should be designed to:
  - a. Collect photographic records of culverts and bridges as soon after flooding as possible, with shots taken looking directly into the culvert barrels from both upstream and downstream, as well as other angles.
  - b. Survey maximum flood levels (where available, e.g. from debris marks) upstream and downstream of the culvert.
  - c. Collect from all culverts within a particular area, not just those where blockage is perceived to have occurred. This is vital to improve the understanding of the underlying probability of blockage occurring.
  - d. Utilise handheld GPS receivers to record the coordinates of photographs in the database, so that spatial analysis can be undertaken.
- 3) The blockage policy should be subject to periodic future review, particularly after any future extreme storms if additional data on blockage has been collected.
- 4) In light of the lack of experimental understanding about blockage mechanisms, further research involving physical modelling (e.g. Kramer et. al. 2016) is encouraged. This recommendation is to the broader flood modelling industry, not Council specifically.

## 6.2. Objectives of the Blockage Policy

A revised policy has been developed according to the following over-arching objectives. The policy should:

- be based on scientific principles of observation and sound technical analysis, as far as the limitations allowed by the available data;
- be clearly communicated, to minimise conflict arising from alternative interpretation;
- be consistent with design flood estimation principles outlined in the ARR revision, particularly probability neutrality;
- be consistent with over-arching principles of floodplain management as defined in the NSW Floodplain Development Manual, e.g. that use of the floodplain should be compatible with the risk;
- be readily implemented using industry standard hydraulic modelling techniques;
- provide appropriate consideration of a wide range of applicable scenarios (e.g. major highway crossings, small private driveways, and other waterway crossings);
- provide incentives to mitigate serious blockage risk where appropriate (i.e. high likelihood of blockage combined with major consequences); and
- be able to be readily updated in response to new information from additional data collected following a major flood event, or from improved modelling techniques.

### 6.3. Recommended Revised Blockage Policy

The following slight change is proposed to clarify Section 4.3 of Chapter E14 of the Wollongong DCP:

*For trunk stormwater systems, which include open channels, large conduits and overland flow-paths, flood behaviour up to the PMF event should be investigated to estimate the full extent of overland flow paths and potential flow diversions.*

The following is recommended as a replacement for Section 10.3.2 of Chapter E14 of the Wollongong DCP:

1. Applicability of this section
  - a) The blockage policy applies to all watercourses including creeks, floodway and other trunk drainage systems within the City of Wollongong with the exception of the minor system as defined in the Introduction to this chapter of the DCP. It does not apply to pit blockage. Pit blockage considerations are set out in Section 7.2. It does not apply to pipes where the only upstream entry points are from kerb/gutter stormwater inlets (e.g. the minor system).
2. General
  - a) Historical evidence indicates a reasonable likelihood of partial blockage of structures located along watercourses during major flooding.
3. Application of Different Blockage Factors
  - a) The “Design” blockage factors in Table 1 are to be applied to structures across all watercourses for all design flood modelling purposes except those listed in 3(b) below. These applications include:
    - Estimation of design flood levels, velocities, and depths for flood studies
    - Flood hazard and hydraulic categories, including delineation of the High Flood Risk Precinct,
    - Infrastructure design,
    - Structural design of proposed development,
    - Impact assessment of proposed development,
    - Assessing the benefit of proposed flood mitigation works,
    - Estimating flood damages,
    - Assessment of risk to life and evacuation considerations, and
    - All other design flood estimation tasks except those listed in 3(b) below.
  - b) The “Risk Management” blockage factors in Table 2 are to be used for the following applications:
    - Setting Flood Planning Levels (FPLs), such as floor levels for new development;
    - Delineating the Medium and Low Flood Risk Precincts..

#### 4. Peak Flood Level Envelopes

- a) For “Design” applications, flooding is to be assessed using the following two scenarios, and an “envelope” of the maximums from both scenarios is to be used:
  - No blockage; and
  - “Design” blockage factors.
- b) For “Risk Management” applications (see clause 3(b) above), flooding is to be assessed using the following two scenarios, and an “envelope” of the maximums from both scenarios is to be used:
  - No blockage; and
  - “Risk Management” blockage factors
- c) Additional scenarios requiring mixing of various combinations of blockage (e.g. no blockage at some culverts, partial blockage at other culverts) are not generally required.

#### 5. Overtopping and Cross-Catchment Flow Diversion Investigation.

- a) Where flows exceed the capacity of the structure (applying the relevant blockage factor), flood modelling or other calculations should be undertaken to identify the overtopping flow behaviour. The modelling or calculations must be sufficient to identify where flows will return into the watercourse downstream of the structure, and whether flow will be diverted along other overland flow paths.
- b) Modelling or other calculations must be sufficient to identify whether cross-catchment flows from other watercourses need to be considered at the site of interest.

#### 6. Provision of Debris Control Structures

- a) The provision of debris control structures at new culverts or bridges is encouraged, particularly at locations with a high sensitivity to blockage or severe consequences of blockage (such as detention basin outlets).
- b) New bridges and culverts will generally require a debris control structure, with suitable access for maintenance, for instance concrete aprons and access paths. Development applications may be accompanied by an assessment of the merits of providing debris control structures, in which case Council may determine at its discretion whether such a structure is not required.
- c) A reduced blockage factor may be applicable for structures with debris control devices, subject to an assessment being provided demonstrating the long-term effectiveness of the structure. The reduced “design” blockage factor is to be at the discretion of Council.
- d) Existing or proposed debris control structures are to be included in the design flood calculations, using parameters for an appropriate consideration of the obstruction caused by the unblocked device, as well as a reasonable assumption of debris blockage that will occur during a flood. This will typically involve both energy loss parameters and modelling of the change in effective waterway area through the device.



## 7. Design of New Structures

- a) The structure is to be designed using the relevant “Design” blockage factor at every stage in the calculations;
- b) Impacts of the structure on existing flood behaviour (levels, velocity and hazard) are to be quantified for a range of flood events, including larger and smaller events than the design AEP, using “Design” blockage factors;
- c) Impacts are to be mitigated in accordance with the guidance specified in Chapter E13: Floodplain Management of the DCP; and
- d) All aspects of the proposed design with the potential to affect flow behaviour, including ancillary structures such as headwalls, handrails, safety barriers, noise walls, etc., are to be appropriately considered in the flood calculations.

## 8. Blockage Factors

- a) Culvert and bridge classifications are defined as follows:

**Class 1.** Pipes 1.2 m internal diameter or smaller. Box culverts or bridges with a diagonal opening less than 1.5 m, and a width or height less than 0.9 m.

**Class 2.** Pipes greater than 1.2 m internal diameter. Box culverts or bridges with a diagonal opening of more than or equal to 1.5 m, less than 3 m and minimum dimension of 0.9 m for both width and height.

**Class 3.** Box culverts or bridges with a diagonal opening of more than or equal to 3 m, less than 6 m, and a minimum dimension of 1.2 m for both width and height.

**Class 4.** Box culverts or bridges with a diagonal opening greater than or equal to 6 m, and a minimum dimension of 2.5 m for both width and height.

- b) For bridges, the dimension refer to the waterway opening between piers, not the total bridge dimensions. When determining the clearance of bridges above a natural channel, a reasonable level representing the long term channel bottom level should be used, using an averaged profile slope. For instance, it is not appropriate to propose localised excavation of the normal channel bed to increase the clearance above 3 m and satisfy the Class 4 requirements.
- c) The blockage factors are to be applied as a reduction in the effective flow area of the unblocked waterway of the structure. The blockage is to be a consistent effective reduction of the total flow area across the entire cross-section (that is, not bottom-up, top-down, or other selective partial blockage of the waterway area). This will typically involve a consistent reduction of the cross-section width (1D hydraulic models) or computational cell width (2D or 3D hydraulic models) representing the structure. For software packages which implement a blockage factor as a parameter for bridges or culverts, this parameter should be used.
- d) The blockage factors are to be applied to all culverts in the catchment that have the potential to influence the flow behaviour at the point of interest.
- e) The blockage factors are to be applied for all locations within the Wollongong LGA, regardless of current land use or other considerations such as creek slope.
- f) Fences, rails and barriers which are within the overtopping flow path of a



structure are to be modelled with appropriate energy losses (i.e. using the parameter  $K$  which represents the energy losses as a factor of dynamic head  $V^2/2g$ ), to reflect the influence of the rails on upstream flow. Energy losses resulting from the drag and turbulence induced by the form of the embankment between the culvert soffit (top) and the overtopping crest level are to be included where appropriate.

Table 1: “Design” blockage factors

Design AEP	Bridge / Culvert Classification				Debris Blockage of Overtopping Flows
	Class 1	Class 2	Class 3	Class 4	
20% AEP or more frequent (e.g. 50% AEP, 20% AEP)	35%	25%	15%	0%	Must include appropriate representation of obstructions to flow, such as bridge decks, fences, handrails, buildings, crash/noise barriers, etc.  Modelling of pervious structures such as fences and railings above the structure should assume a 50% debris blockage of the unblocked flow area through the obstruction, plus associated hydraulic energy losses.
Rarer than 20% AEP and more frequent than 2% AEP (e.g. 10% AEP, 5% AEP)	50%	40%	30%	5%	
2% AEP or greater (e.g. 2% AEP, 1% AEP, PMF)	70%	50%	40%	10%	

Table 2: “Risk Management” blockage factors

Bridge / Culvert Classification			Debris Blockage of Overtopping Flows
Class 1 and Class 2	Class 3	Class 4	
Additional 25% blockage above “design” factors  (e.g. for 1% AEP event, 95% blockage for Class 1 75% blockage for Class 2)	Additional 20% blockage above “design” factors  (e.g. 60% blockage for 1% AEP event)	Additional 5% blockage above “design” factors  (e.g. 15% blockage for 1% AEP event)	Additional 25% blockage above “design” factors  (75% debris blockage of unblocked flow area)

## 7. REFERENCES

- Barthelmeß 2009, *Quantification of Debris Potential and the Evolution of a Regional Culvert Blockage Model*, University of Wollongong.
- Bewsher 1998, *A Preliminary Assessment of Mt Ousley Road Culverts During the Storms of 17 & 18 August 1998*, NSW Roads & Traffic Authority
- Bewsher 2010a, *Fairy and Cabbage Tree Creeks Floodplain Risk Management Study and Plan*, Wollongong City Council.
- Bewsher 2010b, *Mullet and Brooks Creeks Flood Study*, Wollongong City Council.
- Bewsher 2010c, *Mullet and Brooks Creeks Floodplain Risk Management Study and Plan*, Wollongong City Council.
- BMT WBM 2009, *Fairy and Cabbage Tree Creeks Flood Study*, Wollongong City Council.
- BMT WBM 2012, *Duck Creek Flood Study*, Wollongong City Council.
- BMT WBM 2015, *Review of Towradgi Creek Flood Study*, Wollongong City Council
- Chow, V. T. 1959, *Open Channel Hydraulics*, McGraw Hill.
- Environment Agency UK 2015a *Blockage Management Guide*, London.
- Environment Agency UK 2015b *Blockage Management Guide: Science Report*, London.
- Evans, J. and Bewick, B., *The Wollongong Flash Flood Event 15-19 August 1998*, Bureau of Meteorology
- Forbes Rigby 2002a, *Hewitts Creek Flood Study*, Wollongong City Council.
- Forbes Rigby 2002b, *Hewitts Creek Floodplain Risk Management Study and Plan*, Wollongong City Council.
- KBR 2002, *Minnegang Creek Flood Study*, Wollongong City Council.
- KBR 2004a, *Minnegang Creek Floodplain Risk Management Study*, Wollongong City Council.
- KBR 2004b, *Minnegang Creek Floodplain Risk Management Plan*, Wollongong City Council.
- Keller, RJ 2013, *Comment on Culvert Hydraulics, Section 4 of ARR Project 11 Stage 1 Report* [IEAust, 2013]

Kramer, M., W. Peirson, R French and G Smith (2016), *A physical model study of culvert blockage*, Australian Journal of Water Resources, DOI: 10.1080/13241583.2015.1116184

Lawson and Treloar 2006a, *Allans Creek Flood Study*, Wollongong City Council.

Lawson and Treloar 2006b, *Allans Creek Floodplain Risk Management Study*, Wollongong City Council.

Lawson and Treloar 2006c, *Allans Creek Floodplain Risk Management Plan*, Wollongong City Council.

Lyall and Associates 2011, *Combined Catchments of Whartons, Collins and Farrahars Creeks, Bellambi Gully and Bellambi Lake: Flood Study*, Wollongong City Council.

Lyall and Associates 2014, *Combined Catchments of Whartons, Collins and Farrahars Creeks, Bellambi Gully and Bellambi Lake: Floodplain Risk Management Study and Plan*, Wollongong City Council.

NSW Department of Land and Water Conservation 2002, *17 August 1998 Storms in Wollongong – Flood Data Report*, Wollongong City Council.

NSW Government 2005, *Floodplain Development Manual: the management of flood liable land*.

Nichols, P.S., Barthelmess, A.J. and Webber, K., 2008, *Merit-based Design in Floodplain Management*, Proceedings 48th Annual Floodplain Managers Conference, Wollongong NSW.

Pilgrim, D. H. (Editor in Chief) 1987, *Australian Rainfall and Runoff – A Guide to Flood Estimation*, Engineers Australia.

Reinfelds, I. and Nanson, G. 2003, *Aspects of the hydro-geomorphology of Illawarra streams: implications for planning and design of urbanising landscapes*, Wetlands (Australia) Symposium November 2003.

Rigby, E.H. and Silveri, P., 2001, *The Impact of Blockages on Flood Behavior in the Wollongong Storm of August 1998*, Conference on Hydraulics in Civil Engineering, Hobart November 2001

Rigby E. H., M. Boyd, S. Roso, P. Silveri and A. Davis 2002, *Causes and Effects of Culvert Blockage During Large Storms*, 9th International Conference on Urban Drainage, Portland Oregon

Rigby, E.H. and Barthelmess, A.J. 2011, *Culvert Blockage Mechanisms and their Impact on Flood Behaviour*, 34th World Congress of the International Association for Hydro-Environment Engineering and Research (IAHR) July, 2011

Roso, S., M. Boyd, E. Rigby and R. VanDrie 2004, *Prediction of Increased Flooding in Urban Catchments due to Debris Blockage and Flow Diversions*, Proceedings Novatech 2004, Lyon France, July 2004

Silveri, P. 2001, *Floodplain Risk Management in Wollongong*, Stormwater Industry Association Workshop, Sydney 2001.

Vernon-Kidd, D., A. Kiem, G. Willgoose and P. Haines, 2010, *Case Studies of Extreme Events - East Coast Lows and the Newcastle/Central Coast Pasha Bulker Storm*, National Climate Change Adaption Research Facility (NCCARF), ISBN: 978-1-921609-14-5.

Weeks, 2009. *Project 11: Blockage of Hydraulic Structures Stage 1 Report*. Engineers Australia

Weeks, 2013. *Project 11: Blockage of Hydraulic Structures Stage 2 Report*. Engineers Australia

Weeks, W, A. Barthelmeß, T. Rigby, G. Witheridge and R. Adamson, 2009, *Blockage in Drainage Structures*, Hydrology and Water Resources Symposium, Engineers Australia, Newcastle

Weeks, WD and Rigby, EH 2015, *Australian Rainfall and Runoff: Blockage Guidelines for Culverts and Small Bridges*, Engineers Australia

Available at [http://www.arr.org.au/wp-content/uploads/Blockage\\_guidelines\\_February-2015.pdf](http://www.arr.org.au/wp-content/uploads/Blockage_guidelines_February-2015.pdf)

WMAwater 2013, *Wollongong City Flood Study*, Wollongong City Council

WMAwater 2015, *Wollongong City Floodplain Risk Management Study and Plan*, Wollongong City Council

Wollongong City Council 2009a, *Wollongong Development Control Plan 2009*

Wollongong City Council 2009b, *Wollongong Local Environment Plan 2009*

Submission	Issue Raised	Submission Request/Recommendation	Response
<b>Aztec Design &amp; Drafting</b>	Application of two different "standards" will be too complex to administer and result in confusion.	The new policy should be simple and easy to utilise, especially as drainage assessment staffing at Wollongong Council is overtaxed currently.	WMAwater recommends that the "design" blockage factors are our best estimate of probability neutral blockage and should be used for most flood modelling tasks. The "risk management" factors are only recommended for "high regret" planning decisions, such as the level and structural design of new development, to account for uncertainty in the blockage factors. The updated final draft contains revised text to clarify the specific applications of each factor.
	The study has gained a large amount of knowledge	Should the study be incorporated into future versions of ARR for nation-wide application, not just locally.	The methodology applied to assess the available information could be adopted elsewhere, but only where is sufficient local information, and where there is significant development in the vicinity of culvert and bridge crossings as in Wollongong. In most instances around Australia, there is little or no historical blockage information, and the ARR guidelines are appropriate for use based on a qualitative assessment of the catchment.
<b>GHD</b>	However the consideration of a more risk assessment based approach is highly encouraged.	GHD would recommend consideration of the ARR policy, with deviation from that policy generally driven only where dictated by local factors.	While there would be some advantages to a flexible policy framework, there would also be significant drawbacks. Applying a completely flexible system and requiring a site-specific assessment for every development application would lead to an ad-hoc approach where neighbouring developments are based on different assumptions. Given the sheer number of structures to which the policy applies within the Wollongong LGA, there are also advantages to a fixed assessment approach, in that there is more certainty about the requirements for those wishing to lodge development applications.
		The interpretation and implementation of the proposed policy needs to incorporate a reasonable level of flexibility and not be prescriptive for all situations. Utilising a more risk assessment based approach, consideration of local factors and engineering judgement should be a standard practice. Similarly, it should be required that a suitably qualified and experienced professional is engaged to undertake the process.	It should also be noted that the ARR guidelines are not a blockage "policy," they are a qualitative set of criteria for use in areas where no local historical blockage data are available. The actual factors which are derived from the use of the guidelines, while based on a logical process, do not have any quantitative analysis in their development.
		As a minimum, to facilitate additional flexibility the Draft Revised Blockage Policy could benefit from some additional interpretive wording to assist in guiding both Council and consultants as to suitable interpretations of the proposed policy.	There are trade-offs between a completely flexible system and a more
	There are concerns in relation to the additional layer of assessment (additional complication) and the potential for the higher "Risk Management" blockage factors to unnecessarily overestimate the planning levels and thus limit the demonstrable development potential of land. Conversely, it is noted that the high level application of risk factors, followed by design factors does go towards the philosophy of encouraging a risk management approach.	It is suggested that it will be important that Council do not, by default, interpret the proposed policy as requiring "Risk Management" blockage factors for all systems.	WMAwater recommends that the "design" blockage factors are our best estimate of probability neutral blockage and should be used for most flood modelling tasks. The "risk management" factors are only for "high regret" planning decisions, such as the level and structural design of new development, to account for uncertainty in the blockage factors. The updated final draft contains revised text to clarify the specific applications of each factor.
	The benefits and disadvantages of installing debris control structures in specific locations need to be assessed relative to the alternative of leaving the culvert or bridge unprotected. The two alternatives should not be separated from each other; otherwise there is the potential outcome of spending significant capital for no apparent benefit.	It is considered that the installation of debris control structures should be encouraged but not mandated. This can then flow through in the general risk assessment process and appropriate decisions made on a case by case basis.	Several submissions raised this issue, including Council. WMAwater agrees that there should be an encouragement for such structures, but decisions should be made on the basis of merits. The updated final draft contains revised text to allow some discretion to Council on when such structures are required.

Submission	Issue Raised	Submission Request/Recommendation	Response
GHD	Specific consideration should be applied to the applicability of the Draft Revised Blockage Policy to detention basin outlets. The application of very high blockage factors to detention basin outlets offers the real possibility of resultant difficulties in achieving the desired performance as the low level outlet cannot be modelled without a high blockage factor applied (e.g. 95% when 1200 mm diameter or less), potentially resulting in the need to over size basins to achieve the required performance. Again, the utilisation of a risk assessment based approach would be applicable here.	If there is "negligible chance" of blockage, then reduce blockage factors accordingly. However, where a high chance of blockage exists, then there may need to be an alternative approach that either involves a high level alternate outlet, or "mandatory" debris capture, as the size of the basin outlet is critical to performance.	The updated final draft contains revised text to allow some discretion to Council on whether a reduction in the blockage factor may be applied in some circumstances, as a result of implementation of a suitably designed debris management device.
	It is considered pertinent that a statement be included noting that any existing permanent obstructions such as pipelines or utilities within or crossing culverts and bridges are to be considered in addition to the proposed blockage factors. These permanent obstructions have the potential to cause more blockage than their nominal area. For example, a utility taking up 10% of the culvert area, crossing in front of the culvert, may generate an 80% blockage.	Include consideration of fixed obstructions across waterways.	This is expected to apply for a relative minority of structures, but it is anticipated that typical modelling practice should account for such fixed obstructions. The draft policy does refer to such structures in relation to overtopping flows. It is unnecessary to provide a prescriptive approach for such situations as they can be addressed on a case-by-case basis. WMAwater suggests that such arguments should not be used to apply higher blockage factors to structures upstream of a proposed development, so as to lower flood levels for that development.
John Pirrie - Resident	Insurance companies will use "Risk Management" levels and ignore the "Design" levels		It is correct that there is no way to enforce what assumptions insurance companies use in setting premiums for flood-affected properties. However the "risk management" factors are only used for a small sub-set of outputs from flood studies. Most mapping produced from flood studies, including flood depths, velocities, levels, hazard and extents, is to be produced using the "design" factors. Mapping of the Flood Planning Area and Low/Medium Flood Risk Precincts will use the "risk management" factors. These areas will represent the area above the best estimate of the true flood level, but below the area where flood controls apply to account for uncertainty in estimating these levels.
	There is no classification for 0% blockage even though this was often noted in the observed data.		Even though 0% blockage is a probable outcome in many individual floods, on average over multiple floods some blockage is expected, and the effect of this blockage should be accounted for when managing development. The proposed "design" blockage factors represent the typical effect that blockage is expected to have on average over the long term.
	There is no evidence in the data that is a reliable indicator of blockage factors, therefore how can it be codified into a "one size fits all" policy? Each catchment has to be considered individually.		There is a need to have a clear basis for the policy and avoid a situation where alternative opinions become the basis for a confrontational system. WMAwater considers the factors presented provide a pragmatic, data-based approach that will simplify the assessment of blockage for design flood modelling in the Wollongong LGA, and lead to improved certainty for developers and Council for planning development in the floodplain.

Submission	Issue Raised	Submission Request/Recommendation	Response
John Mathieson - NEFRAG	In general, NEFRAG believes that WCC through WMAwater (WMAW) has put forward an impressive approach to the very difficult issue of devising a “probability neutral” methodology for determining the effect of conduit blockage on flood levels. This new approach, although less detailed in terms of the mechanisms of blockage, appears to have taken a step beyond the current AR&R blockage guidelines (Weeks and Rigby 2015) by introducing Monte Carlo computations.	No doubt, both WCC and WMAwater believe that the new methodology and blockage guidelines will be acceptable to NSW government agencies, particularly Roads and Maritime Services, the State Rail Authority and the Department of Planning.	The methodology applied to assess the available information could be adopted elsewhere, but only where is sufficient local information, and where there is significant development in the vicinity of culvert and bridge crossings as in Wollongong. In most instances around Australia, there is little or no historical blockage information, and the ARR guidelines are appropriate for use based on a qualitative assessment of the catchment.
	NEFRAG has conducted such a review and has identified 19 cases out of the 121 rated locations where a different hydraulic blockage might be considered. This review is reported in Section 3.2. Since the 19 locations represent less than 10 percent of the database, it is likely that any resultant changes to the analysis would lead to only marginal differences.	Reconsider all fully-reasoned hydraulic blockage estimates as put forward by reviewers of the draft report, and examine whether the resultant changes to Diagrams 11 – 13 would require actions in terms of the subsequent analysis.	As identified, changes to a relative minority of the locations analysed does not have a significant effect on the overall outcomes of the probabilistic modelling analysis. The key input assumption for the analysis is the “blockage likelihood” distribution developed for each group of structure sizes. This distribution was modified slightly for the final draft report, but the modifications did not significantly change the outcomes or the recommended design blockage factors.
	In Diagram 14, since the calculated points represent the probability or AEP-neutral positions, then blockages exceeding those calculated, for any given structural opening size, clearly represent flooding with a decreased AEP or increased ARI. It is therefore evident that the WMAwater “Design” line for the 1% AEP flood represents a conservative assumption, i.e. an event of lower probability than the design 1 in 100 year flood. NEFRAG has therefore proposed an alternative.	Reconsider the recommended blockages for the various structural opening classes, with a view to strict compliance with the “probability neutral” principle, and not allowing the design event to subtly shift to lower AEP (rarer event).	The recommended factors for use in the range from 20% AEP to 2% AEP were fitted closely through the calculated points, since the basis of the available historical blockage data is from floods of this magnitude.  It is reasonable to expect that higher blockage might be expected for larger floods such as the 1% AEP, for reasons discussed in the report, but this assumption of correlation for higher blockage with larger floods was not built into the analysis. When more intense rainfall events occur, if the observed blockage is similar to that observed in the 1998 and 1999 storms, then it would be reasonable to adjust the factors for higher storms back to the levels recommended for the 5% AEP event.
	WMAW's development of “probability neutral” blockage values has been based on analysis of three size groupings (Diagonals <3 m, 3 – 6 m, and >6 m) (WMAW 2016, Table 4). The <3 m class was later split into two classes (Class 1: <1.2 m and Class 2: 1.2 – 3 m) on the basis of differing behaviour. NEFRAG now wishes to propose that the 3 to 6 m size class is divided at 4.5 m, for the same reason.	Adopt an additional size class from 4.5 to 6.0 m diagonal opening. This is both strongly supported by the calculated “probability neutral” blockages and by the need to avoid large jumps in design blockage between the size classes.	WMAwater considers that the proposed classifications are sufficient based on the available data. Very little additional data is available for the structures between 4.5m and 6m. The Allans Creek culverts at the M1 are one of the sites analysed in the probabilistic modelling. There is strong anecdotal evidence from engineers present at the time that these culverts were significantly blocked by Erythrina (Coral Trees) in August 1998. The proposed design blockage factors are in line with previous estimates of this blockage from calibration modelling in the Allans Creek Flood Study.
	It is difficult to proceed to recommendations for the more frequent events without further analysis. Part of such analysis may be found in Section 3.3. The data for the 10, 20 and 50% AEP events could usefully be plotted in a similar way to WMAW's Diagram 14 and used to derive suitable “probability neutral” envelopes. The full argument on this subject would be a valuable addition to Section 7 of the revised report.	Using the data available in Appendix C, re-evaluate the blockage factors recommended for events more frequent than 2% AEP. It may be possible, (i) to include the 5% AEP event with the rarer group, and (ii) simplify the classifications into two groupings, rather than three.	The probabilistic modelling undertaken does not include any assumption of correlation of actual blockage with flood magnitude, even though such relationship may exist. The reason for the lower “probability neutral blockages” in the 50% AEP events is largely related to the fact that most culverts are designed to carry the 10% or 5% AEP flow, and thus have “spare capacity” in the 50% AEP event. This makes the upstream flood levels less sensitive to blockage in the 50% AEP event, since the blockage just reduces this “spare capacity.”

Submission	Issue Raised	Submission Request/Recommendation	Response
<b>John Mathieson - NEFRAG</b>	NEFRAG is concerned that there is no ambiguity for the insurance companies and the banks concerning the predicted 1% AEP flooding level. Therefore, we suggest that this issue is never framed as a “risk management flood level”, because a suitable alternative framing is available.	Reframe the current “risk management” flooding levels to a variable freeboard concept that considers risks above the “probability neutral” 1% AEP flood; thereby eliminating any ambiguities that may lead to unwarranted adverse actions by the insurance companies and banks.	There are also difficulties for planning frameworks with framing the additional blockage to account for uncertainty purely as “freeboard,” even though this is a reasonable description. The terminology used is a trade-off between these difficulties.
		Consider whether it might be better to base the variable freeboard calculation on a simpler evidence-based principle, e.g. an additional 20% (absolute) blockage above the “probability neutral” 1% AEP.	For the updated final draft, the “risk management” factors have been simplified in line with this suggestion to better reflect how they were determined.
	Specific feedback provided on individual sections of the report, generally requesting additional clarification of principles and methodology in the documentation.		WMAwater has reviewed the feedback and updated sections of the report where reasonable.
		Since Section 7 represents the greatest area of innovation in this project, that WMAwater upgrades the description and illustration of this work so that it is transparent for subject experts, and generally understandable for those with training in engineering or science.	Additional detail will be contained in papers submitted to relevant conferences on floodplain management and hydrology.
<b>Office of Environment and Heritage</b>	We are unclear how the concept of ‘AEP neutrality’, which underpins the blockage policy, applies to hydraulic parameters such as conduit blockage, roughness, geomorphology etc.		The concept of probability neutrality applies to all probabilistic variables involved in flood estimation, regardless of whether these variables are modelled in a hydrologic model, hydraulic model, spreadsheet, or other form of numerical calculation. As identified in the report, many of the factors contributing to the level of blockage at a given culvert in a given storm are random, and blockage should be treated as a probabilistic (not deterministic) variable. In this regard it is similar to the treatment of antecedent conditions for determining infiltration losses, initial water levels in dam storages, storm temporal patterns, and coincident flooding of tributaries (on larger systems). In each of these cases, the assumption used for design modelling is not normally an extreme case (either completely full or completely empty in the case of a dam), but the case which translates design rainfalls into a design flood level at the point of interest. Roughness and geomorphology are typically treated as deterministic variables, and WMAwater is not suggesting a change to this practice.
	A risk management approach would involve understanding the range of potential impacts of blockage (i.e. envelope maximum possible blockage factors with X design rainfall/ unblocked X design rainfall).		Sensitivity analysis can still be undertaken for maximum possible blockage factors to understand sensitivity and risk. However risk management should also consider likelihood as well as consequence. Maximum (total) blockage of culverts is a relatively unlikely outcome, and WMAwater does not think planning decisions should be made assuming that such blockage will occur for every flood.



Submission	Issue Raised	Submission Request/Recommendation	Response
<b>Office of Environment and Heritage</b>	Previous modelling with blockage was able to calibrate to observed flood levels. Where changes in blockage assumptions results in significant differences in predicted flood behaviour, model parameters should be revisited to ensure an appropriate model calibration is achievable at the location. We are currently unsure that calibration by the proposed methodology i.e. incorporating loss parameters with the estimated hydraulic blockage factors (appendix b) will achieve calibration to observed flood levels.	Testing of these parameters will ensure the new blockage methodology is appropriately representative in the statistical analysis sampling buckets and can be applied in future flood studies to achieve calibrated models	Calibration using blockage factors is covered in detail in the report. WMAwater considers that in the examples given, the blockage factor has been over-relied upon as a calibration factor, and energy loss parameters have been omitted where there is a clear case for their use.  The use of energy losses to parametrise head loss at culverts is standard practice in hydraulics. WMAwater is not suggesting blockage be completely omitted as a consideration during calibration, but that it not be relied upon as the only parameter for matching observed afflux in historical storms.
	The implications and DCP wording around 'design blockage factors' and 'risk management blockage factors' should be further considered. There is significant crossover particularly in the subdivision and new infrastructure context (page 89).	We suggest that applications of 3) a-b 'impact assessment of proposed development' should be undertaken using the risk management blockage factors, to enable Council to make an informed merit based assessment understanding all flood behaviour impacts (levels, velocity, categorisation, hazard, diversions, cumulative impact etc).  Further, we believe it is necessary to include under '3b risk management blockage factors': • Delineating hydraulic and hazard categories consistent with the NSW Floodplain Development Manual.	WMAwater recommends that the "design" blockage factors are our best estimate of probability neutral blockage and should be used for most flood modelling tasks, including determination of design flood levels, velocities, hazard, hydraulic categorisation etc. The "risk management" factors are only recommended for "high regret" planning decisions, such as the level and structural design of new development, to account for uncertainty in the blockage factors. The updated final draft contains revised text to clarify the specific applications of each factor.
	There does not appear to be reference to recommendations for incorporation into chapter E13 – Floodplain Management of Council's DCP.	It is suggested that the conduit blockage policy is cross referenced in each of the chapters and relevant considerations incorporated as appropriate.	WCC may need to update other parts of the DCP, however this will be up to Council to determine. The recommended updates to the policy would not affect the current cross-referencing in the DCP, and fit into the existing framework.
	Consideration should be given to the practicality and ability of Council to maintain these structures in the long term so that any proposed structure effectively reduces blockage and does not cause any unintended consequences on existing or future development.	Design specifications in accordance with the intent of the policy and capabilities of Council will be key and warrants further consideration before inclusion in the policy.	Several submissions raised this issue, including Council. WMAwater agrees that there should be an encouragement for such structures, but decisions should be made on the basis of merits. The updated final draft contains revised text to allow some discretion to Council on when such structures are required.
<b>Paul Nichols (John Carrick Pty Ltd)</b>		It is suggested that separate monte carlo analyses be undertaken for blockages caused by each of the two mechanisms.	There is insufficient data to analyse this distinction reliably. This may be appropriate in the future, with collection of additional data, particularly observations made during the flood.
	There is only a relatively small difference between blockage factors for Classes 2 and 3, but a large difference when moving from Class 3 to Class 4. Splitting Class 3 into two would help eliminate the abrupt increase in blockage factors that occurs between Classes 3 and 4.	Redefine size ranges for Classes 2 and 3 and to introduce a new culvert class as follows: Class 2 – reduce upper limiting diagonal width to 2.4 m Class 3A – new sub-class for culverts of diagonal width between 2.4 m and 4.5 m Class 3B – new sub-class for culverts of diagonal width between 4.5 m and 6.0 m.	WMAwater considers that the proposed classifications are sufficient based on the available data. Very little additional data is available for the structures between 4.5m and 6m. The Allans Creek culverts at the M1 are one of the sites analysed in the probabilistic modelling. There is strong anecdotal evidence from engineers present at the time that these culverts were significantly blocked by Erythrina (Coral Trees) in August 1998. The proposed design blockage factors are in line with previous estimates of this blockage from calibration modelling in the Allans Creek Flood Study.

Submission	Issue Raised	Submission Request/Recommendation	Response
Paul Nichols (John Carrick Pty Ltd)		Suggest that flexibility be introduced to allow the ability to increase or decrease the culvert class applying to a culvert at a particular site to take into account other site-specific factors that affect the propensity for blockage	While there would be some advantages to a flexible policy framework, there would also be significant drawbacks. Applying a completely flexible system and requiring a site-specific assessment for every development application would lead to an ad-hoc approach where neighbouring developments are based on different assumptions. Given the sheer number of structures to which the policy applies within the Wollongong LGA, there are also advantages to a fixed assessment approach, in that there is more certainty about the requirements for those wishing to lodge development applications.
	I am concerned that the new Policy is too prescriptive in regards to debris traps, particularly the requirements to: (a) Install debris control structures at all new Class 1, 2 or 3 culverts or bridges with a "high" debris potential for the 1% AEP event, as identified in the Australian Rainfall and Runoff Blockage Guidelines (b) Retain an unmodified blockage factor for individual structures even when 'localised' upstream control measures are provided, including trash racks and settling basins. In regard to (a), the cure could be worse than the complaint. The Lemrac Ave trash rack is a good example.	Ideally, the Policy should incorporate sufficient flexibility to facilitate the implementation of alternative works that are considered more effective than installing a debris control structure at a waterway structure which doesn't lend itself to such works.	Several submissions raised this issue, including Council. WMAwater agrees that there should be an encouragement for such structures, but decisions should be made on the basis of merits. The updated final draft contains revised text to allow some discretion to Council on when such structures are required.
		It is recommended that flexibility for reduced blockage factors be built into the new Policy where there are effective defacto debris traps/settling basins (or deliberately engineered ones) immediately upstream.	The revised recommended policy wording includes provisions to encourage use of debris control structures, potentially by lowering the blockage factor at the discretion of Council, where it can be demonstrated that such structures will be effective over the long term.
	The new Policy makes no change to the assumption in the old Policy that blockages are in place at the start of the storm, whereas arguably more realistic blockage timing criteria are given in Table 8 of the new ARR national guidelines. Admittedly, the ARR Guidelines propose a very complex range of timing criteria for a number of different blockage modes which are difficult to predict.	Perhaps a compromise here is to adopt the recommended timing for a porous plug blockage (TOTB/SA), when flow first overtops the stream's banks in the source area reaches the structure	There is insufficient data to adopt this higher level of complexity in the policy. This may be appropriate in the future, with collection of additional data, particularly observations made during the flood.
	It is requested that the new Policy clarifies what set of flood levels are to be used in calculating flood affectation impacts from loss of flood storage.		The revised policy wording clarifies this issue. WMAwater recommends the use of "design" blockage factors for such impact assessments.
	The introduction of 'Risk Management' or risk-adjusted 1% flood levels is not a feature promoted in either the ARR Blockage guidelines, the Floodplain Development Manual or Department of Planning directives on floodplain management. These documents advocate a general approach of using two 'benchmark' floods: - the 1% AEP flood for appraising property damage; and - more extreme floods for assessing threats to human life.	Based on the above discussion, it is concluded that: - Use of Design blockage factors is appropriate for assessing property damage in a 1% AEP flood; and - Use of the PMF with Risk Management blockage factors is appropriate when considering human safety.	The use of "risk management" blockage factors in setting design floor levels for new development is supported by the Floodplain Development Manual and DoP, in that it recognises the uncertainty involved with the blockage estimates, and allows a higher factor of safety in light of this uncertainty. It is consistent with the concept of freeboard adopted in those documents.

Submission	Issue Raised	Submission Request/Recommendation	Response
Paul Nichols (John Carrick Pty Ltd)	It is recommended that the legal implications of a situation be investigated whereby drainage infrastructure is designed to limit afflux to acceptable limits using realistic (Design) blockage factors, as currently proposed, but where upstream property owners are then obliged to construct new development designed using more severe blockage factors (which they wouldn't have otherwise had to do).		Standard floodplain management practice now is to assess afflux using design flood modelling (not incorporating freeboard), but to build new development with a freeboard to account for uncertainty and future risks. The proposed blockage policy does not depart from this standard practice.
Rienco Consulting	Data from the storm event of 27 March 2016, which was a significant event in the Russell Vale catchment, was not included in the review.	It would seem appropriate to defer adoption of the new policy until this data has been gathered and appropriately analysed.	No additional data is provided in the submission. The storm event occurred after preparation of WMAwater's reports for the review and recommended revised policy. Unless additional documented data is presented that substantially challenges the findings of the analysis, WMAwater does not consider this request to have a significant bearing on the outcomes of the study.
	Based on our review of the WMA report and its recommended blockage estimation procedure, there does not exist any substantive reasons as to why the AR&R procedure was summarily dismissed by WMA. There is equally no substantive reason why the proposed statistically based design blockage procedure proposed by WMA, as a policy uniformly applicable across the LGA, can or will reflect the several site specific factors that significantly influence likely design blockage levels at a site. In contrast, all key factors influencing blockage at a specific site are reflected in the AR&R guidelines which, unlike the proposed procedure has been subject to extensive peer review. Dismissal of the AR&R procedure in the early stages of the review process has in our view been a serious error in judgement.	In the absence of any other suitable alternative, it is our view that the more comprehensive and site specific AR&R guidelines should be adopted and incorporated into Council's proposed draft policy, at least as an acceptable alternative, particularly in those situations where realistic assessment of likely design blockage levels is important.	The development of the policy was not a simple question of "ARR guidelines" versus another approach. As discussed in response to other submissions, there are significant benefits in the certainty provided by a consistent policy. Applying a completely flexible system and requiring a site-specific assessment for every development application would lead to an ad-hoc approach where neighbouring developments are based on different assumptions. Given the sheer number of structures to which the policy applies within the Wollongong LGA, there are also advantages to a fixed assessment approach, in that there is more certainty about the requirements for those wishing to lodge development applications.  The outcomes of the ARR guidelines were not "summarily dismissed." The qualitative considerations that form the guidelines were reviewed, but correlations for these factors were not borne out by the available data, and it was not considered reasonable to introduce extra complexity to the policy. It is incorrect to suggest that only the ARR guidelines can provide a "realistic" assessment of likely design blockage levels. The basis of the policy developed by WMAwater is transparent, and is a suitable alternative for a local pragmatic approach to blockage assumptions for design flood modelling in the region.
	Both the current WCC conduit blockage policy and that currently proposal by WCC are based on the assumption that the level of blockage does not vary spatially to any significant extent across the LGA.  The AR&R procedure consistently reflects the realistic likelihood of blockage levels across the LGA increasing east to west and decreasing north to south. The WMA procedure cannot and does not.		The analysis presented in Section 7.5 of the review report indicates that the spatial correlations presumed in this submission are not borne out by the data. In the course of the review, WMAwater did not find robust statistical analysis indicating that these correlations are present in sufficient magnitude to justify a more complex policy approach that requires individual assessment for every structure. This lack of statistical evidence for such correlations includes the list of papers referred to in the submission.

Submission	Issue Raised	Submission Request/Recommendation	Response
Rienco Consulting	It is also of note that the proposed WMA analysis and procedure is a one off, new approach to estimation of likely blockage levels that has not been peer reviewed or tested by the profession. In contrast, the AR&R procedure has been extensively debated by an expert panel over several years, made available to the public and profession for review and tested by an independent team of practicing professionals from most states of Australia. It is hard to understand how the WMA procedure is now presented as even an equivalent, much less superior, means of assessing likely blockage levels in the Wollongong LGA.		The analysis methodology uses techniques that are well documented in other parts of the ARR revision process, such as Nathan & Weinmann (2013), <i>Discussion Paper: monte Carlo Simulation Techniques</i> . It is incorrect to claim that it is an approach <i>"that has not been peer reviewed or tested by the profession."</i>
	The AR&R procedure correlates well with the calibrated blockage levels in the 1998 event, throughout the LGA. The WMA procedure only does so in the central (spatial average) zone of the LGA, with blockage levels being significantly over-predicted in the south and only realistically predicted in the narrow middle (east to west) region of the north		The problems with the blockage factors estimated using model calibration are clearly documented in WMAwater's report. The spatial differences in blockage distribution presumed in this submission were not borne out in WMAwater's spatial analysis of the data.
	In respect to the question 'what does the WCC policy omit that is covered in the AR&R procedure and are these omissions important', we can only conclude that many potentially significant factors affecting likely blockage levels are omitted from the proposed new policy procedure and that these factors can be very important in their influence on likely blockage levels at a particular site.		The submission does not address whether the addition of such complexity for the policy would produce any benefits with regards to floodplain management decision-making.
	Our primary concern is in regard to the logic of arbitrarily choosing to increase design blockage levels by this standard deviation in order to establish appropriate FPLs.	FPLs should in no circumstance be based on other than the designated event ARI.	The FPLs are not being based on a different ARI, they are including an additional factor of safety for sites where there is a high level of uncertainty about design flood levels. Utilisation of higher freeboard is a common approach to dealing with uncertainty in floodplain management, and the reasons for this approach are clearly explained in WMAwater's report. The proposed approach which only have an influence on total freeboard levels in a minority of locations where flood levels are particularly sensitive to blockage assumptions, well above the portion of traditional freeboard that might be attributed to blockage.  It is noted that the "risk management" factors are used for a relatively small number of applications, primarily the level of new development, where there are potentially "high regret" consequences involved.
	The proposed policy is inconsistent with S.117 directions	We contend that it is inconsistent with the S.117 direction to have a flood of greater magnitude than the 1% AEP flood as the basis for setting floor levels or flood related planning controls.	Most floor levels and flood-related planning controls under the existing WCC DCP are based on the 1% AEP flood. PMF controls are typically limited assessment of evacuation, structural soundness and critical infrastructure. This point is not related to blockage assumptions, and outside the scope of this review, except to note that WMAwater's proposed policy does not change these aspects of the DCP

Submission	Issue Raised	Submission Request/Recommendation	Response
Rienco Consulting	The Draft Policy's use of an elevated blockage level (beyond the ARI neutral blockage level) to create a flood surface higher than the 100yr ARI design flood surface, as the basis for setting FPL's and flood related planning controls, is inconsistent with the Floodplain Development Manual's guidelines		WMAwater does not agree with this assessment. The incorporation of additional factors of safety in areas of particular sensitivity to blockage is entirely consistent with Appendix K of the FDM, which deals with setting FPLs and determining freeboard, and which clearly states that "freeboard may be different for different parts of the floodplain, where factors influencing freeboard may vary with location. Blockage is one of these factors in Wollongong.
	At the outset it was always envisaged by the Project 11 committee that Councils adopting the AR&R Guidelines would construct their own spatial datasets describing dominant debris types, sizes of the larger fraction (L10) and debris potential levels across their LGA.	Wollongong Council is well resourced and has significant expertise in this area making such mapping a relatively minor exercise. If in house resources were not available at the appropriate time, such mapping could easily be delegated to an external expert in this field. Once this mapping is in place, variability in estimates between consultants and Council would be all but eliminated.	WMAwater notes that such mapping does not form part of the published ARR guidelines.
		While not a fundamental consideration, WCC could provide tabulated values for the design blockage factors for the more important or contentious culverts that have been developed in accordance with the AR&R procedure. This is not a major task and would both expedite and enforce total consistency across users. Such a table could again be developed in house or contracted externally.	WMAwater does not consider this to be a pragmatic approach. If the values are for "contentious" culverts, how would selection of the competing assessed values be arbitrated?
Robert French	Nothing the report recommends will improve the future flooding situation in Wollongong		WMAwater thinks the revised policy will improve floodplain management outcomes in Wollongong
	It reviews available blockage information and proposes a design blockage policy similar to the WCC Policy but different from the WP11 guidelines for AR&R. That necessarily casts doubt that either design method could be grounded on the physics of culvert blockage.		The limitations of the data are well understood. Until better data are available based on physical measurements (this is possible with increasingly cheap remote sensing equipment), we must rely on what is available. The analysis undertaken provides a quantitative method for assessing probability neutral blockage that will improve with future improvements in data and physical testing.
	The computer modelling (Appendix C) makes it very clear that blockage effects on a flood peak are negligible, once overtopping of the channel system occurs.		This is incorrect. In many instances throughout Wollongong, water levels are insensitive to blockage, but not everywhere.
	First principles indicate that Australian over-bank flooding is essentially due to intense rainfall and that blockage of culverts normally cannot raise flood levels to discernible degrees. The Wollongong-originated focus on waterway blockage arises from the assumption (in lieu of theory and data) that waterway blockage has an important effect on peak flood heights.		WMAwater clearly states in the report that the primary cause of flooding in Wollongong is intense rainfall exceeding the drainage system capacity. This does not preclude blockage as an irrelevance. Blockage can certainly affect peak flood heights. Even a change of 0.1m is enough to require consideration as part of setting appropriate levels for new development.
	The review of the blockage data is pointless in a second way: there are no hydraulic blockage data to review.		"Hydraulic blockage" is not well defined. WMAwater has used a definition relating to the proportion of flow (volume/time) through the structure for given upstream and downstream water levels, compared to the unblocked flow capacity. This is close to the definition applied by hydraulic models through the use of blockage parameters. It is agreed that the available data does not specifically measure this quantity. That does not permit us to ignore the issue entirely.

Submission	Issue Raised	Submission Request/Recommendation	Response
Robert French	There are several contributing factors but blockage is only a focus because it has been mistakenly assumed to be a major cause of such flooding. The real cause is heavy rains producing overbank floods which are then controlled by natural and artificial land features.		The report does not claim to quantify the proportion of "cause" of flood damages that may be attributed to blockage. The report seeks to address what an appropriate assumption of blockage is for estimating design flood risk, for locations where it does play some role.
	The authors do not make it clear than the probability distribution of blockage magnitudes is required for every flood ARI likely to be used in design (say, 10, 20, 50 100-years) so that the ARI-neutral blockage magnitude for each design ARI can be determined. Obviously, the underlying probability cannot be known if there is an absence of data which can have probability distributions fitted to them		WMAwater recognise that the assumed distribution is likely to be different for different flood magnitudes. There are currently insufficient data to make this distinction in the analysis. This may be appropriate in the future, with collection of additional data, particularly observations made during the flood. This does not invalidate the approach.
	Yes, hydraulic blockage is relevant to Council's blockage policy – visual blockage is not relevant to anything – and computer models are generally conceived of as using hydraulic blockage. But hydraulic catchment models do not use blockage, hydraulic or otherwise. They use a calibration factor called 'blockage' but it only has meaning within the software. As such, it has no relationship with physical blockage in the field.		"Hydraulic blockage" is not well defined. WMAwater has used a definition relating to the proportion of flow (volume/time) through the structure for given upstream and downstream water levels, compared to the unblocked flow capacity at the same levels. This is close to the definition applied by hydraulic models through the use of blockage parameters. It is agreed that the available data does not specifically measure this quantity. That does not permit us to ignore the issue entirely.
	"It was recognised that flood levels in some areas could vary significantly depending on the amount of blockage occurring at certain culverts or bridges. This was particularly true at major road and rail crossings, where the embankment across the floodplain is in some instances much higher than the top of the culvert passing underneath. It was also recognised that in some areas, flow diversions occurred and created flow paths which were unexpected."  The first sentence uses the word 'recognised' as a euphemism for 'mistakenly thought' because Rigby and Barthelmess (2011) have shown what little effect waterway blockage can have on peak overland flood levels.		The analysis by Bewsher of the Mt Ousley Road culvert performance, summarised in WMAwater's report, provides a convincing record of the effect of blockages on overland flood levels in that event.
	No such blockages of waterways in long, high embankments have ever been recorded around Wollongong.		There are reliable accounts of blockage for the M1 Princes Highway culvert on Allans Creek, and The Avenue on Byarong Creek, in August 1998.
Rory Hentschel (Cardno)	A 1.2m diameter pipe will be Class 1 and a 0.9wx0.9h culvert will be Class 2. This is inequitable as a higher blockage will be applied to the culvert which is smaller.	Reword Class 2 to include Pipes of 1.2m diameter or greater.	For the updated final draft, the classifications have been simplified and clarified to remove some of the inconsistencies identified. Note that new policy cannot guarantee to be consistent with all decisions made under the previous policy.
	All Pipes greater than 1.2m internal diameter will be Class 2. There is no sizing for Class 3 pipes.	Add sizing for Class 3 pipes.	
	A 2.7m diameter pipe will be Class 2 and a 2.7w x 1.5h culvert will be Class 3. This is inequitable as a higher blockage will be applied to the culvert which is smaller.	Reword Class 3 to include Pipes of 3.0m diameter or greater.	

Submission	Issue Raised	Submission Request/Recommendation	Response
Rory Hentschel (Cardno)	Class 3 bridges have no minimum span or height. This could result in unconventional bridges designed specifically to exploit this loop hole. A 2.4w x 1.5h culvert will be Class 2 and a 2.4m span, 1.5m high bridge will be Class 3. This is inequitable as the openings are the same.	Treat openings for Culverts and Bridges the same.	
	A 6.0w x 1.2h Culvert will increase from 25% blocked under the current DCP to Class 2 (50-75% blocked) under the proposed Policy. This is a real example from DA-2011-478-C approved in August 2014. The DA included a cast in-situ concrete box culvert with a span of 6m. DA condition 38 required a minimum height of 1.2m to minimise blockage. Adopting a minimum height of 1.5m for Class 3 (and 4) structures will result in this culvert being Class 2 and the new blockage being 75%. This will result in higher flood levels than previously anticipated.	Change the minimum height for Class 3 culverts from 1.5m to 1.2m.	
	All bridges with a diagonal opening >6m and height less than 3m will increase from 25% blocked under the current DCP to Class 3 (40-60% blocked) under the proposed Policy.	Reword Class definition.	
	All bridges with a diagonal opening >6m and span less than 5m will increase from 25% blocked under the current DCP to Class 3 (40-60% blocked) under the proposed Policy.	Reword Class definition.	
	Referring to Items 1-10 the wording of the structure Classing needs to be resolved to remove ambiguity. It is suggested that the Classification remove differentiation for Pipes/Culverts/Bridges and refer to a diagonal opening and minimum dimension only.	A suggested Class wording is provided below: Class 1. Diagonal opening <1.2m or any dimension <0.75m Class 2. Diagonal opening >=1.2m and all dimensions >=0.75m Class 3. Diagonal opening >=3m and all dimension >=1.2m Class 4. Diagonal opening >=6m and all dimension >=1.2m	
	There is no basis in the WMA report for the provision of Debris Control Structures (DCS) at some new structures. If DCS are effective there should be an allowance for a reduced blockage. If DCS are not effective we should not waste money installing them at new Culverts.	Remove the requirement to construct Debris Control Structures at new Culverts.	Several submissions raised this issue, including Council. WMAwater agrees that there should be an encouragement for such structures, but decisions should be made on the basis of merits. The updated final draft contains revised text to allow some discretion to Council on when such structures are required.
	Council should carefully consider the additional maintenance burden created by requiring Debris Control Structures (DCS) at some new Culverts. Maintenance requirements will be higher, as small debris that might have passed through a 3m culvert will get stuck on a DCS. If maintenance is not provided then the DCS will be full of debris before a storm occurs and will provide no benefit. Providing DSC results in an additional maintenance burden on Council with no measurable benefit.	Remove the requirement to construct Debris Control Structures at new Culverts.	

Submission	Issue Raised	Submission Request/Recommendation	Response
Rory Hentschel (Cardno)	Having different "Design" and "Risk Management" blockage factors will create confusion and is not necessary. The idea that the design blockage factors will be used to design and assess impact while the risk management factors will be used to determine FPLs and Flood Risk Precincts is flawed, consider the following scenario. A dwelling has 0.5m freeboard to the "Risk management" flood level. A new culvert crossing is designed downstream of the dwelling and is found to have no upstream impacts based on the design blockage factors. The dwelling might now have less than 0.5m freeboard to the "Risk management" flood level because it was not considered in the design of the culvert. Impact assessments will need to be carried out using the "Risk Management" factors to ensure that developments don't increase the flood risk to other properties.	Use one set of blockage factors and use a standard 0.5m freeboard to the Risk Management level.	With regards to impact assessment, the recommended approach (using "design" blockage factors) is consistent with standard floodplain management practice in NSW, and current practice by Council. Current practice does not require development to assess the impact on the FPL/FPA of neighbouring development, only on the design flood behaviour. For example, if a development has a small impact within the creek channel, it may be approved, even if it does "use up" some of the freeboard that adjacent dwellings have above the design flood level. The NSW Floodplain Development Manual is clear that that one of the purposes of freeboard is for "the cumulative effect of subsequent infill development of existing zoned land." (see Section K5)
	Clarification needs to be provided on which blockage factors need to be used when determining the trafficability of a road for the purpose of evacuation. If it is the "Risk Management" levels then culverts and bridges need to be designed using the "Risk Management" levels. In that case there is no need for additional "Design" blockage factors.	Use one set of blockage factors.	WMAwater recommends that the "design" blockage factors are our best estimate of probability neutral blockage and should be used for most flood modelling tasks. The "risk management" factors are only recommended for "high regret" planning decisions, such as the level and structural design of new development, to account for uncertainty in the blockage factors. The updated final draft contains revised text to clarify the specific applications of each factor.
Wollongong City Council	Point 4 (Peak Flood Level Envelopes) refers to assessing two scenarios to obtain an envelope, however does not stipulate which scenario to adopt.	It should be made clear in the policy that the scenario which results in the highest flood level is the one to be adopted.	The policy states that "an envelope of the maximums from both scenarios are to be used."
	Point 4 under 'risk management' refers to clause 2(c), which does not exist.	It should refer to clause 3(b).	This has been corrected.
	Point 6 (Provision of Debris Control Structures) indicates that all new classes of culverts (1,2,3) and bridges with high debris potential should have debris control structures installed – it is unclear how this will be implemented or enforced by Council.	Instead the statement should read "...debris control structures installed at the discretion of Council..."	Several submissions raised this issue, including Council. WMAwater agrees that there should be an encouragement for such structures, but decisions should be made on the basis of merits. The updated final draft contains revised text to allow some discretion to Council on when such structures are required.
	Point 6 (d) refers to debris control structures to be included in the design flood calculations, however does not provide a clear guidance or parameters as to how these structures should be modelled.	Given the variance of parameters based on the type of debris control structure, a single parameter should be recommended for ease of calculations – perhaps a blockage factor based on the aperture size of the debris control structure.	Given the wide range in designs and site-specific considerations for such structures, it is considered reasonable for modelling of such structures to be based on modeller judgement, as with other features of the floodplain that can affect flow behaviour.
	Point 7 (Design of New Structures) indicates that the design AEP capacity of the proposed structure needs to be identified, however does not refer to any specific reference.	This reference should be based on an accepted design standard and from a subjective determination by a consultant. This will make it easier for both Council and the consultant.	Specifying the design AEP for drainage structures is part of standard design practice. This clause has been removed as it is not specifically related to blockage and creates ambiguity.
	Point 8 (Blockage Factors) describe each class of culvert/pipe to a certain degree however should be accompanied by a diagram such that there is no misinterpretation.	Include diagrams in the policy	The wording for the classifications has been simplified.
	Point 8 (Blockage Factors) under Class 3 should be revised to avoid misuse of a lesser class and percentage blockage.	The second sentence should read "...Bridges with a clearance of between 1.5m and 3m from the bottom of the channel, or a span width between 3 and 5m."	The wording for the classifications has been simplified and the treatment of bridges and box culverts made more consistent.



Submission	Issue Raised	Submission Request/Recommendation	Response
Wollongong City Council	Point 8b (Blockage Factors) refers to blockage to be "...a consistent effective reduction of the total flow area across the entire cross section..."	Whilst this description may be partially effective for some consultants, this point should be accompanied by a diagram for each class of conduit/bridge type such that there is no misinterpretation.	This point is very hard to convey by use of a diagram. The explanation given is suitable for practitioners with experience in hydraulic modelling.
	Point 8b (Blockage Factors) refers to blockage to be "...a consistent effective reduction of the total flow area across the entire cross section..." however this aspect does not take into account existing/future creek bed accretion over time which would occur upslope and across the total waterway including the invert of the waterway structure.	This item should be further investigated to validate a suggested approach.	Such "permanent" accretion is a function of the model topography, not random event-based debris blockage as covered by the policy. This accretion should be modelled as a matter of standard modelling practice, or addressed by appropriate maintenance measures if it is anticipated to exacerbate future flood risk.
	Point 8c (Blockage Factors) refers to culverts that have "...potential to significantly influence the flow behaviour..."	The word 'significantly' should be removed from this sentence to avoid confusion.	This suggestion has been adopted in the updated final draft.
	Point 8d (Blockage Factors) refers to modelling fences/rails/barriers with appropriate energy losses. Whilst this approach may be more accurate, it is unclear how the application of such a factor will be demonstrated by the consultant and verified by Council.	The energy loss factor should be removed from the analysis for simplicity and reliance made on the % blockage based on tables 1 and 2.	Energy loss parameters are an important component of modelling such obstructions to flow, and are standard practice in hydraulic modelling. It may be necessary for the relevant officers to undertake further training in hydraulic modelling if assessment of this issue is a concern.
	Table 1 and Table 2 - The modelling of pervious structures such as fences/railings with a 50% or 70% debris blockage factor should be clarified with an example showing the intended application to make it clearer for the consultant/Council.	Include diagram in the policy	The blockage factor is to be applied to the otherwise "open" part of the structure. Council may develop diagrams for the DCP if required.
	Table 1 and Table 2 - The application of the hydraulic blockage factors should be clarified with an example for each class of structure to make it clearer for the consultant/Council.	Include examples of application for each class or structure	The method of application is the same for all classes, and is specified in clause 7(c) of the recommended policy. It may be necessary for the relevant officers to undertake further training in hydraulic modelling if assessment of this issue is a concern.
	<p>A new development is proposed and in order to comply with the policy the consultant undertakes flood impact modelling based the "Design" blockage factors (i.e. Table 2) to demonstrate that there are no impacts.</p> <p>Based on the development proposal, there are impacts in "Risk Management" blockage conditions (i.e. Table 1) but the policy does not require the applicant's consultant to model or consider these impacts.</p>	<p>The policy should be amended to ensure that whichever blockage conditions are used to determine development potential of a property (i.e. delineating flood risk precincts, setting of floor levels, etc.) are also required to be considered for modelling of flood impacts.</p> <p>Developments should also be required to consider impacts in reduced and even no blockage conditions also.</p>	<p>With regards to impact assessment, the recommended approach (using "design" blockage factors) is consistent with standard floodplain management practice in NSW, and current practice by Council. Current practice does not require development to assess the impact on the FPL/FPA of neighbouring development, only on the design flood behaviour. For example, if a development has a small impact within the creek channel, it may be approved, even if it does "use up" some of the freeboard that adjacent dwellings have above the design flood level. The NSW Floodplain Development Manual is clear that that one of the purposes of freeboard is for "the cumulative effect of subsequent infill development of existing zoned land." (see Section K5)</p>

Submission	Issue Raised	Submission Request/Recommendation	Response
Wollongong City Council	There are a number of other controls in Chapter E13 that relate to other aspects of the development (i.e. Building components, structural soundness, flood affectation, evacuation, management and design, car parking, fencing, etc.).	<p>If it is intended that the “Risk Management” blockage criteria be used to address the controls in Chapter E13, then add extra dot point under 5.3(2)(b) as follows:</p> <ul style="list-style-type: none"> <li>- Addressing floodplain management related development controls for new developments, as contained within Chapter E13 of the Wollongong DCP2009.</li> </ul> <p>Alternatively, if it is intended that different blockage factors be applied to address different controls (which is NOT RECOMMENDED as this is overly complicated, likely to make the policy difficult to apply, and increase the complexity and cost of flood modelling for new</p>	WMAwater recommends that the “design” blockage factors are our best estimate of probability neutral blockage and should be used for most flood modelling tasks, including structural design of development. The “risk management” factors are only recommended for “high regret” planning decisions, such as the level and structural design of new development, to account for uncertainty in the blockage factors. The updated final draft contains revised text to clarify the specific applications of each factor.
	The terminology ‘Flood Planning Area (FPA)’, being the term used to identify land subject to flooding controls is inconsistent with Chapter E13 (Floodplain Management) of the WDCP2009. Note that based on the above definitions, there are portions of land that are within the Floodplain, but not within the FPA (i.e. where the PMF is more than 0.5 m above the 1 % AEP level, which is common throughout the LGA). Similarly, there are portions of land that are within the FPA but not within the Floodplain (i.e. anywhere where the PMF level is less than 0.5 m above the 1 % AEP).	<p>Change wording to ensure harmony between the two policies (i.e. Ch E13 and E14) and clarify which land is intended to be subject to floodplain related development controls.</p> <p>NOTE: Based on the current floodplain management controls in ChE13, both the Floodplain (i.e. PMF extent) and FPA (i.e. land below the Flood Planning Level) should be subject to the floodplain management related development controls, as there are controls that relate to both the PMF level and also the FPL.</p>	This inconsistency between the PMF extent and FPA extent is an existing issue with the DCP, and cannot be clarified by revisions to the blockage policy alone. WMAwater agrees that Council should review this issue, but it is outside the scope of this review.
	Insurance companies are not obliged to comply with the DCP. Insurance companies will undertake their own risk assessment based on whichever blockage factors they choose to use. This will likely involve reviewing the flood extents and risk precincts in Council’s adopted studies, which will be mapped based on the Table 1 blockage factors.		References to insurance assessment have been removed from the policy.
	This sounds overly complicated and could be difficult for some consultants to achieve, particularly with the modelling tools traditional used by consultants that typically undertake site specific flood studies for individual developments within the LGA (e.g. local small scale engineering consultants using 1D modelling tools such as HECRAS, as oppose to specialist hydraulic consultants undertaking large 2D catchment-wide flood models for Council or larger developments).	Change to be more simplistic, practical, and cost effective to apply on a development specific level.	1D modelling tools such as HEC RAS have similar capabilities for including energy loss parameters for hydraulic structures that more complex models do. Much of the industry knowledge for modelling energy losses at bridge structures is documented by Bradley (1978) <i>Hydraulic of Bridge Waterways</i> , published for the US Federal Highway Administration, and which is specifically referred to in the HEC RAS documentation for modelling bridge structures in that software. The effect of such features on overtopping flow is likely to be equally or more important than debris blockage, and should not be overlooked even for small scale assessments, if in proximity to such structures.

## WOLLONGONG DCP 2009 – Sustainability Review – Preliminary Stakeholder Feedback

### Attachment 1

<b>Preliminary feedback and recommendations from stakeholders</b>	<b>Comment</b>
Ranking/ rating tool for development and sustainability.	Encourage the use of existing tools for residential developments. Review of existing provisions has occurred for non-residential development.
Requirement for a minimum number of trees per allotment.	Council can recommend a minimum number of trees per allotment. Issues may follow in relation to regulation of such provisions, post development consent.
Encouraging more active transport when designing new subdivisions and larger developments. This may be through ensuring interconnectivity between communities, roads, cycle ways and pedestrian links.	Review of subdivision design process may occur to ensure active transport considerations are included and actively compete with other site constraints.
Requirement aspect and passive solar design requirements, particularly at the subdivision stage, for new residential development and larger developments.	There are existing provisions contained in Wollongong DCP 2009 relating to subdivision and solar access, orientation and lot layouts. These provisions aim to maximise solar access and energy efficiency opportunities for future dwellings and private open space.
Ensuring requirement for stormwater erosions and sediment controls in approval process.	Provisions relating to erosion and sediment control are contained in Wollongong DCP 2009. Conditions are included in development consents. Feedback provided to relevant internal divisions.
Stormwater and erosions sediment controls - regulation of controls during demolition and/ or construction.	Outside the scope of this DCP review. Feedback provided to relevant internal divisions.
Stormwater and sedimentation ponds - requirement for these not to be placed on Council land (or land to be dedicated to Council).	Location included as part of development assessments. Generally location within the development area.
Increase in permeable surfaces.	Informed review of Wollongong DCP 2009.
Decrease in allowable floor space ratio.	LEP requirement outside the scope of this project.
Requirement for more vegetation and less grass.	Informed review of Wollongong DCP 2009.
Increase sustainability features - going beyond BASIX SEPP.	Council may only encourage residents to go beyond BASIX requirements.
Lighter roof surfaces and driveways to facilitate cooling and reflect heat.	Council may encourage through the DCP where appropriate noting the implications relating to glare and reflection and existing inclusion in BASIX.
Deep soil zones – deep soil zones for residential flat buildings should be at the front to reinforce streetscape and continuous corridor of vegetation.	Informed review of the Wollongong DCP 2009.
Bicycle parking facilities even for single homes, duplex and townhouses.	Discussion with staff revealed WCC 6x6m garage requirement is regularly varied and reduced for dwellings & dual occupancies due to the AS being 5.5m x 5.5m. No further increase is recommended. Existing Wollongong DCP 2009 provision for storage for e.g. 3 bedroom dwelling –10m2 volume & 5m2 area required.
Improvements to the assessment of trees for removal in the DA process.	Informed review of the Wollongong DCP.

<b>Preliminary feedback and recommendations from stakeholders</b>	<b>Comment</b>
Include requirement for source separation of building materials so that less goes to landfill.	Existing provisions in Wollongong DCP 2009 benchmarked against other Council's.
Guidelines for solar passive design when designing dwellings.	Outside the scope of the review.
Allowance for and encouragement of green roofs and walls.	Informed review of the Wollongong DCP 2009.
Guidelines for green roofs and walls.	Informed review of the Wollongong DCP 2009.
Character statements – recommended to be revised to place greater emphasis on protecting streetscapes and reducing social conflict, and encouraging multi-dwelling housing near retail centres, employment and major public transport routes.	Outside the immediate scope of this DCP sustainability review.
Liveable Housing – ensuring housing is capable of being adapted to future circumstances and occupants.	Informed review of Wollongong DCP 2009.
Aims and objectives contained in the DCP – to have greater emphasis on sustainability.	Informed review of Wollongong DCP 2009.
Include sustainability DCP provisions in each respective chapter of the current DCP rather than have a stand-alone sustainability chapter	Informed review of Wollongong DCP 2009.
Parks, waterways and creeks – use of local plant species in parks to support local biodiversity, and ensure creeks contribute to visual amenity.	Applicable for new subdivisions.
Street trees and visual amenity in new subdivisions – improving amenity of new subdivisions and developments through landscaping and use of street trees using local plant species.	Informed review of Wollongong DCP 2009 noting the current Urban Green Strategy being developed by Council.

# 2016

## Discussion Paper

Sustainability and Wollongong  
Development Control Plan 2009

April 2016



## Contents

1.	Introduction .....	1
1.1	Defining sustainability .....	1
1.2	Initial stakeholder feedback .....	2
1.3	Benchmarking .....	2
1.4	The role of Wollongong DCP .....	3
2.	Sustainability and Wollongong DCP .....	5
2.1	Biodiversity .....	8
2.1.1	Neighbourhood planning and subdivision .....	9
2.1.2	Individual allotments .....	9
2.1.3	Floor space ratio and site coverage .....	12
2.1.4	Benchmarking across other Councils .....	12
2.1.5	Recommended amendment to Wollongong DCP 2009 .....	14
2.2	Energy and Water .....	17
2.2.1	Residential development and BASIX .....	17
2.2.2	Commercial and Industrial development .....	17
2.2.3	Subdivision .....	19
2.2.4	Floodplain, stormwater and riparian management .....	19
2.2.5	Building Code of Australia .....	19
2.2.6	National Australian Built Environment Rating System .....	19
2.2.7	Benchmarking across other Councils .....	20
2.2.8	Recommended amendment to Wollongong DCP 2009 .....	22
2.3	Waste .....	23
2.3.1	Wollongong DCP and waste minimisation during demolition and construction .....	23
2.3.2	Wollongong DCP and waste collection requirements for different development types .....	23
2.3.3	Benchmarking across other Councils .....	23
2.3.4	Recommended amendment to Wollongong DCP 2009 .....	24
2.4	Transportation .....	25
2.4.1	Car and bicycle parking in Wollongong DCP 2009 .....	25
2.4.2	Car parking incentive for development near transport nodes in Wollongong .....	26
2.4.3	Encouraging active transport through subdivision and road design .....	26
2.4.4	Benchmarking across other Councils .....	26
2.4.5	Recommended amendment to Wollongong DCP 2009 .....	27
2.5	Building design and materials .....	29
2.5.1	Residential development .....	29
2.5.2	Commercial and industrial development .....	30
2.5.3	Recommended amendment to Wollongong DCP 2009 .....	32
3	NSW legislation under review .....	33
3.1	NSW Government expanding complying development .....	33
3.2	NSW Government BASIX target review .....	33
4	Conclusion and Recommendations .....	34
	Appendix A .....	39

---

# 1. Introduction

Like many other areas across New South Wales, Wollongong is experiencing development pressures and this pressure will continue into the future. The Illawarra Shoalhaven Regional Plan 2015 has identified projected housing needs for the Wollongong local government area of 14,600 by 2036. The vision set for the Illawarra and Shoalhaven in the regional plan is *a sustainable future and resilient community, capable of adapting to changing economic, social and environmental circumstances*. The plan identifies the need to support the sustainable use of land and water resources and build resilience to natural hazards and climate change.

Wollongong Local Environment Plan 2009 (Wollongong LEP 2009) is Council's primary statutory document regulating land use and development for the city. Wollongong Development Control Plan 2009 (Wollongong DCP) supplements Wollongong LEP 2009 and contains development objectives and controls which guide permissible development. Wollongong DCP came into force on 3 March 2010 and has since been subject to periodic review. No review has been completed targeting sustainability. Council's Environmental Sustainability Strategy and associated implementation plan, as well as Council's Environmental Strategy and Planning Division 2015/2016 Business Plan seeks development of a sustainability DCP chapter. This discussion paper aims to:

- a) review Wollongong DCP in the context of sustainability as defined by Council's Environmental Sustainability Policy and ESD as defined by the *Environmental Planning and Assessment Act 1979* and *Local Government Act 1993*.
- b) document strengths and shortfalls of current development objectives and controls contained in Wollongong DCP relating to sustainability.
- c) outline legislation affecting development outcomes and the application of Wollongong DCP.
- d) benchmark Wollongong's DCP provisions against the DCP provisions of other NSW Councils.
- e) provide recommended amendments for Wollongong DCP to enhance the sustainability of development.

## 1.1 Defining sustainability

Sustainability is considered an all-encompassing term applicable to Council and our community. Council's Environmental Sustainability Policy defines sustainability as *"meeting the need of present generations without compromising the ability of future generations to meet their own needs"* (Our Common Future, World Commission on Environment and Development 1987).

The *Environmental Planning and Assessment Act 1979* (EPA Act 1979) addresses sustainability through its main objectives, encouraging:

- (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural assets, forests, minerals, water, cities, towns and villages, for the purpose of promoting the social and economic welfare of the community and a better environment... and*
- (vii) *ecologically sustainable development*

Ecologically sustainable development as defined by the *Environmental Planning and Assessment Act 1979*,

*... requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:*

- (a) *the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

*In the application of the precautionary principle, public and private decisions should be guided by:*

- (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
- (ii) *an assessment of the risk-weighted consequences of various options,*
- (b) *inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*

- (c) *conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) *improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:*
- (i) *polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
  - (ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
  - (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

The *Local Government Act 1993* (LG Act 1993) provides the legal framework for the effective, efficient, environmentally responsible and open system for local government in NSW. There are five overall purposes of the LG Act 1993 including the requirement for councils, councillors and council employees to have regard to the principle of ecologically sustainable development in carrying out of their responsibilities. The principles of ecologically sustainable development are defined the same as that of the EPA Act 1979.

Council's Environmental Sustainability Policy acknowledges the principles of ecologically sustainable development in all Council decision making processes, including the precautionary principle, biological diversity and improved valuation, pricing and incentive mechanisms.

The definition of sustainability as defined by Council's Environmental Sustainability Policy, as well as the definition of ESD defined in accordance with EPA Act 1979, have informed this discussion paper.

## 1.2 Initial stakeholder feedback

Initial feedback was sought from Council's Neighbourhood Forums and Environment and Sustainability Reference Group in August/ September 2015 to identify issues and concerns for consideration in this sustainability DCP review (Appendix A). Feedback received was wide-ranging but broadly based around the need to:

- ✓ increase native vegetation and biodiversity,
- ✓ decrease permeable surfaces,
- ✓ improve the siting and operation of residential developments,
- ✓ decrease the bulk and scale of development,
- ✓ go beyond the standard BASIX requirements,
- ✓ review universal housing requirements.

A number of issues raised concerned matters outside Council's sphere of influence i.e. those Council is unable to regulate through a development control plan. These included the requirement to increase sustainability features beyond BASIX for dwellings, as well as minimum passive solar design requirements for dwellings.

## 1.3 Benchmarking

Forming part of this review, Wollongong DCP provisions have been benchmarked against other NSW Councils to highlight differences between local government areas and opportunity for Wollongong. DCP's from the following local government areas have been included in this review:

- City of Sydney 2012
- Gosford DCP 2013
- The Hills DCP 2012
- Kiama DCP 2012
- Newcastle DCP 2012
- North Sydney 2013
- Penrith DCP 2014
- Shellharbour DCP 2013
- Sutherland Draft DCP 2015
- Willoughby DCP 2006



Specific and more targeted DCP chapters from other local government areas have also been included in this review. These have been integrated where appropriate throughout the remainder of this discussion paper.

### 1.4 The role of Wollongong DCP

In accordance with s74BA of EPA Act 1979, the principal purposes of a DCP are to provide guidance on the following matters:

- ✓ to give effect to the aims of the Wollongong LEP 2009,
- ✓ facilitate permissible development, and
- ✓ achieve the objectives of the various land uses zones under Wollongong LEP 2009.

DCP controls may be varied to provide flexibility for applicants, whilst still achieving the DCP objectives.

The Wollongong DCP is divided into five parts and contains 63 chapters and 3 appendices.

- Part A Introduction
- Part B Land Use Based Planning Controls
- Part C Specific Land use Controls
- Part D Locality Based DCPs/ Precinct Plans
- Part E General (City Wide) Controls.

The DCP is structured to move from land use based controls (Part B) to specific locality based controls (Part D), to city wide controls.

The scope of development requiring compliance with Wollongong DCP is limited by other statutory requirements (Table 1).

The State Environmental Planning Policy (Exempt and Complying Development Standards 2008) enables exempt and complying development to occur through application of State-wide development controls. Wollongong LEP and DCP do not apply where an applicant chooses to develop in accordance with this SEPP.

Analysis of data relating to development applications determined and complying development certificates in the Wollongong local government area for 2014/2015 (1 July 2014 to 30 June 2015) indicates 25.1% of applications were complying development, 97% of which were assessed by a private certifier and not Council.

The NSW Government is looking to expand SEPP (Exempt and Complying Development Standards) 2008. A discussion paper was released in November 2015 which explored expansion of the SEPP to include dual occupancies, manor homes, and certain townhouses and terraces. This review is outlined further later in this paper.

Table 1: Legislation affecting application of development control plans

Legislation	Applicability	How does the legislation relate to Council and Wollongong DCP?
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	<p>This SEPP provides a streamlined assessment process for development that complies with specified development standards. This SEPP applies to development types such as dwellings, additions and alterations, swimming pools.</p> <p>Exempt development codes identify the type of development that are of minimal environmental impact that may be carried out without need for development consent (exempt).</p> <p>Complying development codes identify the types of development that may be carried</p>	<p>Council (or a private certifier) completes complying development approval process.</p> <p>Certifiers do not have to assess complying development applications against the Wollongong DCP.</p>

Legislation	Applicability	How does the legislation relate to Council and Wollongong DCP?
	out with a complying development certificate.	
State Environmental Planning Policy No 65 - Design Quality for Residential Apartment Buildings	<p>SEPP 65 applies to residential flat building, shop top housing or mixed use development with a residential accommodation component, (if the development is a new building or substantial re-development, is at least 3 or more storeys, and contains at least 4 or more dwellings).</p> <p>This does not apply to boarding houses or serviced apartments, or class 1a or 1b buildings within the meaning of the <i>Building Code of Australia</i> (i.e. dwelling houses, boarding houses, guest houses, townhouses and villas).</p>	<p>For development effected by this SEPP, advice from the design review panel, design quality principles, and Apartment Design Guide must all be taken into consideration.</p> <p>Clause 6A indicates Wollongong DCP provisions have no effect in relation to visual privacy, solar and daylight access, common circulation and spaces, apartment size and layout, ceiling heights, private open space and balconies, natural ventilation, storage.</p> <p>BASIX applies to development required to comply with SEPP 65.</p> <p>A report to Council 14 March 2016 proposes to increase the application of Wollongong's Design Review Panel and application of SEPP 65 developments. All buildings 3 storeys or more containing at least 4 dwellings will be designed in accordance with SEPP 65 and Apartment Design Guidelines.</p>
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	<p>SEPP applies to all residential development types in NSW e.g. dwelling houses, dual occupancies, multi-dwelling housing, residential flat buildings, the residential component of mix use buildings. This includes complying development.</p> <p>This does not include a hotel or motel.</p>	<p>In accordance with s9 of the SEPP, any provisions contained in Wollongong DCP which relate to the following have no effect</p> <ul style="list-style-type: none"> <li>the reduction of mains supplied potable water, or reduce emissions or greenhouse gases in BASIX effected buildings, or</li> <li>an improved thermal performance of a building.</li> </ul>
<p>A multitude of other legislation operates to regulate the development industry and directly and indirectly affects development outcomes in the Wollongong area. For example:</p> <ul style="list-style-type: none"> <li>SEPP (Infrastructure) 2007</li> <li>SEPP (Affordable Rental Housing) 2009</li> <li>SEPP (Housing for Seniors or People with a Disability) 2004</li> </ul>		

## 2. Sustainability and Wollongong DCP

Wollongong DCP 2009 contains a multitude of existing and integrated provisions which directly or indirectly contribute to sustainable development outcomes. The overarching objectives contained upfront in Wollongong DCP include a number of provisions which introduce and highlight the importance of sustainability for the Wollongong area. These overarching objectives are supported by specific objectives and development controls embedded throughout the various land use, site specific and general DCP chapters in Wollongong DCP 2009.

There are many existing provisions of Wollongong DCP which directly and indirectly enhance the sustainability of development outcomes for the Wollongong area, which are summarised in Table 2.

**Table 2: Existing provisions of Wollongong DCP promoting enhanced sustainability outcomes.**

Chapter	Wollongong DCP Objective / Control
<b>A1: Introduction</b>	<p>Overarching aims and objectives include:</p> <ul style="list-style-type: none"> <li>c) ensuring that development contributes to the quality of the natural and built environments.</li> <li>f) encouraging the provision of development that is accessible and adaptable to meet the existing and future needs of all residents, including people with a disability.</li> <li>g) ensuring development is of a high design standard and energy efficient.</li> <li>i) ensuring the threat of bushfire is assessed.</li> <li>k) ensuring new development contributes to the safe and liveable environments.</li> </ul>
<b>B1: Residential Development</b>	<p>The overall aims for general residential development in Wollongong DCP include:</p> <ul style="list-style-type: none"> <li>(d) to manage residential development in order to maximise the retention of significant remnant trees and other natural features in particular localities.</li> <li>(e) to encourage innovative housing design and energy efficient housing which embraces the highest possible architectural, environmental and amenity standards.</li> <li>(f) promoting development which achieves the objectives of ESD.</li> <li>(g) to encourage a mix of housing forms within the city to assist in achieving urban consolidation initiatives particularly in localities close to business centres and railway stations and to assist in providing housing affordability.</li> </ul> <p><i>Landscaping</i></p> <p>The objectives for landscaped areas for dwelling and dual occupancy residential development aims to preserve and retain existing mature native vegetation, encourage the planting of additional significant vegetation, encourage the linkage of habitat corridors along the rear of sites, allow for increasing water infiltration and minimising urban run-off.</p> <p>The objectives for landscaping for attached dwellings and multi dwelling housing and residential flat buildings are similar to those for general residential development, focusing on reducing impervious areas, the appearance of housing through integrated landscape design and increasing the volume of vegetation in urban areas. A minimum landscaped area is required for all residential development.</p> <p><i>Deep soil zones</i></p> <p>Attached dwellings, multi dwelling housing and residential flat buildings are also required to include a minimum deep soil zone on the site. Deep soil zone objectives compliment those for required landscaped areas and aim to protect existing mature trees on site, encourage the planting of significant vegetation, encourage linkage with adjacent deep soil zones to provide habitat, and allow of increased water infiltration.</p> <p><i>Building character and form</i></p> <p>Provisions which aim to ensure residential development respond to both its natural and built surrounds.</p> <p><i>Adaptable Housing</i></p> <p>Requirement for the application of adaptable housing standard (Australian Standard) generally where there are 6 or more dwellings proposed for a multi dwelling housing and residential flat building.</p> <p><i>SEPP 65 and the NSW Department of Planning and Environment's Apartment Design Guide (July 2015)</i></p>

Chapter	Wollongong DCP Objective / Control
	<p>Applicable to residential flat buildings and includes objectives and design guidance for such development, including provision relating to solar access and design, natural ventilation, landscape design, adaptive reuse, universal design, green roofs and walls, planting on structures, energy efficiency and water management and waste management.</p>
<b>B2: Residential Subdivision</b>	<p>Overall aims include: ensuring subdivisions are designed to take into account the principles of ecological sustainable development; including focus on lot orientation for future solar efficiency; and ensuring the majority of allotments are within 400m walking distance to a bus stop.</p> <p><i>Subdivision design</i></p> <p>Subdivision design objectives and controls aim to ensure the design of a proposed subdivision takes into account inherent site constraints and natural landform features, and to ensure significant trees, other vegetation and endangered ecological communities and threatened species are taken into account.</p> <p><i>Lot layout and orientation</i></p> <p>Includes provision for: consideration of energy efficiency opportunities for future dwellings; maximising private open space; ensuring adequate pedestrian and cycleway linkages are provided; ensuring road networks cater for the safety of pedestrians, cyclists and motorists; and ensuring that footpaths meet required standards.</p> <p><i>Street tree planting</i></p> <p>The residential subdivision chapter includes specification for one street tree per 12m of residential frontage as being generally required.</p> <p><i>Stormwater Drainage (including water sensitive urban design infrastructure)</i></p> <p>Provisions aim to minimise stormwater drainage runoff impacts and limit post development discharge to that of pre-development levels. It aims to provide a sustainable stormwater drainage and water quality environment for both the natural and man-made environment. It aims to encourage the use of water sensitive design initiatives for larger residential subdivisions.</p>
<b>B3 Mixed Use Development</b>	<p>There are various objectives for mixed use development for Wollongong including minimising adverse impacts on neighbouring land uses and ensuring the development has regard for any trees or vegetation which requires preservation. There is no specific objective which promotes development which aims to achieve the principles of ecologically sustainable development.</p> <p><i>Landscaping</i></p> <p>Provision for podium planting and street trees is included. Green roofs and walls are currently not encouraged/ required in Wollongong DCP.</p> <p><i>Adaptable Housing</i></p> <p>Adaptable housing is required where there is a residential component to the development for multi dwelling and attached dwelling housing.</p> <p><i>Adaptive Reuse</i></p> <p>An additional strength of this DCP chapter includes objectives and controls relating to adaptive reuse. These provisions aim to ensure flexible living / working relations within the dwelling design, encourage the conversion of underutilised commercial (office and retail) space to residential. It aims to ensure adaptive reuse opportunities are considered when designing such developments.</p>
<b>B4 Development in Business Zones</b>	<p>DCP Chapter currently under separate review.</p>
<b>B5 Industrial Development</b>	<p>Wollongong's industrial lands DCP chapter includes objectives for the incorporation of ecologically sustainable development and encouraging the use of water sensitive urban design measures.</p> <p>Development objectives relating to the building design / façade treatment include the promotion of</p>

Chapter	Wollongong DCP Objective / Control
	<p>functional, safe and environmentally friendly industrial development. The provision of natural lighting is required for large-scale factory or warehouse distribution buildings.</p> <p>Landscaping controls include a minimum number of trees for car park areas (1 tree per 10 car spaces selected to provide a 4-6m canopy spread at maturity).</p>
<b>B6 Development in the Illawarra Escarpment</b>	<p>Objectives of this DCP chapter include provision to:</p> <p>(e) ensure development is consistent with the principles of ecologically sustainable development, especially intergenerational equity, bearing in mind the unique environmental characteristics of each specific locality within the escarpment.</p> <p>(f) ensure that development is restricted to the existing cleared sites within the escarpment slope and foothills areas only and any such development is well designed to minimise potential bush fire, land instability, flooding and or draining hazard risks.</p> <p>(g) ensure that any new development makes provision for adequate water supplies and an environmentally acceptable waste water treatment system and stormwater drainage.</p> <p>Development in the Illawarra Escarpment requires a visual impact assessment. This is additional to the general development controls for the subject development.</p> <p>Siting and orientation objectives and controls ensure dwellings and outbuildings are not prominent on a ridgeline or hilltop, are sympathetic with the landscape character and surrounding environment, and ensure the external building materials and finishes reinforce the landscape character of the Illawarra Escarpment.</p> <p>This DCP Chapter also includes an outline of BASIX and compliance requirements for residential development.</p>
<b>D13 Wollongong City Centre</b>	<p>This DCP chapter includes requirement to meet minimum energy efficiency and water conservation development controls for certain development, including minimum 4 star rating in accordance with NABERS for commercial office development with a construction cost of \$5 million or more.</p> <p>Development controls relating to reflectivity, wind mitigation, landscape design and planting on structures are also included.</p>
<b>D16 West Dapto Urban Release Area</b>	<p>Chapter D16 West Dapto Release Area acknowledges the intrinsic environment and biodiversity present in the area and sets outlines, in general terms, how this area will be subdivided.</p> <p>Council has also resolved to apply biodiversity certification for West Dapto. This process is underway.</p>
<b>E6 Landscaping</b>	<p>DCP Chapter defines the landscaping provisions necessary for different types of development applications. It aims to ensure landscaping is appropriate to characteristics of its locality, preserves and contributes to its natural, culture, heritage and visual character, and minimise the impacts from development on natural site features and existing trees.</p> <p>DCP chapter includes provisions relating to street trees.</p>
<b>E7 Waste Management</b>	<p>DCP Chapter aiming to minimise the volume of waste generated during the demolition and construction phases of development, minimise waste and encourage recycling during the post development operational phase. This includes the specification for a site waste minimisation management plan specifying the types and volumes of waste expected to be generated, as well as the reuse, recycling and/ or final disposal sites.</p>
<b>E17 Preservation and Management of Trees and Vegetation</b>	<p>DCP chapter outlining Council's requirements for the preservation and management of trees and other vegetation. The controls outlined in this chapter apply for tree/ vegetation removal requested via a development application of via a tree management permit.</p> <p>This DCP chapter aims to protect trees in our LGA, protect and enhance native vegetation and habitat, conserve significant stands of remnant vegetation and ensure any new development considers and maximises the protection of existing vegetation through the site planning, design, development, construction and operation of the development.</p>

Chapter	Wollongong DCP Objective / Control
	This chapter operates alongside chapter E18 (Threatened Species).
<b>E18 Threatened Species</b>	This DCP Chapter applies where there is potential for a development to affect threatened species, populations, endangered ecological communities or their habitat. This DCP chapter is primarily focused on legislation (TSC Act 1995 or FMA 1994) and outlines legislative requirements to assess such impacts. This chapter includes Council's requirements for flora and fauna assessments.
<b>E23 Riparian Lands Management</b>	There are many objectives of this DCP chapter including the aim to protect urban creeks and riparian corridors, conserve, enhance and protect existing native riparian vegetation and habitat and protecting water quality.

In order to analyse the specific provisions of Wollongong DCP and benchmark Wollongong DCP against other NSW Councils DCP provisions, the remainder of this discussion paper has been broken into key sustainability themes, namely:

- Biodiversity
- Energy and water
- Waste
- Transportation
- Building design and materials

## 2.1 Biodiversity

The effect of development on biodiversity is regulated in the first instance by federal and state legislation, and subsequently via Wollongong LEP 2009 and Wollongong DCP. Legislation and state environmental planning policies regulating biodiversity impacts include:

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Environmental Planning and Assessment Act 1979*
- *Threatened Species Conservation Act 1995*
- *Fisheries Management Act 1994*
- *Native Vegetation Act 2003*
- *State Environmental Planning Policy 26 – Littoral Rainforests*
- *State Environmental Planning Policy 44 – Koala Habitat Protection*

Wollongong LEP 2009 contains provisions relating to biodiversity, namely clause 7.2 Natural Resources Sensitivity-Biodiversity and clauses 5.9 and 5.9AA Preservation of trees and vegetation.

Clause 7.2 Natural Resources Sensitivity- Biodiversity aims to protect, maintain or improve the diversity and condition of the native vegetation and habitat, including protecting biological diversity of native flora and fauna, protecting ecological processes, and encouraging the recovery of threatened species, communities, populations and their habitats. This clause applies to areas identified on the natural resource sensitivity – biodiversity map, contained in Wollongong LEP 2009.

Clause 5.9 aims to preserve the amenity of the area including biodiversity values, through the preservation of trees and other vegetation. This clause contains provisions relating to the assessment of trees and other vegetation for removal, and references requirements of Wollongong DCP.

The following chapters of Wollongong DCP directly address biodiversity issues by supporting statutory requirements for biodiversity assessment, and outlining Council's process for the removal of trees and other vegetation.

E17 – Preservation of trees and other vegetation

E18 – Threatened Species Impact Assessment

E23 – Riparian Land Management

There are various DCP provisions which indirectly affect biodiversity and the potential for biodiversity at the neighbourhood planning and subdivision scale, as well as at the individual allotment scale. These have been examined further below.

2.1.1 Neighbourhood planning and subdivision

Chapter B2 Residential Subdivision and D16 West Dapto Release Area of Wollongong DCP provide comprehensive development objectives and controls for subdivisions in the Wollongong local government area. The overall objectives contained in Chapter B2 Residential subdivision include provisions for the subdivision being responsive to inherent site conditions and constraints, and ensure subdivisions are designed to take into account the principles of ESD.

For the West Dapto Urban Release area, Council has resolved to support the application of the biodiversity certification assessment methodology (27 May 2013 and 23 June 2014). The biodiversity certification process identifies and protects areas of high conservation value at the landscape scale, whilst also identifying areas suitable for development. Impacts on areas of lower biodiversity value are permanently offset leading to an overall ‘improve or maintain’ outcome. This approach is considered to be the most sustainable approach to managing the competing priorities of environmental protection and biodiversity, and delivery of housing in the West Dapto urban release area.

Chapter D16 West Dapto Release Area acknowledges the intrinsic environment and biodiversity present in the area and sets outlines, in general terms, how this area will be subdivided. s6.3.1 Flora and Fauna development controls specify areas of environmental sensitivity to be zoned environmental conservation accordingly with minimal development permitted. Areas of lesser significance will still require sensitive design and siting and be included in the Environmental Living zone. Additionally, areas of significant remnant vegetation will be conserved and incorporated into the open space network as areas of passive recreation.

Water Management and Riparian Management objectives and controls in Chapter D16 West Dapto Release Area aim to conserve and rehabilitate riparian corridors and vegetation, restore remnant native vegetation along creeklines, escarpment and provide linkages for wildlife movement, and to introduce wildlife corridors providing a functioning habitat for birds, fish and diverse native flora.

2.1.2 Individual allotments

Although the scope to achieve biodiversity outcomes at an individual allotment scale is limited, there are a number direct and indirect development controls which enhance and effect biodiversity outcomes.

The land use based DCP chapters in Wollongong DCP (Chapters B1 – B7) specify development objectives and controls which guide the footprint, siting and built form of development on a site. Development controls relating to setbacks, landscaping, private open space, and deep soil zones, and Wollongong LEP 2009 floor space ratio, collectively affect the potential for biodiversity both in a present and future capacity.

For dwellings and ancillary development assessed as complying development in accordance with SEPP (Exempt and complying), development standards applied differ from those specified in Wollongong DCP. Table 3 summarises Wollongong’s general residential development controls and those required in accordance with SEPP Exempt and Complying Development Standards.

Table 3: Wollongong’s general residential development controls compared with those required as per SEPP (Exempt and Complying)

	WCC DCP Controls General residential (Chapter B1)	SEPP (Exempt and Complying Development Codes) 2008*
Front setback	6m for infill development (unless the prevailing street character is less).  4m for greenfield sites (except garages and carports – 5.5 m).	Based on lot area. For example  4.5m - for a lot >300m2 but not more than 900m2.
Side setback	For single storey development, walls must be setback 900mm and eaves/ gutters must be setback 450mm.	Based on lot widths however this is generally 900mm.



	WCC DCP Controls General residential (Chapter B1)	SEPP (Exempt and Complying Development Codes) 2008*
Rear setback	For single storey development, walls must be setback 900mm and eaves/gutters must be setback 450mm.  3m - for double storey development,	Based on lot area. For example  3m – for any building with a height of up to 4.5 m and lot area of between 200m <sup>2</sup> and 900m <sup>2</sup> .  8m – for any building with a height greater than 4.5 m and lot area of between 300m <sup>2</sup> and 900m <sup>2</sup> .
Landscape area	20% of the site, of which 50% must be behind the primary building line.  Minimum landscaped width – 1.5m.	Based on lot area.  20% - lot area is >450m <sup>2</sup> - <600m <sup>2</sup> 30% - lot area is >600m <sup>2</sup> - <900m <sup>2</sup> . 40% - lot area is >900m <sup>2</sup> - <1500m <sup>2</sup> .  At least 50% of the landscaped area must be behind the building line to the primary road.  Minimum landscaped width – 1.5m.
Private open space	Minimum area of 24m <sup>2</sup> . Minimum width for one side 4m and no steeper than 1:50.	Based on lot width. For example:  24m <sup>2</sup> minimum POS for lots with width >10m.  Minimum width for one side 3m, no steeper than 1:50.
Site coverage	Nil	s3.9 outlines site coverage requirements for complying development subject based on the lot area. i.e.  55% of the area of the lot, if the lot has an area of at least 300m <sup>2</sup> but less than 450m <sup>2</sup>  50 % if the lot has an area of at least 450m <sup>2</sup> but less than 900m <sup>2</sup>  40% if the lot has an area of at least 900m <sup>2</sup> but less than 1500m <sup>2</sup> .
Floor area	Floor space ratio as defined by Wollongong LEP and shown on the FSR map.  FSR is defined in s2.1.3.  Generally FSR is as follows:  R2 zone (low density residential) 0.5:1  R3 zone (medium density zone) 0.75:1	Maximum floor area used and defined differently to the FSR As per Wollongong LEP.  Maximum floor areas is the total floor area for a dwelling housing, detached studio, basement and any secondary dwelling:  270m <sup>2</sup> if the lot has an area of 300m <sup>2</sup> but not more than 450m <sup>2</sup> . 330m <sup>2</sup> if the lot has an area of 450m <sup>2</sup> but not more than 600m <sup>2</sup> 380m <sup>2</sup> if the lot has an area of 600m <sup>2</sup> but not more than 900m <sup>2</sup> . 430m <sup>2</sup> if the lot has an area of more than 900m <sup>2</sup> .  Floor area, for a dwelling house referred to in Part 3, 3A or 4 of SEPP (exempt and complying), means the sum of the areas of each storey of the dwelling house and any carport, garage, balcony, deck, patio, pergola, terrace or verandah, measured at a height of 1.4m above each floor level, that is within the outer face of:  (a) the external walls of the dwelling house, and (b) the walls of the carport, garage, balcony, deck, patio, pergola, terrace or verandah,  but does not include any of the following:



	WCC DCP Controls General residential (Chapter B1)	SEPP (Exempt and Complying Development Codes) 2008*
		(c) any part of an awning, blind or canopy that is outside the outer wall of a building, (d) the eaves, (e) a lift shaft, (f) a stairway, (g) a void above a lower storey.

Differences between Wollongong DCP and the complying development general housing code relate to rear setbacks, FSR, site coverage and maximum floor area. Complying development also requires a higher landscaped area than that required in Wollongong DCP, in cases where the lot size is greater than 600m<sup>2</sup>.

Landscaping objectives defined in Wollongong DCP for residential development aim to retain and encourage the enhancement of existing native biodiversity and concentrate corridors along the rear of sites. The additional sustainability benefits beyond biodiversity relate to water cycle management and facilitation of private open space areas for current and future generations. Complementary to landscape areas, deep soil planting zones are an additional requirement for many forms of development, excluding dwellings. Deep soil zones have multiple aims including the protection of existing mature vegetation, encouragement of planting significant vegetation, contribution to the biodiversity, and increasing water infiltration capacity. Linkages of deep soil zones across the back of allotments have historically been recommended, aiming to provide habitat linkages for plants and birdlife.

**Table 4: Wollongong DCP's landscaping and deep soil zone requirements for residential land uses.**

	Landscaping controls (summary)	Deep soil planting controls (summary)
Dwellings, dual occupancies	20% (minimum) of the allotment or site area. <ul style="list-style-type: none"> <li>- 50% must be behind the front building line.</li> <li>- minimum 1.5m width for landscaping.</li> </ul>	Nil
Attached dwellings and multi-dwelling housing	30% (minimum) of the allotment or site area. <ul style="list-style-type: none"> <li>- minimum 1.5m width for landscaping.</li> </ul>	15% minimum (or half the landscaped area) is required to be deep soil zone where this is not located at the rear of the site.  Alternatively, a minimum 6m wide strip may be provided at the rear of the site. (note the minimum site width for these types of development is 18m).  Deep planting zone must be densely planted with trees and shrubs.
Residential Flat Buildings	30% (minimum) of the site area. <ul style="list-style-type: none"> <li>- minimum 1.5m width landscaping.</li> </ul>	A minimum of half the landscaped area (or 15% of the site) is required to be provided as deep soil zone where this is not located at the rear of the site.  May be located anywhere except front of the building line, and have a minimum dimension of 6m.  Otherwise, the deep soil zone may extend the full length of the rear of the site – 6m minimum.

	Landscaping controls (summary)	Deep soil planting controls (summary)
		Note a minimum site width of 24m is required for residential flat buildings.

### 2.1.3 Floor space ratio and site coverage

In accordance with Wollongong Local Environment Plan 2009, *floor space ratio* of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area.

Gross floor area is defined as *the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:*

- a) the area of a mezzanine, and*
- b) habitable rooms in a basement or an attic, and*
- c) any shop, auditorium, cinema, and the like, in a basement or attic,*

*but excludes:*

- d) any area for common vertical circulation, such as lifts and stairs, and*
- e) any basement:*
  - i. storage, and*
  - ii. vehicular access, loading areas, garbage and services, and*
- f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and car parking to meet any requirements of the*
  - a) consent authority (including access to that car parking), and*
  - b) any space used for the loading or unloading of goods (including access to it), and*
  - c) terraces and balconies with outer walls less than 1.4 metres high, and*
  - d) voids above a floor at the level of a storey or storey above.*

The definition of FSR constrains development on a site. The term FSR however may be considered misleading when the definition is not carefully interpreted.

Site coverage is concerned with the overall footprint of the site (Figure 1). Defined by Wollongong LEP 2009 site coverage is the *proportion of a site area covered by buildings. The following are not included for the purpose of calculating site coverage:*

- (a) any basement,*
- (b) any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,*
- (c) any eaves,*
- (d) unenclosed balconies, decks, pergolas and the like.*

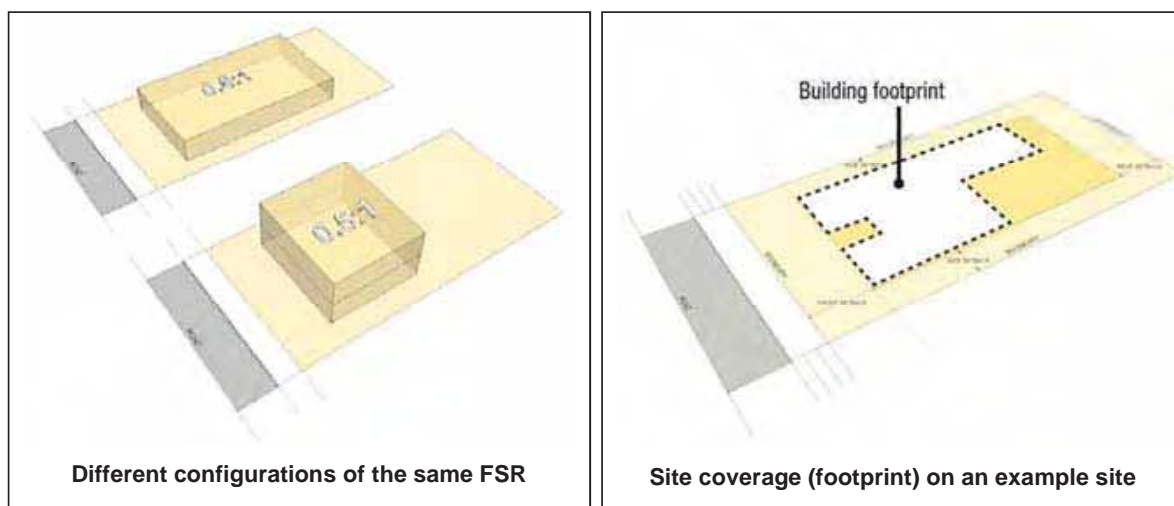
### 2.1.4 Benchmarking across other Councils

#### Landscaping

Analysis of the landscaping provisions from benchmarked Councils indicates minimum landscaping area requirements vary across local government areas. Some Councils adopt a similar approach to the *SEPP (Exempt and Complying Development Codes) 2008* and link minimum landscaped areas to lot size for dwellings and residential development. Example: Penrith DCP 2014, Newcastle DCP 2012. Others Councils adopt a similar approach to Wollongong and have a minimum area based on land use. Example: North Sydney.

Sutherland Shire and Hunters Hill Councils have gone a one step further and included minimum landscaped areas in their local environment plan. Sutherland (draft) DCP 2015 contains provisions relating to the location of landscaping, and also specifies a minimum number of trees for low density residential development. Hunters Hill Council DCP 2015, supported by the LEP landscaping provisions, specifies a minimum number of canopy trees for dwellings and

secondary dwellings. Both Sutherland Shire Council and Hunters Hill Council local environment plans contain minimum landscaping requirements. There are no minimum landscape requirements contained in Wollongong LEP 2009.



**Figure 1 Example of the application of FSR and site coverage (Source: Tweed Shire Council, May 2012)**

#### Site coverage

Site coverage is an additional DCP provision adopted by some benchmarked Councils and included as a requirement under SEPP Exempt and Complying Development. Site coverage DCP objectives and controls often aim to:

- control the density of development on a site and / or ensure development is in keeping with an optimum capacity of the site,
- ensure adequate provision is made for landscaping, landscaped areas and private open space.

Of those Councils benchmarked, four did not include any requirements for site coverage, one specified site coverage requirements for secondary dwellings (only), and four contained more comprehensive site coverage (or similar) requirements for specified types of residential development.

*Kiama Municipal Council DCP 2012* specifies 60% site coverage for dwellings. Medium density development is required to comply with a building footprint requirement which specifies 25% of the site to be deep soil zones and designed in accordance with their landscaping requirements.

*North Sydney Council DCP 2013* contains site coverage requirements dependant on lot size. For example 50% for lots 230-499m<sup>2</sup>, 40% for lots 500-749m<sup>2</sup>. 45% site coverage for dual occupancies. Note: North Sydney does not use FSR, only height controls in their LEP and site coverage in the DCP.

*Gosford Council DCP 2013* does not specify site coverage in their general development controls. They adopt a similar approach using site occupancy termed Open Space Areas. An Open Space Area is 'that part of a site not occupied by any building and which is predominantly landscaped by way of planting of gardens, lawns, shrubs or trees and is available for use and enjoyment by the occupants of the building erected on that site, but does not include so much of the site area as is used for driveways and parking areas'. For dwelling houses, ancillary structures, and secondary dwellings – collectively the Open Space Area for the site, must not be less than 40%.

Site coverage is specified in Gosford DCP in their major centres with specific development controls e.g. 100% for commercial and mixed use development in the commercial core, 75% for commercial and mixed use development in all other zones.

*Willoughby Council DCP 2006* includes site coverage objectives and controls for attached dwellings, multi dwelling housing and residential flat buildings. The maximum site coverage is based on the number of storeys of the development as below.

<i>Storey</i>	<i>Max site coverage</i>
1	50%
2	35%
3	30%
4	28%

#### Roof gardens and podium planting vs green roofs and walls

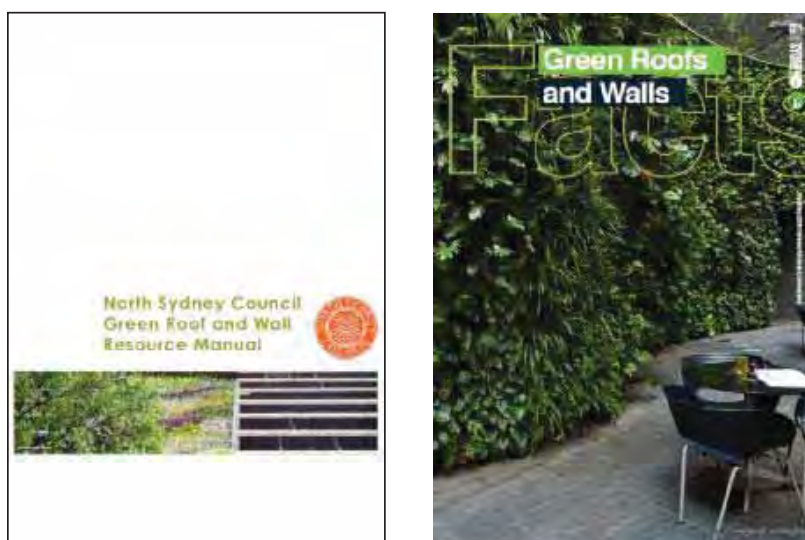
Podium planting and roof top gardens have long provided an avenue to integrate landscaping outcomes into residential flat buildings, mixed use and commercial developments. Wollongong DCP 2009 promotes the use of rooftop gardens as one avenue of achieving private open space requirements for attached dwellings and residential apartment buildings. Additional provisions are included in Chapter E6 Landscaping of Wollongong 2009 in relation to planting on concrete slabs and podiums, and landscape plans.

Green roofs and walls have become a focus of sustainable development in recent years and aim to minimise the impacts of a building on the environment, as well as increasing biodiversity outcomes. Green walls have the potential to significantly contribute to the streetscape and building façade when aesthetically designed and operating correctly. They also present risk if the functionally fails and/ or during changes of ownership. A failing or failed green wall is likely to detract from the overall streetscape.

North Sydney Council DCP defines green roofs and requires the provision of a green roof/s for new buildings or alterations and additions which involve the creation of new roof space which are generally flat. North Sydney Council DCP also contains a provision which encourage the incorporation of green walls into developments where appropriate. The City of Sydney DCP and Newcastle Council DCP both contain provisions relating to green roofs and walls encouraging their use. Wollongong DCP does not provide commentary in relation to green roofs and walls.

North Sydney Council and the City of Sydney have both produced manuals relating to green roofs and or walls which provide technical guidance on their design, construction and maintenance.

2.1.5



**Figure 1 Green roof and wall guides have been produced by (left) North Sydney Council and (right) City of Sydney.**

#### **Recommended amendment to Wollongong DCP 2009**

Wollongong DCP may look to enhance biodiversity outcomes throughout Wollongong through the introduction of site coverage controls and increasing minimum landscaped areas. The introduction of deep soil zones for dual occupancies would allow for increased water infiltration and enable an increase in vegetation onsite. The requirement for a minimum number of trees for different developments and encouragement of the use of green roofs and walls would also contribute to biodiversity surrounding such developments.

DCP Chapter	General recommendation	Draft recommended amendment
B1 Residential Development	Introduce site coverage development objectives and controls for dwellings.	For dwellings & dual occupancies – adapted from SEPP (Exempt and complying). i.e.  55% of the area of the lot, if the lot has an area less than 450m <sup>2</sup> .  50% of the area of the lot, if the lot has an area of at least 450m <sup>2</sup> but less than 900m <sup>2</sup> .  40% of the area of the lot, if the lot has an area of at least 900m <sup>2</sup> .
B1 Residential Development	Increase the minimum landscaped areas required for residential development dwellings and dual occupancies.	Current minimum landscape area for dwellings and dual occupancies – 20%. <i>Amend this control as below</i>  20% - lot area up to 600m <sup>2</sup>  30% - lot area is >600m <sup>2</sup> - <900m <sup>2</sup> .  40% - lot area is >900m <sup>2</sup> .
B1 Residential Development	Introduce minimum deep soil zone requirements for dual occupancies.	<i>New objectives and controls for dual occupancies</i>  Objectives  a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation. b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife. c) To allow for increased water infiltration. d) To contribute to biodiversity.  Controls  1. A minimum of half of the landscaped area must be provided as a deep soil zone. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 3m. The deep soil zone must not be included in any area allocated as private open space. 2. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located: (a) At the rear of the site to allow for separation from adjacent dwellings and to provide a corridor of vegetation of native fauna; or (b) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight. 3. No structures, basement car parks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone. 3. The deep soil zone shall be densely planted with trees and shrubs. Where the development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.
B1 Residential Development	Increase the minimum number of trees per lot for dual occupancies, and introduce a minimum number of tree/s per lot for dwellings, attached	<i>New clause in landscaping section for dwellings (s4.4)</i>  A minimum of one semi mature small to medium tree (minimum pot size 45L) is to be provided per lot in the landscaped area or private open space. This tree must be planted at least 3m from a dwelling,

DCP Chapter	General recommendation	Draft recommended amendment										
	dwellings and multi dwelling housing.	<p>building or structure on the lot.</p> <p><i>New additional clause for Dual Occupancies (additional to 4.4.2.5)</i></p> <p>A second semi mature small to medium tree (minimum pot size 45L) is to be provided onsite, planted at least 3m from any dwelling, building or structure on the lot.</p> <p><i>New additional clause for attached dwellings and multi dwelling housing</i></p> <p>Two semi mature medium – large trees (minimum pot size 45L) are to be provided for attached dwellings and multi dwelling housing in the deep soil planting zone or landscaped area and at least 3m from any dwelling, building or structure on the lot.</p> <p><i>New additional clause for residential flat buildings</i></p> <p>The minimum number of trees to be planted onsite as specified in the table below [or a minimum of 1 medium tree (minimum pot size 45L), whichever is greater]. Trees are to be planted in the deep soil zone or landscaped area on the site and at least 3m from any dwelling, building or structure.</p> <table><tr><th>Site area</th><th>Recommended tree planting</th></tr><tr><td>Up to 850m<sub>2</sub></td><td>1 medium tree per 50m<sub>2</sub> of deep soil zone</td></tr><tr><td>Between 850 - 1,500m<sub>2</sub></td><td>1 large tree or 2 medium trees per 90m<sub>2</sub> of deep soil zone</td></tr><tr><td>Greater than 1,500m<sub>2</sub></td><td>1 large tree or 2 medium trees per 80m<sub>2</sub> of deep soil zone</td></tr><tr><td colspan="2">Source - Apartment Design Guide 2015</td></tr></table>	Site area	Recommended tree planting	Up to 850m <sub>2</sub>	1 medium tree per 50m <sub>2</sub> of deep soil zone	Between 850 - 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 90m <sub>2</sub> of deep soil zone	Greater than 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 80m <sub>2</sub> of deep soil zone	Source - Apartment Design Guide 2015	
Site area	Recommended tree planting											
Up to 850m <sub>2</sub>	1 medium tree per 50m <sub>2</sub> of deep soil zone											
Between 850 - 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 90m <sub>2</sub> of deep soil zone											
Greater than 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 80m <sub>2</sub> of deep soil zone											
Source - Apartment Design Guide 2015												
B1 Residential Development, B3 Mixed Use Development D13 Wollongong City Centre E6 Landscaping	Encourage the use of green roofs and walls for residential flat buildings, mixed use developments, commercial and industrial developments through new development objectives and controls throughout Wollongong DCP.											

## 2.2 Energy and Water

Energy and water conservation and an increased efficiency of a development provide benefit to both the owner the property, and the overall reduction in greenhouse gas emissions benefits broader environment. Regulation of energy and water efficiency and conservation occurs in the first instance, via:

- *SEPP (Building Sustainability Index) 2004*
- *SEPP 65 – Design Quality of Residential Apartment Development*
- *Building Energy Efficiency Disclosure Act 2010*
- *Water Efficiency Labelling and Standards Act 2005*
- *Water Management Act 2000*
- *Greenhouse and Energy Minimum Standards Act 2012*

The following Wollongong DCP 2009 chapters include provisions relating to energy and water conservation and efficiency.

D13 Wollongong City Centre Precinct

E13 Floodplain Management

E14 Stormwater Management

### 2.2.1 Residential development and BASIX

All residential development in NSW is required to comply with SEPP (Building Sustainability Index) 2004 aka BASIX. BASIX sets out requirements on how to achieve water conservation and energy efficiency targets for residential development and include provision for passive solar design and selection of building materials for thermal insulation. In accordance with SEPP (Building Sustainability Index) 2004, no additional provisions may be required by any Council in relation to these matters.

For residential apartment development, Apartment Design Guide 2015 (NSW Department of Planning and Environment, July 2015) provides design guidance in relation to the incorporation of passive solar design, natural ventilation, ensuring potable water use is minimised, and urban stormwater. Compliance with the requirements of BASIX is the minimum requirement.

Council may encourage applicants to go beyond BASIX and incorporate as many sustainable design principles and building materials as possible (Figures 3 and 4). Wollongong DCP currently specifies compliance with BASIX but does not encourage going beyond BASIX for residential development.

### 2.2.2 Commercial and Industrial development

Development objectives and controls relating to energy and water efficiency for non-residential development are contained in Chapter D13 Wollongong City Centre. Objectives relating to energy efficiency aim to reduce the need for mechanical heating and cooling, minimise greenhouse gas emissions, and make use natural climatic advantages of the coastal location such as cool summer breezes. Development controls for commercial office development with a construction cost of \$5 million or more have been set. For such developments, an energy efficiency report is to accompany any development application and demonstrate no less than a 4 star rating under the Australian Building Greenhouse Rating Scheme (ABGRS). Note ABGR is now known as National Australian Built Environment Rating System (NABERS).

Objectives and controls relating to water conservation and reducing water runoff and discharge are additionally included for non-residential development in the Wollongong City Centre. Additionally, appliances are to be 3 stars or better for water efficiency, and controls exist in relation to stormwater runoff control and reuse, selection of water efficient plants, and operation details for swimming pools and water features.

There are no minimum requirements relating to energy and water efficiency specified for Industrial development (Chapter B5) or development in business zones (Chapter B4) in Wollongong DCP.





Figure 2 Sustainable housing features encouraged by BASIX (Source - NSW Department of Planning and Environment)

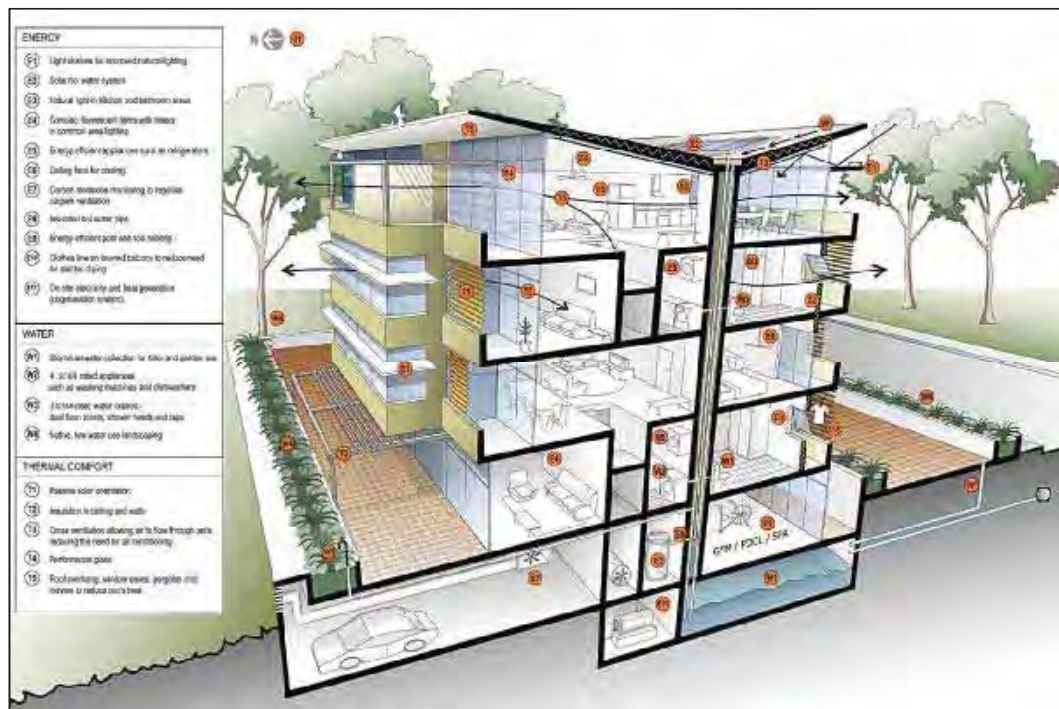


Figure 4 Sustainable multi-unit features encouraged by BASIX (Source - NSW Department of Planning and Environment)



### 2.2.3 Subdivision

An optimal subdivision design maximising solar orientation for allotments can be designed at the neighbourhood planning and subdivision stage. Wollongong DCP Chapter B2 Residential Development contains provisions in relation to subdivision lot layout, aspect and solar access. A number of existing development objectives specifically relate to solar access orientation and aspect of allotments. These objectives include:

- a) ensuring residential lots are well designed to take into account aspect, orientation, slope issues, and optimal solar access.
- b) residential lots which maximise solar access and energy efficiency opportunities for future dwellings and private open space areas.

A number of controls exist to support these objectives including the preferred north – south allotment orientation, and requirement for east-west allotments to be widened to ensure satisfactory solar access. Chapter D16: West Dapto Release Area of Wollongong DCP contains additional information, objectives and development controls relating to water management and riparian corridors. Development objectives aim to create a network of interconnected multi-functional creek corridors which act as creeks, flood ways, areas of flora and fauna habitat, water quality treatment areas, cyclist areas and pedestrian area, and drainage corridors. Additional objectives relate to protection and restoration of aquatic habitat, conservation and restoration of remnant native vegetation, and protection of Lake Illawarra catchment. Development controls have been set in relation to floodplain storage capacity and aim to ensure there is no net removal of floodplain capacity. Restrictions on development in flood affected areas have also been set.

### 2.2.4 Floodplain, stormwater and riparian management

Wollongong DCP contains a vast array of objectives and controls relating to floodplain management, stormwater management, waterways and riparian lands applicable to development under certain circumstances.

Chapter E13 Floodplain Management applies to flood liable land and contains a number of key objectives, many of which relate to minimising impact and risk of development to human life, property, and the aesthetics, recreation and ecological value of the waterway corridor.

Chapter E14 Stormwater Management outlines Council's requirements for stormwater drainage design and onsite stormwater detention,

Chapter E15 Water Sensitive Urban Design specifies the incorporation of appropriate water sensitive urban design measures which may be required for certain development types e.g. residential subdivision involving 50 or more allotments, industrial developments (including major alterations and additions to existing industrial buildings) involving a site area of 2 hectares or more.

### 2.2.5 Building Code of Australia

Section J of the Building Code of Australia (BCA) contains minimum energy efficiency provisions for class 3, 5-9 buildings in NSW including residential buildings other than single dwellings. Class 3, 5-9 buildings include residential part of a school, hotel or motel, boarding house, hostel, offices, shopping centres, restaurant or cafes, laboratory, clinic, day surgeries, theatres, cinemas and schools, aged-care buildings.

The BCA minimum energy efficiency requirements relate to building fabric, glazing, sealing, air conditioning, lighting and power, swimming pools and facilities for energy monitoring. Compliance with the BCA is required for all applicable classes of development.

### 2.2.6 National Australian Built Environment Rating System

The National Australian Built Environment Rating System (NABERS) is a performance based environmental impact rating system for office space in Australia. NABERS can provide a rating for energy, water, waste and indoor environments. NABERS Energy ratings are already required for in accordance with the following:

- Energy Efficiency in Government Operations Policy (EEGO Policy)  
The EEGO Policy sets minimum energy performance standards and targets for Australian Government office buildings. A minimum 4.5 stars NABERS Energy rating is (generally) required for new buildings, major refurbishments and new leases over 2,000m<sup>2</sup> net lettable area.

- Commercial Building Disclosure Program (CBD Program)  
The CBD Program requires most sellers and lessors of office space of 2,000m<sup>2</sup> or more to obtain a Building Energy Efficiency Certificate (which includes a NABERS Energy rating) before the building goes on the market for sale, lease or sublease.

Although the NABERS Energy ratings for EGO Policy and CBD Program are not incorporated into Wollongong DCP, they re-inforce the importance of energy efficiency in the built environment and provide another layer of regulation in this sector.

### 2.2.7 Benchmarking across other Councils

All benchmarked DCP's include provisions relating to energy and water efficiency and conservation. The degree to which these provisions are regulated is however variable, with no minimum standard observed.

#### *Residential development*

All DCP's recognised the role of BASIX for residential developments. Most DCP's encourage applicants to go beyond the minimum BASIX requirements to design and build a more sustainable home. All benchmarked local government areas required compliance with BASIX only for residential developments, except Willoughby Council. Willoughby requires compliance with BASIX as well as their sustainability scorecard DCP controls. Discussions with a staff member from Willoughby Council indicated these provisions were due for review in the near future and this process may see these provisions removed. These provisions have been hard to enforce for residential development and are seen as surplus to BASIX.

#### *Non-residential development*

More than half of those local government areas benchmarked require an energy assessment report and / or environment rating e.g. NABERS or Greenstar, for certain types of development. The type of assessment, threshold at which this is required, and development type requiring assessment varies between Councils. Table 5 summarises the varying energy assessment requirements.

All benchmarked DCP's contained additional general energy efficiency and conservation development provisions e.g. minimum 4 or 4.5 star energy rating for hot water systems, clothes dryers, dishwashers, fixed air conditioning systems. Willoughby Council and North Sydney Councils DCP's contain more comprehensive development objectives and controls for different classes of development.

Wollongong City Council city centre and Gosford City Council city centre energy assessment provisions reflect one another.

**Table 5: Energy assessment requirements for benchmarked local government areas**

Local Government Area	Commercial Development	Industrial Development
City of Sydney	Council encourages applicants to use an environmental building tool e.g. green star in the absence of a comprehensive government standard and building rating tool.	
Gosford	In the Gosford City Centre and Peninsula Centre - Energy efficiency report required for all commercial development over \$5million demonstrating commitment to achieve minimum 4 stars under NABERS.  Additional general provisions required for all development in these centres.	Nil
The Hills	All buildings with an office component greater than 100m <sup>2</sup> , a minimum 4 star NABERS rating required.	All buildings to achieve a minimum 4 star NABERS rating required.

Local Government Area	Commercial Development	Industrial Development
Kiama	DCP contains general development objectives relating to energy efficiency.  No assessment reports required.	
Newcastle	Applicable to certain types of business development - minimum 4 star green building rating required.  New commercial office development over \$5 million should have energy efficiency report detailing minimum 4 star green star rating.  Change of use applications over 2000m2 - require development is to meet a minimum 3.5 star NABERS rating.	For specified industrial development, minimum 4 star green star rating required.
North Sydney	For commercial development (including the commercial component of mixed use) with gross floor area greater than 2000m2, a 4.5min star rating under NABERS is required.  Evidence of commitment entered into with OEH required.  For development with gross floor area greater than 5000m2 of office space – 5 star minimum under green building green star office tool.	Nil
Penrith	All non-residential (including mixed use) with a construction cost of \$1 million or greater, must demonstrate commitment to achieving a minimum of 4 stars greenstar rating, or 4.5 stars under NABERS.	
Shellharbour	DCP contains general development objectives relating to energy efficiency.  No assessment reports required.	
Sutherland	DCP contains only general development objectives and controls relating to energy efficiency.  No assessment reports required.  Note – Sutherland LEP 2015 clause 6.15 Energy efficiency and sustainable building techniques for commercial and industrial developments. This clause aims to ensure the development utilises building materials and construction techniques that are energy efficient, ecologically sustainable and that maximise the useful lifecycle of buildings.	
Willoughby	NABERS agreement is required if development is greater than \$250,000. Offices less than \$250,000 require an energy performance statement.  Additional requirements e.g. details of metering, water heating system ratings.  For other retail development less than \$250,000 but over 200m2, an energy performance statement is required. All require sustainability scorecard.	Energy performance statement required, to be detailed in a sustainability scorecard.

Development controls relating to water efficiency and conservation, similar to those relating to energy efficiency, vary between local government areas. The majority of benchmarked Councils include only general provisions e.g. where plumbing fixtures and water appliances are proposed to be installed, such are to be of the following type

- (a) minimum water efficiency labelling standard (WELS) - 3 star water rating,
- (b) maximum 6L dual flush toilet cisterns where they are not supplied by a roof water tank etc (Newcastle DCP clause 7.07.01.2).

Newcastle City Council includes an additional development control requiring change of use applications over 2000sqm where not complying development, to achieve a minimum 3.5 star water rating with NABERS. No other DCP requires an assessment of minimum rating for water efficiency.

### 2.2.8 Recommended amendment to Wollongong DCP 2009

Wollongong DCP contains minor provisions relating to energy and water efficiency and conservation for commercial and industrial developments. Amendment is recommended to encourage residential developments to go beyond the minimum BASIX requirements, and to enhance provisions for commercial developments.

DCP Chapter	Recommendation	Draft new clauses/ recommended amendments
A1 Introduction	Addition of new objective to encourage ESD.	New additional objective:  To encourage development that achieves the principles of ecologically sustainable development.
New chapter proposed. A2 Ecologically Sustainable Development	New DCP chapter A2 (part of the introduction A chapter) to be developed. Chapter to outline the principles of sustainable development and encouraging application for all types of development. This chapter to include provision encouraging residents to go beyond the minimum BASIX requirements.	
B5 Industrial Development	Introduction of objectives and controls relating to energy and water efficiency.	
D13 Wollongong City Centre	Revise energy and water efficiency development for commercial development to increase the scope and threshold at which efficiency assessments are required.	<i>Replace following paragraph in clause 5.2.2</i>  Provide an Energy Efficiency Report from a suitably qualified consultant to accompany any development application for new commercial office development with a construction cost of \$5 million or more that demonstrates a commitment to achieve no less than a 4 star rating under the Australian Building Greenhouse Rating Scheme.  <i>Insert new clause</i>  All non-residential development with a construction cost of \$1million or greater, must demonstrate commitment to achieving a minimum of 4 stars Green Star rating or 4 stars NABERS rating (energy tool) as a minimum.

## 2.3 Waste

Waste and resource consumption continues to be a major environmental issue and priority, with the environmental and economic costs of waste generation and disposal continuing to increase. Compliance with legislation ensures waste is reduced and disposal occurs a lawful manner. Legislation encouraging resource recovery and that regulates the waste industry includes:

- *Waste Avoidance and Resources Recovery Act 2001*
- *Protection of the Environment Operations Act 1997*

Chapter E7 of Wollongong DCP includes provisions relating to waste management and development in Wollongong.

### 2.3.1 Wollongong DCP and waste minimisation during demolition and construction

Existing development controls contained in Chapter E7 Waste Management require all development applications (demolition, construction and the ongoing use of a site/ premises), to be accompanied by a Site Waste Minimisation and Management Plan (SWMMP). The SWMMP contains analysis of volume and types of waste, storage and recyclables, disposal of waste and the intended waste management service provider. The intent of the SWMMP is for all potential types and quantities of waste to be thought through prior to works commencing, maximising reuse and minimising quantities directed to landfill.

Examples of demolition materials and potential reuse-recycling options are included in Wollongong DCP.

For residential apartment development, the Apartment Design Guide 2015 (NSW Department of Planning and Environment, July 2015), provides objectives and design guidance for waste storage facilities and provision for safe and convenient source separation and recycling.

### 2.3.2 Wollongong DCP and waste collection requirements for different development types

Chapter E7 Waste Management contains provisions relating to waste collection and servicing dependant on the type of development. For example: a development application for a dwelling house or dual occupancy contains provisions relating to:

- ✓ bins for general waste, recyclables, and green waste,
- ✓ storage of waste both inside and outside the dwelling.

### 2.3.3 Benchmarking across other Councils

The NSW Office of Environment and Heritage (OEH) previously provided funding allocations via the Waste and Sustainability Improvement Payment Program, for NSW Councils to prepare DCPs based on the NSW Office of Environment and Heritage Waste Not model DCP Chapter. Chapter E7 is based on the model DCP chapter and is similar to other benchmarked Council's.

All benchmarked Councils include specification for a SWMMP for demolition and construction works, and include objectives and controls relating to design and siting of waste facilities (e.g. bins and recycling facilities) for each development. A smaller number of benchmarked Councils (including Wollongong) include additional information in relation to waste management for the applicant. Examples of such provisions:

- background information relating to the waste hierarchy,
- data relating to the amount of waste going to landfill in the local area,
- importance of redirecting materials from landfill,
- examples of how demolition materials (bricks, concrete) may be reused in a subsequent development.

Penrith Council includes additional provisions termed 'lifting the bar' which appear to incentivise the application of further waste reduction for applicants. By demonstrating commitment to such waste reduction provisions, Penrith Council may consider a variation of other development controls (Chapter C5, sC5 F). An example of such a provision includes a reduction the volume of demolition and construction waste going to landfill by 76%.



Figure 3 Waste Hierarchy as detailed in Penrith Council DCP Chapter C5.

#### 2.3.4 Recommended amendment to Wollongong DCP 2009

The waste management provisions in the Wollongong DCP 2009 are based on the model Waste Not DCP chapter and other benchmarked Councils in terms of sustainability provisions.

## 2.4 Transportation

Connecting residents to public transport, ensuring subdivisions are appropriately designed, and promoting sustainable modes of transport has marked health benefits and reduces the overall impact of our transport system on our environment. The Illawarra Regional Transport Plan (March 2014) indicates key transport challenges for the Illawarra including high levels of private car use and an aging population, as two of the three main key challenges.

Wollongong City Council and Roads and Maritime Service (RMS) collectively regulate our transport network including roads and road networks, pathways, car parking, bicycle and /or motorcycle parking. The RMS and Transport for NSW regulates public transport.

The following Wollongong DCP chapters address transportation issues:

- B2 – Residential Subdivision
- D13 – Wollongong City Centre
- D16 – West Dapto Release Area
- E3 – Car Parking, Access, Servicing/ Loading Facilities and Traffic Management

### 2.4.1 Car and bicycle parking in Wollongong DCP 2009

Wollongong DCP 2009 details car parking, bicycle and /or motorcycle parking in and around the Wollongong local government area, except where overridden by state legislation.

For development requiring compliance with SEPP 65 and the Apartment Design Guide (NSW Department of Planning, July 2015), car parking requirements are regulated in accordance with either Wollongong DCP or the *RTA Guide to Traffic Generating Development* or Wollongong DCP 2009, whichever provides the lessor requirement. The *RTA Guide to Traffic Generating Development* currently requires less car parking spaces than Wollongong DCP 2009 for residential flat buildings. Wollongong DCP 2009 bicycle parking requirements do apply for SEPP 65 development and requires 1 bicycle space per 3 dwellings and 1 space per 12 dwelling for visitors.

Car parking requirements are generally less for development in the Wollongong City Centre across both residential and non-residential land uses (Table 6).

**Table 6: Car parking and bicycle rates for development City Wide and in the Wollongong City Centre.**

	Wollongong city wide provisions*	Wollongong city centre provisions*
Attached dwellings and multi-dwelling housing	1 car space per dwelling <70m <sup>2</sup> , 1.5 car parking spaces per dwelling 70-110m <sup>2</sup> , 2 car parking spaces per dwelling greater than 110m <sup>2</sup> , plus 0.2 car parking space per dwelling for visitors.  1 bicycle space is required per 3 dwellings for residents and 1 bicycle space per 12 dwellings for visitors.	0.75 car space per dwelling <70m <sup>2</sup> , 1 car parking spaces per dwelling 70-110m <sup>2</sup> , 1.25 car parking spaces per dwelling greater than 110m <sup>2</sup> , 0.2 car parking space per dwelling for visitors.  1 bicycle space is required per 3 dwellings for residents and 1 bicycle space per 12 dwellings for visitors.
Office premise	1 car space per 40m <sup>2</sup> of GFA.  1 bicycle space / 200m <sup>2</sup> GFA for staff and 1 bicycle space per 750m <sup>2</sup> GFA for visitors.	1 car space per 60m <sup>2</sup> of GFA for B3 and B4 zone.  1 bicycle space / 200m <sup>2</sup> GFA for staff and 1 bicycle space per 750m <sup>2</sup> GFA for visitors.
Business / retail premises	Business - 1 car space per 40m <sup>2</sup> of GFA.	1 car space per 60m <sup>2</sup> of GFA for B3 and B4 zones.



	Wollongong city wide provisions*	Wollongong city centre provisions*
	Retail - 1 car space per 25m <sup>2</sup> of GFA.  1 bicycle space / 200m <sup>2</sup> GFA for staff and 1 bicycle space per 750m <sup>2</sup> -1000m <sup>2</sup> GFA (depending on the use) for shoppers.	1 bicycle space / 200m <sup>2</sup> GFA for staff and 1 bicycle space per 750m <sup>2</sup> -1000m <sup>2</sup> GFA (depending on the use) for shoppers.

\*summarised from Wollongong DCP Chapter E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management.

Wollongong DCP also includes the requirement for storage, shower and change room facilities tenants, workers and bicycle couriers for commercial office, business premises and retail centres.

#### 2.4.2 Car parking incentive for development near transport nodes in Wollongong

Existing provisions in *Chapter E3: Car parking, Access, Servicing, Loading Facilities and Traffic Management* provide provision for a reduction in car parking rates as an incentive for non-residential development located near public transport nodes in the Wollongong Local government area. This is as follows:

- 10% reduction\* if bus stop within 400m of site (measured along an existing footpath)
- 20% reduction\* if railway station within 800m of site (measured along an existing footpath)
- 10% reduction\* if public car park with greater than 50 car spaces within 400m of site (measured along an existing footpath)

\*Reductions are cumulative with a maximum final reduction of 30%.

This incentive is not currently applied:

- to residential development (city wide), and
- most land uses in the Wollongong City Centre commercial core and B4 mixed use zone (residential, office premises, retail and business premises uses).

Wollongong DCP 2009 recognises the constrained nature of many sites in Wollongong City Centre and provides exemption for additional car parking to be required for development applications involving a change of use within the commercial core and mixed use zones in the Wollongong City Centre. This exemption is not provided outside of the city centre.

#### 2.4.3 Encouraging active transport through subdivision and road design

Wollongong DCP 2009 aims to ensure residential subdivision provides adequate pedestrian and cycleway linkages to facilities within the surrounding area (chapter B2 Residential Subdivision).

Chapter D16 West Dapto Release Area details the ideal subdivision layout and urban structure for West Dapto being the notion of walkable villages, with a series of town centres, village centres, and local nodes with the provision of bus stops, local shops and amenities, community facilities, schools, and mixed use jobs. Riparian corridors are to be integrated and designed to promote walking and cycling linking key destinations and promoting walkability. Development controls are also contained in the West Dapto Release Chapter to ensure the majority of dwellings are within 400m walking distance to bus stops (s6.3.9 control 3). Additional development objectives and controls contained in Chapter D16 relate to the road network and aim to promote sustainable and active forms of transport, encourage alternative forms of transport, and reduce car dependency.

#### 2.4.4 Benchmarking across other Councils

Wollongong DCP 2009 car parking and bicycle parking rates are generally similar to most local government areas benchmarked. Differences arise in relation to the City of Sydney and North Sydney, assumedly due to their close proximity to rail and bus public transport.

Benchmarked local government areas generally require 1-2 parking spaces for dwellings, dual occupancies, attached dwellings, multi-dwelling housing and residential flat buildings. This is dependent on either the area of

the dwelling or number of bedrooms. No additional specific bicycle parking provisions were identified for dwellings or dual occupancies.

For commercial premises (retail, office and business) areas in the Gosford, Newcastle Shellharbour and Sutherland local government areas, car parking was based on the gross floor area (GFA) or gross leasable floor area (GLFA) of the development. The area of GFA/ GLFA varied depending on the exact location in the local government area, but generally speaking for the city centre component of each local government area, the following was required.

- ✓ Gosford: 1 space per 30- 40m<sup>2</sup> of GFA
- ✓ Newcastle: 1 space per 40-50m<sup>2</sup> GLFA
- ✓ Shellharbour: 1 space per 35-40m<sup>2</sup> GLFA
- ✓ Sutherland: 1 space per 30m<sup>2</sup> GFA.

#### *Green Travel Plans*

A Green Travel Plan (GTP) is a site-specific plan which provides details for residents/ visitors/ workers as to how to access that site by walking, cycling or public transport (North Sydney Council DCP 2013). GTPs encourage employees to make greater use of public transport by cycling, walking, and car sharing. GTPs are a key action in the Metropolitan Plan for Sydney 2036 and are thus included in the City of Sydney and North Sydney Council DCP's.

Willoughby DCP 2009 and Newcastle DCP 2013 contain provisions relating to and encouraging the implementation of GTP for certain development types. Newcastle DCP, for example, encourages GTP for developments of more than 50 dwellings, aged persons' accommodation, entertainment venues). Implementation of a submitted GTP is advised to be included as a condition of consent for the development.

GTPs may be encouraged through Wollongong DCP 2009. The inclusion of specific GTP provisions as a component of Wollongong DCP 2009, for certain development types may be appropriate, with further analysis required in relation to assessment, regulation and implementation of such plans.

#### *Cash contributions in lieu of car parking*

In the instance where a developer is not able to meet all car parking space requirements on site, a selection of local government areas provide the option for the applicant to pay a cash contribution (via developer contributions plan), in lieu of car parking onsite. The City of Sydney and Gosford City Council provide such option.

Wollongong DCP (Chapter E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management) includes similar provision, however this is to occur via a voluntary planning agreement.

### **2.2.5 Recommended amendment to Wollongong DCP 2009**

Wollongong's car parking rates for development in the city centre are generally less than other benchmarked local government areas. Wollongong DCP may further promote the use of public transport, walking and cycling through the introduction of green travel plan DCP provisions and encouraging their application for developments in the city centre.

DCP Chapter	Recommendation	Draft new clauses/ recommended amendments
E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management	Encourage the use of green travel plans to for development in Wollongong City Centre.	<p><i>New section in DCP - Objective</i></p> <p>1. Encourage the use of public transport, walking and cycling as an alternative to private vehicle use.</p> <p><i>Controls</i></p> <p>1. Council encourages the use of green travel plans for development in the Wollongong City Centre, particularly larger residential developments, offices, recreation facilities, hospitals commercial (business and retail) premises. A Green Travel Plan is prepared and submitted to Council in support of applications for major new development. Components/strategies of a Green Travel Plan will likely vary according to the nature of the development, but may include:</p>

DCP Chapter	Recommendation	Draft new clauses/ recommended amendments
		<ul style="list-style-type: none"> <li>a) identification and promotion of public transport options to access the site (for example, web site, business cards),</li> <li>b) encouragement of a car pool system for employees,</li> <li>c) encouragement of cycling and walking to the workplace through provision of bicycle parking, showers and lockers ,</li> <li>d) incentive schemes to encourage employees to commute using sustainable transport modes (such as provision of public transport vouchers/subsidised public transport tickets),</li> <li>e) allocation of designated parking spaces for a car sharing scheme, and/or</li> <li>f) prominent display of a large map of cycling routes (for example, in the foyer of a residential complex).</li> </ul>

## 2.5 Building design and materials

Building design and materials chosen influence the impact of a development at the time of construction, as well as its efficiency and long term sustainability. Legislation regulating building design, materials and construction in NSW is vast and includes:

- *Environmental Planning and Assessment Act 1979* (giving effect to the Building Code of Australia as well as various Australian Standards)
- *SEPP (Building Sustainability Index) 2004*
- *SEPP 65 – Design Quality of Residential Apartment Development*

The following Wollongong DCP 2009 chapters address issues relating to building design and materials. These provisions largely relate to built form, energy and water efficiency, adaptability, and adaptive reuse.

- Chapter B1 Residential Development
- Chapter B3 Mixed Use Development
- Chapter B4 Development in Business Zones
- Chapter B5 Industrial Development
- Chapter B6 Development in the Illawarra Escarpment
- Chapter D13 Wollongong City Centre Precinct

### 2.5.1 Residential development

Building design and materials have a large impact on the long term operation, efficiency and overall sustainability of a development. For residential development (dwellings, dual occupancies, townhouses and apartments), SEPP (BASIX) governs the water and energy efficiency, and passive solar design.

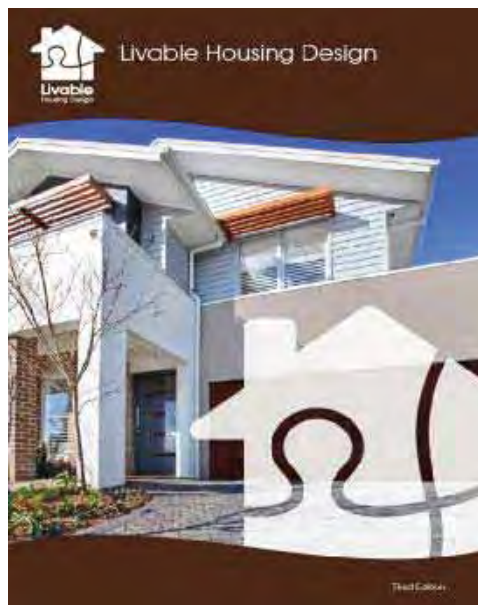
In accordance with SEPP 65 and the Apartment Design Guidelines, subject developments are required to meet the objectives and design guidance detailed in the guide.

Through the application of adaptable housing and universal design principles, the ability of a development to cater to the needs of current and future occupants may be strengthened. Adaptable housing sees development designed to allow for the future adaptation. Universal design sees development designed to enable residents to continue living in the same dwelling as their needs change, without any need to adapt this. To date, focus has primarily been on the provision for adaptable housing in residential development. The incorporation of universal design principles in residential developments is required less, yet contributes to delivering flexible and robust housing stock.

The NSW Apartment Design Guide, released by the NSW Department of Planning and Environment in 2015, provides design guidance relating to adaptable housing and universal design. This is regulated in accordance with SEPP 65. In summary

- Universal design – Developments are to achieve a benchmark of 20% of the total apartment incorporating the Livable Housing Guidelines silver level universal design features.
- Adaptable Housing – shall be provided in accordance with the relevant council policy.

Wollongong DCP includes requirement for adaptable housing for residential flat buildings and multi dwelling housing. For residential flat buildings, at least 10% or one dwelling must be designed as per AS 4299 – 1995. For multi dwelling housing, 10% of dwellings or at least 1 dwelling, where more than 6 dwellings are proposed, must be designed as per AS 4299



**Figure 4 the NSW Apartment Design Guide requires 20% of developments to achieve silver level universal design features as per Livable Housing Design Guideline.**

– 1995. Additional provisions exist in relation to car parking and preference for adaptable dwellings to be on the ground floor.

Adaptable housing requirements vary in application across benchmarked local government areas. However, they all focus on the application of the essential requirements in accordance with Australian Standard 4299. Table 7 summarises adaptable housing DCP provisions and their application for benchmarked local government areas. DCP provisions relating to universal housing design have also been included in this table for comparison.

### **2.5.2 Commercial and industrial development**

The building design and materials of commercial and industrial developments affects the sustainability and long term operation of these developments. The objectives of Wollongong DCP Industrial development Chapter (B5) include the aim to ensure that ... employment premises incorporate the principles of Ecologically Sustainable Development, and ... encourage water urban sensitive design measures wherever practicable...

Current development objectives and controls in the industrial lands chapter relate to the external appearance of a building, glare, reflectivity, avoidance of blank walls, main entry points, and natural lighting for large scale factory or warehouse buildings.

Development controls contained in the Wollongong City Centre (Chapter D13) similarly relate to building form, in particular street alignment and setback requirements, building depth and bulk, deep soil zones, landscape design, and sun access for key public spaces. Additional objectives and controls are included in relation to environmental management include many objectives, one of which aims to facilitate development of building design excellence appropriate to a regional city. Development controls in this chapter relate to energy efficiency and conservation (as detailed previously), water conservation (as detailed previously), reflectivity, wind mitigation and waste and recycling.

Benchmarking with other Councils has revealed widespread information on the application of DCP objectives and controls relating to building materials and design. For example, Willoughby Council's DCP contains information and development controls for applicants in relation to environmentally preferred building materials and advises the least environmentally damaging material should be chosen for each application.

City of Sydney DCP also contains development objective and controls relating to building materials and components. These controls are general in nature and relate to the use of paint and floor coverings with low levels of volatile organic components, the use of building materials, fittings and finishes that are or include recycled components, or are made from certified as sustainable or 'environmentally friendly' materials, designing building components for longevity, adaption, disassembly, reuse and recycling, and reducing the quantity of materials used in construction e.g. naturally ventilating buildings.

City of Sydney, through its local environment plan promotes design excellence and aims to deliver the highest standard of architectural, urban and landscape design for subject development. Through the design excellence process many factors are considered including environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity, as well as the achievement of the principles of ecologically sustainable development. The design excellence process is mandatory for development (any building) that will have a height greater than 55m on land in Central Sydney, or 25m on other land, and having a capital value of more than \$100,000,000. City of Sydney recognises the additional costs of this competitive design process and may award additional building height or floor space of up to 10% or one floor whichever is greater.

**Table 7: Adaptable housing and universal housing design DCP provisions for benchmarked local government areas**

Local Government Area	Adaptable Housing	Universal Housing Design
City of Sydney	Design criteria as per the Australian Standard. Adaptable dwellings to be provided for all new development as per the following rates: - Between 0 and 7 - nil - Between 8 and 14 - 1 dwelling - Between 15 and 21 - 2 dwellings - Between 22 and 29 - 3 dwellings - 30 or more 15 % of total dwellings Car parking requirements refers to Australian standard.	DCP encourages applicants to use the Universal Housing Guidelines.
Gosford	In developments with more than 3 dwellings, one third should be adaptable meaning must satisfy Class C specifications in AS 4299 including minimum dimensions for habitable rooms, hallways and doorways.	Nil
The Hills	At least 1, or 5 % of units in a development of 20 or more dwellings must be either: - an accessible unit to Australian Standard 1428 Part 2, suitable for occupation by a wheelchair user: or - meet class B adaptability under AS 4299 -1995.	Nil
Kiama	Provision of Adaptable Housing (Australian Standard AS 4299) at a ratio of 1:4 dwellings or part thereof for medium density development	Nil
Newcastle	Nil	
North Sydney	A minimum of 15% of dwellings in multi dwelling housing, residential flat buildings, and the dwelling component of a mixed use development that contain more than 5 dwellings must comprise adaptable housing.	Nil
Penrith	DCP includes general minimum specifications for different types of development e.g. dual occupancies, multi dwelling housing, residential flat buildings.  For residential flat buildings, additional requirement for 10% of all dwellings or a minimum of one dwelling (the greater) to be designed as per AS 4299-1995.  Car parking as per the relevant Australian Standard.	Nil in commercial and retail goods DCP chapter. Industrial DCP chapter includes requirements for the entry, design and layout of the main office or administration component of the development. These must is to consider the principles of universal design and incorporate if possible.
Shellharbour	Developers of all residential subdivisions including combined subdivision/ dwellings, boarding houses, hostels should consider applying the essential and desirable features identified in AS 4299 to developments involving 4 or more dwellings. I.e. 25% for 4 of dwellings, boarding houses, hostel units or rooms, 20% for more than 4 (to the nearest whole number). An appendix of further information is also provided.	Reference to universal housing made in social impact assessment. Nil objectives and controls.

Local Government Area	Adaptable Housing	Universal Housing Design
Sutherland	Multi dwelling housing and residential flat building development with 6 or more dwellings required - 20% adaptable as per Class C requirements of AS 4299.	Multi dwelling housing and residential flat buildings must provide livable dwellings to the silver standard in the Livable Housing Design Guideline as per the following rates: - for developments with 3 to 5 dwelling - 1 dwelling, - for developments with 6 or more dwellings - 10% of dwellings.
Willoughby	<p>DCP includes development controls relating to universal housing and adaptable housing, applicable to secondary dwellings, attached dwellings, multi dwelling housing, residential flat buildings, and shop top housing. The percentages for dwellings varies commencing from 10% of all units for single storey attached dwellings and multi dwelling housing, to 50% for all multi dwelling housing and residential flat buildings greater than 3 storeys, &amp; shop top housing if lift access is provided, to include 100% of all secondary dwellings. Design criteria as per the Australian Standard 4299 1995.</p> <p>DCP encourages adaptable and universal design for alterations and additions, single dwelling houses, dual occupancy, semi-detached dwellings, boarding houses.</p>	

### 2.5.3 Recommended amendment to Wollongong DCP 2009

DCP Chapter	Recommendation	Draft new clauses/ recommended amendments
B1 Residential Development B3 Mixed Use Development D13 Wollongong City Centre	Increase the percentage of housing requiring compliance with adaptable housing Australian standard for residential flat buildings (s6) And multi dwelling housing (s5.14)	<p><i>Recommended amendment to s5.14.2.1 for multi dwelling housing</i></p> <p>Within a multi dwelling development incorporating more than six (6) dwellings, <del>10%</del> 20% of all dwellings (or at least 1 dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.</p> <p><i>Recommended amendment to s6.15.2.1 for residential flat building</i></p> <p>Within a residential apartment building, <del>10%</del> 20% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "preadaptation" design details to ensure visitability is achieved.</p>
B1 Residential Development B3 Mixed Use	Introduce minimum requirement for universal housing design through compliance with Livable Housing Design Guideline.	<p><i>For multi dwelling housing residential flat buildings – amend adaptable housing heading s5.14 and s6.15 to include both adaptable housing and universal design.</i></p> <p><i>New Controls</i></p> <p>In addition to adaptable housing development controls, all new</p>

DCP Chapter	Recommendation	Draft new clauses/ recommended amendments
Development D13 Wollongong City Centre		<p>multi dwelling housing development must provide livable dwellings (i.e. dwellings designed to Silver Standard Livable Housing Design Guidelines at the following rates.</p> <ul style="list-style-type: none"> <li>- Developments of 6 or more dwellings – 10% or at least one dwelling.</li> </ul> <p>Where proposed, all ‘livable’ dwellings must be clearly identified on the submitted DA plans.</p>

## 3 NSW legislation under review

### 3.1 NSW Government expanding complying development

The NSW government is investigating opportunities to expand SEPP (Exempt and Complying Development Codes) 2008. In late 2105, a background and discussion paper *Options for Low Rise Medium Density Housing* was released for public comment. The discussion paper proposes to introduce complying development standards for the following development types.

- Development resulting in 2 dwellings (dual occupancies) on a single lot with a minimum lot size of 400sqm.
- Development resulting in 3-4 dwellings (manor houses) on a single lot with a minimum lot size of 500sqm.
- Development resulting in 3-10 dwellings on a single lot with a minimum lot size of 600sqm (townhouses/ terraces/ and/or a combination of dwelling types resulting in 3-10 dwellings on a single a lot).

The discussion paper outlines proposed primary, design and amenity development standards. This discussion paper was on exhibition until the end of January 2016. Council made a submission objecting to the proposed expansion of complying development.

### 3.2 NSW Government BASIX target review

The NSW Government, in early 2014, proposed new BASIX targets to further reduce water and energy consumption in new houses and residential apartments. The proposed BASIX targets vary by region and development type, however in general, the target increase represents:

- 10% increase in the energy and water reduction for detached houses, attached houses and low rise buildings.
- 5% increase in energy reduction for mid-rise buildings and high-rise buildings.
- 5% increase in water reduction for mid-rise buildings.

No change proposed for high-rise building and water efficiency.

This BASIX review was exhibited for public comment from 13 December 2013 – 13 February 2014. The proposed changes are still under consideration by the NSW Department of Planning and Environment.



## 4 Conclusion and Recommendations

This discussion paper has identified the role of a DCP and the legislative constraints operating to affect its scope and application. This paper recognises Wollongong DCP does not in itself, deliver sustainable development outcomes. It recognises the role of the DCP to guide development, collectively shaping development outcomes in our city.

This discussion paper highlights an abundance of existing and integrated development objectives and controls which enhance the sustainability of development throughout Wollongong. This discussion paper identifies the existing strengths of the DCP, as well as areas for improvement. This paper concludes with a series of recommendations to amend the Wollongong DCP 2009 and further enhance the sustainability of development outcomes across Wollongong.

DCP Chapter	General recommendation	Draft recommended amendment
A1 Introduction	Addition of new objective to encourage ESD.	New additional objective:  To encourage development that achieves the principles of ecologically sustainable development.
New chapter proposed.  A2 Ecologically Sustainable Development	New DCP chapter A2 (part of the introduction A chapter) to be developed. Chapter to outline the principles of sustainable development and encouraging application for all types of development. This chapter to include provision encouraging residents to go beyond the minimum BASIX requirements.	
B1 Residential Development	Introduce site coverage development objectives and controls for dwellings.	For dwellings & dual occupancies – adapted from SEPP (Exempt and complying). i.e.  55% of the area of the lot, if the lot has an area less than 450m <sup>2</sup> .  50% of the area of the lot, if the lot has an area of at least 450m <sup>2</sup> but less than 900m <sup>2</sup> .  40% of the area of the lot, if the lot has an area of at least 900m <sup>2</sup> .
B1 Residential Development	Increase the minimum landscaped areas required for residential development dwellings and dual occupancies.	Current minimum landscape area for dwellings and dual occupancies – 20%.  <i>Amend this control as below</i>  20% - lot area up to 600m <sup>2</sup>  30% - lot area is >600m <sup>2</sup> - <900m <sup>2</sup> .  40% - lot area is >900m <sup>2</sup> .
B1 Residential Development	Introduce minimum deep soil zone requirements for dual occupancies.	<i>New objectives and controls for dual occupancies</i>  Objectives  a) To protect existing mature trees on a site and encourage the

DCP Chapter	General recommendation	Draft recommended amendment
		<p>planting of additional significant vegetation.</p> <p>b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife.</p> <p>c) To allow for increased water infiltration.</p> <p>d) To contribute to biodiversity.</p> <p>Controls</p> <p>4. A minimum of half of the landscaped area must be provided as a deep soil zone. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 3m. The deep soil zone must not be included in any area allocated as private open space.</p> <p>5. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located:</p> <p>(a) At the rear of the site to allow for separation from adjacent dwellings and to provide a corridor of vegetation of native fauna; or</p> <p>(b) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.</p> <p>6. No structures, basement car parks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone.</p> <p>4. The deep soil zone shall be densely planted with trees and shrubs. Where the development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.</p>
B1 Residential Development	Increase the minimum number of trees per lot for dual occupancies, and introduce a minimum number of tree/s per lot for dwellings, attached dwellings and multi dwelling housing.	<p><i>New clause in landscaping section for dwellings (s4.4)</i></p> <p>A minimum of one semi mature small to medium tree (minimum pot size 45L) is to be provided per lot in the landscaped area or private open space. This tree must be planted at least 3m from a dwelling, building or structure on the lot.</p> <p><i>New additional clause for Dual Occupancies (additional to 4.4.2.5)</i></p> <p>A second semi mature small to medium tree (minimum pot size 45L) is to be provided onsite, planted at least 3m from any dwelling, building or structure on the lot.</p> <p><i>New additional clause for attached dwellings and multi dwelling housing</i></p> <p>Two semi mature medium – large trees (minimum pot size 45L) are to be provided for attached dwellings and multi dwelling housing in the deep soil planting zone or landscaped area and at least 3m from any dwelling, building or structure on the lot.</p> <p><i>New additional clause for residential flat buildings</i></p> <p>The minimum number of trees to be planted onsite as specified in the table below [or a minimum of 1 medium tree (minimum pot size 45L), whichever is greater]. Trees are to be planted in</p>

DCP Chapter	General recommendation	Draft recommended amendment										
		<p>the deep soil zone or landscaped area on the site and at least 3m from any dwelling, building or structure.</p> <table><tr><th>Site area</th><th>Recommended tree planting</th></tr><tr><td>Up to 850m<sub>2</sub></td><td>1 medium tree per 50m<sub>2</sub> of deep soil zone</td></tr><tr><td>Between 850 - 1,500m<sub>2</sub></td><td>1 large tree or 2 medium trees per 90m<sub>2</sub> of deep soil zone</td></tr><tr><td>Greater than 1,500m<sub>2</sub></td><td>1 large tree or 2 medium trees per 80m<sub>2</sub> of deep soil zone</td></tr><tr><td colspan="2">Source - Apartment Design Guide 2015</td></tr></table>	Site area	Recommended tree planting	Up to 850m <sub>2</sub>	1 medium tree per 50m <sub>2</sub> of deep soil zone	Between 850 - 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 90m <sub>2</sub> of deep soil zone	Greater than 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 80m <sub>2</sub> of deep soil zone	Source - Apartment Design Guide 2015	
Site area	Recommended tree planting											
Up to 850m <sub>2</sub>	1 medium tree per 50m <sub>2</sub> of deep soil zone											
Between 850 - 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 90m <sub>2</sub> of deep soil zone											
Greater than 1,500m <sub>2</sub>	1 large tree or 2 medium trees per 80m <sub>2</sub> of deep soil zone											
Source - Apartment Design Guide 2015												
B1 Residential Development, B3 Mixed Use Development D13 Wollongong City Centre E6 Landscaping	Encourage the use of green roofs and walls for residential flat buildings, mixed use developments, commercial and industrial developments through new development objectives and controls throughout Wollongong DCP.											
B1 Residential Development, B3 Mixed Use Development D13 Wollongong City Centre	Increase the percentage of housing requiring compliance with adaptable housing Australian standard for residential flat buildings (s6) And multi dwelling housing (s5.14)	<p><i>Recommended amendment to s5.14.2.1 for multi dwelling housing</i></p> <p>Within a multi dwelling development incorporating more than six (6) dwellings, <del>40%</del> 20% of all dwellings (or at least 1 dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “pre-adaptation” design details to ensure visitability is achieved.</p> <p><i>Recommended amendment to s6.15.2.1 for residential flat building</i></p> <p>Within a residential apartment building, <del>40%</del> 20% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “preadaptation” design details to ensure visitability is achieved.</p>										
B1 Residential Development, B3 Mixed Use Development D13 Wollongong	Introduce minimum requirement for universal housing design through compliance with Livable Housing Design Guideline.	<p><i>For multi dwelling housing residential flat buildings – amend adaptable housing heading s5.14 and s6.15 to include both adaptable housing and universal design.</i></p> <p><i>New Controls</i></p> <p>In addition to adaptable housing development controls, all new multi dwelling housing development must provide livable dwellings (i.e. dwellings designed to Silver Standard Livable</p>										

DCP Chapter	General recommendation	Draft recommended amendment
City Centre		<p>Housing Design Guidelines at the following rates.</p> <ul style="list-style-type: none"> <li>- Developments of 6 or more dwellings – 10% or at least one dwelling.</li> </ul> <p>Where proposed, all 'livable' dwellings must be clearly identified on the submitted DA plans.</p>
B5 Industrial Development	Introduction of objectives and controls relating to energy and water efficiency.	
D13 Wollongong City Centre	Revise energy and water efficiency development for commercial development to increase the scope and threshold at which efficiency assessments are required.	<p><i>Replace following paragraph in clause 5.2.2</i></p> <p>Provide an Energy Efficiency Report from a suitably qualified consultant to accompany any development application for new commercial office development with a construction cost of \$5 million or more that demonstrates a commitment to achieve no less than a 4 star rating under the Australian Building Greenhouse Rating Scheme.</p> <p><i>Insert new clause</i></p> <p>All non-residential development with a construction cost of \$1million or greater, must demonstrate commitment to achieving a minimum of 4 stars Green Star rating or 4 stars NABERS rating (energy tool) as a minimum.</p>
E3 Car Parking, Access, Servicing/ Loading Facilities and Traffic Management	Encourage the use of green travel plans to for development in Wollongong City Centre.	<p><i>New section in DCP - Objective</i></p> <p>1. Encourage the use of public transport, walking and cycling as an alternative to private vehicle use.</p> <p><i>Controls</i></p> <p>1. Council encourages the use of green travel plans for development in the Wollongong City Centre, particularly larger residential developments, offices, recreation facilities, hospitals commercial (business and retail) premises. A Green Travel Plan is prepared and submitted to Council in support of applications for major new development. Components/strategies of a Green Travel Plan will likely vary according to the nature of the development, but may include:</p> <ol style="list-style-type: none"> <li>a) identification and promotion of public transport options to access the site (for example, web site, business cards)</li> <li>b) encouragement of a car pool system for employees.</li> <li>c) encouragement of cycling and walking to the workplace through provision of bicycle parking, showers and lockers</li> <li>d) incentive schemes to encourage employees to commute using sustainable transport modes (such as provision of public transport vouchers/subsidised public transport tickets)</li> <li>e) allocation of designated parking spaces for a car sharing scheme, and/or</li> <li>f) prominent display of a large map of cycling routes (for example, in the foyer of a residential complex).</li> </ol>

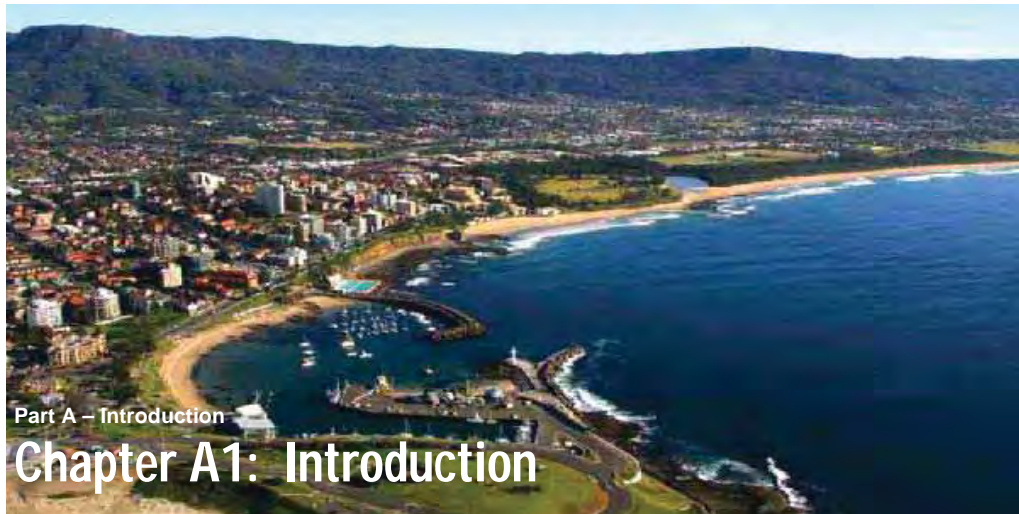
Additional opportunities to enhance the sustainability of development outcomes in Wollongong have been identified outside the direct scope of this project, however they are important for future consideration. This list is not exhaustive.

- ✓ Amendment of Wollongong LEP to include specific local provisions e.g.
  - Sutherland Shire Council's LEP includes local provisions relating to energy efficiency and sustainable building techniques for commercial and industrial developments.
  - Sutherland Shire Council LEP and Hunter's Hill Council LEP include local provisions specifying minimum landscaped areas, strengthening the application of the landscaping DCP objectives and controls.
- ✓ Supporting residents/ applicants on their sustainable development journey e.g. Lane Cove Council provides a free Sustainable Building Advisory Service for residents. Through this service residents are able to obtain sustainable building advice from a qualified architect or building designer.
- ✓ Educating and connecting residents/ applicants to existing resources and information regarding sustainable building design and construction e.g. Your Home Australia's Guide to Environmentally Sustainable Homes (Federal government publication), North Sydney and City of Sydney green wall and roof resources.
- ✓ Working in collaboration the development industry to identify and reduce barriers and incentivise sustainable housing siting and design.

## Appendix A

Points to be considered in / out of scope of Sustainability DCP review	DCP relevance	LEP constraint	Regulation concern	Education opportunity	Comments
Considerations of the urban cooling report considered by Council 27 April 2015.	Y	Y			Encourage the use of existing tools for residential developments. Review of existing provisions has occurred for non-residential development.
Ranking/ rating tool for development and sustainability.	Y			Y	Encourage the use of existing tools for residential developments. Review of existing provisions has occurred for non-residential development.
Requirement for a minimum number of trees per allotment.	Y				Council can recommend a minimum number of trees per allotment. Issues may follow in relation to regulation of such provisions, post development consent.
Encouraging more active transport when designing new subdivisions and larger developments. This may be through ensuring interconnectivity between communities, roads, cycle ways and pedestrian links.	Y				Review of subdivision design process may occur to ensure active transport considerations are included and actively compete with other site constraints.
Requirement aspect and passive solar design requirements, particularly at the subdivision stage, for new residential development and larger developments.	Y				There are existing provisions contained in Wollongong DCP 2009 relating to subdivision and solar access, orientation and lot layouts. These provisions aim to maximise solar access and energy efficiency opportunities for future dwellings and private open space.
Ensuring requirement for stormwater erosions and sediment controls in approval process.	Y				Provisions relating to erosion and sediment control are contained in Wollongong DCP 2009. Conditions are included in development consents. Feedback provided to relevant internal divisions.
Stormwater and erosions sediment controls - regulation of controls during demolition and/ or construction.			Y	Y	Outside the scope of this DCP review. Feedback provided to relevant internal divisions.
Stormwater and sedimentation ponds - requirement for these not to be placed on Council land (or land to be dedicated to Council).	Y				Location included as part of development assessments. Generally located within the development area.
Increase in permeable surfaces.	Y				Informed review of Wollongong DCP 2009.
Decrease in allowable floor space ratio.		Y			LEP requirement outside the scope of this project.
Requirement for more vegetation and less grass.	Y			Y	Informed review of Wollongong DCP 2009.
Increase sustainability features - going beyond BASIX.	Y			Y	Council may only encourage residents to go beyond BASIX requirements.
Lighter roof surfaces and driveways to facilitate cooling and reflect heat.	Y			Y	Council may encourage through the DCP where appropriate noting the implications relating to glare and reflection and existing inclusion in BASIX.

Points to be considered in / out of scope of Sustainability DCP review	DCP relevance	LEP constraint	Regulation concern	Education opportunity	Comments
Deep soil zones – deep soil zones for residential flat buildings should be at the front to reinforce streetscape and continuous corridor of vegetation.	Y				Informed review of the Wollongong DCP 2009.
Bicycle parking facilities even for single homes, duplex and townhouses.	Y				Discussion with staff revealed WCC 6x6m garage requirement is regularly varied and reduced for dwellings & dual occupancies due to the AS being 5.5m x 5.5m. No further increase is recommended. Existing Wollongong DCP 2009 provision for storage for e.g. 3 bedroom dwelling –10m2 volume & 5m2 area required.
Improvements to the assessment of trees for removal in the DA process.	Y				Informed review of the Wollongong DCP.
Include requirement for source separation of building materials so that less goes to landfill.	Y		Y	Y	Existing provisions in Wollongong DCP 2009 benchmarked against other Councils.
Guidelines for solar passive design when designing dwellings.				Y	Outside the scope of the review.
Allowance for and encouragement of green roofs and walls.	Y				Informed review of the Wollongong DCP 2009.
Guidelines for green roofs and walls.				Y	Informed review of the Wollongong DCP 2009.
Character statements – recommended to be revised to place greater emphasis on protecting streetscapes and reducing social conflict, and encouraging multi-dwelling housing near retail centres, employment and major public transport routes.	Y				Outside the immediate scope of this DCP sustainability review.
Liveable Housing – ensuring housing is capable of being adapted to future circumstances and occupants.	Y				Informed review of Wollongong DCP 2009.
Aims and objectives contained in the DCP – to have greater emphasis on sustainability.	Y				Informed review of Wollongong DCP 2009.
Include sustainability DCP provisions in each respective chapter of the current DCP rather than have a stand-alone sustainability chapter	Y				Informed review of Wollongong DCP 2009.
Parks, waterways and creeks – use of local plant species in parks to support local biodiversity, and ensure creeks contribute to visual amenity.	Y				Applicable for new subdivisions.
Street trees and visual amenity in new subdivisions – improving amenity of new subdivisions and developments through landscaping and use of street trees using local plant species.	Y				Informed review of Wollongong DCP 2009 noting the current Urban Green Strategy being developed by Council.



## Contents

1	NAME OF THIS DEVELOPMENT CONTROL PLAN	1	10	PRE-LODGE MEETINGS FOR DEVELOPMENT PROPOSALS	7
2	REVIEW OF THIS DCP	1	11	WHEN IS A DEVELOPMENT APPLICATION REQUIRED	7
3	PURPOSE OF THE DEVELOPMENT CONTROL PLAN	1	11.1	Requirements for the lodgement of a Development Application	9
4	AIMS & OBJECTIVES OF THIS DEVELOPMENT CONTROL PLAN	1	12	DEVELOPMENT APPLICATION ASSESSMENT PROCESS	11
5	RELATIONSHIP WITH OTHER PLANS AND POLICIES	2	12.1	What matters will Council take into consideration in the assessment of a Development Application?	11
6	HOW TO USE THE DCP	2	12.2	Lodgement of a modifications to development consent	12
7	SAVINGS AND TRANSITIONAL PROVISIONS	2			
8	VARIATIONS TO DEVELOPMENT CONTROLS IN THE DCP	3			
9	SITE AND CONTEXT ANALYSIS	3			
9.1	Objectives	3			
9.2	Minimum Requirements for Site and Context Analysis	4			

## Figures

Figure 1: Typical Site and Context Analysis – dwelling	6
Figure 2: Assessment Process	8



## 1 NAME OF THIS DEVELOPMENT CONTROL PLAN

This plan is known as Wollongong Development Control Plan (DCP) 2009. DCP 2009 was adopted by Council on 15 December 2009 and came into effect on 3 March 2010.

This DCP 2009 has been prepared in accordance with Section 74C of the Environmental Planning and Assessment Act 1979 and clause 16 of the Environmental Planning and Assessment Regulation 2000.

## 2 REVIEW OF THIS DCP

Council reviews this DCP on a periodic basis. It is recommended that applicants contact Council's Customer Service Centre to confirm that this version is current. Table of Amendments is available as part of the Table of Content.

## 3 PURPOSE OF THE DEVELOPMENT CONTROL PLAN

The purpose of this DCP is to outline built form controls to guide development. This DCP supplements the provisions of Wollongong Local Environmental Plan 2009, Wollongong Local Environmental Plan (West Dapto) 2010, Wollongong Local Environmental Plan 1990 and Wollongong Local Environmental Plan No 38 (1984). In the event of any inconsistency between this DCP and the relevant LEP, the LEP will prevail.

Under Section 79C of the Environmental Planning and Assessment Act 1979, the consent authority is required to take into consideration the relevant provisions of this DCP in determining a Development Application for development in the City of Wollongong.

The DCP also contains administrative provisions including details on how Development Applications will be publicly notified and what meetings may be available, to enable stakeholders to discuss any issues concerning an application.

## 4 AIMS & OBJECTIVES OF THIS DEVELOPMENT CONTROL PLAN

The objectives of this DCP are:

- a) To provide detailed development controls within a single document which support the Local Environmental Plan.
- b) To ensure appropriate information is submitted with Development Applications.
- c) **To encourage development that achieves the principles of ecologically sustainably development.**
- d) To ensure that development contributes to the quality of the natural and built environments.
- e) To encourage development that contributes to the quality of the public domain.
- f) To ensure future development responds positively to the qualities of the site and the character of the surrounding locality.
- g) To encourage the provision of development that is accessible and adaptable to meet the existing and future needs of all residents, including people with a disability.
- h) To ensure development is of a high design standard and energy efficient.
- i) To ensure new development is consistent with the desired future character for the area.

- j) To ensure the threat of bushfire is assessed.
- k) To protect areas of high scenic and aesthetic value.
- l) To ensure new development contributes to the safe and liveable environments.

## 5 RELATIONSHIP WITH OTHER PLANS AND POLICIES

1. This plan applies to all lands within the City of Wollongong Local Government Area (LGA) excluding sites approved under Part 3A of the Act.
2. Wollongong Local Environmental Plan 2009 (Wollongong LEP 2009), Wollongong Local Environmental Plan (West Dapto) 2010 (WDLEP 2010) are the principal environmental planning instruments which apply to the majority of lands within City of Wollongong. Wollongong Local Environmental Plan 1990 and Wollongong Local Environmental Plan No. 38 continue to apply to certain lands which have been “deferred” under West Dapto LEP 2010.
3. State Environmental Planning Policies (SEPPs) or State Codes may also apply to certain lands in the City of Wollongong. The statutory provisions of any SEPP or State Code will also prevail over this DCP, in the event of any inconsistency.
4. Different SEPPs cover a range of development including but not limited to secondary dwelling, boarding houses, education facilities, hospitals, seniors living, infrastructure and complying development.

## 6 HOW TO USE THE DCP

1. This DCP is divided into following Parts:-

Part A	Introduction
Part B	Land Use Based Controls (eg Residential Development, Residential Subdivision, Development in the Mixed Use, Business, Industrial, Rural Zones and Development in the Illawarra Escarpment)
Part C	Specific Land Use Controls (City Wide)
Part D	Locality Based DCPs / Precinct Plans
Part E	General Controls
Appendices	(Public Notification and Advertising Procedures for applications, Definitions etc)

2. Applicants will need to comply with the requirements of all relevant parts of the DCP. The guidelines contained in Wollongong DCP 2009 must be taken into account in the preparation of any Development Application for the proposed land use or development.
3. Compliance with the provisions of this DCP may not guarantee that consent will be granted to a Development Application (DA), particularly where the objectives of the DCP have not been met.

## 7 SAVINGS AND TRANSITIONAL PROVISIONS

Wollongong DCP 2009 applies to any development application which was lodged with Council but not finally determined before the commencement of this Plan. Any application lodged before the

commencement of this plan will be assessed in accordance with any previous development control plan, technical policy or other Council policy which applied to the site at the time of application lodgement including exhibited draft plans and policies.

## **8 VARIATIONS TO DEVELOPMENT CONTROLS IN THE DCP**

The DCP aims to allow flexibility in the application of such development controls to promote innovation and design excellence. Council may consider variations to the requirements of the WDCP in certain circumstances.

Variation to development control will be considered on a case by case basis and will only be considered where written justification is provided to the satisfaction of Council, that the objectives of the development control have been achieved.

1. The variation statement must address the following points:
  - (a) The control being varied; and
  - (b) The extent of the proposed variation and the unique circumstances as to why the variation is requested; and
  - (c) Demonstrate how the objectives are met with the proposed variations; and
  - (d) Demonstrate that the development will not have additional adverse impacts as a result of the variation.
2. The variation statement should be contained within the Statement of Environmental Effects accompanying a development application.
3. Any written variation request must be supported by detailed site analysis and other necessary documentation.
4. The fact that an existing development may not comply with one or more of the development controls, does not necessarily mean that the development control is unreasonable or unnecessary, when applied to future development.
5. More specific requirements relating to variation statements may be included under the individual chapters of this DCP.

## **9 SITE AND CONTEXT ANALYSIS**

### **9.1 Objectives**

A Site and Context Analysis is prepared prior to inform the design process. It enables the applicant, neighbours and Council to appreciate the site's natural and contextual features; identify the relationship of the site to adjacent properties; and ensure that the proposal appropriately respects and responds to its context and the prevailing character of a street.

The objectives of this clause are:

- a) To ensure that a Site and Context Analysis is undertaken for sites subject of a development application.
- b) To promote development with good design by ensuring the consideration of existing characteristics, opportunities and constraints of the site and its surrounds.
- c) To ensure that consideration is given to all relevant site and locality issues in the formulation of development proposals.

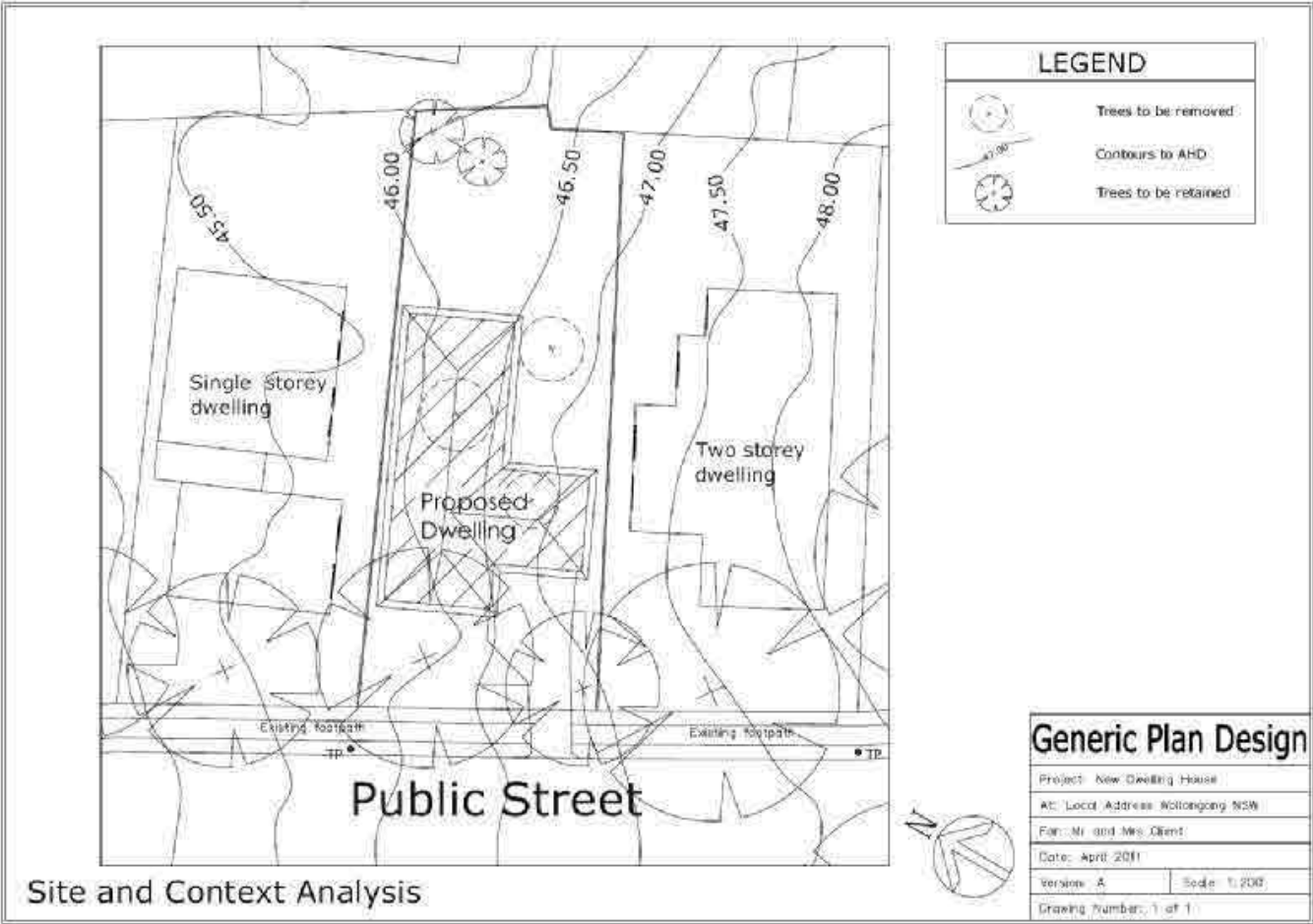
- d) To identify the minimum requirements for the preparation of a detailed Site and Context Analysis to lead and support the design process for developments.

## 9.2 Minimum Requirements for Site and Context Analysis Plan

1. A Site and Context Analysis involves two (2) phases which includes a site survey and the analysis
2. The site and context analysis plan must also demonstrate that the development is well proportioned, both as an individual element and within the streetscape.
3. A Site and Context Analysis Plan must accompany ALL development applications for residential development, with the exception of internal alterations to existing buildings. The level of information required may vary depending on the extent of work being carried out.
4. The Site and Context Analysis must comprise an annotated plan and should be accompanied by written information. A Site Analysis plan must be based on a survey drawing produced by a registered surveyor. The site analysis plan should also contain a reference number and the date it was prepared.
5. The Site and Context Analysis Plan must be prepared to scale and accurately show all relevant information, as follows:
  - a) Contours and levels to Australian Height Datum (AHD);
  - b) Land description including lot dimensions, true north point and scale;
  - c) The footprint, height and use of existing and proposed buildings on the site including immediately adjoining sites. Larger developments will include a wider context analysis;
  - d) Any endangered ecological community (EEC), existing trees, significant trees or other vegetation (including any High Conservation Value native vegetation);
  - e) Site orientation and dimensions and local climatic features such as wind direction;
  - f) Site constraints including flood affected land, overland flow paths, slope instability, contaminated land, landfill areas, heritage items on or in the vicinity of the site and archaeological sites;
  - g) Services and utilities including location of drainage infrastructure and connection for utility services;
  - h) Easements, fences, boundaries and site access;
  - i) The location of any sewer main upon the site, where development involves the construction of a basement level;
  - j) Views to and from the site and the existence of any significant nearby view corridors from public spaces and nearby residences (where relevant);
  - k) Movement corridors including local streets and pedestrian pathways;
  - l) Any other notable natural landform features or other characteristics of the site.
  - m) Difference in levels between the site and adjacent properties;
  - n) Location of significant environmental features adjacent to the site including watercourses, noise, pollution sources and environmentally sensitive land;
  - o) Sites with adjoining boundaries; and
  - p) Those sites directly across any road adjacent to the site.
  - q) Inner and outer protection zone areas.
  - r) Trees required to be removed for any development or Asset Protection Zones.

6. Larger development must also consider the footprint, height and use of buildings on a minimum of:
- a) Two lots either side of the development site;
  - b) Any allotments which abut the rear boundary of the development site;
  - c) Setback distances, areas of private open space and windows overlooking the site; and
  - d) Direction and distance to local facilities including shops, schools, public transport and recreation and community facilities.

Figure 1: Typical Site and Context Analysis - dwelling



## 10 PRE-LODGEEMENT MEETINGS FOR DEVELOPMENT PROPOSALS

1. A formal pre-lodgement meeting is recommended prior to the lodgement of a Development Application. Generally development for the purpose of a dwelling houses, alterations and additions to dwellings, secondary dwellings, dual occupancies and ancillary structures will not require a pre-lodgement. Contact Council to establish a pre-lodgement meeting.
2. The preliminary concept plans required for the formal pre-lodgement meeting should include the following: site plan, floor layout plans, elevation plans, sectional plans and a survey plan.
3. Pre-lodgement meetings are held on a weekly basis and will include Council's assessment team. Relevant consultants and advisors used by the applicant should also attend these meetings.
4. The quality of advice provided by Council staff on a project will be based upon the level of information provided to Council by the applicant / applicant's consultant(s) prior to and at that meeting.
5. Further pre-lodgement meetings may be warranted for very major or technically complex projects. In some cases, it may be prudent (but not mandatory) for the applicant to provide Council with the Draft Statement of Environmental Effects (SEE) or Draft Environmental Impact Statements (EIS) or other supporting technical studies, especially where the proposal involves very complex environmental impact assessment matters.
6. Pre-lodgement meeting notes will be made after each meeting. The meeting notes will reflect the main issues discussed at the pre-lodgement meeting. The pre-lodgement meeting notes will include what supporting information / reports are required to be submitted with the Development Application. The pre-lodgement meeting notes will be provided to the applicant.
7. Council reserves the right to seek additional information at the Development Application stage where such information is, in the opinion of Council, necessary to enable the proper assessment of the application, notwithstanding any previous pre-lodgement meeting.

## 11 WHEN IS A DEVELOPMENT APPLICATION REQUIRED

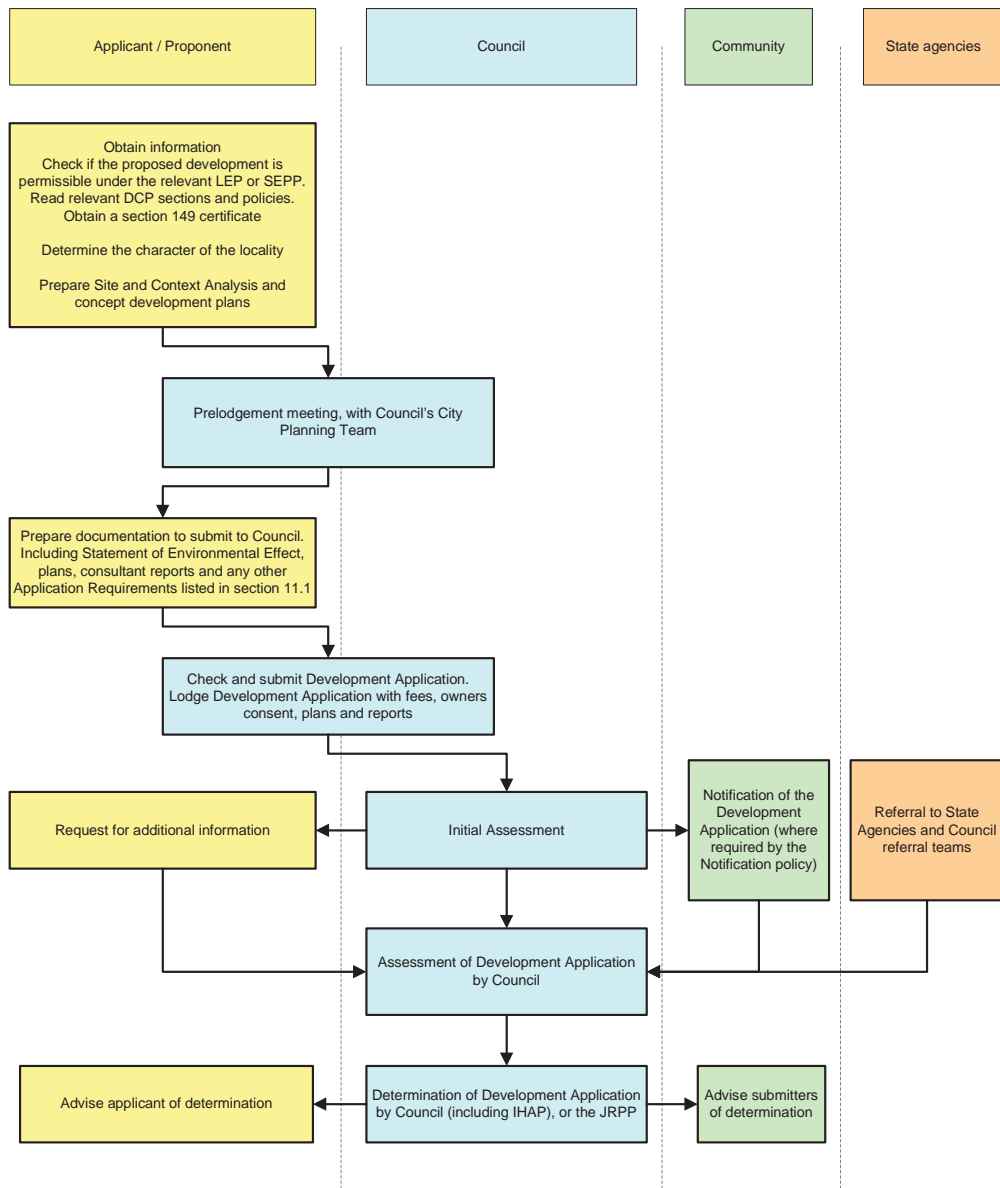
1. The lodgement of a Development Application is required for any proposed development where the relevant LEP or any other environmental planning instrument specifies that a proposed development may only be carried out with development consent upon the land to which the instrument applies.
2. Certain proposed developments may be classified as either under "designated development" or an "integrated development" under the Environmental Planning and Assessment Act 1979 or Regulation 2000.

Designated development requires the preparation of an Environmental Impact Assessment (EIS) which must be undertaken in accordance with the requirements of the Director-General of the NSW Department of Planning.

Integrated development requires formal concurrence approval from one or more public authorities. Council is required to obtain general terms of approval which if granted consent form part of the conditions of consent.

3. A Development Application is not required for any proposed development which is classified as "exempt development" or "complying development" under the relevant LEP, any State Environmental Planning Policy or State Code.

**Figure 2: Assessment Process**





## 11.1 Requirements for the lodgement of a Development Application

1. A Development Application may be required to be accompanied by specialist reports and plans depending on the nature of the site, including constraints and development proposed.
2. Site constraints and relevant planning controls and standards are identified on a Section 149 Certificate.
3. Development Application fees for registered charities will be waived.
4. Where a Development Application proposes a variation to a development standard the applicant must clearly identify the proposed variation on the development application form. This will enable Council to notify and exhibit the proposed variation to the development standard. Failure on behalf of the applicant to clearly identify a proposed variation at lodgement may result in re-notification of the application.
5. The requirements for the lodgement of a Development Application for a particular type of development are addressed in the Matrix for Minimum Lodgement Requirements, in section 11.2 of Chapter A1 (Table 1).

### 11.1.1 Matrix of minimum lodgement requirements

The matrix table is designed to provide a brief summary of the minimum information requirements for lodgement with a Development Application for common types of development. However, a full review of the DCP is recommended in order to ensure that all necessary information is lodged in support of a Development Application.

In the event that a proposed development is not listed in the matrix table, it is recommended that the applicant contact Council, to determine the minimum information required for lodgement of a Development Application.

Further additional documentation may be required for a specific type of developments during the assessment process.

**Table 1 Minimum Information Requirements for lodgement of a Development Application**

	Subdivision	Dwelling House	Dual Occupancy	Multi Dwelling Development	Residential Apartment Building	Mixed Use Development	Child Care Centre	Retail Development	Commercial Office Development	Industrial Development	Warehouse Distribution Centre	Bulky Goods Showroom	Educational Establishment	Tele-Communications
Site and Context Analysis	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Statement of Environmental Effects / EIS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Site Plan	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Subdivision Plan	✓	•	•	•	•	•	•	•	•	•	•	•	NA	NA
Floor Layout Plans	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	Subdivision	Dwelling House	Dual Occupancy	Multi Dwelling Development	Residential Apartment Building	Mixed Use Development	Child Care Centre	Retail Development	Commercial Office Development	Industrial Development	Warehouse Distribution Centre	Bulky Goods Showroom	Educational Establishment	Tele-Communications
Elevation Plans	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Section Plans	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NA
Shadow Diagrams	NA	•	✓	✓	✓	✓	•	•	•	•	•	•	•	•
Streetscape Perspective	NA	•	•	✓	✓	✓	•	•	•	•	•	•	•	•
Photomontage	NA	•	•	✓	✓	✓	✓	✓	✓	•	•	•	•	•
3D Model	NA	NA	NA	•	•	•	•	•	•	•	•	•	•	•
SEPP 65 Design Verification Statement	NA	NA	NA	•	•	•	NA	NA	NA	NA	NA	NA	NA	NA
BASIX Certificate	NA	•	•	•	•	•	NA	NA	NA	NA	NA	NA	NA	NA
Landscape Plan	NA	•	•	•	•	•	•	•	•	•	•	•	•	•
Schedule of External Finishes	NA	•	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	•	•
Tree Survey	•	•	•	✓	✓	✓	•	•	•	✓	✓	✓	✓	•
Arborist Report	•	•	•	✓	✓	✓	•	•	•	•	•	•	•	•
Economic Impact Assessment Report	NA	NA	NA	NA	NA	•	NA	✓	•	NA	NA	•	NA	NA
Noise Impact Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	NA
Geotechnical Impact Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Acid Sulfate Soil Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Traffic Impact Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Heritage Impact Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Aboriginal Archaeological Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bushfire Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Threatened Species Impact Assessment Report	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Drainage Concept Plan & Calculations	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	•
On-site Detention	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	•	•

	Subdivision	Dwelling House	Dual Occupancy	Multi Dwelling Development	Residential Apartment Building	Mixed Use Development	Child Care Centre	Retail Development	Commercial Office Development	Industrial Development	Warehouse Distribution Centre	Bulky Goods Showroom	Educational Establishment	Tele-Communications
Plan														
Flood Study	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Preliminary Contamination Audit – Review of Existing & Previous Site History	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Erosion & Sedimentation Control Plan	✓	•	•	•	•	•	•	•	•	✓	✓	✓	✓	•
Demolition Work Plan	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Waste Management Plan	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

#### LEGEND

✓ Information required

• Information may be required (Determined at pre-lodgement meeting with Council staff).

NA Not Applicable

## 12 DEVELOPMENT APPLICATION ASSESSMENT PROCESS

### 12.1 What matters will Council take into consideration in the assessment of a Development Application?

- Each application will be considered on its own merits in terms of the achievement of the objectives of this DCP. Any variations must comply with Clause 8 of Chapter A1.
- In assessing an application, Council will take into consideration a range of the matters, including (but not necessarily limited to) the following:

- Environmental Planning and Assessment Act 1979, in particular the “matters for consideration” as listed under Section 79C of the Act;

*In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*

- the provisions of:*

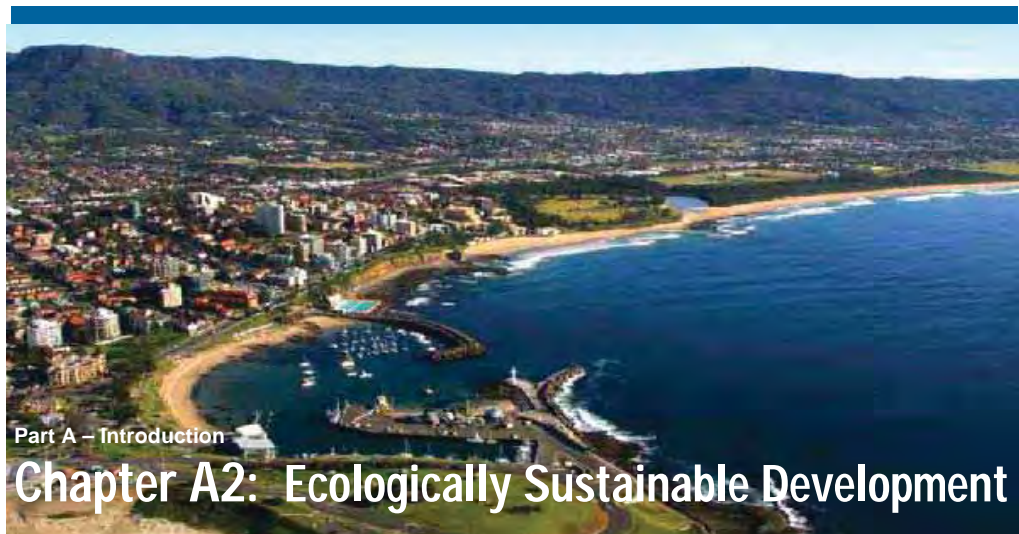
- any environmental planning instrument, and*
- any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
- any development control plan, and*
- any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and*

- (iv) *the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and*
  - (v) *any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates,*
  - (b) *the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
  - (c) *the suitability of the site for the development,*
  - (d) *any submissions made in accordance with this Act or the regulations,*
  - (e) *the public interest.*
- 6. A development application may be determined by a planning officer, Independent Hearing and Assessment Panel (IHAP), Joint Regional Planning Panel (JRPP) or Council.
- 7. A review of determination application may be lodged with Council if an applicant is dissatisfied with Council's original decision on the application in accordance with Section 82A of the EPA Act.

## 12.2 Lodgement of a modifications to development consent

The EPA Act allows applicants to modify approved development applications [Section 96(1) and Section 96(2)] where a modification involves:

- a) Minor error, misdescription or miscalculations; or
  - b) Modifications involving minimal environmental impact; or
  - c) Other modifications
1. Development Application for modifications must include:
- a) Written evidence documenting the changes,
  - b) Where changes are proposed to the built form internally or externally, plans are required that clearly illustrate the variation to the original approved development. These plans must highlight any changes on the plans via different colours or other visual means.
  - c) Demonstrate which development controls apply to the proposed modification and how they are complied with under the modification.



## Contents

1.1	Introduction	1
1.2	Objectives	1
1.3	Sustainability principles	2
1.4	Development Controls	3
1.5	Resources for further information	3

## 1.1 Introduction

Council encourages the application of ecologically sustainable development (ESD) for all development in the Wollongong local government area. Ecologically sustainable development, as defined by the *Environmental Planning and Assessment Act 1979*, requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
- (ii) an assessment of the risk-weighted consequences of various options,
- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
- (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
- (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
  - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
  - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
  - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004* mandates provisions relating to reduced consumption of mains-supplied potable water, reduction of greenhouse gases emissions and improved thermal comfort for all residential development. Council encourages applicants to go beyond the minimum BASIX requirements for their development.

## 1.2 Objectives

Through the application of ESD, development should be sited, designed and constructed taking into consideration the principles of ESD, and comply with the following objectives.

- (a) Greenhouse gas emissions will be reduced.
- (b) Potable water use will be reduced.
- (c) Development can adapt to climate change.

(d) Waste will be reduced.

(e) Recycling of waste and use of products from recycled sources will be increased.

(f) Energy that is used will be renewable and low carbon.

(g) Indoor environmental quality is improved.

(h) The environmental impacts from building materials will be reduced through reduction, reuse and recycling of materials, resources and building components.

(i) Biodiversity values are improved.

Council also encourages the application of an environmental building rating tool e.g. Green Star or NABERS, to document and demonstrate the environmental performance of a proposed development.

### 1.3 Sustainability principles

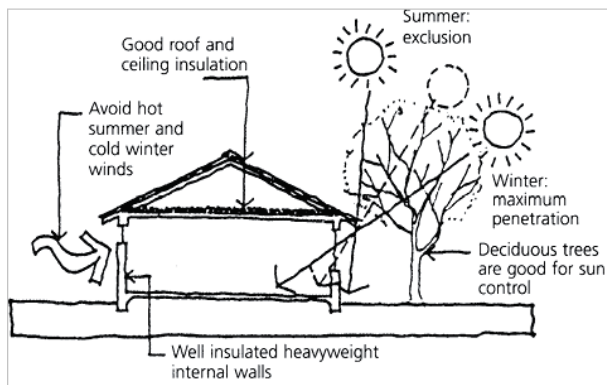
Taking into consideration the site and context analysis, the principles of passive solar design should be used to refine the design and siting of the development. Passive solar design involves designing a development for the local climate, orientating to achieve good passive solar heating in winter and cooling in summer, insulating, glazing and considering the thermal mass of construction materials.

Council encourages the use of the most efficient water and energy appliances and systems, natural ventilation, efficient heating and cooling systems and renewable energy in order to minimise greenhouse gas emissions resulting from the development.

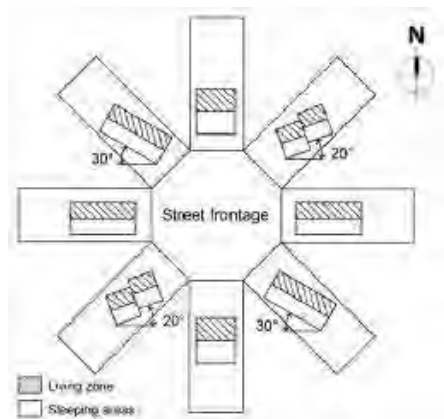
The development must aim to maintain, conserve and enhance indigenous species, populations and ecological communities present prior to, during and post construction. Consideration should also be given to:

- The use of local indigenous species to enhance wildlife corridors and contribute to the amenity of the area.
- Maintaining and enhancing existing vegetation. Landscaped areas should aim to enhance existing wildlife corridors onsite and adjacent to the site, and may include the preservation and reuse of topsoil.
- The use of deciduous trees to provide shade in summer and allow sunlight infiltration during winter.
- Increasing landscaped areas to enable water infiltration and decrease hard surfaces.
- For larger developments, the incorporation of green roofs and walls is encouraged. Green roofs and walls assist in the regulation of the buildings temperature, as well as acting as insulation, improving air quality, enhancing biodiversity and reducing stormwater runoff.

Careful analysis and selection of building materials can result in improvements to the thermal comfort and long term efficiency of the development. The embodied energy of construction materials should be considered when selecting building materials and during construction. Embodied energy includes all the energy associated with mining and processing of materials, manufacturing, transportation and eventual delivery of the product.



Above: Dwelling diagram incorporating passive solar design principles (source [www.yourhome.gov.au](http://www.yourhome.gov.au)).



Above: Examples of residential lots orientated towards a street and a preferred living / sleeping zone orientation for passive solar performance (source [www.yourhome.gov.au](http://www.yourhome.gov.au)).

## 1.4 Development Controls

Development controls to improve the sustainability of development throughout Wollongong are integrated into the relevant chapters of this DCP. The Land Use based DCP chapters, for example B1 Residential Development, B3 Mixed Use Development, B5 Industrial Developments, and B6 Development in the Illawarra Escarpment, relay objectives relating to the application of ESD, for example energy efficiency, maximising retention of significant remnant trees and other vegetation, and encouraging innovative housing design. These DCP chapters include development controls relating to landscaping, deep soil zones, building character and form, adaptable and universally designed housing.

Chapter B2: Residential Subdivision and D16 West Dapto Urban Release Area include objectives and development controls which aim to ensure subdivisions are designed to take into account the principles of ecological sustainable development. They include focus on lot orientation for future solar efficiency and walkability. The DCP chapter include development controls relating to subdivision design, lot layout, provision for street tree planting and stormwater drainage.

Chapter D13 Wollongong City Centre Precinct includes objectives relating to the application of ESD, as well as provisions relating to energy and water efficiency and conservation for non-residential developments.

Please refer to relevant chapters of the Wollongong DCP 2009 for specific development controls.

## 1.5 Resources for further information

Australian Government, 2013, Your Home Australia's guide to environmentally sustainable homes, <http://www.yourhome.gov.au/>, viewed February 2016.

City of Sydney, December 2014, Green roofs resource manual, <http://www.cityofsydney.nsw.gov.au>, viewed February 2016.





## Part B – Land Use Based Controls

# Chapter B1: Residential Development

## Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>3</b>		
<b>2</b>	<b>OBJECTIVES</b>	<b>3</b>		
<b>3</b>	<b>DEFINITIONS</b>	<b>3</b>		
<b>4</b>	<b>GENERAL RESIDENTIAL CONTROLS</b>	<b>4</b>		
4.1	Number of Storeys	4	4.22	Additional Controls for Dual Occupancy's - Building Character and Form 24
4.2	Front Setbacks	5	4.23	Additional Controls for Dual Occupancy's – Deep Soil Zones 24
4.3	Side and Rear Setbacks	6		
4.4	Site Coverage	6	<b>5</b>	<b>ATTACHED DWELLINGS AND MULTI - DWELLING HOUSING 25</b>
4.5	Landscaped Area	7	5.1	Minimum Site Width Requirement 25
4.6	Private Open Space	8	5.2	Number of Storeys 26
4.7	Solar Access	9	5.3	Front Setbacks 27
4.8	Building Character and Form	10	5.4	Side and Rear Setbacks 27
4.9	Fences	11	5.5	Building Character and Form 29
4.10	Car parking and Access	13	5.6	Access / Driveway Requirements 30
4.11	Storage Facilities	14	5.7	Car Parking Requirements 31
4.12	Site Facilities	14	5.8	Landscaping Requirements 32
4.13	Fire Brigade Servicing	15	5.9	Deep Soil Planting 33
4.14	Services	15	5.10	Communal Open Space 34
4.15	Development near the Coastline	16	5.11	Private Open Space 34
4.16	View Sharing	17	5.12	Solar Access Requirements 35
4.17	Retaining Walls	18	5.13	Additional Control for Multi Dwelling Housing - Dwelling Mix and Layout 36
4.18	Swimming Pools and Spas	20	5.14	Additional Control for Multi Dwelling Housing - Adaptable and Universally Designed Housing 37
4.19	Development Near Railway Corridors and Major Road	22	5.15	Additional Control for Multi Dwelling Housing - Crime Prevention through Environmental Design 38
4.20	Additional controls for semi-detached dwellings – alterations and additions	23	<b>6</b>	<b>RESIDENTIAL FLAT BUILDINGS 39</b>
4.21	Additional Controls for Dual Occupancy's - Minimum Site Width	23	6.1	General 39
			6.2	Minimum Site Width Requirement 39
			6.3	Front Setbacks 41
			6.4	Side and Rear Setbacks / Building Separation 42
			6.5	Built Form 43

6.6	Visual privacy	45
6.7	Acoustic privacy	47
6.8	Car Parking Requirements	48
6.9	Basement Car Parking	48
6.10	Access Requirements	49
6.11	Landscaping Requirements	50
6.12	Deep Soil Zone	53
6.13	Communal Open Space	53
6.14	Private Open Space	54
6.15	Adaptable and Universally Designed Housing	56
6.16	Access for People with a Disability	57
6.17	Apartment Size and Layout Mix for Larger Residential Flat Building Developments	57
6.18	Solar Access	59
6.19	Natural Ventilation	60

## Figures

Figure 1: Cliff top sitting of building .....	17
Figure 2: (Top) Where $y - x$ is less than or equal to 2 metres, the setback equals $x$ or $y$ .....	41
Figure 3: (Bottom) Where $y - x$ is greater than 2 metres, the setback equals the average of $x$ and $y$ .....	41
Figure 4: Examples of Residential Flat Building design .....	45
Figure 5: Examples of balcony screening and climate control elements. Reference: Residential Flat Design Code .....	56
Figure 6: Natural Ventilation, Corner apartments encourage natural ventilation flows. (Ref: Residential Flat Design Code) ..	60
Figure 7: This optimal layout allows air flow directly from one side of the apartment to the other .....	60

## 1 INTRODUCTION

This chapter contains residential development controls for dwelling-house, secondary dwelling, semi-detached dwelling, dual occupancy, attached dwelling, multi-dwelling housing (villas and townhouses), residential flat building developments in standard residential zones.

This chapter of the DCP applies to all residential zoned land within the City of Wollongong Local Government Area (LGA.) including E4 Environmental Living.

Section 4 provides general development controls which apply to the erection of all dwelling-house, dual occupancy, secondary dwelling, ancillary structures and semi detached dwellings within urban areas.

Section 5 provides controls for Attached dwellings and Multi-dwelling housing.

Section 6 provides controls for Residential Flat Buildings.

This chapter of the DCP should be read in conjunction with the relevant LEP and Part A, any relevant Part D and Part E chapter including E7 Waste Management, E14 Stormwater Management, E15 Water Sensitive Urban Design, E13 Floodplain Management, E19 Earthworks (Land Re-Shaping Works), E22 Soil and Sediment Control.

## 2 OBJECTIVES

The key objectives of Chapter B1 of the DCP are:

- (a) To ensure a high standard of residential development within the City of Wollongong LGA.
- (b) To encourage new residential development that is sympathetic to the existing streetscape and neighbourhood character of a particular locality.
- (c) To encourage residential development that reflects the desired future character of individual suburbs within the Wollongong City LGA.
- (d) To manage residential development in order to maximise the retention of significant remnant trees and other natural features in particular localities.
- (e) To encourage innovative housing design and energy efficient housing which embraces the highest possible architectural, environmental and amenity standards.
- (f) To promote residential development that achieves the principles of ecologically sustainable development.
- (g) To encourage a mix of housing forms within the city to assist in achieving urban consolidation initiatives particularly in localities close to business centres and railway stations and to assist in providing housing affordability.
- (h) To ensure that Crime Prevention through Environmental Design (CPTED) principles are holistically embraced in the design of any residential development.

## 3 DEFINITIONS

For the definitions of the following terms as applied in the DCP refer to the relevant LEP.

- a) Attached dwelling
- b) Dual occupancy
- c) Dwelling
- d) Dwelling-house
- e) Multi dwelling housing

- f) Residential flat building
- g) Secondary dwelling (also refer to the Affordable Housing SEPP)
- h) Semi-detached dwelling.

## 4 GENERAL RESIDENTIAL CONTROLS

### 4.1 Number of Storeys

The maximum building height is set by the Local Environmental Plans generally

- a) R2 Low Density Residential Zones permit a maximum height of 9m – a maximum of 2 storeys
- b) R3 Medium Density Residential Zones permit a maximum of height of 13m a maximum 3 storeys.

The number of storeys acceptable will be dependant on the surrounding development, the future desired character of the area, the impacts that the proposed development has on solar access, privacy, visual amenity and overshadowing.

#### 4.1.1 Objectives

- a) To encourage buildings which integrate within the streetscape and the natural setting whilst maintaining the visual amenity of the area.
- b) To minimise the potential for overlooking on adjacent dwellings and open space areas.
- c) To ensure that development is sympathetic to and addresses site constraints.
- d) To encourage split level stepped building solutions on steeply sloping sites.
- e) To encourage a built form of dwellings that does not have negative impact on the visual amenity of the adjoining residences.
- f) To ensure ancillary structures have appropriate scale and are not visually dominant compared to the dwelling.
- g) To ensure appropriate correlation between the height and setbacks of ancillary structures.
- h) To encourage positive solar access outcomes for dwellings and the associated private open spaces.

#### 4.1.2 Development Controls

1. Dwelling houses on battleaxe allotments are restricted to 1 storey unless it can be demonstrated that the proposed development achieves the objectives in Clause 4.1.1 and complies with the maximum height maps in the LEP.
2. Ancillary structures are restricted to 1 storey unless it can be demonstrated that the proposed development achieves the objectives in Clause 4.1.1 and complies with the maximum height maps in the LEP.
3. Habitable roof space may provide additional habitable area only when the height of the building does not exceed the maximum building heights specified in the relevant LEP.

4. In R2 Low Density Residential zones, where development occurs within the 8m rear setback the development is limited to single storey, so as to not adversely impact on the amenity of the adjoining property.
5. Landscaping may be required within the side and rear setbacks to mitigate the visual impact of the building form from adjoining properties.

## 4.2 Front Setbacks

### 4.2.1 Objectives

- (a) To reinforce the existing character of the street and locality by acknowledging building setbacks.
- (b) To ensure that buildings are appropriately sited, having regard to site constraints.
- (c) To ensure building setbacks are representative of the character of the area.
- (d) To provide for compatibility in front setbacks to provide unity in the building line.
- (e) To ensure that setbacks do not have a detrimental effect on streetscape or view corridors.
- (f) To ensure that hard stand areas can be provided in front of garage without imposing on movement corridors (pathways, cycle ways and road reserves).

### 4.2.2 Development Controls

1. The following setback requirements apply from the primary street frontage to the front facade of the building:
  - a) Infill development sites require a minimum setback of 6m from the front property boundary, or
  - b) Less than 6 metres where the prevailing street character permits and the future desired character of the area is not prejudiced. Reduced setbacks must be demonstrated through a Site and Context Analysis (Chapter A.1 cl.11.1).
  - c) Garages and carports must be setback a minimum of 5.5 metres to enable a vehicle to park or stand in front of the garage or carport.
  - d) Greenfield sites require a minimum setback of 4m (excluding garages and carports which must be setback at least 5.5 metres).
2. Corner allotments
  - (a) Infill development sites require a minimum setback of 6m, or
  - (b) Less than 6 metres where the prevailing street character permits and the future desired character of the area is not prejudiced. Reduced setbacks must be demonstrated through a Site and Context Analysis (Chapter A.1 cl.11.1).
  - (c) Secondary building line must be setback a minimum of 3 metres, except for garages which must be setback at least 5.5 metres from the property boundary on the secondary road.
3. Any secondary dwelling shall be setback behind the front building alignment of the principal dwelling.

## 4.3 Side and Rear Setbacks

### 4.3.1 Objectives

- (a) To create a consistent pattern of building separation along streets.
- (b) To provide adequate setbacks from boundaries to retain privacy levels and minimise overlooking/overshadowing.
- (c) To ensure that buildings are appropriately sited having regard to site constraints.
- (d) To control overshadowing of adjacent properties and private or shared open space.
- (e) To ensure improved visual amenity outcomes for adjoining residences.

### 4.3.2 Development Controls

- 1. Walls must be setback at least 900mm from any side or rear property boundary and eaves/gutters must be setback at least 450mm from the side and rear property boundaries.
- 2. Walls (including gable ends and parapets) that exceed 7 metres overall height must be setback at least 3 metres from the side and rear boundaries.
- 3. Freestanding garages or outbuildings with habitable roof spaces or second storey must be setback at least 900mm from a side or rear property boundary.

Detached single storey garages/outbuildings must be setback at least 500mm from a side or rear boundary, unless constructed of masonry, in which case a lesser setback may be considered in accordance with the criteria for variations stated below.

- 5. All balconies and windows of habitable rooms (excluding bedrooms) within a proposed dwelling-house or secondary dwelling must be designed to minimise any direct overlooking impact upon any adjoining property.
- 6. Walls in excess of 8m in length may not be considered for a variation to side setbacks.
- 7. The side and rear setback controls may only be varied where the following is demonstrated to Council's satisfaction:
  - (a) The objectives of 4.4.1 are met.
  - (b) The walls and footings are located wholly on the subject land.
  - (c) There are no windows facing the adjoining property that enable overlooking.
  - (d) Walls provide articulation so as to not impact the amenity of adjoining dwellings.
  - (e) Landscaping is appropriately provided to screen development.

## 4.4 Site Coverage

### 4.4.1 Objectives

- (a) To limit the building footprint and ensure adequate provision is made for landscaped areas, deep soil zones, permeability and private open space.
- (b) To control site density.

- (c) To minimise adverse impacts arising from large dwellings and ancillary structures on the amenity of adjoining and adjacent properties.

#### 4.4.2 Development Controls

1. Site coverage is defined accordance with Wollongong LEP 2009 and means the proportion of a site area covered by buildings. However, the following are not included for the purpose of calculating site coverage:
  - a) any basement,
  - b) any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,
  - c) any eaves,
  - d) unenclosed balconies, decks, pergolas and the like.
2. The maximum site coverage for a dwelling, dual occupancy, and combined maximum coverage for a principle dwelling and secondary dwelling, is as follows:

55% of the area of the lot, if the lot has an area less than 450m<sup>2</sup>.

50% of the area of the lot, if the lot has an area of at least 450m<sup>2</sup> but less than 900m<sup>2</sup>.

40% of the area of the lot, if the lot has an area of at least 900m<sup>2</sup>.
3. For dual occupancy development, maximum site coverage for both dwellings combine must be less than or equal to that specified based on lot area above.
4. Where a two lot Torrens Title subdivision is proposed for dual occupancy development, the site coverage for each dwelling must be less than or equal to the maximum site coverage as specified above.

### 4.5 Landscaped Area

#### 4.5.1 Objectives

- (a) To preserve and retain existing mature native vegetation and encourage the planting of additional significant native vegetation.
- (b) To encourage the linkage of habitat corridors along the rear of sites.
- (c) To allow for increased water infiltration and minimise urban run-off.
- (d) To facilitate pleasant views from within dwellings and backyard settings.
- (e) To reduce privacy and amenity impacts at the rear of residential properties.

#### 4.5.2 Development Controls

1. Significant trees are to be maintained on the site.

2. 

The minimum landscaped area required is based on lot size as outlined below. This percentage is the a minimum. At least 20% of the land must be provided as 'landscaped area' which is a permeable area capable of growing trees, shrubs, groundcovers and / or lawn and does not include any building, structure or hard paved area.

  - i) lot area less than 600m<sup>2</sup> - 20% landscaped area
  - j) lot area from 600m<sup>2</sup> to 900m<sup>2</sup> - 30% landscaped area
  - k) lot area greater than 900m<sup>2</sup> - 40% landscaped area.
3. At least 50% of the landscaped area must be located behind the building line to the primary road boundary.
4. Landscaped areas must be integrated with the drainage design. The location of drainage lines, pits and detention areas should not conflict with landscaped areas including proposed and existing trees.
5. For development proposing a dwelling, a minimum of one (1) semi mature small to medium evergreen or deciduous tree (minimum pot size 45 litre) is to be provided within the landscape area. This tree is to be planted at least 3m from any dwelling or structure present onsite. No additional tree is required for a secondary dwelling.
6. Dual occupancy development requires:
  - (a) a minimum of 1.5 metre wide landscape strip within the front setback for the majority of the site width (excluding the driveway). This area must be mulched and planted with appropriate trees, shrubs and/or groundcovers. A minimum of one (1) semi mature small to medium evergreen or deciduous tree (minimum pot size 45 litre) is to be provided within this landscape bed.
  - (b) second semi mature small to medium tree (minimum pot size 45L) is to be provided onsite in the landscaped area or deep soil zone, planted at least 3m from any dwelling, building or structure on the lot.

## 4.6 Private Open Space

### 4.6.1 Objectives

- (a) To ensure that private open spaces are large enough to accommodate a range of uses and are accessible and connected to indoor spaces.
- (b) To ensure that private open space is suitably located taking into account existing and potential surrounding development.
- (c) To minimise amenity impacts to neighbours.
- (d) To ensure functionality of the private open space area by reducing overlooking, overshadowing and amenity impacts onto / from adjoining properties, through the provision of appropriate buffer screen planting around the perimeter of the open space area, where necessary.
- (e) To protect existing trees and other vegetation in the immediate locality which contribute to the natural setting of the site.



## 4.6.2 Development Controls

1. Private open space must be provided in accordance with the following requirements:
  - a) A 24m<sup>2</sup> area of private open space must be directly accessible from the living areas of each proposed dwelling and have a minimum width of 4 metres and be no steeper than 1:50.
  - b) Private open spaces and private courtyards should not be located on side boundaries or front yard. Variations may be permitted where the private open space is sufficiently setback as to ensure that the private open space will not be impacted upon by existing or future complying dwellings on adjoining lots.
  - c) Private open space must be defined through the use of planting, fencing, or landscape features.
  - d) Private open space shall be screened where necessary to ensure privacy between dwellings in a dual occupancy and secondary dwellings.
  - e) Private open space areas including balconies and decks must not extend forward of the front building line by greater than 900mm.
  - f) Space shall be provided for clothes lines and waste/recycling bins and rain water tanks behind the front building line but outside of the private open space area.
  - g) Secondary dwellings will be required to provide private open space with a minimum area of 24m<sup>2</sup>.

## 4.7 Solar Access

### 4.7.1 Objective

- (a) To minimise the extent of loss of sunlight to living areas of adjacent dwellings and private open space areas of adjoining properties.
- (b) To maximise solar access into living rooms and private open space of dwellings in the subject development.

### 4.7.2 Development Controls

1. Windows to living rooms of adjoining dwellings must receive at least 3 hours continuous sunlight, between hours of 9.00am and 3.00pm on 21 June.
2. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of continuous sunlight, between hours of 9.00am and 3.00pm on June 21.
3. Shadow diagrams are required for 9.00am, 12:00pm and 3.00pm for the 21 June winter solstice period for two storey dwellings. In certain circumstances where the extent of solar impacts is uncertain hourly intervals may be required. Additional hourly interval shadow diagrams for the equinox period may be necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

4. Dwellings should be designed to maximise natural sunlight to main living areas and the private open space.

## **4.8 Building Character and Form**

### **4.8.1 Objectives**

- (a) To ensure that development responds to both its natural and built context.
- (b) To design residential development that responds to the existing character and the future character of the area.
- (c) To ensure building design contributes in to the locality through a design that considers building scale, form, articulation and landscaping.
- (d) To encourage colour schemes that are of similar hues and tones to that within the streetscape.
- (e) To ensure buildings address the primary street frontage via entry doors and windows.
- (f) To ensure that dwellings provide appropriate passive surveillance of public spaces and street frontage.
- (g) To ensure that ancillary structures are not the dominate feature of built form.

### **4.8.2 Development Controls**

1. The design, height and siting of a new development must respond to its site context taking into account both natural and built form features of that locality. The design of the development must have particular regard to the topography of the site to minimise the extent of cut and fill associated with dwelling construction.
2. Large bulky forms are to be avoided, particularly in visible locations. The use of extended terraces, balconies, sun shading devices and awnings will help reduce the apparent bulk of buildings.
3. New dwelling-houses within established residential areas should be sympathetic with the existing character of the immediate locality. New innovative contemporary building designs may also be permitted, where, in the opinion of Council, the development will not result in an adverse impact upon the streetscape or residential amenity of that locality, as compared to a more traditional design.
4. All residential buildings must be designed with building frontages and entries clearly addressing the street frontage. On corner allotments, the development should address the street on both frontages.
5. The appearance of blank walls or walls with only utility windows on the front elevation will not be permitted. Note: Utility windows include windows for toilets, bathrooms, laundries etc which are small and / or translucent and hence, are not permitted within the front elevation of a dwelling.
6. Where garages are proposed on the front elevation they must be articulated from the front façade.
7. Additions to an existing dwelling-house must be compatible in terms of design, roof configuration and materials with the existing dwelling, unless the existing part of the dwelling is also upgraded to be sympathetic with the design, roof configuration and materials of the new addition.

8. Any secondary dwelling shall be designed and constructed of external building materials and colour finishes which are sympathetic to the principal dwelling.
9. Existing garages and outbuildings must not be used as a secondary dwelling, except where the required Development Application is supported with appropriate evidence which proves that the structure complies with the relevant provisions of the Building Code of Australia.
10. Fences in the front building line should be predominately constructed in transparent fence materials, allowing for visual connection between the dwelling and the street.
11. Where the garage door addresses the street they must be a maximum of 50% of the width of the dwelling.

## **4.9 Fences**

### **4.9.1 Objectives**

- (a) To allow for the physical separation of properties for resident privacy.
- (b) To define the boundaries between public and private land.
- (c) To enhance the usability of private open space areas / courtyards.
- (d) To ensure that the design, heights and materials of fencing are appropriately selected.
- (e) To ensure that fencing design and location complements the building design, enhance the streetscape and complement the objectives of passive surveillance
- (f) To ensure that the design allows for casual surveillance of the lot.
- (g) To ensure that clear lines of sight are maintained for motorists and pedestrians to and from the lot.
- (h) To provide suitable fencing to improve the acoustic and visual privacy for residential properties fronting major (busy) roads, where appropriate sight line distances can be maintained.

### **4.9.2 Development Controls**

1. All fences are to be constructed to allow the natural flow of stormwater drainage or runoff. Fences must not significantly obstruct the free flow of floodwaters and must be constructed so as to remain safe during floods and not obstruct moving debris. Fences must not be constructed of second hand materials without the consent of Council.
2. Fences within the front and secondary building lines should be predominantly constructed in transparent fence materials, allowing visual connection between the dwelling and the street.
3. Any fence and associated retaining wall within the front setback area from the primary road frontage must be a maximum 1.2 metres in height, above existing ground level. Where the front fence is located on the front property boundary line, the height of the fence is to be measured above the existing ground level of the adjacent footpath or verge.
4. Front fences must be open for at least 50% of the upper 2/3 of the area of the fence. Any brick or other solid portion of the fence above 600mm must not be more than 250mm wide.

5. All front fences must be designed to ensure the safety of all pedestrians using any adjacent public footpath, including children and people with a visual disability. Metal spike picket infill pickets or sharply shaped timber pickets will not be permitted.
6. Front and return fences should reflect the design of the residential building, wherever practicable.
7. Front and return fences should be designed of materials which are compatible with other fences within the immediate streetscape, wherever practicable.
8. Side fences on corner blocks shall be a maximum of 1.2 metres in height within the front setback area (ie up to the front alignment of the dwelling) from the primary road frontage and shall be a maximum of 1.8m in height for the remainder of the secondary road frontage (ie behind the front building alignment).
9. Dividing fences between the front building line and the rear property boundary must be a maximum of 1.8 metres in height.
10. A fence or a fence and an associated retaining wall on a sloping site may be stepped, provided the height of each step is not more than:
  - (a) 1.6 metres above the existing ground level, if it is located within a setback area from a primary road, or
  - (b) 2.2 metres above the existing ground level for side or rear fences, behind the front building line.
11. The height and design of any proposed fence on top of a retaining wall must be included in the consideration of the overall height of the fence and retaining wall.
12. Fences which exceed the maximum fence heights above will only be considered in exceptional circumstances where Council is of the opinion that the variation is reasonable in the circumstances. For example, the erection of a higher front fence for a property fronting a major arterial road, in order to improve the privacy or amenity of the property. In such cases, any fence will be required to be well articulated and landscaped with appropriate planting, to help soften the visual impact and improve the streetscape appearance of the fence.
13. Fences must be constructed of timber, metal, lightweight materials or masonry. Fences in bush fire prone areas shall be of a metal or masonry construction only.
14. Front and return fences are not to be of a timber paling, Colorbond, or chain wire mesh design.
15. When the trunk of a significant tree exists within the location of a proposed fence, then the fence must be designed around the tree or an application made to Council for the proposed removal of the tree (ie in which case Council will assess whether or not the tree removal is appropriate based upon the assessment criteria contained in Chapter E17: Preservation and Management of Trees and Vegetation).
16. Fences within a floodway or high-risk flood precinct are not permitted except for security/ permeable / open style safety fences of a design approved by Council.
17. All fences are to be at or upslope of the foreshore building line and shall be of an open, permeable steel style to maintain views to / from the water body.
18. Any gates associated with the front fence should open inwards so as to not obstruct the road reserve.

19. Fencing must be in keeping with the streetscape.

## **4.10 Car parking and Access**

### **4.10.1 Objectives**

- (a) To provide car parking for residents.
- (b) To ensure that there is adequate provision for vehicular access and manoeuvring.
- (c) To minimise the impact of garages upon the streetscape.

### **4.10.2 Development Controls**

1. The provision of car parking shall be as follows:
  - (a) 1 space per dwelling with a gross floor area of less than 125m<sup>2</sup>
  - (b) 2 spaces per dwelling with a gross floor area of 125m<sup>2</sup> or greater
2. Carports must be setback behind the front building line of the dwelling. Council may consider a variation to this control for carports that are compatible with the design of the dwelling in instances where an existing streetscape includes carports within the front setback or a site is too steep for driveway access to the front building line.
3. Garages must be setback a minimum of 5.5m from the front property boundary.
4. Where garage door openings face a road they shall:
  - (a) Be a maximum of 50% of the width of the dwelling.
5. The car parking spaces may be an open hard stand space, driveway, carport or a garage, whether attached to or detached from the dwelling.
6. The minimum dimension for a single car parking space shall be 5.5 metres x 2.6 metres where unenclosed. The minimum dimension for double car parking space shall be 6 metres x 6 metres, unenclosed.
7. The minimum internal dimensions for a single garage shall be 6 metres (depth) x 3 metres (width). The minimum internal dimensions for a double garage shall be 6 metres (depth) x 6 metres (width).
8. The siting of ancillary buildings, extensions and swimming pools associated with a dwelling-house shall not reduce the number of on site parking spaces behind the building line to less than one.
9. Driveways shall be separated from side boundaries by a minimum of 1 metre.
10. Driveways shall have a maximum cross-over width of 3 metres.
11. Dual Occupancy - Access for a rear dwelling must be provided by a dedicated access corridor attached to the same ownership of the rear property. A right of carriageway over the front public road frontage lot in favour of the rear lot will generally not be supported, except where, in the opinion of Council, this

access arrangement would provide a more functional arrangement and not pose any adverse impact upon the amenity or streetscape character of the locality.

## 4.11 Storage Facilities

### 4.11.1 Objective

- (a) To provide accessible storage for larger household items that cannot be readily accommodated within dwellings.

### 4.11.2 Development Controls

1. Storage must be provided in accordance with the following minimum requirements:

Dwelling	Storage Volume	Storage Area
Studio/1 bedroom	6m <sup>3</sup>	3m <sup>2</sup>
Two bedroom	8m <sup>3</sup>	4m <sup>2</sup>
Three or more bedrooms	10m <sup>3</sup>	5m <sup>2</sup>

## 4.12 Site Facilities

### 4.12.1 Objectives

- (a) To ensure that site facilities (such as clothes drying, mail boxes, recycling and garbage disposal units/areas, screens, lighting, storage areas, air conditioning units, rainwater tanks and communication structures) are effectively integrated into the development and are unobtrusive.

### 4.12.2 Development Controls

1. Provide letterboxes for all residential dwellings in a location, which is accessible. Where a development involves two or more dwellings letterboxes should be grouped in one location adjacent to the main entrance to the development. Letterboxes must be secure and large enough to accommodate articles such as newspapers. In developments involving two or more dwellings they should be integrated into a wall where possible and be constructed of materials that are aligned with the appearance of the building.
2. Locate satellite dish telecommunication antennae, air conditioning units and any ancillary structures:
  - (a) Away from the street frontage;
  - (b) In a position where such facilities will not become a skyline feature at the top of any building; and
  - (c) Adequately setback from the perimeter wall or roof edge of buildings.
3. All dwellings must be provided with open air clothes drying facilities that are easily accessible and which are screened from the public domain and communal open spaces. Clothes drying areas must have a

high degree of solar access. Clothes drying areas must not be located between the building line and a public road or accessway, unless adequately screened.

4. Air conditioning units shall be located so that they are not visible from the street or other public places.

## 4.13 Fire Brigade Servicing

### 4.13.1 Objective

- (a) To ensure that all dwellings can be serviced by fire fighting vehicles.

### 4.13.2 Development Controls

1. All dwellings particularly dual occupancy and dwellings on battle axe allotment must be located within 60m of a fire hydrant, or the required distance as required by Australian Standard AS2419.1. Provision must be made so that Fire and Rescue NSW vehicles can enter and leave the site in a forward direction where:
  - a) Fire and Rescue NSW cannot park their vehicles within the road reserve due to the distance of hydrants from dwellings and/or restricted vehicular access to hydrants; and
  - b) The site has an access driveway longer than 15m.
2. For developments where a fire brigade vehicle is required to access the site, vehicular access, egress and manoeuvring must be provided on the site in accordance with the Fire and Rescue NSW *Code of Practice – Building Construction - NSWFB Vehicle Requirements*.

## 4.14 Services

### 4.14.1 Objective

- (a) To encourage early consideration of servicing requirements, to ensure that all residential development can be appropriately serviced.

### 4.14.2 Development Controls

1. Applicants shall contact service authorities early in the planning stage to determine their requirements regarding conduits, contributions, layout plans, substations and other relevant details.
2. Consideration shall be given to the siting of any proposed substation during the design stage, to minimise its visual impact on the streetscape. Any required substation must not be located in a prominent position at the front of the property.
3. Water, sewerage, gas, underground electricity and telephone are to be provided to the proposed development by the developer in accordance with Council and servicing authority requirements.
4. Developments must be connected to a reticulated sewerage scheme.
5. Where a reticulated scheme is not available, an on-site sewage management system will be required in accordance with the On-site Sewage Management System chapter in Part E of the DCP. The full details of the proposed on-site sewage management system must be provided with the Development Application. A section 68 approval will also be required under the *Local Government Act 1993* in these instances.

## 4.15 Development near the Coastline

### 4.15.1 Objectives

- (a) To minimise built intrusions into the coastal landscape.
- (b) To protect property from the threat of coastal hazards and land instability.
- (c) To retain views to the ocean from roads and public spaces.
- (d) To facilitate buildings that are consistent with a coastal character.

### 4.15.2 Development Controls

1. All development must be setback at least 10m from a beach or cliff top to reduce the potential risk of instability and long term coastal erosion. In some instances, restricted building zones indicated on the Deposited Plan for an allotment of land will also need to be considered when siting buildings on the site.
2. Any development near coastal foreshore areas is to be sited and designed so to be protected from long term coastal erosion.
3. (Note: A Geotechnical Report will be required which confirms that the structural adequacy of the development near a coastal foreshore area from any long term coastal erosion effects. The Geotechnical Report must be prepared in accordance with the requirements contained in the Geotechnical chapter in Part E of the DCP).
4. Development on land with frontage to natural features including the ocean, a clifftop, beach or public open space fronting the ocean is to be sited so as to provide a minimum side boundary setback from any building(s) or structures of 3 metres or 25% of the total width of the site, whichever is the lesser. This setback is required in order to provide a public view corridor and is to be unencumbered with any structures or significant vegetation that restricts public views through the site to the relevant coastal feature.
5. In the circumstances where there is an existing public view corridor specifically provided on immediately adjoining land, then development may be provided with a reduced setback, subject to the combined corridor on the immediately adjoining sites be no less than 4 metres in width and unencumbered with any structures and significant vegetation.
6. Buildings within the coastal zone are to incorporate the following design features:
  - (a) Development should generally be designed in a contemporary Australian coastal style which incorporates elements such as varied roof lines, a modest scale, light weight materials where appropriate, wide eaves and covered outdoor living areas, and consistent with the desired future character outlined for the relevant suburb or locality as contained in Character Statements in Part A of the DCP.
  - (b) Consideration is to be given to the appearance of buildings from all public areas. Buildings are to be well articulated by the use of such features as indentations, off-set wall alignments, shading devices, balconies, window openings, awnings, and a mix of external materials and/or colours.



- (c) Skillion and/or peaked roof forms with overhangs, which bring the roof line down towards the earth and therefore blend with the landscape, are preferred on sites adjacent to coastal foreshores.
- (d) Buildings must not incorporate an unbroken horizontal elevation of more than 16 metres in length. Elevations are to be broken up by building articulation and/or variation in external colours and materials.
- (e) Buildings shall be designed to utilise a composite of construction materials (such as a combination of masonry, glass, timber, weatherboard cladding and powder coated metal). The preferred roofing material is corrugated metal sheeting similar to “Colorbond®”.
- (f) In most instances the use of low-reflective materials will be required although this may vary in circumstances where a building seeks to echo the existing character of part of a neighbourhood (as reflected in the desired future character statement contained in Part A of the DCP). The use of curtain wall glazing and large expanses of framed glass will not be permitted in the vicinity of main roads in order to minimise reflectivity impacts.
- (g) Colour schemes are to incorporate a mix of finishes drawn from colours found in the natural environment of the coastline. This does not however preclude the use of colour highlights on façade elements. Colour schemes in visually exposed areas must be recessive (i.e. backdrop colour or darker) to allow the development to blend with the coastal landscape.

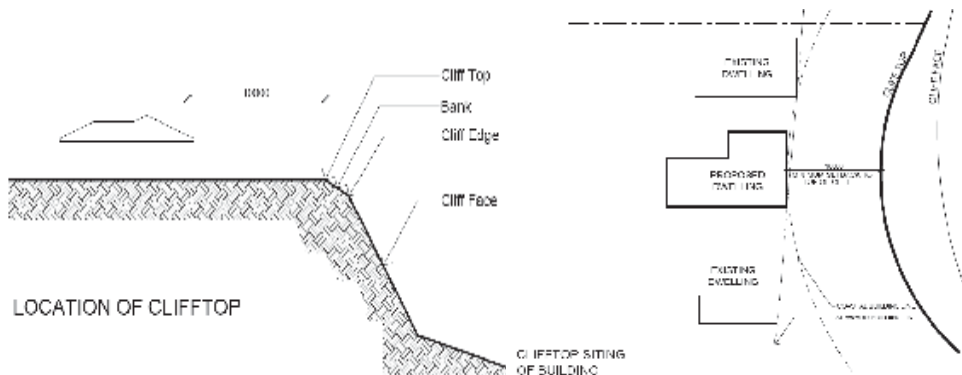


Figure 1: Cliff top sitting of building

## 4.16 View Sharing

### 4.16.1 Objectives

- (a) To encourage view sharing from adjoining or nearby properties, public places, and new development.
- (b) To protect and enhance significant view corridors from public places.
- (c) To encourage the siting and design of new buildings which open up significant views from public areas.

### 4.16.2 Development Controls

1. Visual impact assessment should include an:

- (a) Assessment of views likely to be affected.
  - (b) Assessment of what part of the property the views are obtained from.
  - (c) Assessment as to the extent of the potential view loss impact.
  - (d) Assessment as to the reasonableness of the proposal causing the potential view loss impact.
2. A range of view sharing measures shall be considered for incorporation into the design of a building including:
- (a) Appropriate siting of the building on the land so as to provide a strip of land, unencumbered with structures, down one side of the dwelling. This strip of land must be a minimum width of 3m or 25% of the lot width whichever is the greater.
  - (b) A reduced view corridor width may be accepted, where it is located adjacent to a view corridor on the adjacent site, subject to the combined width having a minimum of 4m.
  - (c) Appropriate placement of the bulk of the building on a site.
  - (d) Provision of greater separation between buildings, where necessary to retain view corridors.
  - (e) Articulation within the buildings design.
  - (f) Careful selection of roof forms and slope.
  - (g) Placement of vents, air conditioning units, solar panels and similar structures in locations which will not restrict views.

## 4.17 Retaining Walls

### 4.17.1 General

The provisions of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 identify certain retaining walls which do not require the formal lodgement of a Development Application and may be approved through a Complying Development Certificate.

However, if the proposed retaining wall does not comply with the maximum height or minimum setback dimensions off side or rear property boundaries, as set out in SEPP (Exempt and Complying Development Codes) 2008, then the lodgement of a Development Application with Council is necessary and must be in compliance with the requirements mentioned below.

### 4.17.2 Objectives

- (a) To ensure that retaining walls are structurally sound and are located to minimise any adverse stormwater drainage, visual, amenity or overlooking impacts upon adjoining properties.
- (b) To guide the design and construction of low height aesthetically pleasing retaining walls.
- (c) To ensure any retaining wall is well designed, in order to achieve long term structural integrity of the wall.
- (d) To ensure slope stabilisation techniques are implemented to preserve and enhance the natural features and characteristics of the site and to maintain the long term structural integrity of any retaining wall.

#### 4.17.3 Development Controls

1. A retaining wall or embankment should be restricted to a maximum height above or depth below natural ground level of no more than:
  - (a) 600mm at any distance up to 900mm setback from any side or rear boundary; or
  - (b) 1 metre, if the toe of the retaining wall or embankment is setback greater than 900mm from any side or rear boundary.

Note: Council may consider a variation to the abovementioned maximum height / depth of a retaining wall, in cases where the subject site is steeply sloping and the proposed retaining wall is setback more than 1 metre from any side or rear common property boundary. Additionally, appropriate structural design details will be required and in some cases appropriate landscape buffer screen planting may be required, where necessary.

2. Any retaining wall over a meter in height must be designed by an Engineer.
3. Within areas of suspected slope instability or subject to known slope instability, Council may also require a report prepared by a suitably qualified geotechnical and structural engineer relating to the proposed retaining wall. Council will assess the suitability of any retaining within these areas, based upon the findings and recommendations contained in the report.
4. To limit the overall height impact, terracing of retaining walls is required, limiting the maximum vertical rise of a retaining wall to 1 metre, with a minimum horizontal setback of 1 metre.
5. Any retaining wall with a vertical height exceeding 1 metre in any one vertical rise must be supported by appropriate justification demonstrating how the proposal meets the objectives above.
6. Balustrading will be required in accordance with the *Building Code of Australia*, to ensure the safety of the public, where the retaining wall adjoins a public place and where there is a change in level greater than 1 metre to the surface beneath.
7. Open window face type retaining walls must not be permitted within 1.5 metres of an adjoining property boundary. These include crib block and similar type walls that permit the free flow of solid material through the wall.
8. A fence and any associated retaining wall located within the setback area from a primary road shall be restricted to:
  - (a) A maximum 1.2 metre height above existing ground level, and
  - (b) An open style for at least 50 per cent of the upper 2/3 of the area of the fence, and
  - (c) Any brick or other solid portion of the fence above 600mm being not more than 250mm wide.
9. The fence or the fence and associated retaining wall on a sloping site may be stepped, provided the height of each step is not more than:
  - (a) 1.6 metres above existing ground level if it is located within a setback area from a primary road, or
  - (b) 2.2 metres above existing ground level for side or rear boundaries (where it is behind the front building line).

10. Adequate provision must be made for the proper disposal of surface and subsurface drainage associated with the erection of the walls. The method of disposal must be approved by Council and could include:
  - (a) The connection of sub-surface drainage from the retaining wall to the street gutter.
  - (b) Disposal via properly constructed absorption trench/es on the property containing the retaining wall designed and located in accordance with Council's Fact Sheet on Domestic Stormwater Drainage Systems.
  - (c) Disposal via piped or channelled drainage easement/s.
  - (d) Other means as determined by Council.
11. All surface and sub-surface drainage must not discharge directly onto other adjoining properties unless a drainage easement has been created. Council's Fact Sheet on Retaining Walls provides further information regarding the construction of retaining walls.

## 4.18 Swimming Pools and Spas

### 4.18.1 Objective

- (a) To ensure that swimming pools meet relevant safety standards and meet user needs.
- (b) To ensure swimming pools and spas are sited and designed to maintain the amenity of the surrounding residential neighbourhood.

### 4.18.2 Development Controls

1. Ancillary development comprising a swimming pool and / or spa for private use must be located on land:
  - a) That contains an existing dwelling or a dwelling is constructed on the land at the same time the swimming pool and / or spa is constructed.
  - b) Behind the building line of a primary road setback.
2. For corner sites or where a property has two road frontages, the location of the swimming pool or spa is not to be in the primary frontage.
3. Where a swimming pool or spa is proposed between the building façade and the secondary road frontage, appropriate landscape buffer screen planting will be required within the pool enclosure, behind the child resistant barrier, (i.e. so as not to affect the performance of the child resistant barrier) surrounding the pool enclosure.
4. Where a boundary fence is proposed to form part of the pool fence and it adjoins a public road the fence must be 1.8m high.
5. A swimming pool or spa must not be located:
  - a) Over an easement or restricted building zone.
  - b) Within a zone of influence of a public sewer main.
  - c) Within a zone of influence of a public drainage pipe.

- d) Within a riparian buffer zone:
  - e) Without appropriate approval by the relevant authority or person benefiting from the easement of covenant.
6. The swimming pool water line or spa water line must have a setback of at least 900mm from any side or rear boundary.
  7. Any decking around a swimming pool or spa must not be more than 600mm above ground level (existing).
  8. Coping around a swimming pool must not be more than:
    - a) 1.4m above ground level (existing), and
    - b) 300mm wide if the coping is more than 600mm above ground level (existing).
  9. Any in-ground swimming pool or spa should be constructed so that the top edge of the swimming pool / spa is as close as possible to the existing ground level. On sloping sites, this may require excavation on the high side of the site, in order to ensure minimal out of ground exposure of the swimming pool at the low side.
  10. Water from paved areas must not be discharged to any watercourse.
  11. Overflow paths must be provided to allow for surface flows of water in paving areas around the pool and shall not be directed or connected at any point onto the adjoining property.
  12. Discharge and/or overflow pipe(s) from the swimming pool and filtration unit are:
    - a) To be discharged in accordance with an approval under the Local Government Act 1993 if the lot is not connected to a sewer main.
    - b) In the case of land within Rural / non-urban or Environmental Protection zones having an area greater than 1000m<sup>2</sup>, to incorporate disposal pits located a minimum of 3m from any property boundary except where on-site disposal is not recommended in a geotechnical report prepared for the land or for the development.
    - c) Not to discharge water to any watercourse.
  13. Pool excavations are not to conflict with the position of any stormwater drainage trench or line (including any inter-allotment drainage line), the position of which must be ascertained and shown on the site plan before pool excavation commences.
  14. A swimming pool must be surrounded by a child resistant barrier complying with the requirements of the *Swimming Pools Act 1992* (and Regulations) and the appropriate Australian Standard as referenced by the *Building Code of Australia*.
  15. The wall of a residential building may form part of the child restraint barrier so long as the wall contains no openable door, window or other opening through which access may at any time be gained to the swimming pool.
  16. A minimum of 50% of the perimeter of a pool must be accessible for rescue purposes.

17. A spa pool is not required to be surrounded by a child resistant barrier provided that the spa pool is covered or secured by way of a child-safe structure (eg door, lid, grill or mesh) that is fastened to the spa pool by a child-resistant device, at all times, when the spa pool is not in actual use.
18. Structures such as tool sheds garages, barbeques, clotheslines or other like structures not appurtenant to a swimming pool must be located outside the fenced pool enclosure.
19. The pool pump / filter must be located as far away as practicable from any adjoining dwelling and should be enclosed in an acoustic enclosure / structure.

## 4.19 Development Near Railway Corridors and Major Road

### 4.19.1 Objectives

1. To ensure that development near rail corridors and major roads are protected from noise and vibration.
2. To ensure development does not affect the operation or rail corridors or their safety.
3. To ensure compliance with the SEPP Infrastructure.

### 4.19.2 Development Controls

1. Development immediately adjacent to rail corridors needs to take into consideration the provisions of the SEPP Infrastructure under clause 85. Council may be required to refer the development application to the Rail Authority.
2. Council must consider the provisions of the NSW Department of Planning's *"Development near Rail Corridors and Busy Roads – Interim Guideline dated December 2008"* for any development on land in or immediately adjacent to a rail corridor where it:
  - a) Is likely to have an adverse effect on rail safety, or
  - b) Involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or
  - c) Involves the use of a crane in air space above any rail corridor.
  - d) Any excavation within 25m of the rail corridor.
3. Excavation in, above or adjacent to rail corridors may also be referred to the Rail Authority and must be in accordance with clause 86 and the NSW Department of Planning's *"Development near Rail Corridors and Busy Roads – Interim Guideline dated December 2008"*
4. Impacts of rail and road noise or vibration on non-rail development must also be considered under clause 87 of the SEPP Infrastructure.

## **4.20 Additional controls for semi-detached dwellings – alterations and additions**

### **4.20.1 Objectives**

- (a) To recognise that each semi-detached dwelling represents only one of a pair of dwellings and hence any external alterations and additions to one dwelling must be sympathetic with the other dwelling to which it is attached.
- (b) To ensure any alteration or addition to an individual semi-detached dwelling is responsive to the style, character, form and external appearance of the other dwelling to which it is attached.

### **4.20.2 Development Controls**

- 1. Alterations and additions to one existing semi-detached dwelling must be compatible in terms of building form and design, roof configuration and external building materials with the other existing dwelling to which it is attached, unless the other existing dwelling is also upgraded to be sympathetic with the design, roof configuration and materials in line with the other dwelling. In this regard, it is preferable that alterations and additions be carried out at the same time for both semi-detached dwellings.
- 2. Where symmetry is the dominant character it should be respected. Conversely, where asymmetry is the dominant and leads to an appearance of a single building, the design should attempt to maintain that character.
- 3. Any first floor addition to a semi-detached dwelling should be setback from the principal street frontage to maintain the existing prevailing roof form at the front of the dwelling and to locate the bulk of the new additions to the rear of the dwelling.
- 4. New additions to semi-detached dwellings should be located behind the main gable or hipped roof feature of the building on the principal street frontage.
- 5. The use of dormer windows, balconies and skylights on the first floor of the dwelling should be located at the rear of the dwelling, rather than the principal street frontage.
- 6. The style and pitch of the proposed roof of the dwelling should match and complement the existing roof form of the other semi-detached dwelling to which it is attached.
- 7. Any special elements of the existing roof should be incorporated in the proposed roof form.

## **4.21 Additional Controls for Dual Occupancy's - Minimum Site Width**

### **4.21.1 Objectives**

- (a) To permit dual occupancy developments upon sites which are of sufficient size to accommodate the required building envelope, car parking, private open space, landscaping and other requirements, whilst maintaining the amenity of surrounding residential development and the streetscape character of the locality.
- (b) To allow for development of sites only where the land is not significantly constrained by flood, geotechnical or other environmental hazards.

#### 4.21.2 Development Controls

1. A minimum site width of 15 metres is required for a dual occupancy development. Site width shall be measured for the full width of the site, perpendicular to the side property boundaries. Variations may be granted for irregular shaped blocks or where development can demonstrate compliance with privacy, solar access, private open space, visual amenity, built form, car parking and landscaping requirements.
2. For corner allotments, a minimum 15 metre site width must be achieved for at least one (1) of the street frontages and a minimum 12 metre site width must be achieved for the other street frontage.

### 4.22 Additional Controls for Dual Occupancy's - Building Character and Form

#### 4.22.1 Development Controls

1. On corner allotments, the dual occupancy development must address the street on both frontages. The garage and / or carport for each dwelling must be placed on each street frontage, at the furthest point of the site, from the intersection.
2. Where garages are proposed on the front elevation they must be articulated from the front façade of the dual occupancy dwelling(s).
3. Any external alterations and additions to a dual occupancy dwelling must be compatible in design, roof configuration and building materials with the other adjoining dwelling in the original dual occupancy development.
4. Existing garages and outbuildings can not be used as a dual occupancy - second dwelling unless it can be demonstrated that the structure complies with the relevant provisions of the Building Code of Australia.

### 4.23 Additional Controls for Dual Occupancy's – Deep Soil Zones

#### 4.23.1 Objectives

- (a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.
- (b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife.
- (c) To allow for increased water infiltration.
- (d) To contribute to biodiversity.

#### 4.23.2 Controls

1. A minimum of half of the landscaped area must be provided as a deep soil zone. The deep soil zone may be located in any position on the site including the front setback, subject to this area having a minimum dimension of 3m. The deep soil zone may be included in private open space but is not included in the minimum private open space area required.



2. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located:
  - (a) At the rear of the site to allow for separation from adjacent dwellings and to provide a corridor of vegetation; or
  - (b) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.
3. No structures, basement carpark, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone.
4. The deep soil zone shall be densely planted with trees and shrubs. Where the development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.

## 5 ATTACHED DWELLINGS AND MULTI - DWELLING HOUSING

This section provides additional controls to those in Section 4 (excluding 4.1 to 4.11 and 4.19 to 4.22) of this chapter that must also be taken into consideration when preparing a development application for attached dwellings and multi-dwelling housing.

### 5.1 Minimum Site Width Requirement

#### 5.1.1 Objectives

- (a) To allow for development of sites which are of sufficient size to accommodate the required building envelope, car parking and landscaping requirements.
- (b) To encourage amalgamation of allotments to provide for improved design outcomes.

#### 5.1.2 Development Controls

1. The Wollongong LEP requires a minimum site width of 18 metres for multi-dwelling development. Site width is measured for the full width of the site, perpendicular to the property side boundaries.
2. A minimum site width of 18m is required for attached dwelling development. Site width is measured for the full width of the site, perpendicular to the property side boundaries. This control may be varied for irregular shaped lots or where the development meets the requirements of setbacks, private open space, visual amenity, solar access, built form and landscaping.
3. Sites should be amalgamated, where required, to achieve the minimum site width requirement.
4. Within the R1 General Residential and R3 Medium Density Residential zones, development for the purpose of an attached dwelling development must not result in the creation of an “isolated lot”. An “isolated lot” is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely. This includes cases where there is high separation of ownership of dwellings ownership in the adjoining developments. Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.
5. Council will only allow development which would result in the creation of an “isolated lot”, where it is satisfactorily demonstrated that:

- (a) The “isolated lot” achieves a site width of 18 metres or more and is capable of accommodating an attached dwelling or multi-dwelling development.
- (b) The following planning principles as outlined in the NSW Land and Environment Court judgment in *Melissa Grech v Auburn Council*[2004] NSWLEC 40 are met:
  - (i) Where a property will be “isolated” by a proposed development and that property cannot satisfy the minimum lot width requirements then negotiations between the owners of the properties should commence at an early stage and prior to the lodgement of the Development Application.
  - (ii) Where no satisfactory result is achieved from the negotiations, the Development Application should include details of the negotiations between the owners of the properties. These details should include offers to the owner of the isolated lot. A reasonable offer for the purposes of determining the Development Application and addressing the planning implications of an “isolated lot”, is to be based at least on one recent independent valuation report and may include other reasonable expenses likely to be incurred by the owner of the “isolated lot” in the sale of that property.
  - (iii) The level of negotiation and any offers made for the “isolated lot” are matters that will be given weight in the consideration of the Development Application. The amount of weight will depend on the level of negotiation, whether any offers are deemed reasonable or unreasonable, any relevant planning requirements and the “matters for consideration” under Section 79C of the Environmental Planning & Assessment Act 1979.
- 6. In cases where the subject site is an existing “isolated lot”, Council may consider a variation to the minimum site width requirement provided, in the opinion of Council, the proposed development will not cause any significant adverse overshadowing, privacy or amenity impact upon any adjoining development.
- 7. In certain existing “isolated lot” cases, a proposed development may not achieve its maximum development potential (eg maximum floor space ratio and height) where side and rear setbacks are varied and the development does not, in the opinion of Council, achieve:
  - (a) Adequate separation between buildings to maintain reasonable levels of solar access, privacy and amenity to neighbouring dwellings;
  - (b) Adequate landscaping screening of the development to maintain the amenity of adjoining dwellings; and
  - (c) Maintain the streetscape amenity of the locality.

## 5.2 Number of Storeys

### 5.2.1 Objectives

- (a) To encourage buildings which integrate within the existing streetscape and the desired future character for the area.
- (b) To minimise the potential impacts of overshadowing and overlooking on adjacent dwellings and open space areas.

### 5.2.2 Development Controls

1. The maximum number of storeys for attached and multi dwelling housing is set out in the table below.

Zone	No. Storeys
R1 General Residential zone	Three (3) storeys
R2 Low Density Residential zone	Two (2) storeys
R3 Medium Density Residential zone	Three (3) storeys
R4 High Density Residential zone ( <i>for Multi-Dwelling Housing Only</i> )	Three (3) storeys

2. Habitable roof space may provide additional habitable area only when the height of the building does not exceed the overall ridge heights specified in the maximum building height tables (above) and the maximum building heights specified in the LEP.
3. Where the roof space is used as habitable area in accordance with the above requirements, it is not classified as an additional storey.

## 5.3 Front Setbacks

### 5.3.1 Objectives

- (a) To reinforce the existing character of the street by acknowledging building setbacks.
- (b) To promote compatibility in front setbacks to provide for unity in the building line.

### 5.3.2 Development Controls

1. A 6m setback requirements applies from the front property boundary to the front façade of the building.
2. On corner allotments a minimum setback of 3m to the secondary street frontage from the dwelling façade must be provided.
3. Balconies, front courtyard fences and other building extrusions may be set back up to 900mm closer than the required front or secondary setback.
4. An increase in setbacks may be required to retain existing trees or respect adjacent heritage items.

## 5.4 Side and Rear Setbacks

### 5.4.1 Objectives

- (a) To provide adequate setbacks from boundaries and adjoining dwellings to retain privacy levels, views, sunlight and daylight access and to minimise overlooking.

- (b) To provide appropriate separation between buildings to achieve the desired urban form.
- (c) To optimise the use of land at the rear of the property and surveillance of the street at the front of the property.
- (d) To minimise overshadowing of adjacent properties and private or shared open space.

#### 5.4.2 Development Controls

1. For an attached and multi-dwelling housing, the rear boundary setbacks are measured from the wall of the building or the outer edge of a balcony/deck, to the adjacent property boundary. The minimum rear boundary setbacks are as follows:

Side and Rear Boundary Setbacks Attached and Multi-Dwelling Development		
Zone	Minimum side and rear setback	Minimum side and rear setbacks where balconies or windows of living areas face the rear boundary at first floor level or above
All zones	1.5m	1.5m
R2 Low Density Residential Zone	0.8 x ceiling height	1.0 x ceiling height
R3 Medium Density Residential Zone	0.8 x ceiling height	1.0 x ceiling height
R4 High Density Residential Zone	0.4 x ceiling height	0.6 x ceiling height

2. Where a basement parking area is provided for an attached dwelling development, the controls relative to basement parking areas for residential flat buildings will apply.
3. For attached dwelling developments containing three storeys and 4 or more dwellings, the additional separation/side setback requirements for residential flat buildings will apply.
4. Council may only consider granting a variation to the setback requirements where the following can be demonstrated to Council's satisfaction:
  - (a) The siting of the building satisfies the setback objectives; and
  - (b) Windows which are located on the side or rear boundary are primarily provided for natural light or ventilation purposes. This would include highlight windows with a minimum 1.7m sill, fixed obscure glass windows, glass bricks or windows with fixed louvres; and
  - (c) The amenity of the adjoining property is not unreasonably affected; and

- (d) The design will result in a significant improvement in amenity for residents who will occupy the proposed dwelling.

## **5.5 Building Character and Form**

### **5.5.1 Objectives**

- (a) To design residential development to respond to the streetscape character. The Site and Context Analysis must inform the development proposal.
- (b) To complement and enhance the visual character of the street and neighbourhood through appropriate building scale, form and detail.
- (c) To reduce the visual dominance of garages as viewed from the street.
- (d) To promote high quality architectural design that is contemporary and innovative.
- (e) To ensure corner sites are developed as visually significant elements to promote a strong and legible character.
- (f) To provide an identifiable and desirable street address to each building and dwelling.
- (g) To define the street edge by creating a clear transition between private and public spaces along the street frontage.
- (h) To allow for outlook and surveillance towards the street and the public domain.

### **5.5.2 Development Controls**

1. The following elements must be incorporated in the building design of attached and multi-dwelling development:
  - (a) Articulate and fragment building walls that address the street and add visual interest. The appearance of blank walls or walls with only utility windows on the front elevation is not permitted.
  - (b) Avoid expanses of any single material.
  - (c) Utilise high quality and durable materials and finishes.
  - (d) Entrances must be visible at eye level from the street and well lit.
  - (e) For those dwellings adjacent to the street frontage, the habitable rooms must face the street.
  - (f) Ensure entrances can accommodate the movement of furniture.
  - (g) Air conditioning units must not be visible from the street. Space shall be allocated and shown on plans for air conditioning units in order to demonstrate that this can be achieved.
  - (h) All residential buildings must be designed with building frontages and entries clearly addressing the street frontage. Dwellings adjacent to the street boundary must have individual entries from the street.

- (i) For attached dwellings on corner sites, each frontage of the development must present as the primary street frontage.
- (j) Where garages are proposed on the front elevation they must be articulated, unless it can be demonstrated that the garages will not visually dominate the streetscape appearance of the building.

## **5.6 Access / Driveway Requirements**

### **5.6.1 Objectives**

- (a) To provide adequate and safe vehicular access to all dwellings.
- (b) To encourage driveways to be provided from lanes or secondary streets instead of major roads or primary street frontages, where such alternate access is available.

### **5.6.2 Development Controls**

1. The development proposal must provide access to the site in accordance with the following controls:
  - (a) Paving colour, texture and material should be sympathetic with the character of the precinct and reflect a pleasant visual appearance.
  - (b) Provide driveways to parking areas from lanes and secondary streets rather than the primary road or street, wherever practicable.
  - (c) The number of access points to a development must be kept to a minimum.
  - (d) Locate driveways taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.
  - (e) Long straight driveways should be avoided because these adversely dominate the streetscape and landscape. Curved driveways are more desirable. Landscaping between the buildings and the driveways is encouraged to soften the appearance of the hard surface.
  - (f) All driveways must be located a minimum of 6 metres from the perpendicular of any intersection of any two roads.
  - (g) Any driveway servicing a residential development is to be setback a minimum of 1.5m from any side property boundary.
  - (h) Driveways are to be a maximum of 6m in width.
  - (i) The design of driveway and crossovers must be in accordance with council's standard vehicle entrance designs.
2. All vehicles within a multi dwelling development must provide vehicular manoeuvring areas to all parking spaces so vehicles do not need to make more than a single point turn to leave the site in a forward direction. Direct reversing onto the street will only be considered where the garage fronts a secondary road, carrying reduced traffic volume and all other requirements of the policy are met.

3. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1.
4. Crossover and driveway widths relating must comply with the following:

Table 1: Crossover and driveway widths

No. Dwellings	Crossover Width	Driveway Width
1 to 2	Minimum 2.75m	Minimum 2.75m
3 to 5	3 –4m combined	Minimum 3m
6 to 20	4 – 6m combined to within 6m internally of the front property boundary	Minimum 3m
21 to 50	6 –8m combined	6m
> 50	3-4m each, separated	Minimum 3m each or 6m when combined

5. A minimum 6 metre wide driveway reserve/carriageway width is required for a battle-axe access handle upon a battle-axe lot.

## 5.7 Car Parking Requirements

### 5.7.1 Objectives

- (a) To provide an adequate level of on site car parking based upon anticipated occupancy rates and proximity to public transport.
- (b) To ensure that there is adequate provision for access to and manoeuvring within the development.
- (c) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.
- (d) To ensure that integrated design of car parking facilities to minimise visual impacts.
- (e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

### 5.7.2 Development Controls

1. On site car parking must be positioned to minimise impacts on the streetscape. Car parking must be located behind the building setback and be screened from view with well designed structures and vegetation. Car parking may also be located within a basement.
2. Car parking areas should be designed to conveniently, efficiently and appropriately serve residents and visitors of the site. This can be achieved in the following ways:
  - (a) Ensuring that car parking areas are located close to entrances and access ways.
  - (b) Car parking areas to be secure yet easily accessible for all residents.
  - (c) Have clearly defined areas for visitor parking and disabled parking.

3. Parking for cars, motorcycles and bicycles must be provided and designed in accordance with the requirements contained in Traffic, Access, Parking and Servicing Chapter contained in Part E of this DCP.

## 5.8 Landscaping Requirements

### 5.8.1 Objectives

- (a) To preserve and retain existing mature native vegetation and encourage the planting of additional native vegetation.
- (b) To enhance the appearance of housing through integrated landscape design.
- (b) To improve the visual amenity by increasing the volume of substantial vegetation in urban areas.
- (c) To reduce impervious areas on sites and increase soft landscape screening between side orientations of residential developments.

### 5.8.2 Development Controls

1. A minimum of 30% of the total site area must be provided as landscaped area. Landscaped area is defined as 'any part of the site which is not occupied by any building, basement or hard surface such as driveways, parking areas or paved areas of courtyards, decks, balconies or terraces. The landscaped area also includes landscaping on the podium, where that section of the podium is less than 1.2 metres in height and the minimum soil depth requirements of this DCP are achieved. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations.
2. A minimum of two semi mature medium – large trees (minimum pot size 45L) are to be provided onsite in the landscaped area or deep soil zone and at least 3m from any dwelling, building or structure on the lot. In the instance where there are is an existing mature tree/s onsite and these will be retained post development, only one additional semi mature medium – large tree is required.
3. Any landscaped or grassed areas within the front setback area will be included in the landscaped area calculations. Landscaping in this area must be in context with the scale and height of the multi dwelling housing development.
4. The required landscaped area must include a minimum 1.5 metre wide landscaping bed, which is provided along the side and rear boundaries of the site.
5. The following matters must be addressed within the submitted landscape plan:
  - (a) Site landscaping must be integrated with the stormwater management controls. In particular, the location and nature of the on site stormwater detention basins should not conflict with landscaping areas and objectives.
  - (b) Select appropriate species that are likely to survive in the specific environmental conditions of the site, orientation and microclimate.
  - (c) Identify and retain where possible existing mature trees.



- (d) Garden beds to be mulched and be separated from driveways or open space areas by an appropriate border or edge.
  - (e) The width of the landscape bed does not include kerbs or other hard borders or edges.
  - (f) Where driveways are located parallel to a property boundary, a minimum 1.5m landscape strip is required adjacent to the driveway.
  - (g) Landscaping to separate driveways from dwellings is also required to minimise the expanse of hardstand surfaces, define dwellings from common driveway areas and to promote variation in the alignment of driveway areas.
  - (h) Manoeuvring areas immediately adjacent to the living/dining rooms of dwellings is not permitted.
6. Street trees are required to be planted in accordance with the requirements contained in the Landscaping Chapter in Part E of this DCP.

## 5.9 Deep Soil Planting

### 5.9.1 Objectives

- (a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.
- (b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife.
- (c) To allow for increased water infiltration.
- (d) To contribute to biodiversity.

### 5.9.2 Development Controls

1. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located:
  - (a) Centrally within the site to allow for overlooking from dwellings within a development;
  - (b) At the rear of the site to allow for separation from adjacent dwellings and to provide a continuous corridor of vegetation of native fauna; or
  - (c) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.
2. A minimum of half of the landscaped area (i.e. 15% of the site) must be provided as a deep soil zone, where the deep soil zone is not located at the rear of the site. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 6m. Alternatively, the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be continuous to ensure that the deep soil planting area is a singular uniform area and is not fragmented.

3. No structures, basement carpark, driveways, hardpaving, decks, balconies or drying areas are permitted within the deep soil zone.
4. The deep soil zone shall be densely planted with trees and shrubs. Where a multi dwelling housing development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.

## 5.10 Communal Open Space

### 5.10.1 Objectives

- (a) To ensure that communal open spaces are of adequate size to be functional.
- (b) To provide communal open space, which is accessible by all residents.

### 5.10.2 Development Controls

1. Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at 5m<sup>2</sup> per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5 metres. The communal open space must be easily accessible and within a reasonable distance from each dwelling be integrated with site landscaping, allow for casual social interaction, and be capable of accommodating recreational activities.
2. Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.
3. Areas of the communal open space should contain paving, children's playground equipment, barbeques, shade structures, swimming pools or the like, however these cannot be located within the deep soil zone.
4. At least 50% of the communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.

## 5.11 Private Open Space

### 5.11.1 Objectives

- (a) To ensure that private open spaces are of sufficient size to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate
- (b) To ensure functionality of private open space by reducing overlooking and overshadowing of such spaces

### 5.11.2 Development Standards

1. Private open space must be provided for each dwelling within an attached dwelling development in the form of a balcony, courtyard, terrace and/or roof garden.

2. Private open space for each dwelling within an attached dwelling housing development must comply with the following:
  - (a) Private open space must be provided at the ground level or podium level. The courtyard or terrace must have a minimum dimension of 4 metres x 5 metres. This area must be separated from boundaries by at least 1.5 metres with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas. Where a level courtyard is not possible, a deck or split level courtyard must have a minimum depth of 3 metres.
  - (b) The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
  - (c) Private open space areas (courtyards) must not extend forward of the front building setback by greater than 900mm.
  - (d) Private open space should be sited in a location, which provides privacy, solar access, and pleasing outlook and has a limited impact upon adjoining neighbours.
  - (e) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.
  - (f) Clearly define private open space through use of planting, fencing or landscaping features.
  - (g) Screen private open space where appropriate to ensure privacy.
3. Where part of the private open space is also provided in the form of a balcony, the following requirements must also be met:
  - (a) The primary balconies must not address side setbacks.
  - (b) The balcony must have a minimum area of 8m<sup>2</sup> open space and a minimum width of 2 metres.
  - (c) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.
  - (d) The total combined area of all balconies in a building must not exceed 25% of the building floor space.
  - (e) Individual balcony enclosures are not supported. Balcony enclosures must form part of an overall building façade design treatment and should not compromise the functionality of a balcony as a private open space area

## 5.12 Solar Access Requirements

### 5.12.1 Objectives

- (a) To minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.

- (b) To maximise solar access into living rooms and private open space of dwellings in the subject development.
- (c) To use a consistent sunlight access assessment approach for the assessment of solar access issues.

### **5.12.2 Development Controls**

1. Windows to living rooms of adjoining dwellings must receive 3 hours of sunlight between 9.00am and 3.00pm on 21 June.
2. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.
3. The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
4. Windows to north facing living rooms for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.
5. At least 50% of the private open space area for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.
6. Shadow diagrams will be required for hourly intervals between 9.00 am and 3.00 pm for the 21 June winter solstice period which show the extent of overshadowing upon dwellings and rear private open space areas of adjoining dwellings. In certain cases, Council may require additional hourly interval shadow diagrams for the equinox period where it is necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

## **5.13 Additional Control for Multi Dwelling Housing - Dwelling Mix and Layout**

### **5.13.1 Objectives**

- (a) To provide variety in dwelling sizes and layouts to cater for a range of household types and to assist housing affordability initiatives.
- (b) To ensure that the internal arrangement of dwellings is functional and satisfies occupant's needs.
- (c) To design dwellings to promote resident amenity and adaptability of use.

### **5.13.2 Development Controls**

1. Provide a mix of dwelling sizes and layouts within larger multi-dwelling developments having ten (10) or more dwellings. This could include both variation in the number of bedrooms and gross floor areas of apartments, variety in the internal design or incorporating one, two and three bedroom dwellings to accommodate various resident requirements.
2. The selection of the number of bedrooms within developments shall be determined having regard to the sites context, geographic location and anticipated demographic characteristics.

3. Dwellings should be designed with internal spaces, which are flexible and adaptable to resident's requirements. This should involve the efficient utilisation of available floor space to maximise useable room areas. Apartment layouts should also respond to the sites opportunities, including views and aspect.

## 5.14 Additional Control for Multi Dwelling Housing - Adaptable and Universally Designed Housing

### 5.14.1 Objectives

- (a) To ensure that dwelling layout is sufficiently flexible for residents changing needs over time.
- (b) To ensure that building design is sufficiently robust to accommodate mixed use and potential changes in use such as accommodating an office.
- (c) To ensure a sufficient proportion of dwellings include accessible layouts and universally designed and features to accommodate changing requirements of residents.
- (d) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

### 5.14.2 Development Controls

1. Within a multi dwelling development incorporating more than six (6) dwellings, 40% 20% of all dwellings (or at least 1 dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.
2. Where an adaptable dwelling is provided in the form of a villa and a double garage is required to be provided, Council will accept a single garage, which complies with the minimum adaptable car parking dimensions contained in the Traffic, Access, Parking and Servicing Chapter in Part E of this DCP. The single garage will be counted as two car parking spaces for the purpose of car parking calculations.
3. The Development Application must be accompanied by certification from a suitably qualified and experienced Access Consultant which confirms that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Within a multi dwelling development incorporating more than six (6) dwellings, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans.

### **5.15 Additional Control for Multi Dwelling Housing - Crime Prevention through Environmental Design**

1. Compliance with the requirements of Chapter E2 Crime Prevention through Environmental Design (CPTED) in this DCP.

## 6 RESIDENTIAL FLAT BUILDINGS

### 6.1 General

1. Development of Residential Flat Buildings is guided through SEPP 65 Design Quality of Residential Flat Apartment Development.
2. In addition to the controls in this Section the controls within Section 4 (excluding 4.1 to 4.11 and 4.19 to 4.22) of this chapter that must also be taken into consideration when preparing a development application for Residential Flat Buildings.
3. This chapter should be read in conjunction with other relevant chapters of the DCP including but not limited to E2 CPTED, E3 Car Parking Access Servicing/Loading Facilities and Traffic Management; E6 Landscape.

### 6.2 Minimum Site Width Requirement

#### 6.2.1 Objectives

- (a) To allow for development of sites, which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements.
- (b) To promote the efficient utilisation of land.
- (c) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.

#### 6.2.2 Development Controls

1. The Wollongong LEP 2009 requires a minimum site width of 24 metres is required for residential apartment buildings. The width must be measured for the full length of the building envelope and perpendicular to the side boundary. Exceptions will only be considered for social housing developments.
2. Within the R1 General Residential, R3 Medium Density Residential and R4 High Density Residential zones, development for the purpose of a residential flat building must not result in the creation of an “isolated lot”. An “isolated lot” is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely. This includes cases where there is high separation of ownership of dwelling ownership in the adjoining developments.



Ensure site is of sufficient width (24m) to accommodate setback and landscaping requirements

(Ref: Residential Flat Design Code)

Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.

3. Council will only allow development which would result in the creation of an “isolated lot”, where it is demonstrated that:
  - (a) The “isolated lot” achieves a site width of 24 metres or more and is capable of accommodating the proposed residential flat building, taking into account other relevant development controls..
  - (b) The following planning principles as outlined in the NSW Land and Environment Court judgment in *Melissa Grech v Auburn Council*[2004] NSWLEC 40 are met:
    - (i) Where a property will be “isolated” by a proposed development and that property cannot satisfy the minimum lot width requirements then negotiations between the owners of the properties should commence at an early stage and prior to the lodgement of the Development Application.
    - (ii) Where no satisfactory result is achieved from the negotiations, the Development Application should include details of the negotiations between the owners of the properties. These details should include offers to the owner of the isolated lot. A reasonable offer for the purposes of determining the Development Application and addressing the planning implications of an “isolated lot”, is to be based at least on one recent independent valuation report and may include other reasonable expenses likely to be incurred by the owner of the “isolated lot” in the sale of that property.
    - (iii) The level of negotiation and any offers made for the “isolated lot” are matters that will be given weight in the consideration of the Development Application. The amount of weight will depend on the level of negotiation, whether any offers are deemed reasonable or unreasonable, any relevant planning requirements and the “matters for consideration” under Section 79C of the Environmental Planning & Assessment Act 1979.
4. In cases where the subject site is an existing “isolated lot”, Council may consider a variation to the minimum site width requirement provided, in the opinion of Council, the proposed development will not cause any significant adverse overshadowing, privacy or amenity impact upon any adjoining development.
5. In certain existing “isolated lot” cases, a proposed development may not achieve its maximum development potential (eg maximum floor space ratio and height) where side and rear setbacks are varied and the development does not, in the opinion of Council, achieve:
  - (a) Adequate separation between buildings to maintain reasonable levels of solar access, privacy and amenity to neighbouring dwellings;
  - (b) Adequate landscaping screening of the development to maintain the amenity of adjoining dwellings; and
  - (c) Maintain the streetscape amenity of the locality.



## 6.3 Front Setbacks

### 6.3.1 Objectives

- (a) To reinforce the existing character of the street by acknowledging building setbacks.
- (b) To define the spatial proportions of the street and define the street edge.
- (c) To provide a transition between the public and private domain.
- (d) To promote compatibility in front setbacks to provide unity in the building line.

### 6.3.2 Development Controls

1. For residential flat buildings the following setback requirements apply from the front property boundary to the front façade of the building:
  - (a) The same distance as one or other of the adjoining buildings, provided the difference between the setbacks of the two adjoining dwellings is less than 2.0m.
  - (b) The average of the setbacks of the two adjoining buildings, if the difference between the setbacks of the buildings is greater than 2.0m.
  - (c) A minimum front setback of 6m applies to residential apartment buildings where calculations of a) or b) result in a front setback of less than 6m.
2. On corner allotments, a minimum setback of 3m to the secondary street frontage from the dwelling façade must be provided.
3. Balconies, front courtyard fences and other building extrusions may be setback up to 900mm closer than the required front or secondary setback.
4. An increase in setbacks may be required to retain existing trees or respect adjacent heritage items.

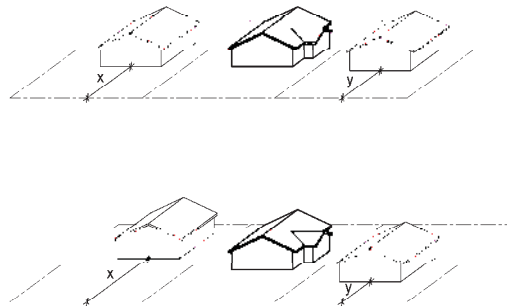


Figure 2: (Top) Where  $y - x$  is less than or equal to 2 metres, the setback equals  $x$  or  $y$

Figure 3: (Bottom) Where  $y - x$  is greater than 2 metres, the setback equals the average of  $x$  and  $y$

## 6.4 Side and Rear Setbacks / Building Separation

### 6.4.1 Objectives

- (a) To provide adequate setbacks from boundaries and adjoining dwellings to retain privacy levels, views, sunlight and daylight access and to minimise overlooking.
- (b) To optimise the use of land at the rear of the property and surveillance of the street at the front of the property.
- (c) To control overshadowing of adjacent properties and private or shared open space.
- (d) To encourage setbacks which reflect the rhythm of building siting and the separation between.
- (e) To ensure that new development is scaled to support the desired area character with appropriate massing and space between buildings.

### 6.4.2 Development Controls

1. For residential flat buildings the following minimum setbacks shall be provided.

Side and Rear Setbacks Residential Apartment Buildings	
Building Height	Minimum Side and Rear Setback
Buildings up to 4 storeys (12 metres)	6 metres where a habitable room/balcony on development site
	3.5 metres where a non-habitable room/blank wall
Buildings of 5 to 8 storeys (up to 25 metres)	9 metres where a habitable room/balcony faces an adjacent property
	4.5 metres where a non-habitable room/blank wall faces an adjacent property

**Note:** The setback is measured from the side or rear wall of the building or balcony to the adjacent boundary.

2. Where Council proposes to provide a laneway adjacent to the rear or side boundary of a property, an additional setback, equal to the identified width of the laneway, must be provided.

## 6.5 Built Form

### 6.5.1 Objectives

- (a) To promote high quality architectural design that is responsive and innovative.
- (b) To ensure that new developments have well articulated and harmonious facades which define the public domain.
- (c) To ensure corner sites are developed as visually significant elements to promote a strong and legible character.
- (d) To provide an identifiable and desirable street address to each building and dwelling.
- (e) To define the street edge by creating a clear transition between private and public spaces along the street frontage.
- (f) To allow for outlook and surveillance towards the street and the public domain.



### 6.5.2 Development Controls

1. All residential flat buildings must be designed by a qualified designer in accordance with *State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development*. A Design Verification Statement must accompany the Development Application.
2. The design, height and siting of the development must respond to its context, being both the natural and built features of an area. The Site and Context Analysis must be utilised as the process by which the opportunities and constraints of the site are identified and the character of a local area defined.
3. The appearance of new development must be in harmony with the buildings around it and the character of the street. New development must contain or respond to the essential elements that make up the character of the surrounding urban environment. This character is created by elements such as building height, setbacks, architectural style, window treatment and placement, materials and landscaping.
4. The following elements must be incorporated into the building design:

Examples of built form controls

- (a) Define a base, middle and top related to the overall proportion of the building.
  - (b) Articulate all building elevations in both plan and section to reduce monotonous flat facades.
  - (c) Highly reflective finishes and curtain wall glazing are not permitted above ground level.
  - (d) Avoid expanses of any single material.
  - (e) Utilise high quality and durable materials and finishes.
  - (f) Avoid blank or solid walls and the use of dark or obscured glass on street frontages.
  - (g) Air conditioning units must be screened and not be visible from the street.
  - (h) For those dwellings adjacent to the street frontage, the habitable rooms must face the street.
  - (i) The main pedestrian entrance or a foyer must be 1.2m or less above natural ground level.
  - (j) Entrances must be visible at eye level from the street and well lit. Ensure entrances can accommodate the movement of furniture.
5. The design of roof forms must address the following:
- (a) Lift over runs and service plants must be concealed within the roof of the building or relate to adjacent roof top rooms or open space.
  - (b) Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated with rooftop activities/features. Details of any rooftop overruns or equipment must accompany the development application for the residential apartment building.
  - (c) The siting of ventilation stacks within the landscaped areas will not be permitted.
  - (d) Landscaped and shaded areas on the roof of residential apartment buildings for private use by residents will be considered where residential amenity is not unreasonably affected.
6. Residential flat buildings which are located on corner sites must address the following:
- (a) Emphasise verticality at corners, where possible, by concentrating the tallest portion of the building on the corner itself. Utilise design devices such as increased wall heights, splayed corner details, increased heights, expression of junction of building planes and other architectural features to reinforce the way finding attributes of street corners.
  - (b) Design corners to add variety and interest to the street and clarify the street hierarchy.
  - (c) Present each frontage of a corner building as a main street frontage.



Figure 4: Examples of Residential Flat Building design

Useful references:

“Residential Flat Design Code”

<http://www.planning.nsw.gov.au/programservices/dcode.asp>

“Residential Flat Design Pattern Book”

<http://www.patternbook.nsw.gov.au/>

## 6.6 Visual privacy

### 6.6.1 General

Visual privacy measures are designed to protect the privacy and amenity of occupants within a residential apartment or serviced apartment. Visual privacy measures allow occupants to carry out private functions within all rooms in the apartment as well as private balconies or open space courtyards, through limiting direct views or overlooking issues from adjoining buildings.

### 6.6.2 Objectives

- (a) To provide reasonable levels of visual privacy externally and internally, during the day and at night-time.
- (b) To maximise outlook and views from principal rooms and private open space without compromising visual privacy.

### 6.6.3 Development controls

- 1. New buildings should be sited and oriented to maximise visual privacy between buildings through compliance with minimum front, side and rear setback / building separation requirements.
- 2. The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony / open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.
- 3. Buildings are to be designed to increase privacy without compromising access to sunlight and natural ventilation through the following measures:
  - (a) Off-setting of windows in new buildings from windows in existing adjoining building(s).
  - (b) Living room windows, balconies and outdoor living areas are not to allow direct views into neighbouring dwellings or neighbouring private open space.
  - (c) Recessed balconies and / or vertical fin elements between adjoining balconies to improve visual privacy.
  - (d) Provision of solid, semi-solid or dark tinted glazed balustrading to balconies.
  - (e) Orientate balconies and outdoor living areas to either the front or rear of the building and not side boundaries where potential overlooking or amenity impacts may occur upon directly adjoining dwellings or private open space areas of side adjoining development.
  - (f) Provision of louvers or screen panels to windows and / or balconies.
  - (g) Provision of perimeter landscaped screen / deep soil planting.
  - (h) Incorporating planter boxes onto apartment balconies to improve visual separation between apartments within the development and adjoining buildings.
  - (i) Provision of pergolas or shading devices to limit overlooking of lower apartments or private open space courtyards / balconies.
- 4. Habitable room windows in the subject building with a direct sightline to habitable room windows in an adjacent dwelling within 12 metres must be:
  - (a) Off-set from the edge of one window to the edge of the other by a distance sufficient to limit views into the windows of the adjacent building; or
  - (b) Sill heights at least 1.7 metres above floor level; or

- (c) Fixed obscure glazing in any part of the window below 1.7 metres above floor level.
- 5. Windows, balconies, stairs, terraces, decks, verandahs or other private areas which provide direct overlooking opportunities from the development into the private open space courtyard of an adjoining property must be obscured or screened. However, no screening is required where such windows have sill heights of at least 1.7 metres above the floor level or the windows are obscured glazing.

## **6.7 Acoustic privacy**

### **6.7.1 General**

- 1. This clause applies to proposals involving the erection of new residential flat buildings upon land directly adjoining or opposite a business or industrial zone or in cases where there is an existing nearby land use which generates external noise from either the land use activity itself or from patrons attending or leave the nearby premises.
- 2. Acoustic privacy is a measure of sound insulation between residential apartments and between external and internal spaces.

### **6.7.2 Objective**

- (a) To ensure a high level of amenity by protecting the privacy of occupants both within apartments and in private open space areas / balconies in the building.

### **6.7.3 Development Control**

- 1. Residential apartments and / or serviced apartments should be arranged in a building, to minimise noise transition between apartments by:
  - (a) Locating busy, noisy areas next to each other and quieter areas, next to other quieter areas (eg living rooms with living rooms and bedrooms with bedrooms);
  - (b) Using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical services or corridors and lobby areas; and
  - (c) Minimising the amount of party (shared) walls with other apartments.
- 2. All residential apartments and / or serviced apartments within a building should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).
- 3. Appropriate sound attenuation measures should be considered between each floor in the development, to minimise potential sound transmission into any residential apartment below.
- 4. Any residential apartment which faces towards a major (busy) road must be designed in accordance with the requirements contained in Chapter E4: Development near Railway Corridors and Major (Busy) Roads in this DCP.
- 5. The Statement of Environmental Effects (SEE) accompanying the development must demonstrate what acoustic measures will be provided to windows of sleeping areas and living areas for each



residential apartment or serviced apartment in the development. The proposed acoustic measures must also be shown on the required architectural floor layout and elevation plans for the development.

Alternatively, the Statement of Environmental Effects (SEE) may include an acoustical impact assessment study which outlines alternative acoustic treatment measures for residential apartment(s) and / or serviced apartment(s) in the development. The acoustic impact assessment study must be carried out by a suitably qualified and experienced acoustic consultant (ie a person who is a Member of the Australian Acoustical Society, the Institution of Engineers or the Association of Australian Acoustical Consultants).

## **6.8 Car Parking Requirements**

### **6.8.1 Objectives**

- (a) To provide an adequate level of on site car parking based upon anticipated occupancy rates.
- (b) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.
- (c) To ensure integrated design of car parking facilities to minimise visual impacts.
- (d) To provide underground parking, wherever feasible.
- (e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

### **6.8.2 Development Controls**

Refer to E3 Car Parking, Access, Servicing/Loading Facilities and Traffic Management.

## **6.9 Basement Car Parking**

### **6.9.1 Objective**

- (a) To integrate the siting, scale and design of basement parking into the site and building design.

### **6.9.2 Development Controls**

1. Where parking is provided within a basement level(s), the scale and siting of the basement car park must not impact upon the ability of the development to satisfy minimum landscaping and deep soil zone requirements.
2. The roof of any basement podium, measured to the top of any solid wall located on the podium must not be greater than 1.2m above natural or finished ground level, when measured at any point on the outside walls of the building. On sites with a greater slope, a change in level in the basement must be provided to achieve this maximum 1.2m height.

Generally variation to this 1.2m podium height limit will not be supported, however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2m height must be included in the total gross floor area calculation for the development.



3. In addition, the following must be satisfied:
  - (a) Landscaped terraces are provided in front of the basement podium to reduce the overall visual impact;
  - (b) The height of the basement does not result in the building having a bulk and scale which dominates the streetscape; and
  - (c) The main pedestrian entry to the building is identifiable and readily accessible from the street frontage, including access by disabled persons.
4. The following setbacks from side and rear boundaries apply to basement podiums:
  - (a) Where the height of the basement podium (measured to the top of any solid wall located on the podium) is less than 1.2m above natural or finished ground level (whichever distance is greater), the basement podium may extend to the property boundary. A minimum 1.5m wide landscaped planter must be provided on the perimeter of any section of the basement podium which is located on a side or rear property boundary. Such planter must prevent direct access to the outer edge of the podium, to minimise direct overlooking of adjacent dwellings and open space areas.
  - (b) Any portion of the basement (measured to the top of any solid wall located on the podium) which exceeds 1.2m above natural or finished ground level (whichever distance is greater) must be setback from the property boundaries by a ratio of 1:1 (height:setback). A minimum setback of 1.5m applies in this instance, with this area to be landscaped.
5. Where parking is provided in a basement, ventilation structures/openings/exhausts for basement parking and air-conditioning units must be orientated away from windows of habitable rooms and private open space areas on the subject land as well as adjoining sites. Ventilation grills must be integrated into the design of the façade of the building to minimise their visual impact.
6. The visual impact of all basement walls must be minimised through the use of various design techniques including well proportioned ground level articulation and relief, mixed finishes and materials, terracing and/or dense landscaping.
7. Basements must be protected from inundation from 100-year ARI flood levels (or greater).
8. Basement car park areas must be located to optimise deep soil planting around the building and allow for natural ventilation to be achieved. Integrating the podium design into the overall design of the development and limiting the extent to which the podium extends beyond the building footprint will minimise the impact of the basement parking areas on the streetscape.

## 6.10 Access Requirements

### 6.10.1 Objectives

- (a) To provide adequate and safe vehicular access to basement car parking areas.
- (b) To ensure that all car parking areas have satisfactory manoeuvring areas to enable vehicles to leave the site in a forward direction.

## 6.10.2 Development Controls

1. The development proposal must provide access to the site which is compliant with the following controls:
  - (a) Provide driveways to parking areas from lanes and secondary streets rather than the primary street, wherever practical.
  - (b) Locate driveways taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.
  - (c) All driveways must be located a minimum of 6 metres from the perpendicular of any intersection of any two roads.
  - (d) Any driveway servicing a residential development is to be setback a minimum of 1.5m from any side property boundary.
  - (e) Driveways are to be a maximum of 6m in width.
  - (f) The design of driveway crossovers must be in accordance with council's standard vehicle entrance designs.
2. All vehicles within a residential apartment building must provide vehicular manoeuvring areas to all parking spaces so vehicles do not need to make more than a single point turn to leave the site in a forward direction.
3. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1. Crossover and driveway widths relating must comply with the following:

No. Dwellings	Crossover Width	Driveway Width
3 to 5	3 –4m combined	Minimum 3m
6 to 20	4 –6m combined to within 6m internally of the front property boundary	Minimum 3m
21 to 50	6 –8m combined	6m
> 50	3-4m each, separated	Minimum 3m each or 6m when combined
4. Minimum 6 metre wide driveway reserve/carriageway width required for battleaxe lots – battle-axe handles.

## 6.11 Landscaping Requirements

### 6.11.1 Objectives

- (a) To preserve and retain existing mature native vegetation and encourage the planting of additional significant vegetation.
- (b) To enhance the appearance of housing through integrated landscape design.
- (b) To improve the visual amenity of the City by increasing the volume of substantial vegetation in urban areas.

- (c) To reduce impervious areas on sites and increase soft landscape screening between side orientations of residential developments.
- (d) To encourage the use of green walls and roofs in communal open space and to enhance the environmental performance of the development.

### 6.11.2 Development Controls

1. A minimum of 30% of the total site area must be provided as landscaped area. Landscaped area is defined as 'is any part of the site which is not occupied by any building, basement or hard surface such as driveways, parking areas or paved areas of courtyards, decks, balconies or terraces'. The landscaped area includes the vegetated component of a green roof, and planting on structures and podiums, where the following minimum soil standards for plants are achieved. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations'.

A minimum of 30% of the total site area must be provided as landscaped area. Landscaped area is defined as 'is any part of the site which is not occupied by any building, basement or hard surface such as driveways, parking areas or paved areas of courtyards, decks, balconies or terraces. The landscaped also includes landscaping on the podium, that section of the podium is less than 1.2 metres in height and the minimum soil depth requirements of this DCP are achieved. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations'.

Plant type	Definition	Soil volume	Soil Depth	Soil area
Large trees	12-18m high, up to 16m crown spread at maturity	150m <sup>2</sup>	1,200mm	10m x 10m or equivalent
Medium trees	8-12m high, up to 16m crown spread at maturity	35m <sup>2</sup>	1,000mm	6 x 6m or equivalent
Small trees	6-8m high, up to 16m crown spread at maturity	9m <sup>2</sup>	800mm	3.5m x 3.5m or equivalent
Shrubs			500-600mm	
Ground cover			300-450mm	
Turf			200mm	

Source: Apartment Design Guide (July 2015)

2. Any landscaped or grassed areas within the front setback area will be included in the landscaped area calculations. Landscaping in this area must be in context with the scale and height of the residential flat building.
3. Landscaped planters located on the podium level over any basement carparking will also be included within the landscaped area requirements, where such landscaping provides minimum soil depths for growth of vegetation.

4. The required landscaped area must include a minimum 1.5 metre wide landscaping bed, which is provided along the side and rear boundaries of the site.
5. Where private or communal open space is located on the rooftop provide 1.5 metre wide landscaped beds or screening devices, setback 1.5 metre from the edge of the building façade, to avoid overlooking into neighbouring properties.
6. The minimum number of trees to be planted onsite as specified in the table below [or a minimum of 1 medium tree (minimum pot size 45L), whichever is greater]. Trees are to be planted in the deep soil zone or landscaped area on the site and at least 3m from any dwelling, building or structure.

Site area	Tree planting
Up to 850m <sup>2</sup>	1 medium tree per 50m <sup>2</sup> of deep soil zone
Between 850m <sup>2</sup> - 1,500m <sup>2</sup>	1 large tree or 2 medium trees per 90m <sup>2</sup> of deep soil zone
Greater than 1,500m <sup>2</sup>	1 large tree or 2 medium trees per 80m <sup>2</sup> of deep soil zone

Source: Apartment Design Guideline, July 2015

7. The following matters must be addressed within the submitted landscape plan:
  - (a) Site landscaping must be integrated with the stormwater management controls. In particular, the location and nature of the on site stormwater detention basins should not conflict with landscaping areas and objectives.
  - (b) Select appropriate species that are likely to survive in the specific environmental conditions of the site, orientation and microclimate.
  - (c) Identify and retain where possible existing mature trees.
  - (d) Garden beds to be mulched and be separated from driveways or open space areas by an appropriate border or edge.
  - (e) The width of the landscape bed does not include kerbs or other hard borders or edges.
  - (f) Where driveways are located parallel to a property boundary, a minimum 1.5m landscape strip is required adjacent to the driveway.
7. Landscaping on podiums shall provide a minimum soil depth that allows for plant establishment and growth as follows:

Plant Type	Soil Depth
Shrubs	600mm
Small trees	800mm
Medium trees	1000mm

8. Street trees are required to be planted in accordance with the requirements contained in the Landscaping Chapter in Part E of this DCP.

## 6.12 Deep Soil Zone

### 6.12.1 Objectives

- (a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.
- (b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife and provide privacy and amenity for existing and future residents.
- (c) To allow for increased water infiltration.
- (d) To contribute to urban biodiversity.

### 6.12.2 Development Controls

1. The siting of the deep soil zone must be determined following a site analysis to investigate whether this area should be located:
  - (a) Centrally within the site to allow for overlooking from dwellings within a development;
  - (b) At the rear of the site to allow for separation from adjacent dwellings and to provide a continuous corridor of vegetation of native fauna; or
  - (c) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.
2. A minimum of half of the landscaped area (i.e. 15% of the site) must be provided as a deep soil zone, where the deep soil zone is not located at the rear of the site. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 6m. Alternatively, the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be contiguous.
3. No structures, basement car parks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone.
4. The deep soil zone must be densely planted with trees and shrubs. Where a residential apartment building is to be strata titled, the deep soil zone must be retained in the common property and be managed by the body corporate.

## 6.13 Communal Open Space

### 6.13.1 Objectives

- (a) To ensure that communal open spaces are of adequate size to be functional.
- (b) To provide communal open space which is accessible by all residents.

### 6.13.2 Development Controls

1. Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at 5m<sup>2</sup> per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5 metres.
2. The communal open space must be easily accessible and within a reasonable distance from apartments, be integrated with site landscaping, allow for casual social interaction and be capable of accommodating recreational activities.
3. Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.
4. Areas of the communal open space which are to be paved or which will contain shade structures, swimming pools or the like cannot be located within the deep soil zone.
5. The communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.

## 6.14 Private Open Space

### 6.14.1 Objectives

- (a) To ensure that private open spaces are of sufficient size to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate.
- (b) To ensure functionality of private open space by reducing overlooking and overshadowing of such spaces.
- (c) To ensure that balconies are integrated into the overall architectural form and detail of residential flat buildings.
- (d) To ensure balconies are functional and responsive to local context and climate thereby promoting the enjoyment of outdoor living for residents.

### 6.14.2 Development Controls

1. Private open space must be provided for each dwelling within a residential apartment building in the form of a balcony, courtyard, terrace and/or roof garden.
2. Private open space for each dwelling within a residential apartment building must comply with the following:
  - (a) The courtyard/terrace for the ground level dwellings must have a minimum area of 25m<sup>2</sup> and width of 2 metres. This area must be separated from boundaries by at least 1.5m with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas.
  - (b) The primary private open area of at least 70% of the dwellings within a residential apartment building must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

- (c) Private open space areas (courtyards) must not extend forward of the front building setback by greater than 900mm.
  - (d) Private open space should be sited in a location which provides privacy, solar access, and pleasing outlook and has a limited impact upon adjoining neighbours.
  - (e) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.
  - (f) Clearly define private open space through use of planting, fencing or landscaping features.
  - (g) Screen private open space where appropriate to ensure privacy.
3. Where private open space is provided in the form of a balcony, the following requirements must also be met:
- (a) Avoid locating the primary balconies where they address side setbacks.
  - (b) The balcony must have a minimum area of 12m<sup>2</sup> open space and a minimum depth of 2.4 metres.
  - (c) The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
  - (d) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.
4. The enclosure of balconies on existing residential flat buildings will generally not be permitted due to their negative impact on maximum floor space controls, fire rating, building aesthetics and form, and the availability and functionality of private open space.
5. Balcony screening and climate control elements shall be provided in the initial design of new residential flat buildings. Operable screens, pergolas, shutters, operable walls or similar shall be provided in locations where noise or high winds prohibit reasonable outdoor use (i.e. next to rail corridors, busy roads and tall towers).
6. Balcony screening and climate control will only be permitted by Council for existing residential flat buildings if the following requirements are met:
- (a) A proposal is submitted for an overall building façade design treatment. This need not include the installation of building elements to all balconies but shall exhibit an appropriate pattern and proportion within the overall façade composition (i.e. treatments may vary depending upon the type and location of balconies at the base, middle or top of facades).
  - (b) The proposal involves the written agreement of all of the owners of unit facades that will be affected (e.g. if screening is proposed to four out of six balconies located on the north façade, the agreement of all owners of units on the north façade is required even if all units are not directly affected by the works).
  - (c) The proposal does not compromise the functionality of a balcony as a private open space area nor reduce the aesthetic quality or articulation of the building.

- (d) The proposal improves the functionality of the balcony and thereby promotes the enjoyment of the outdoor living area
- (e) The use of curtain wall glazing or an expanse of glazing is not permitted. Any glazing used to screen balconies shall be broken up by framing (e.g. louvers) which also casts shadows on the glass in order to reduce reflectivity and building bulk.
- (f) The design integrates with existing balustrades and/or involves the removal of balustrades to ensure the additions do not appear as a 'retrofit'.
- (g) The design integrates with the existing façade composition and increases the variety in façade design particularly for existing facades that exhibit little variation in materials, finishes and form. This may necessitate other modifications to façades such as the installation of awnings, pergolas and/or blade walls, a new colour scheme, and/or cornice treatment.
- (h) Coloured elevations and a photomontage shall be submitted with a Development Application.
- (i) If staged installation is proposed then the approved design shall be included as a by-law attached to the strata plan of the residential flat building prior to issue of an Occupation Certificate for the first stage in order to ensure that the installation of screening/climate control elements accord with an overall building façade design treatment and can be undertaken by various owners when it suits them.



Figure 5: Examples of balcony screening and climate control elements. Reference: Residential Flat Design Code

## 6.15 Adaptable and Universally Designed Housing

### 6.15.1 Objectives

- (a) To ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.
- (b) To ensure a sufficient proportion of dwellings include accessible layouts and features, and universally designed features to accommodate changing requirements of residents.



- (c) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

### 6.15.2 Development Controls

1. Within a residential apartment building, 40% 20% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “pre-adaptation” design details to ensure visitability is achieved.
2. Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
3. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the Traffic, Access, Parking and Servicing Chapter in Part E of this DCP.
4. Within a residential apartment building incorporating more than six (6) dwellings, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans.

## 6.16 Access for People with a Disability

### 6.16.1 General

1. The provision of continuous path of travel is required to the development to ensure equitable access for all people including people with a disability. Refer to Access for People with a Disability in Part E of this DCP.

## 6.17 Apartment Size and Layout Mix for Larger Residential Flat Building Developments

### 6.17.1 Objectives

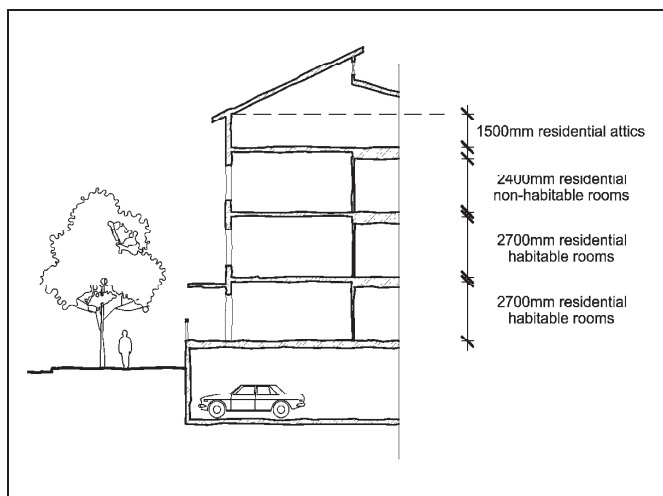
- (a) To provide variety in apartment sizes and layouts to cater for a range of household types.
- (b) To ensure that the internal arrangement of apartments is functional and satisfies occupant’s needs.
- (c) To design apartments to promote resident amenity and adaptability of use.

### 6.17.2 Development Controls

1. A mix of apartment sizes and layouts is required for larger residential apartment buildings involving ten (10) or more dwellings. This could include both variation in the number of bedrooms and gross

floor areas of apartments, variety in the internal design or incorporating single and two level apartments to accommodate various resident requirements.

2. The selection of the number of bedrooms within developments shall be determined having regard to the site's context, geographic location and anticipated market demands. For residential apartment buildings having ten (10) or more dwellings, a minimum of 10% of the apartments must be one bedroom and/or studio apartments, to provide for housing choice.
3. Consideration should be given to the design of apartments to encourage future flexibility. This may include opportunities to combine smaller apartments with adjacent dwellings should residents' lifestyle change or may include the ability to accommodate home office opportunities. Consideration should also be given to the location of one and three bedroom apartments on the ground level where accessibility is more easily achieved for disabled, elderly people or families with children.
4. Apartments must be designed with internal spaces which are flexible and adaptable to resident's requirements. This should involve the efficient utilisation of available floor space to maximise useable room areas. Apartment layouts must respond to the site's opportunities, including views and aspect.
5. Ceiling heights of apartments must be selected to encourage the penetration of natural sunlight into all areas of the building. Provide the following minimum floor to ceiling heights, for residential flat buildings:
  - (a) 2.7m minimum for all habitable rooms on all floors;
  - (b) 2.25 to 2.4m minimum for non habitable rooms on all floors;
  - (c) For two storey apartments, 2.4m minimum for the second storey if 50% or more of the apartment has 2.7m minimum ceiling heights;
  - (d) For 2 storey units with a two storey void space, 2.4m minimum ceiling heights;
  - (e) Attic spaces, 1.5m minimum wall height at edge of room with a 30 degree minimum ceiling slope.



## 6.18 Solar Access

### 6.18.1 Objectives

- (a) To minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.
- (b) To maximise solar access into living rooms and private open space of dwellings in the subject development.
- (c) To provide an appropriate level of natural sunlight to living spaces to improve residential amenity and minimise the use of artificial light.
- (d) To use a consistent sunlight access assessment approach for the assessment of solar access issues.

### 6.18.2 Development Controls

#### *Solar Access into Residential Apartment Buildings*

- 1. Residential apartment buildings must aim to maximise their level of northern exposure to optimise the number of dwellings having a northern aspect. Where a northern aspect is available, the living spaces and balconies of such apartments must typically be orientated towards the north.
- 2. The development must maximise the number of apartments with a dual orientation. Single aspect, single storey apartments should preferably have a northerly or easterly aspect and a reduced depth to allow for access of natural light to all habitable spaces.
- 3. Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation.
- 4. The living rooms and private open space of at least 70% of apartments should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm.
- 5. The number of single aspect apartments with a southerly aspect (south-westerly to south-easterly) is limited to a maximum of 10% of the total number of apartments proposed.
- 6. Provide vertical shading to eastern and western windows. Shading can take the form of eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.

#### *Solar Access into Living Areas and Private Open Space Area of Adjoining Properties*

- 1. The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas.
- 2. Windows to living rooms and private space areas in adjacent residential buildings must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.
- 3. In determining access to sunlight, overshadowing by fences, roof overhangs and changes in level must be taken into consideration. Overshadowing by vegetation should also be considered, where dense vegetation appears as a solid fence.

4. In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.
5. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.
6. Shadow diagrams will be required for hourly intervals between 9.00 am and 3.00 pm for the 21 June winter solstice period which show the extent of overshadowing upon dwellings and rear private open space areas of adjoining dwellings. Additional hourly interval shadow diagrams for the equinox period where it is necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

## 6.19 Natural Ventilation

### 6.19.1 Objectives

- (a) To encourage apartment design which allows for natural ventilation of habitable rooms.
- (b) To provide natural ventilation in non –habitable rooms, where possible.
- (c) To reduce energy consumption by minimising the use of mechanical ventilation.

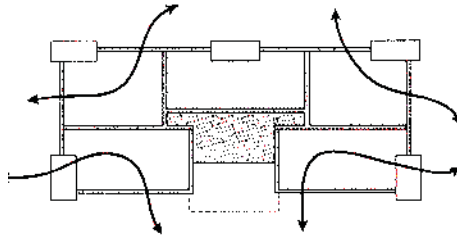


Figure 6: Natural Ventilation, Corner apartments encourage natural ventilation flows. (Ref: Residential Flat Design Code)

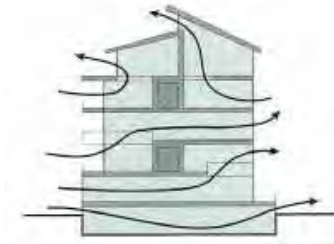


Figure 7: This optimal layout allows air flow directly from one side of the apartment to the other (Ref: Residential Flat Design Code)

### 6.19.2 Development Controls

1. All residential apartment buildings shall have a building depth of between 10 and 18 metres. The depth is measured across the shortest dimension of the building. Dwellings should be a maximum depth of 21 metres, measured from the outside of the balcony.

Variation to this standard will only be considered where it can be demonstrated that apartments will achieve the minimum requirements with regard to natural ventilation. This may be achieved where apartments have a wider frontage, or increased ceiling and window height to allow for greater penetration of natural light. The building depth is measured across the shortest access, excluding the depth of any unenclosed balconies.

2. A minimum of sixty percent (60%) of all residential apartments shall be naturally cross ventilated.
3. Twenty five (25%) of kitchens within a development must have access to natural ventilation. Where kitchens do not have direct access to a window, the back of the kitchen must be no more than 8 metres from a window.
4. Single aspect apartments must be limited in depth to 8 metres from a window.



## Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>	<b>5</b>	<b>GENERAL REQUIREMENTS FOR ALL MIXED USE DEVELOPMENT</b>	<b>28</b>
<b>2</b>	<b>OBJECTIVES</b>	<b>1</b>	5.1	Floodplain Management	28
<b>3</b>	<b>DEFINITIONS</b>	<b>2</b>	5.2	Land Re-Shaping Works (Cut and Fill Earthworks)	28
<b>4</b>	<b>DESIGN REQUIREMENTS - MIXED USE BUILDINGS</b>	<b>3</b>	5.3	Retaining Walls	29
4.1	Minimum Site Width	3	5.4	Soil Erosion and Sediment Control	30
4.2	Maximum Floor Space Ratio / Density	4	5.5	Fences	30
4.3	Building Height	4	5.6	Access for People with a Disability	31
4.4	Front Setbacks	4	5.7	Services	31
4.5	Side and Rear Setbacks / Building Separation	5	5.8	Swimming Pools	32
4.6	Built Form	7	5.9	Fire Brigade Servicing	33
4.7	Active Street Frontages	12	5.10	Site Facilities	33
4.8	Awnings	13	5.11	Storage Facilities	34
4.9	Car Parking	13	5.12	Waste Management	34
4.10	Basement Car Parking	15			
4.11	Driveways	16			
4.12	Landscaping	17			
4.13	Communal Open Space	18			
4.14	Private Open Space	19			
4.15	Solar Access	20			
4.16	Visual privacy	21			
4.17	Acoustic privacy	21			
4.18	Adaptable Housing	22			
4.19	Residential Component - Apartment Mix and Layout	23			
4.20	Natural Ventilation	25			
4.21	Adaptive Re-use	26			
4.22	Crime Prevention Through Environmental Design (Safety and Security)	27			

## Figures

Figure 1: Provides a continuous facade along main commercial streets at the lower levels (Ref: Residential Flat Design Code ..	5
Figure 2: Ground floor residential units with residential entrances directly accessed from the street (Ref: Residential Flat Design Code). .....	8
Figure 3: Mixed Use Development – Residential flat building on top of commercial premises. ....	11
Figure 4: Good cross ventilation can be achieved with cross over apartments and corner apartments (Ref: Residential Flat Design Code) .....	26

## 1 INTRODUCTION

1. This chapter of the DCP outlines the development standards which specifically apply to mixed use development. This chapter relates to mixed use development to lands outside the Wollongong City Centre. Where mixed use development is proposed within the Wollongong City Centre reference should be made to the Part D of the DCP which provides the specific controls for mixed use development within the Wollongong City Centre.
2. This chapter must be read in conjunction with Part A (Introduction), Part D (Locality based / Site Specific Precinct Planning DCPs) and Part E (General City Wide Controls). In the event that the subject site is affected by Part D Locality or Site Specific Precinct based DCP controls and there is any inconsistency between this part of the DCP and Part D of the DCP, Part D of the DCP will prevail.
3. Additionally, this chapter should also be read in conjunction with the relevant LEP applying to the site as the first step to determine whether a proposed mixed use development is permitted upon a particular zoned parcel of land.
4. Under Wollongong LEP 2009, “*Mixed use development*” means a building or place comprising 2 or more different land uses.
5. For the purposes of this chapter, mixed use development is development which includes residential uses (ie shop top housing, residential flat buildings etc) in conjunction with one or more non-residential uses such as:
  - (a) Business premises.
  - (b) Commercial offices.
  - (c) Retail shops.
  - (d) Community facilities.
  - (e) Hotels.
  - (f) Serviced apartments.
  - (g) Seniors housing.
6. Typical mixed use developments involve ground floor retail shops, commercial offices / business premises and upper level residential apartments. Other mixed use developments may include ground floor retail, serviced apartments / hotel and residential apartments (provided the serviced apartments are on separate floors / levels to the residential apartment component).

## 2 OBJECTIVES

1. The objectives of this chapter are:
  - (a) To ensure new mixed use developments are of a high architectural standard through design and appropriate selection of external building materials and finishes.
  - (b) To promote mixed used development that achieves the principles of ecologically sustainable development.
  - (b) To discourage any development which is, in the opinion of Council, unreasonably detrimental to the surrounding locality in regard to its proposed use, design, height, bulk /form, external appearance and streetscape character.



- (c) To minimise any potential adverse impact upon neighbouring land uses in term of amenity, noise, overlooking or loss of privacy.
- (d) To ensure that mixed use developments can satisfactorily function totally within their designated site, in terms of on-site car parking, off-street loading/unloading areas and manoeuvring areas and waste disposal.
- (e) To ensure that design, placement and height of buildings takes into account any site constraints.
- (f) To optimise, balance and/or retain a minimum mix of uses in all business/ commercial centres so that they provide an efficient local service role to their communities, in addition to any specialised role they may have.
- (g) In order that a broad range of business functions are attracted to commercial zones, the non-residential component of mixed use developments are to be designed and located so that both retail and commercial/office functions may be catered for.
- (h) To ensure all mixed use developments make provision for a high standard of landscaping.
- (i) To ensure that mixed use developments have particular regard to whether any trees or other vegetation on the land should be preserved.

### 3 DEFINITIONS

**Business premises** means a building or place at or on which:

- (a) An occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or
- (b) A service is provided directly to members of the public on a regular basis.

**Hotel or motel accommodation** means tourist and visitor accommodation (whether or not licenced premises under the Liquor Act 1982):

- (a) Comprising rooms or self-contained suites, and
- (b) That may provide meals to guests or the general public and facilities for the parking of guest's vehicles,

but does not include backpacker's accommodation, a boarding-house, bed and breakfast accommodation or farm stay accommodation.

**Residential flat building** means a building containing 3 or more dwellings, but does not include an attached dwelling or multi-dwelling development.

**Restaurant** means a building or place the principal purpose of which is the provision of food or beverages to people for consumption on the premises and that may also provide takeaway meals and beverages.

**Retail premises** means a building or place used for the purpose of selling items by retail, or for hiring or displaying items for the purposes of selling them by retail or hiring them out, whether the items are goods or materials (or whether also sold by wholesale).

**Seniors housing** means residential accommodation that consists of:

- (a) A residential care facility, or

- (b) A hostel, or
- (c) A group of self-contained dwellings, or
- (d) A combination of these and that is or is intended to be used permanently for:
- (e) Seniors or people who have a disability, or
- (f) People who live in the same household with seniors or people who have a disability, or
- (g) Staff employed to assist in the administration of the residential accommodation or in the provision of services to persons living in the accommodation,

But does not include a hospital.

**Serviced apartment** means a building or part of a building providing self-contained tourist and visitor accommodation that is regularly serviced or cleaned by the owner or manager of the building or part of the building or the owner's or manager's agents.

**Shop top housing** means one or more dwellings located above (or otherwise attached to) ground floor retail premises or restricted premises.

## 4 DESIGN REQUIREMENTS - MIXED USE BUILDINGS

### 4.1 Minimum Site Width

#### 4.1.1 Objectives

- (a) To allow for development of sites which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements.
- (b) To allow for development of sites only where the land is not significantly constrained by flood, geotechnical or other environmental hazards.
- (c) To promote the efficient utilisation of land.
- (d) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.

#### 4.1.2 Development Controls

1. A minimum site width of 24 metres is required for mixed use developments. The site width must be measured for the full length of the building envelope and perpendicular to the side boundary. Exceptions will only be considered for social housing developments. Sites may be amalgamated, where required, to achieve the frontage requirements.
2. Within business centres, mixed use development must not result in the creation of an isolated allotment. An isolated allotment is *'a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house'*. Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.
3. Council will only allow development which would result in the creation of an isolated allotment, where it is demonstrated that:

- (a) Written negotiations to purchase the isolated allotment have been entered into but have been unsuccessful; and
- (b) The isolated allotment has a site width of greater than 20m and is capable of accommodating a similar mixed use development.

## 4.2 Maximum Floor Space Ratio / Density

### 4.2.1 Objectives

- (a) To ensure that the bulk and scale of the building is compatible with surrounding built form and the desired future character of commercial precincts.
- (b) To ensure the density is appropriate for the site and its context.
- (c) To ensure that density is sustainable in the regional servicing context.

### 4.2.2 Development Controls

1. The maximum floor space ratio (FSR) for a mixed used development upon a particular parcel of land will be determined by the relevant LEP and the relevant Floor Space Ratio Map applying to the subject site.

## 4.3 Building Height

### 4.3.1 Objectives

- (a) To encourage buildings which integrate within the existing streetscape or the desired future character in an area which is undergoing transition.
- (b) To minimise the potential impacts of overshadowing and overlooking on adjacent dwellings and open space areas.

### 4.3.2 Development Controls

1. The maximum permissible building height for a mixed use development upon a particular parcel of land is shown on the relevant Heights Map applying to the subject site as contained in the relevant LEP.

## 4.4 Front Setbacks

### 4.4.1 Objectives

- (a) To reinforce the existing character of the street by acknowledging building setbacks.
- (b) To provide a continuous façade along main commercial streets.
- (c) To define the spatial proportions of the street and define the street edge.
- (d) To provide a transition between the public and private domain.

### 4.4.2 Development Controls

#### *Within the B2 Local Centre zone:*

1. The building should be located on the front property boundary, where a continuous façade along main commercial streets is desired.

*Within the B1 Neighbourhood Centre zone and B6 Enterprise Corridor zone:*

2. The following setback requirements apply from the front property boundary to the front façade of the building:
  - (a) The same distance as one or other of the adjoining buildings, provided the difference between the setbacks of the two adjoining dwellings is less than 2.0m; or
  - (b) The average of the setbacks of the two adjoining buildings, if the difference between the setbacks of the buildings is greater than 2.0m; unless Council considers that a reduced setback is appropriate in the local context.

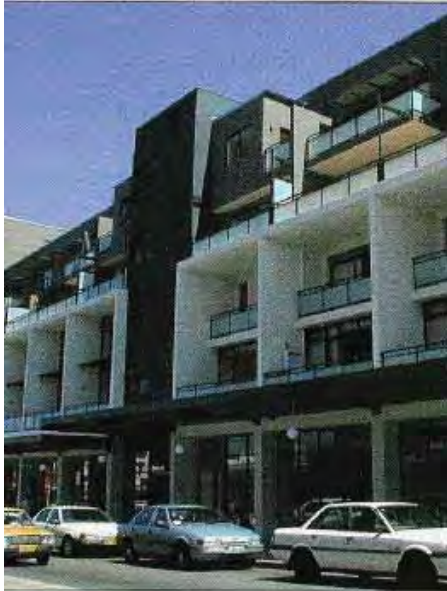


Figure 1: Provides a continuous facade along main commercial streets at the lower levels (Ref: Residential Flat Design Code)

## 4.5 Side and Rear Setbacks / Building Separation

### 4.5.1 Objectives

- (a) To provide adequate setbacks from boundaries and adjoining dwellings to retain privacy levels, views, sunlight and daylight access and to minimise overlooking.
- (b) To optimise surveillance of the street at the front of the property.
- (c) To control overshadowing of adjacent residential properties and private or shared open space.
- (d) To ensure that new development is scaled to support the desired area character with appropriate massing and space between buildings.

### 4.5.2 Development Controls

*Within the B2 Local Centre:*

1. A continuous street line / zero side setback is required for the majority of mixed use developments within a B2 Local Centre ,except in cases where a subject site directly abuts

residentially zoned land, in which case the minimum side setback shall be in accordance with Table 1 below.

Table 1: Side Setbacks Mixed Use Buildings	
Building Height	Minimum Side Setback
Buildings up to 4 storeys (12 metres)	6 metres where a habitable room/balcony faces an adjacent property
	3.5 metres where a non-habitable room/blank wall faces an adjacent property
Buildings of 5 to 8 storeys (up to 25 metres)	9 metres where a habitable room/balcony faces an adjacent property
	4.5 metres where a non-habitable room/blank wall faces an adjacent property

**Note:** The setback is measured from the side or rear wall of the building or balcony to the adjacent boundary.

2. The minimum rear setback for any mixed use / shop top housing development shall be in accordance with Table 2 below:

Table 2: Side Rear Setbacks Mixed Use Buildings	
Building Height	Minimum Rear Setback
Buildings up to 4 storeys (12 metres)	6 metres from the common property boundary with any directly abutting residentially zoned property
	6 metres where a habitable room/balcony faces an adjacent property
	3.5 metres where a non-habitable room/blank wall faces an adjacent non-residentially zoned property
Buildings of 5 to 8 storeys (up to 25 metres)	9 metres from the common property boundary with any directly abutting residentially zoned property
	9 metres where a habitable room/balcony faces an adjacent property
	4.5 metres where a non-habitable room/blank wall faces an adjacent property

**Note:** The setback is measured from the rear wall of the building or balcony to the adjacent property boundary.

4. Council will only consider granting a variation to the setback requirements where the following can be demonstrated:
  - (a) The development site comprises a narrow infill site, where zero lot lines are appropriate at all levels; and

- (b) The development predominantly contains commercial functions and the increased residential setback requirements are inappropriate; and
- (c) The recommendations of this DCP have been varied in response to site and context constraints; and
- (d) The requirements of daylight access, urban form and visual/acoustic privacy have been satisfactorily achieved; and
- (e) The daylight access requirements of this DCP and the Residential Flat Design Code will be available to buildings and open spaces.

*Within the B1 Neighbourhood Centre:*

- 5. The side and rear building setbacks for any mixed use development upon land zoned B1 Neighbourhood Centre shall be in accordance with the side and rear setback requirements contained in Table 1 in clause 4.5.2.1 and Table 2 in clause 4.5.2.2 above.

*For mixed use developments on any site which adjoin a residential zone:*

- 6. The side and rear setbacks for any mixed use development on any site adjoining residentially zoned land shall be in accordance with the side and rear setback requirements contained in Table 1 in clause 4.5.2.1 and Table 2 in clause 4.5.2.2 above.

## **4.6 Built Form**

### **4.6.1 Objectives**

- (a) To support the integration of appropriate retail and commercial uses with housing.
- (b) To provide an identifiable and desirable street address to each building and dwelling.
- (c) To create safe and more active lively streets and urban areas, which encourage pedestrian movement, and services to meet the needs of residents.
- (d) To ensure that the design of mixed-use developments maintains residential amenity and preserves compatibility between uses.
- (e) To allow for outlook and surveillance towards the street and the public domain.
- (f) To encourage mixed used development that achieves the principles of ecologically sustainable development.

### **4.6.2 Development Controls**

- 1. A mixed use or shop top housing development involving three (3) or more storeys and four (4) or more dwellings must be designed by a qualified designer in accordance with State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development.
- 2. The appearance of new development must be in harmony with the buildings around it and the streetscape character of the locality. New development must contain or respond to the essential elements that make up the character of the surrounding urban environment. This character is created by elements such as building height, setbacks, architectural style, window treatment and placement, materials and landscaping.
- 3. The siting, form, height and external appearance of any new building should be sympathetic with adjoining buildings in the surrounding retail and business precinct in addition to any abutting or nearby residential dwellings.

4. Any mixed use or shop top housing building should feature highly articulated facades, particularly any facades facing road frontages and any abutting residential area, in order to add visual interest to the building.
5. Any mixed use or shop top housing building must be designed to provide active street frontages on the ground floor level of the building to all street frontages and in some cases, Council may require appropriate pedestrian thoroughfare links.
6. Within the B1 Neighbourhood Centre and B2 Local Centre zones, commercial office / retail development is required at the ground floor level, as a minimum, within a mixed use or shop top housing building. However, any such use must be designed to minimise any potential adverse noise or amenity impacts upon the upper level residential apartments in the building.
7. Where residential development is located at the ground floor level, the development must maximise the number of ground floor units which have separate entrances and are accessible from the street. Ground floor apartments must incorporate an internal layout which provides opportunity for home employment. Only in exceptional circumstances will ground level dwellings and residential apartments be permitted, such as where it can be clearly demonstrated that the proposal will not detrimentally impact the commercial area and where there is no demand for commercial frontage development.
8. In B2 Local Centre, B1 Neighbourhood Centre and B4 Mixed Use zones, the ground floor and first floor levels of a building must provide for minimum 3.3 metre floor to ceiling height clearances, to maximise the flexibility of in the future use of the buildings.



**Figure 2: Ground floor residential units with residential entrances directly accessed from the street (Ref: Residential Flat Design Code)**

9. Separate entrances must be provided for retail. The floor layouts of residential apartments and the ceiling heights which are provided within mixed use developments must allow for future adaptive use of the upper residential floors.
10. The following elements must be incorporated into the building design to define the commercial and retail components of the development:
  - (a) Servicing of retail and commercial uses must be separated from the servicing of the residential component. Commercial and residential uses.
  - (b) Residential entrances must directly address the street. The main pedestrian entrance or a foyer must provide for continuous and safe access for all people, including people with a disability.

- (c) For those dwellings adjacent to the street frontage, the habitable rooms must face the street.
  - (d) Active uses are encouraged on the street level and first floor.
  - (e) Where ground floor residential units are provided they must have separate entrances and be accessible from the street.
  - (f) Maximise glazing for retail uses but break glazing into sections to avoid large expanses of glass. Wrap shopfronts around corners.
  - (g) Orientate commercial and residential uses to the street to provide casual surveillance.
  - (h) All buildings must express their internal functions in their facades.
  - (i) Entrances must be visible at eye level from the street and well lit.
  - (k) Ensure entrances can accommodate the movement of furniture.
  - (l) Solid roller shutters are not permitted as security devices on shop fronts (windows and doors). Open grille security devices may be used on shop fronts if such devices are necessary but should be unobtrusive and sympathetic to the character of the building and the streetscape, with minimum transparency of 65% to provide light spill to the pavement and create a sense of openness to the street.
  - (m) Place services such as Automatic Teller Machines (ATMs) and public telephones in highly visible locations to be accessible and well lit at night.
  - (n) Where developments have a car park or access laneway to a car park, provide windows, lighting or secondary access doors that address the car park.
  - (o) Avoid building recess, alcoves or dense landscaping in places where concealment is possible.
11. The horizontal form of any building should also be broken up vertically, in order to provide visual relief and interest to the development. The horizontal and vertical emphasis is especially critical for the middle and upper levels of a building.
12. The following elements must be considered in the building design:
- (a) Define a base, middle and top related to the overall proportion of the building.
  - (b) Articulate and fragment building walls that address the street and add visual interest.
  - (c) Highly reflective finishes and curtain wall glazing are not permitted above ground level.
  - (d) Large areas of flat facade are to be avoided. Facades should be articulated into separate sections, using steps in the facade, expressed entries, panels, bay windows, balconies, pergolas and other architectural elements.
  - (e) Avoid expanses of any single material.
  - (f) Provide a balance of horizontal and vertical facade elements to relate to adjacent facades in the streetscape. Avoid simple facade designs containing only horizontal or vertical elements.
  - (g) Utilise high quality and durable materials and finishes.
  - (h) The façade of ground floor retail development must be compatible with surrounding facades.



- (i) Air conditioning units must not be visible from the street.
  - (j) Avoid blank or solid walls and the use of dark or obscured glass on street frontages.
13. The design of roof forms must address the following:
- (a) Create a richly patterned skyline and roof scapes when viewed from the street or from the upper levels of other buildings.
  - (b) The profile of parapets and roof top elements should be integrated in the overall roof design of the building.
  - (c) The angle of any pitched roof shall be compatible with existing development.
  - (d) Create interesting and harmonious roof scapes and skylines through the design of roofs.
  - (e) Lift over runs and service plants must be concealed within the roof, the building or relate to adjacent roof top rooms or open space.
  - (f) Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated with rooftop activities/features.
  - (g) All roof forms and roof top elements are not to exceed the maximum ridge height limit for the site. This does not include any vent, chimney, flue, antennae or the like.
  - (h) Landscaped and shaded areas on the roofs of mixed use buildings for private use by residents will be considered, where residential amenity is not unreasonably affected.
  - (i) The incorporation of green roofs is encouraged however such features must not exceed the maximum height limit for the site.
14. Mixed use buildings which are located on corner sites must address the following:
- (a) Ensure that corner buildings, which by their location are often highly visible, are well designed and respond to the different characteristics of the street which they address.
  - (b) Emphasise verticality at corners, where possible, by concentrating the tallest portion of the building on the corner itself. Utilise design devices such as increased wall heights, splayed corner details, increased heights, expression of junction of building planes and other architectural features to reinforce the way finding attributes of street corners.
  - (c) Design corners to add variety and interest to the street and clarify the street hierarchy.
  - (d) Present each frontage of a corner building as a main street frontage.
  - (e) Design building frontages and entries so that they are readily apparent from the street and are well lit.
  - (f) Avoid blank or solid walls on street frontages.



**Figures 3 & 4: Mixed use development containing ground floor retail shops and upper residential apartments**



**Figure 5: Mixed use development containing active ground floor retail shops and café / restaurants with upper level residential apartments**

15. The street corners of any new corner building should be strengthened by massing and building articulation to both street frontages. In this regard, Council may permit a variation to the height limits contained in this DCP (but no greater than the building height limit in the LEP) by permitting an additional 1 – 2 storeys for the corner element of a building where, in the opinion of Council, a strong corner element is necessary for the building. Any such variation to the height limit will only be supported by Council in circumstances where Council is of the opinion that the proposed development will exhibit design excellence, through the provision a strong corner element in the proposed building.
15. New mixed use buildings should continue the predominant built form character of the locality, including parapets, floor to ceiling heights and roof pitches.
16. For large multi-storey mixed use buildings, the treatment of the facades should be designed to provide character, visual legibility and human scale and to delineate the distinct uses.
17. New mixed use buildings should maintain the balance of horizontal and vertical proportions of other existing buildings in the locality.
18. Any development involving the re-use of existing buildings should reinstate any missing façade elements or other decorative details, wherever practicable.
19. The external building materials and finishes of any mixed use building should be sympathetic to the existing fabric and character of buildings within that retail and business precinct.

20. External walls should be constructed of high quality and durable materials and finishes with low maintenance costs.
21. Highly reflective finishes, reflective glass and curtain wall glazing are not permitted above ground floor level.
22. The reflectivity of glazing shall be restricted to less than 20%. A reflectivity diagram may be required where in the opinion of Council has the potential to pose future glare impacts upon pedestrians within public domain areas or motorists travelling past the site.
23. All Development Applications for new buildings or external alterations and additions to existing premises must be accompanied by a schedule of proposed external building materials and finishes (colours) board which shows the proposed building materials and finishes (colours) to be used on the external facades of the building. An A4 sized photograph of the schedule of external building materials and finishes (colours) board is also required.

## 4.7 Active Street Frontages

### 4.7.1 Objectives

- (a) To provide active street frontages to all mixed use buildings, in order to maintain or enhance the vibrancy of local business centres.
- (b) To ensure ground floor level retail or business premises provide direct pedestrian access to / from the street with direct visual inspection into each premise.

### 4.7.2 Development Controls

1. All new retail, business or mixed use buildings are required to provide ground level active street frontages.
2. Buildings should contain no more than 5 metres of ground floor wall without a door or window. Windows should make up at least 50% of the ground floor front wall.
3. Buildings with frontages to retail streets are to contribute to the liveliness and vitality of those streets by:
  - (a) Providing product retailing and / or food and drink premises within all enclosed shop fronts;
  - (b) Minimising the extent and visual impact of building entrances, office lobbies, foyers, vehicle entrances and other entries not associated with retail, service areas and fire escapes;
  - (c) Locating activities that may involve queuing (e.g. automatic teller machines) behind building frontages so that footpaths remain free for pedestrian movement; and
  - (d) Providing a high standard of finish to retail shopfronts.
4. All street frontage windows at ground level are to have clear glazing.
5. Display windows with clear glazing to ground floor retail and business premises are required with a maximum window sill height of 0.7 metres above finished ground level.
6. Security grilles are to be fitted only within the retail shopfront. Such grilles are to be transparent and not of any roller door type.
7. Direct pedestrian access and visual inspection should be provided from the front of the building, to encourage active street frontage to retail shops and business premises.

## **4.8 Awnings**

### **4.8.1 Objectives**

- (a) To provide all weather protection for pedestrians.
- (b) To address the streetscape by providing a consistent street frontage within commercial areas.

### **4.8.2 Development Controls**

1. Provide continuous street front awnings, where required to provide a continuation of existing awnings.
2. Awning designs should match building frontages.
3. Wrap awnings around corners where a building is sited on a street corner. Corner awnings must be wrapped for a minimum distance of 6m.
4. Awnings must have a minimum width of 2.5m.
5. Cantilever awnings from buildings should be a maximum eave height of 3.3m.
6. Awnings should be setback from the kerb a minimum of 600 mm.
7. Awnings should be complimentary to other existing awnings.
8. Provide under awning lighting to facilitate night use and to improve public safety.

## **4.9 Car Parking**

### **4.9.1 Objectives**

- (a) To provide an adequate level of on site carparking based upon the anticipated building use.
- (b) To ensure that mixed use buildings are designed to be accessible for pedestrians, cyclists and motorists.
- (c) To ensure integrated design of car parking facilities to minimise visual impacts.
- (d) To provide underground parking, wherever feasible.
- (e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

### **4.9.2 Development Controls**

1. Parking for cars, motorcycles and bicycles shall be provided in accordance with the requirements contained in the Traffic, Parking, Access and Servicing chapter in Part E of this DCP.
2. Access driveways to car parking areas must be positioned to minimise impacts on the streetscape. Access driveways to car parking areas must be positioned to minimise impacts on the streetscape.
3. Car parking for mixed use developments must be provided within one or more basement levels. For mixed use developments within B1 Neighbourhood Centre zones, Council may require the provision of a number of at grade parking spaces for customers to minimise on street parking.
4. Car parking areas should be designed to conveniently, efficiently and appropriately serve residents and visitors of the site. This can be achieved in the following ways:

- (a) Ensuring that visitor car parking areas are located close to entrances and access driveways.
  - (b) Have clearly defined areas for staff, resident, visitor, customer and disabled parking. Where customer and visitor car parking is located in a secure basement, an intercom system shall be provided to allow for visitor access. A turning bay must also be provided for customer/visitor use to prevent vehicles reversing onto the street in the event that a car parking space is not available.
5. Car parking spaces must comply with the minimum size requirements:

Carparking Dimensions	
Car space type	Minimum car space dimension
Unencumbered open space	2.6m x 5.5m
Open space – restricted one side	2.7m x 5.5m
Open space – restricted both sides	2.9m x 5.5m
Single garages	3.0m x 6.0m
Garage door openings	2.7m
Double garages	6.0m x 6.0m
Garage door openings	5.4m
Disabled Parking	3.2m x 5.5m

6. Integrate ventilation grills or screening devices of carpark openings into the façade design and landscape design.
7. Car parking entry doors or façade elements must be setback a minimum of 600mm from the line of the front façade.
8. Tandem or stacked car parking (one space immediately behind the other) is permitted for resident parking provisions providing both spaces are utilised by the same dwelling and such spaces do not interfere with common manoeuvring areas. Tandem or stacked parking is not permitted for adaptable housing.
9. For developments having greater than 10 dwellings, one bicycle rail per ten dwellings must be provided for visitors.

#### 4.9.3 Mechanical Parking Systems

1. Mechanical parking systems may provide for more space-efficient storage of vehicles than can be achieved with traditional at-grade parking. These systems can be considered for use in residential developments.
2. Where it is proposed to incorporate a mechanical parking system within a residential development, the developer shall provide the following information as part of a Traffic Report and suitably scaled plan and sectional drawings submitted with the Development Application documentation:
- (a) The make and model of the system.
  - (b) A demonstrated need for the need for the system, including reasons why parking cannot be satisfactorily provided in an at-grade parking arrangement.
  - (c) Demonstrated compliance with all relevant clauses of AS2890.1

- (d) A demonstrated minimum internal headroom clearance of 1.90m in the entry level of the system.
  - (e) A demonstrated minimum internal vertical clearance of 1.55m on all other levels within the parking system.
  - (f) Details of security measures restricting the use of the system to permanent residents of the building.
  - (g) Details of noise and vibration associated with the use of the system.
  - (h) Details of a waiting bay, demonstrating that vehicles can safely and conveniently wait at the entry level for other vehicles to manoeuvre to or from the parking system. Waiting bays must be designed so as to not obstruct traffic flow within the parking level. Waiting bays would typically have identical dimensions to parking spaces as per AS2890.1 and are additional to the parking requirement of the development.
  - (i) An assessment of the likely vehicle queuing impacts associated with system, with reference to the operating times of the system, peak vehicle movements and available queue lengths within the parking area.
  - (j) Swept path turning templates demonstrating the ability of vehicles to turn into and out of the system in a single movement.
3. All visitor parking spaces and those spaces associated with adaptable housing must be provided in at-grade positions and;
- (a) The system and all associated infrastructure such as pits and ceiling indentations must be clearly shown in the drawings of the car parking area, at development application stage.

## 4.10 Basement Car Parking

### 4.10.1 Objective

- (a) To integrate the siting, scale and design of basement parking into the site and building design.

### 4.10.2 Development Controls

1. The scale and siting of the basement carpark must not impact upon the ability of the development to satisfy minimum landscaping requirements.
2. The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2 metres above natural or finished ground level, when measured at any point on the outside walls of the building. On sites with a greater slope, a change in level in the basement must be provided to achieve this maximum 1.2 metre height.
3. Generally variation to this 1.2 metre height will not be supported however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2 metre height must be included in the total gross floor area calculation for the development. In addition, the following must be satisfied:
  - (a) Landscaped terraces are provided in front of the basement podium to reduce the overall visual impact;

- (b) The height of the basement does not result in the building having a bulk and scale which dominates the streetscape; and
- (c) The main pedestrian entry to the building is identifiable and readily accessible from the street frontage.

*Within the B2 Local Centre zone:*

1. Where a continuous street line is required, the basement must be constructed on the side property boundaries (ie zero setbacks).

*Within the B1 Neighbourhood Centre and B6 Enterprise Corridor zones:*

1. The basement setbacks for residential apartment buildings in Chapter B1: Residential Development shall apply to that boundary which adjoins the residential zone.

*For mixed use developments on any site which adjoin a residential zone:*

1. The setbacks for residential apartment buildings in Chapter B1: Residential Development shall apply to that boundary which adjoins the residential zone.
2. Where parking is provided in a basement, ventilation structures for the basement parking and air-conditioning units must be orientated away from windows of habitable rooms and private open space areas. Ventilation grills must be integrated into the design of the façade of the building to minimise their visual impact.
3. The visual impact of all basement walls must be minimised through the use of various design techniques including well proportioned ground level articulation and relief, mixed finishes and materials, terracing and/or dense landscaping.
4. Basements must be protected from inundation from the 100-year flood levels (or greater).

## **4.11 Driveways**

### **4.11.1 Objectives**

- (a) To provide adequate and safe vehicular access to basement carparking areas.
- (b) To ensure that all carparking areas have satisfactory manoeuvring areas to enable vehicles to leave the site in a forward direction.

### **4.11.2 Development Controls**

1. Provide driveways to parking areas from lanes and secondary streets rather than the primary street, wherever practical.
2. Locate driveways taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.
3. All driveways must be located a minimum of 6 metres from the perpendicular of any intersection of any two roads.
4. Any driveway servicing a residential development is to be setback a minimum of 1.5m from any side property boundary.
5. The design of driveway and crossovers must be in accordance with Council's standard vehicle entrance designs.
6. All vehicles within a mixed use development building must provide vehicular manoeuvring areas to all parking spaces so vehicles do not need to make more than a single point turn to leave the site in a forward direction.

7. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1. Crossover and driveway widths relating to the erection of one or more dwellings must comply with the following:

No. Units	Crossover Width	Driveway Width
1 to 2	Minimum 2.75m	Minimum 2.75m
3 to 5	3 –4m combined	Minimum 3m
6 to 20	4 –6m combined to within 6m internally of the front property boundary	Minimum 3m
21 to 50	6 –8m combined	6m
> 50	3-4m each, separated	Minimum 3m each or 6m when combined

## 4.12 Landscaping

### 4.12.1 Objectives

- To use landscaping features to define spaces and their intended functions.
- To enhance the appearance and amenity through integrated landscape design.
- To encourage the use of green roofs and walls in communal open space to enhance the environmental performance of the development.

### 4.12.2 Development Controls

- Landscaping within mixed use developments must be provided on terraces or balconies where required for screening purposes, to minimise overlooking between commercial and residential functions. Landscaping, including deep soil planting, must be provided where mixed use developments are located adjacent residential zones.
- Green roofs and walls, landscaping on podiums and on planters must provide sufficient soil depth and area to allow for plant establishment and growth. The following minimum standards are required:

Plant type	Definition	Soil volume	Soil Depth	Soil area
Large trees	12-18m high, up to 16m crown spread at maturity	150m <sup>2</sup>	1,200mm	10m x 10m or equivalent
Medium trees	8-12m high, up to 16m crown spread at maturity	35m <sup>2</sup>	1,000mm	6 x 6m or equivalent
Small trees	6-8m high, up to 16m crown spread at maturity	9m <sup>2</sup>	800mm	3.5m x 3.5m or equivalent
Shrubs			500-600mm	



Ground cover			300-450mm	
Turf			200mm	

Source: Apartment Design Guide (July 2015)

~~Landscaping on podiums must provide sufficient soil depth and area to allow for plant establishment and growth. The following minimum standards are recommended (Ref: Residential Flat Design Code):~~

Plant Type	Soil Depth
Medium trees	1.0m
Small trees	800mm
Shrubs	500-600mm

3. Where a mixed use development is sited on the boundary of a business area and / or is adjacent residential buildings, the residential component of the development must adopt the respective landscape requirements of a residential apartment building.
4. Within a B1 Neighbourhood Centre zone, the landscaping requirements for a residential flat building or multi dwelling housing also apply, to ensure that the development will integrate within the residential neighbourhood.
5. The following matters shall be addressed within the submitted landscape plan:
  - (a) Site landscaping must be integrated with the stormwater management controls. Select appropriate species that are likely to survive in the specific environmental conditions of the site, orientation and microclimate.
  - (b) Identify and retain where possible existing mature trees.
6. Public domain improvements must be provided, where required, in accordance with the relevant Public Domain Master plan.
7. The use of green walls is encouraged as an avenue to enliven blank facades.
8. The developer is to provide street trees to street frontages of the development site. Trees to be minimum container size 100L and must be true to type, of good health and vigour, free from pests and disease, free from injury, be self supporting (tree must not be tied to stakes) and meet the following NATSPEC criteria:
9. Trees must be planted and adequately established (minimum 12 months) to the satisfaction of WCC Manager of City Works.
10. The preparation of a landscape plan and accompanying supporting documentation should be in accordance with the Landscaping chapter in Part E of the DCP.

## 4.13 Communal Open Space

### 4.13.1 Objectives

- (a) To ensure that communal open spaces are of adequate size to be functional.

- (b) To provide communal open space which is accessible by all residents.

#### 4.13.2 Development Controls

1. Mixed use developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at the rate of 5m<sup>2</sup> per dwelling. Any area to be included in the open space calculations must have a minimum width of 5 metres.

Variation to this requirement will only be considered where it can be demonstrated that the development has access to a range of recreational opportunities in the immediate vicinity.

2. Within mixed use developments the communal open space area may be provided as either an internal or external space. Roof top terraces will not be accepted as communal open space.
3. The communal open space must be easily accessible and be integrated with landscaping.

### 4.14 Private Open Space

#### 4.14.1 Objectives

- (a) To ensure that private open spaces are large enough to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate.
- (b) To ensure functionality of private open space by reducing overlooking and overshadowing of such spaces.

#### 4.14.2 Development Controls

1. Private open space must be provided for each residential dwelling within the development in the form of a balcony, courtyard, terrace and/or roof garden.
2. Private open space for each dwelling within a residential apartment building must comply with the following:
  - (a) The courtyard/terrace for the ground level dwellings must have a minimum area of 8m<sup>2</sup> and depth of 2m<sup>2</sup>. Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.
  - (b) Screen private open space where appropriate to ensure privacy.
  - (c) Provide balconies with operable screens or similar in locations where noise or high winds would otherwise prohibit reasonable outdoor use (ie. next to rail corridors, busy roads and tall towers).
3. Where private open space is provided in the form of a balcony, the following requirements must also be met:
  - (a) Avoid locating primary balconies towards side setbacks.
  - (b) The balcony must have a minimum area of 12m<sup>2</sup> open space and a minimum width of 2.4 metres.
  - (c) The primary balcony of at least 70% of the residential dwellings within a mixed use housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
  - (d) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.

- (e) Individual balcony enclosures are not supported since such enclosure would compromise the functionality of a balcony as a private open space area and adversely affect the streetscape/ visual character of the building.

## 4.15 Solar Access

### 4.15.1 Objectives

- (a) To minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.
- (b) To maximise solar access into the habitable areas and private balconies of residential apartments within the mixed used development.
- (c) To maximise solar access into any ground floor communal open space area or outdoor restaurant.
- (d) To provide appropriate shading devices to windows of habitable rooms on the western façade of buildings.

### 4.15.2 Development Controls

1. The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas.
2. Living rooms and private courtyards of adjacent residential buildings must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.  
  
In determining access to sunlight, overshadowing by fences, roof overhangs and changes in level must be taken into consideration. Overshadowing by vegetation should also be considered, where dense vegetation appears as a solid fence.
3. In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.
4. Mixed use developments must aim to maximise the number of dwellings having a northern aspect. Where a northern aspect is available, the living spaces and balconies of such apartments must typically be orientated towards the north.
5. The development must maximise the number of apartments with a dual orientation. Single aspect, single storey apartments should preferably have a northerly or easterly aspect and a reduced depth to allow for access of natural light to all habitable spaces.
6. Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation.
7. The living rooms and private open space of at least 70% of apartments within the subject development must receive a minimum of three (3) hours direct sunlight between 9.00am and 3.00pm on 21 June.
8. The number of single aspect apartments with a southerly (south-westerly to south-easterly) aspect shall be limited to a maximum of 10% of the total number of apartments proposed in the development.

9. Provide vertical shading to eastern and western windows. Shading can take the form of eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.

## **4.16 Visual privacy**

### **4.16.1 General**

1. Visual privacy measures are designed to protect the privacy and amenity of occupants within a residential apartment or serviced apartment. Visual privacy measures allow occupants to carry out private functions within all rooms in the apartment as well as private balconies or open space courtyards, through limiting direct views or overlooking issues from adjoining buildings.

### **4.16.2 Objectives**

- (a) To provide reasonable levels of visual privacy externally and internally, during the day and at night.
- (b) To maximise outlook and views from principal rooms and private open space without compromising visual privacy.

### **4.16.3 Development controls**

1. New buildings should be sited and oriented to maximise visual privacy between buildings through compliance with minimum front, side and rear setback / building separation requirements.
2. The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony / open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.
3. Buildings are to be designed to increase privacy without compromising access to sunlight and natural ventilation through the following measures:
  - (a) Off-setting of windows in new buildings from windows in existing adjoining building(s).
  - (b) Recessed balconies and / or vertical fin elements between adjoining balconies to improve visual privacy.
  - (c) Provision of solid, semi-solid or dark tinted glazed balustrading to balconies.
  - (d) Provision of louvers or screen panels to windows and / or balconies.
  - (e) Provision of perimeter landscaped screen / deep soil planting.
  - (f) Incorporating planter boxes onto apartment balconies to improve visual separation between apartments within the development and adjoining buildings.
  - (g) Provision of pergolas or shading devices to limit overlooking of lower apartments or private open space courtyards / balconies.

## **4.17 Acoustic privacy**

### **4.17.1 General**

1. Acoustic privacy is a measure of sound insulation between residential apartments and between external and internal spaces.

#### 4.17.2 Objective

- (a) To ensure a high level of amenity for occupants within residential apartments and / or serviced apartments in the development.

#### 4.17.3 Development Controls

1. Residential apartments and / or serviced apartments should be arranged in a mixed use building, to minimise noise transition between apartments by:
  - (a) Locating busy, noisy areas next to each other and quieter areas, next to other quieter areas (eg living rooms with living rooms and bedrooms with bedrooms);
  - (b) Using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical services or corridors and lobby areas; and
  - (c) Minimising the amount of party (shared) walls with other apartments.
2. All residential apartments and / or serviced apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).
3. Appropriate sound attenuation measures should be considered between for each floor in the development, to minimise potential sound transmission into any residential apartment below.
4. Any residential apartment which faces towards a major (busy) road must be designed in accordance with the requirements contained in Chapter E4: Development near Railway Corridors and Major (Busy) Roads in this DCP.
5. The Statement of Environmental Effects (SEE) accompanying the development must demonstrate what acoustic measures will be provided to windows of sleeping areas and living areas for each residential apartment or serviced apartment in the development. The proposed acoustic measures must also be shown on the required architectural floor layout and elevation plans for the development.

Alternatively, the Statement of Environmental Effects (SEE) may include an acoustical impact assessment study which outlines alternative acoustic treatment measures for residential apartment(s) and / or serviced apartment(s) in the development. The acoustic impact assessment study must be carried out by a suitably qualified and experienced acoustic consultant (ie a person who is a Member of the Australian Acoustical Society, the Institution of Engineers or the Association of Australian Acoustical Consultants).

### 4.18 Adaptable and Universally Designed Housing

#### 4.18.1 Objectives

- (a) To ensure that dwelling layout is sufficiently flexible for resident's changing needs over time.
- (b) To ensure a sufficient proportion of dwellings include accessible layouts and universally designed features to accommodate changing requirements of residents.
- (c) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

#### 4.18.2 Development Controls

1. Within a mixed use development incorporating more than six (6) dwellings, ~~40%~~ 20% of all dwellings (or a minimum of 1 dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “pre-adaptation” design details to ensure that visitability is achieved.
2. Lift access to all adaptable dwellings must be provided. The lift must provide access from the basement to allow access for people with disabilities. Disabled access to the commercial component of the development must also be provided from the footpath level.
3. Any Development Application for mixed use development must be accompanied by certification from a suitably qualified and experienced Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Car parking and garages allocated to adaptable dwellings must comply with the following requirements:

Adaptable Dwellings – Car parking Dimensions	
Car space type	Minimum car space dimension
Open space	3.2m x 5.5 m
Single garage	3.5m x 6.0m - min. 2.5m headroom
Double garage	6.5 x 6.0m - min. 2.5m headroom

5. Within a mixed use development incorporating more than six (6) dwellings, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans.

### 4.19 Residential Component - Apartment Mix and Layout

#### 4.19.1 Objectives

- (a) To provide variety in apartment sizes and layouts to cater for a range of household types.
- (b) To provide flexible living/work relationships within dwellings design.
- (c) To ensure that building design is sufficiently robust to accommodate mixed use and potential changes in use such as accommodating an office.

#### 4.19.2 Development Controls

1. Provide a mix of apartment sizes and layouts within larger mixed use developments of ten (10) or more dwellings. This could include both variation in the gross floor areas of apartments, variety in the internal design, together with single or two level apartments to accommodate various resident requirements.
2. The selection of the number of bedrooms within developments shall be determined having regard to the site context, geographic location and demographic characteristics. For mixed use developments having ten (10) or more dwellings, a minimum of 10% of the apartments must be one bedroom and/or studio apartments, to provide affordable housing opportunities.
3. Consideration should be given to the design of apartments to encourage future flexibility. This may include opportunities to combine smaller apartments with adjacent dwellings should resident's lifestyle change or may include the ability to accommodate home office opportunities, if

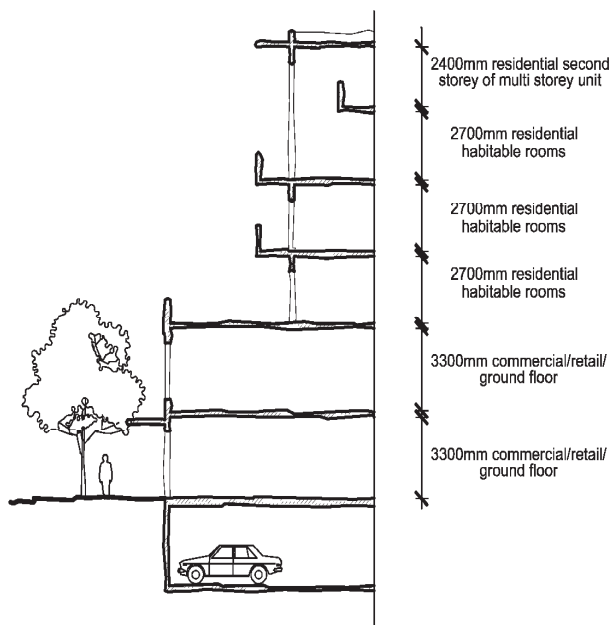
required. Consideration should also be given to the location of one and three bedroom apartments on the ground level where accessibility is more easily achieved for disabled, elderly people or families with children.

4. Apartments should be designed with internal space, which is flexible and adaptable to resident's requirements. This should involve the efficient utilisation of available floor space to maximise useable room areas. Apartment layouts should also respond to the site opportunities, including views and aspect.
5. Mixed use buildings shall be designed to permit adaptation of residential floors for commercial uses, if appropriate at a future time.
6. Provide apartments with the following minimum dimensions;

(a)	Studio and 1 bedroom apartment	50m <sup>2</sup>
(b)	2 bedroom apartment	70m <sup>2</sup>
(c)	3 bedroom apartment	95m <sup>2</sup>

Unless it can be demonstrated that efficient design and room configuration will provide an appropriate level of residential amenity.

7. Ceiling heights of apartments must be selected to encourage the penetration of natural sunlight into all areas of the dwelling.
8. Provide the following minimum floor to ceiling heights, as required by the Residential Flat Design Code:
  - (a) Minimum 3.3m for both ground floor retail or commercial and first floor levels of the building, in order to enable future flexibility of potential uses.
  - (b) For upper residential floors (above the ground and first floors in a mixed use building / shop top housing development) provide the following minimum floor to ceiling heights:
    - (i) 2.7m minimum for all habitable rooms on all floors.
    - (ii) 2.25 to 2.4m minimum for non-habitable rooms on all floors.
    - (iii) For two storey apartments, 2.4m minimum for the second storey if 50% or more of the apartment has 2.7m minimum ceiling heights.
    - (iv) For 2 storey units with a two storey void space, 2.4m minimum ceiling heights.
    - (v) Attic spaces, 1.5m minimum wall height at edge of room with a 30 degree minimum ceiling slope.



## 4.20 Natural Ventilation

### 4.20.1 Objectives

- (a) To encourage apartment design which allows for natural ventilation of habitable rooms.
- (b) To provide natural ventilation in non-habitable rooms, where possible.
- (c) To reduce energy consumption by minimising the use of mechanical ventilation.

### 4.20.2 Development Controls

1. The site analysis shall be used to determine the prevailing winds and the optimal building orientation. Dwellings must be orientated to take advantage of natural breezes. The development shall seek to incorporate dual aspect apartments, two storey apartments or apartments with a narrow depth to allow natural airflows to penetrate through habitable rooms.
2. Mixed use developments may have varied building depths to accommodate the varied functions of the building. The residential component of mixed use developments shall have a building depth of between 10 and 18m. Residential apartments must be a maximum depth of 21m, as measured from the outside of the balcony. Increased building depths are acceptable for the commercial component of the building.
3. Variation to the maximum depth of the residential component of the building will only be considered where it can be demonstrated that apartments will achieve the minimum requirements with regard to solar access and natural ventilation. This may be achieved where apartments have a wider frontage to allow for greater penetration of natural light. The building depth is measured across the shortest access, excluding the depth of any unenclosed balconies.



4. A minimum of sixty percent (60%) of all residential apartments must be naturally cross ventilated.
5. Twenty five (25%) of kitchens within a development must have access to natural ventilation. Where kitchens do not have direct access to a window, the back of the kitchen must be no more than 8m from a window.
6. To maximise natural ventilation and natural daylight opportunities, upper level residential apartments in a building should include corner apartments, cross over or cross through apartments, split-level apartments or shallow, single aspect apartments only.
7. Single aspect apartments must be limited in depth to 8 metres from a window.
8. Crossover or cross through apartments must be no greater than 15 metres deep (excluding balconies or terraces), to avoid deep narrow apartment layouts.
9. The minimum width for residential apartments should be at least 6 metres in order to avoid relatively narrow apartments and to improve natural ventilation and daylight opportunities. However, Council may in some cases, allow a minimum 4 metre width for cross-over or cross through apartments which are below 12 metres in depth,

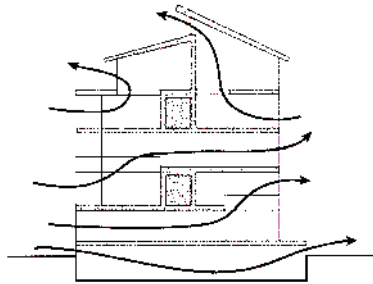


Figure 4: Good cross ventilation can be achieved with cross over apartments and corner apartments (Ref: Residential Flat Design Code).

## 4.21 Adaptive Re-use

### 4.21.1 Objectives

- (a) To provide flexible living/work relationships within dwelling design.
- (b) To encourage the conversion of underutilised office and retail space above street level premises in existing commercial premises to residential uses.
- (c) To consider adaptive reuse opportunities in the design of mixed use buildings.

### 4.21.2 Development Controls

1. Within appropriately located developments, consider including opportunity for home based employment when designing dwellings. This can be achieved by providing purpose built dwellings at the ground floor level which have separate residential and employment spaces and which have direct access from the adjacent street. Consideration could also be given to the provision of apartment layouts which will allow for future reconfiguration of rooms to allow for home based work opportunities.

2. Where residential dwelling units are proposed at ground level within a business zone a report must be provided with the development application demonstrating how future commercial uses can be accommodated within the ground level design. The report must address:
  - (a) Access requirements including access for persons with a disability.
  - (b) Any upgrading works necessary for compliance with the Building Code of Australia.
3. Council encourages the adaptive use of underutilised or vacant floor space within the business zones in the City. Shop top housing is encouraged in such situations, to allow adaptive use of such space. To encourage shop top housing the following incentives are offered by Council:
  - (a) No requirement for additional carparking spaces for existing floor space that is converted to residential uses.
  - (b) Where a change of use does not involve an increase in floor space, certain controls may not be applied such as building setback and orientation of windows etc....

## **4.22 Crime Prevention Through Environmental Design (Safety and Security)**

### **4.22.1 Objectives**

- (a) To ensure compliance with relevant legislation in the consideration of security (crime prevention) issues.
- (b) To reduce opportunities for crime through the provision of natural and technical surveillance opportunities.
- (c) To control access through the provisions of physical or implied barriers which can be used to attract, channel or restrict the movement of people.
- (d) To implement territorial reinforcement by encouraging community ownership of public space.
- (e) To promote space management by ensuring that public open space is effectively utilised and maintained.

### **4.22.2 Development Controls**

1. Ensure that the building design allows for casual surveillance of accessways, entries and driveways.
2. Avoid creating blind corners in pathways, stairwells, hallways and car parks.
3. Provide entrances which are in prominent positions and which are easily identifiable, with visible numbering.
4. Where private open space is located within the front building alignment any front fencing must be of a design and/or height which allows for passive surveillance of the street.
5. The number of dwellings accessible from a single lift or corridor is limited to a maximum of eight (8) per floor.
6. Provide adequate lighting of all pedestrian access ways, parking areas and building entries. Such lighting should be on a timer or movement detector to reduce energy consumption.

7. Avoid the creation of obscure or dark alcoves, which might conceal intruders. Provide clear lines of sight and well-lit routes throughout the development.
8. Where a pedestrian pathway is provided from the street, allow for casual surveillance of the pathway. Ensure that pathways do not provide concealment opportunities.

## **5 GENERAL REQUIREMENTS FOR ALL MIXED USE DEVELOPMENT**

### **5.1 Floodplain Management**

#### **5.1.1 Objectives**

- (a) To minimise potential risks to life and property as a result of potential flooding.
- (b) To provide appropriate freeboards for residential development.
- (c) To ensure that development is appropriately sited having regard to potential flood risks.

#### **5.1.2 Development Controls**

- 1 The submission of a flood study is required where the land is suspected to be affected by flooding or the proposed development could impact on flood behaviour. All development must comply with Floodplain Management chapter contained in Part E of this DCP, with appropriate freeboards for residential development.

### **5.2 Land Re-Shaping Works (Cut and Fill Earthworks)**

#### **5.2.1 Objectives**

- (a) To encourage development which follows the natural contours of the land, to minimise the extent of cut and fill required on a site.
- (b) To ensure that building design is appropriate for site conditions.
- (c) To protect the stability and privacy of adjoining properties.

#### **5.2.2 Development Controls**

1. All land re-shaping (cut and fill earthworks) shall be minimised.
2. A maximum of 600mm of cut and/or 600mm of fill will generally be permitted.
3. Excavations in excess of 600mm within the confines of the building may be permitted to allow for basement garages, non-habitable rooms or similar construction.
4. Where walls are designed as retaining walls, waterproofing and drainage details, to direct water away from the building, must be submitted to Council.
5. Proposed cut or fill must not compromise structures on the subject land or adjacent land or the overall stability of the land.
6. Further, any cut or fill must not impede the drainage characteristics of adjoining land and must not interfere with neighbouring properties or existing vegetation which is required to be retained.

7. Battered slopes must be graded at no steeper than 1:2 (vertical: horizontal), to the natural ground level, unless the foundation strata of the area permits otherwise and Council is satisfied with the overall stability of the ground. A slope of 1:4 is recommended for mowing purposes.
8. All fill applied should be Virgin Excavated Natural Material (VENM) as defined by the NSW Department of Environment and Climate Change.
9. Adequate measures must be made to ensure public safety, especially where excavation is located close to a public place or where it exceeds one metre in depth.
10. Stormwater must not be redirected or concentrated onto adjoining properties so as to cause a nuisance.
11. Within areas of landslip or suspected landslip, Council may require a geotechnical and structural engineer's report relating to the proposed structure. Council will assess the stability of any cut or fill within these areas dependent upon the recommendations contained in these reports.

## 5.3 Retaining Walls

### 5.3.1 Objectives

- (a) To ensure that retaining walls are structurally sound and are located to minimise any adverse impact on adjoining properties.
- (b) To guide the design and construction of low height aesthetically pleasing retaining walls.
- (c) To ensure slope stabilisation techniques are implemented to preserve and enhance the natural features and characteristics of the site.

### 5.3.2 Development Controls

1. Schedule 2 of Wollongong LEP 2009 identifies retaining walls that do not require Council approval subject to the requirements of clause 3.1 of the LEP.
2. Within areas of landslip and suspected landslip Council may require a report prepared by a suitably qualified geotechnical and structural engineer relating to the proposed retaining wall. Council will assess the suitability of any retaining within these areas dependent upon the recommendations contained in these reports.
3. Applications for retaining walls which exceed 1.0 metre in height must be accompanied by certification provided by a suitably qualified practising structural engineer and/or the manufacturer's specification of the design of the wall.
4. To limit the overall height impact, terracing of retaining walls is required, to limit the maximum vertical rise of a retaining wall to 1.0m, with a minimum horizontal setback of 1.0m.
5. Applicants proposing retaining walls of a vertical height exceeding 1.0m in any one vertical rise must demonstrate compliance with the above objectives.
6. Ballustrading will be required in accordance with the *Building Code of Australia*, to ensure the safety of the public, where the retaining wall adjoins a public place and where a person could fall more than one metre.
7. The height and design of any proposed fence on top of the retaining wall must be included in the consideration of the height of the retaining wall. Applicants proposing fences on retaining walls must demonstrate compliance with the above objectives.

8. Open window face type retaining walls must not be permitted within 1.5 metres of an adjoining property boundary. These include crib block and similar type walls that permit the free flow of solid material through the wall.
9. The maximum height of a retaining wall in any one vertical rise and which is located within 3m of the adjoining boundary is 600mm. Additionally:
  - (a) All components, including footings and agricultural lines must be wholly contained within the property.
  - (b) Retaining walls are to be constructed so as not to prevent the natural flow of stormwater runoff.
10. Adequate provision must be made for the proper disposal of surface and subsurface drainage associated with the erection of the walls. The method of disposal must be approved by Council and could include:
  - (a) The connection of sub-surface drainage from the retaining wall to the street gutter.
  - (b) Disposal via properly constructed absorption trenches on the property containing the retaining wall in accordance with Council's Fact Sheet on Domestic Stormwater Drainage Systems.
  - (c) Disposal via piped or channelled drainage easement.
  - (d) Other means as determined by Council.
11. All surface and sub-surface drainage must not discharge directly onto other adjoining properties unless a drainage easement has been created. Council's Fact Sheet on Retaining Walls provides further information regarding the construction of retaining walls.

## **5.4 Soil Erosion and Sediment Control**

### **5.4.1 Objectives**

- (a) To minimise site disturbance during construction.
- (b) To implement erosion and sediment controls to minimise potential adverse impacts during construction works.

### **5.4.2 Development Controls**

1. All soil erosion and sediment control measures shall comply with Soil Erosion and Sediment Control chapter in Part E of the DCP.

## **5.5 Fences**

### **5.5.1 Objectives**

- (a) To allow for the physical separation of properties for resident privacy.
- (b) To ensure that the design, heights and materials of fencing are appropriately selected.
- (c) Fencing design and location should aim to complement the building design and enhance the streetscape.

- (d) To ensure that the design allows for casual surveillance of the lot.
- (e) To ensure that clear lines of sight are maintained for motorists and pedestrians to and from the lot.

### **5.5.2 Development Controls**

1. All fences are to be constructed to allow the natural flow of stormwater drainage or runoff. Fences must not significantly obstruct the free flow of floodwaters and must be constructed so as to remain safe during floods and not obstruct moving debris. Fences must not be constructed of second hand materials without the consent of Council.
2. Fences within the front and secondary building lines should be predominantly constructed in transparent fence materials, allowing visual connection between the dwelling and the street.
3. Fences within the front setback area from the primary road frontage are to be a maximum 1.2m in height. Front fences must be of a height and/or design to allow for passive surveillance of the street.
4. Side fences on corner blocks shall be a maximum of 1.2m in height within the front setback area from the primary road frontage and shall be a maximum of 1.8m in height for the remainder of the secondary road frontage.
5. Dividing fences between the front building line and the rear property boundary must be a maximum of 1.8m in height.
6. Fences exceeding maximum permissible heights must be articulated and landscaped to soften their visual impact.
7. Fences must be constructed of timber, metal, lightweight materials or masonry.
8. The height and design of any proposed fence on top of a retaining wall must be included in the consideration of the height of the retaining wall.
9. When trees which are the subject of a tree preservation order are located in the location of a proposed fence, then the fence must be designed around the tree or an application made to Council for the removal of the tree.
10. Fences within a floodway or high-risk flood precinct are not permitted except for security/permeable/open style safety fences of a design approved by Council.

## **5.6 Access for People with a Disability**

### **5.6.1 General**

1. Refer to Access for People with a Disability Chapter in Part E of the DCP.

## **5.7 Services**

### **5.7.1 Objectives**

- (a) To encourage early consideration of servicing requirements, to ensure that all residential development can be appropriately serviced.

## 5.7.2 Development Controls

1. Applicants shall contact service authorities early in the planning stage to determine their requirements regarding conduits, contributions, layout plans, substations and other relevant details.
2. Consideration shall be given to the siting of any proposed substation during the design stage, to minimise its visual impact on the streetscape. Any required substation must not be located in a prominent position at the front of the property.
3. Water, sewerage, gas, underground electricity and telephone are to be provided to the proposed development by the developer in accordance with Council and servicing authority requirements.
4. Developments must be connected to a reticulated sewerage scheme.
5. Where a reticulated scheme is not available, an on-site sewage management system will be required in accordance with the On-site Sewage Management System chapter in Part E of the DCP. The full details of the proposed on-site sewage management system must be provided with the Development Application. A section 68 approval will also be required under the *Local Government Act 1993* in these instances.

## 5.8 Swimming Pools

### 5.8.1 Objectives

- (a) To ensure that swimming pools meet relevant safety standards and meet user needs whilst not compromising the amenity of the residential neighbourhood.

### 5.8.2 Development Controls

1. Swimming pools for private use within a mixed use development must be located on land:
  - a) That contains an existing dwelling or a dwelling is constructed on the land at the same time the swimming pool is constructed; and
  - b) Behind the front building line.
2. A swimming pool must not be located:
  - a) Over an easement or restricted building zone;
  - b) Within a zone of influence of a public sewer main;
  - c) Within a zone of influence of a public drainage pipe; orWithout appropriate approval by Council
3. The swimming pool water line must have a setback of at least 900mm from a side or rear boundary.
4. Decking around a swimming pool must not be more than 600mm above ground level (existing).
5. Coping around a swimming pool must not be more than:
  - a) 1.4m above ground level (existing), and
  - b) 300mm wide if the coping is more than 600mm above ground level (existing).
6. Water from paved areas must not be discharged to any watercourse.

7. Overflow paths must be provided to allow for surface flows of water in paving areas around the pool and shall not be directed or connected at any point onto the adjoining property.
8. Discharge and/or overflow pipe(s) from the swimming pool and filtration unit are:
  - a) To be discharged in accordance with an approval under the *Local Government Act 1993* if the lot is not connected to a sewer main.
  - b) Not to discharge water to any watercourse.
9. Pool excavations are not to conflict with the position of the household drainage trenches or lines, the position of which must be ascertained and shown on the site plan before pool excavation commences.
10. A swimming pool must be surrounded by a child resistant barrier complying with the requirements of the *Swimming Pools Act 1992* (and Regulations) and the appropriate Australian Standard as referenced by the *Building Code of Australia*.
11. A minimum of 50% of the perimeter of a pool must be accessible for rescue purposes.
12. Structures such as tool sheds, garages, barbeques, clotheslines or other like structures must be located outside the fenced pool enclosure.

## 5.9 Fire Brigade Servicing

### 5.9.1 Objectives

- (a) To ensure that all mixed use developments can be serviced by fire fighting vehicles.

### 5.9.2 Development Controls

1. All mixed use developments must be located within 60m of a fire hydrant, or the required distance as required by Australian Standard AS2419.1. Provision must be made so that NSW Fire Brigade vehicles can enter and leave the site in a forward direction where:
  - (a) NSW Fire Brigade cannot park their vehicles within the road reserve due to the distance of hydrants from dwellings and/or restricted vehicular access to hydrants; and
  - (b) The site has an access driveway longer than 15m.
2. For developments where a fire brigade vehicle is required to access the site, vehicular access, egress and manoeuvring must be provided on the site in accordance with the NSW Fire Brigades *Code of Practice – Building Construction - NSWFB Vehicle Requirements*.

## 5.10 Site Facilities

### 5.10.1 Objectives

- (a) To ensure that site facilities (such as clothes drying, mail boxes, recycling and garbage disposal units/areas, screens, lighting, storage areas, air conditioning units and communication structures) are effectively integrated into the development and are unobtrusive.
- (b) To design site services and facilities in a manner such that they relate to the development, enable easy access, require minimal maintenance and blend with the development.

### 5.10.2 Development Controls

1. Provide letterboxes for all mixed use developments in a location, which are accessible.



2. Letterboxes should be grouped in one location adjacent to the main entrance to the development. Letterboxes must be secure and large enough to accommodate articles such as newspapers. Letterboxes should be integrated into a wall where possible and be constructed of materials that are aligned with the appearance of the building.
3. Locate satellite dish telecommunication antennae, air conditioning units and any ancillary structures:
  - (a) Away from the street frontage;
  - (b) In a position where such facilities will not become a skyline feature at the top of any building; and
  - (c) Adequately setback from the perimeter wall or roof edge of buildings.
4. All residential apartments within a mixed use development must be provided with open air clothes drying facilities that are easily accessible and which are screened from the public domain and communal open spaces. Clothes drying areas must have a high degree of solar access. Clothes drying areas must not be located between the building line and a public road or accessway, unless adequately screened.
5. Air conditioning units shall be located so that they are not visible from the street or other public places.

## 5.11 Storage Facilities

### 5.11.1 Objective

- (a) To provide accessible storage for larger household items which cannot be readily accommodated within dwellings.

### 5.11.2 Development Controls

1. For each dwelling within a mixed use building provide a secure space to be set aside exclusively for storage as part of the basement. The storage area must comply with the following requirements:

Dwelling	Storage Area	Storage Volume
One bedroom apartments	3m <sup>2</sup>	6m <sup>3</sup>
Two bedroom apartments	4m <sup>2</sup>	8m <sup>3</sup>
Three or more bedroom apartments	5m <sup>2</sup>	10m <sup>3</sup>

## 5.12 Waste Management

### 5.12.1 Objectives

- (a) To minimise the volume of waste generated during relevant demolition and construction phases of development, through reuse and recycling and the efficient selection and use of resources.
- (b) To encourage development which facilitates waste minimisation and complements waste services offered by a private waste and recycling contractors.

- (c) To maximise reuse and recycling of building materials and commercial office / retail waste.
- (d) To provide appropriately located, sized and accessible waste and recycling storage facilities.
- (e) To ensure sustainable waste management practices are implemented through the preparation of a site waste minimisation and management plan at the Development Application stage.

#### **5.12.2 Development Controls**

1. All mixed use developments shall address all of the requirements contained in Chapter E7: Waste Management in Part E of the DCP.
2. All mixed use developments shall provide suitable garbage and waste recycling facilities in accordance with the Chapter E7: Waste Management in the DCP.
3. The garbage and recycling facilities shall be designed to be serviced by an appropriate waste contractor as per the design requirements contained in the Waste Management chapter.



Part B – Land Use Based Controls

## Chapter B5: Industrial Development

### Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>	<b>11</b>	<b>MOTOR VEHICLE REPAIR WORKSHOPS</b>	<b>16</b>
<b>2</b>	<b>OBJECTIVES</b>	<b>1</b>	11.1	Objectives	16
<b>3</b>	<b>factory / WAREHOUSE DISTRIBUTION centre BUILDING DESIGN REQUIREMENTS</b>		11.2	Development Controls	16
3.1	Building Setbacks	<b>2</b>	<b>12</b>	<b>FENCING</b>	<b>17</b>
<b>4</b>	<b>Building Design / Façade Treatment</b>	<b>2</b>	12.1	Objectives	17
<b>5</b>	<b>SAFETY AND SECURITY</b>	<b>3</b>	12.2	Development Controls	17
5.1	Objectives	<b>5</b>	<b>13</b>	<b>USE OF FACTORY / WAREHOUSE UNITS</b>	<b>18</b>
5.2	Development Controls	6	13.1	Objective	18
<b>6</b>	<b>CARPARKING REQUIREMENTS</b>	6	13.2	Development Control	18
6.1	Objectives	<b>6</b>	<b>14</b>	<b>ABRASIVE BLASTING INDUSTRY</b>	<b>18</b>
6.2	Development Controls	6	14.1	General	18
<b>7</b>	<b>LOADING DOCK FACILITIES, VEHICULAR ACCESS AND MANOEUVRING REQUIREMENTS</b>	7	14.2	Objectives	18
7.1	Objectives	<b>7</b>	14.3	Development Controls	19
7.2	Development Controls	<b>8</b>	<b>15</b>	<b>INDUSTRIAL DEVELOPMENT ADJOINING A RESIDENTIAL ZONE</b>	<b>21</b>
<b>8</b>	<b>LANDSCAPING REQUIREMENTS</b>	8	15.1	Objectives	21
8.1	Objectives	8	15.2	Development Controls	21
8.2	Development Controls	<b>9</b>	<b>16</b>	<b>RETAILING IN INDUSTRIAL AREAS</b>	<b>22</b>
<b>9</b>	<b>OUTDOOR STORAGE AREAS</b>	9	16.1	Neighbourhood Shops	22
9.1	Objectives	9	16.2	Take –away food and drink premises	23
9.2	Development Controls	<b>15</b>	16.3	Kiosks	23
<b>10</b>	<b>SHIPPING CONTAINER STORAGE FACILITIES</b>	15		<b>YALLAH INDUSTRIAL ESTATE</b>	<b>24</b>
10.1	Objectives	15	<b>17</b>	<b>24</b>	
10.2	Development Controls	15	17.1	Development Controls	24
		<b>16</b>	<b>18</b>	<b>JARDINE STREET INDUSTRIAL ESTATE</b>	<b>24</b>
			18.1	Development Controls	24

<b>19</b>	<b>ADVERTISING STRUCTURES / SIGNS</b>	<b>25</b>
19.1	Development Controls	25
<b>20</b>	<b>STORMWATER DRAINAGE REQUIREMENTS &amp; FLOOD STUDY REQUIREMENTS</b>	<b>25</b>
20.1	Objectives	25
20.2	Development Controls	25
<b>21</b>	<b>RIPARIAN CORRIDOR MANAGEMENT</b>	<b>26</b>
21.1	Development Controls	26
<b>22</b>	<b>UTILITY INFRASTRUCTURE SERVICES</b>	<b>26</b>
22.1	Development Controls	26
<b>23</b>	<b>SUBDIVISION OF INDUSTRIAL LAND</b>	<b>27</b>
23.1	Development Controls	27
<b>24</b>	<b>ROAD DESIGN &amp; CONSTRUCTION REQUIREMENTS - ROAD TYPES AND CHARACTERISTICS FOR PUBLIC ROADS</b>	<b>27</b>
24.1	Road infrastructure construction works	29
<b>25</b>	<b>RESTRICTED ACCESS TO ARTERIAL OR SUB-ARTERIAL ROADS</b>	<b>29</b>
25.1	General	29
25.2	Creation of legal restrictions prohibiting direct access to designated roads (arterial or sub-arterial roads)	29
25.3	Temporary access to designated roads (arterial or sub-arterial roads)	30
<b>26</b>	<b>STREET LIGHTING</b>	<b>30</b>
<b>27</b>	<b>STRATA SUBDIVISION OF MULTI-UNIT FACTORY / WAREHOUSE DISTRIBUTION CENTRE COMPLEXES</b>	<b>30</b>
27.1	Development Controls	30

## 1 INTRODUCTION

1. This chapter of the DCP provides the objectives and detailed controls for the subdivision of industrial land and industrial development and should be read in conjunction with the relevant LEP applying to the subject site..
2. This chapter of the DCP applies to land zoned either: IN1 General Industry, IN2 Light Industrial, IN3 Heavy Industrial and IN4 Working Waterfront under the relevant LEP.
3. This chapter of the DCP also applies to any light industry or warehouse or distribution centre proposed upon land zoned B6 Enterprise Corridor.
4. It is also recommended that prospective applicant's also refer to the Subdivision Code which provides the detailed design and construction requirements for roads, stormwater drainage and other infrastructure works.

## 2 OBJECTIVES

1. The objectives of this chapter of the DCP are:
  - (a) To preserve core industrial lands to meet the current and future needs of the Illawarra Region.
  - (b) To minimise the fragmentation of land in industrial areas, particularly the Port Kembla heavy industrial area and the Unanderra industrial area to enable the future establishment of port related industries and large-scale warehouse distribution facilities.
  - (c) To accommodate industrial development which produces a range of goods and provides employment without adversely affecting the amenity, health or safety of any adjoining residential area.
  - (d) To encourage a high standard of aesthetically pleasing and functional industrial developments that sympathetically relate to adjoining and nearby developments.
  - (e) To encourage modern forms of general industrial, light industrial, warehousing, high technology and research and the like development within industrial areas of the City.
  - (f) To reduce the visual impact of industrial development on the streetscape and surrounding areas.
  - (g) To ensure open storage areas are properly screened to minimise any adverse visual effects of the development.
  - (h) To ensure that fencing and walls for security purposes have positive impacts on the streetscape and public domain areas.
  - (i) To encourage water sensitive urban design measures, wherever practicable and to ensure stormwater run-off is satisfactorily catered for.
  - (j) To ensure that employment premises incorporate the principles of Ecologically Sustainable Development.

### 3 FACTORY / WAREHOUSE DISTRIBUTION CENTRE BUILDING DESIGN REQUIREMENTS

#### 3.1 Building Setbacks

##### 3.1.1 Objectives

- (a) To enhance the visual quality of industrial development through appropriate setbacks together with appropriate building and landscape design, particularly when viewed from public roads and other public domain areas.
- (b) To minimise the visual impact of factory / warehouse distribution centre buildings upon the streetscape of the surrounding locality.
- (c) To create a pleasant environment within and external to the site.
- (d) To ensure satisfactory amenity and privacy levels are maintained for any adjoining sensitive land uses such as a residential land use.

##### 3.1.2 Development Controls

1. The minimum front building line setback for all buildings fronting a public road shall be in accordance with the following table:

**Table 1: Minimum Front Building Line Setbacks for Factory/ Warehouse Distribution Centre Buildings**

Road Classification	Minimum Front Building Line Setback (Primary Road Frontage)
Arterial Road	20 metres
Sub-Arterial Road	15 metres
Collector Road	10 metres
Local Road	7.5 metres

2. The minimum secondary road building line setback for all buildings on corner or dual frontage sites shall be in accordance with the following table:

**Table 2: Minimum Secondary Road Setbacks for Buildings on Corner or Dual Frontage Sites**

Road Classification	Minimum Building Line Setback for Secondary Road Frontage (Corner Lot or Dual Frontage Lot)
Arterial Road	7.5 metres
Sub-Arterial Road	5 metres
Collector Road	5 metres

Local Road

5 metres

## **4 BUILDING DESIGN / FAÇADE TREATMENT**

### **4.1.1 Objectives**

- (a) To achieve a high standard of industrial development by promoting visually attractive buildings and through the use of high quality external finishes.
- (b) To encourage a range of architectural design elements and innovative roof forms for industrial buildings, in order to improve the visual interest and attractiveness of such buildings.
- (c) To promote functional, safe and environmentally friendly industrial development.

### **4.1.2 Development Controls**

- 1. The external front façade of all buildings fronting public roads shall be of a high quality glass, decorative finished concrete or face brick construction. This external façade treatment shall incorporate a minimum 6 metre return around the sides of the building. Alternatively, colorbond wall materials may be used for up to 50% of the total front façade of the building with the remaining 50% of the façade being of a glass, decorative finished concrete or face brick construction.
- 2. The maximum reflectivity of any glazing shall not exceed 20%, in order to minimise any potential glare impacts.
- 3. The submission of a schedule of proposed external building materials and finishes is required with the Development Application.
- 4. Large unrelieved expanses of walls or building mass are required to be broken up through building articulation, vertical and horizontal modulation and / or alternative architectural enhancements, in order to provide visual interest to the building.
- 5. Other architectural elements or treatments may include (but are not limited to) the following:
  - (a) Varied building materials and external finishes on the building façade;
  - (b) Roof forms and parapets to create an interesting skyline;
  - (c) Vertical fin walls;
  - (d) Sun shading devices; and
  - (e) Public art works on the building and in front of the building.
- 6. Any proposed building on a dual road frontage lot will be required to be designed to incorporate varied architectural features for both road frontages with the building being orientated towards the major road frontage.
- 7. Buildings located on corner allotments shall be designed to address both street frontages in terms of façade treatment and articulation of the building and the roofline form. Any building on a corner lot must incorporate architectural corner features to add visual interest to the building.
- 8. Where blank walls on street frontages are unavoidable for new buildings, the building shall feature decorative wall elements and / or vertical fin elements to provide visual interest.

9. The placement of roller shutters, loading docks and other building openings shall wherever possible be provided at the rear or side of the building.
10. Showroom display areas, ancillary offices and other low – scale elements should be, wherever practicable, located at the front of the building and constructed of glass, decorative finished concrete or face brick materials.
11. The main entry to the building shall be easily identifiable from the road and directly accessible from the front of the building or driveway in the case of a multi-unit complex.
12. Large floor plate buildings must provide an open face to the public domain, especially at road level.
13. Buildings should incorporate decorative roof elements and avoid bulky roof forms.
14. Roofing materials should be constructed of low reflective materials and / or finishes wherever possible.
15. All roofing shall be provided with adequate guttering and downpipes which discharge to an open grated surface inlet pit for subsequent discharge to Council's stormwater drainage system or as part of a Water Sensitive Urban Design solution.
16. All rooftop or exposed structures including plant rooms, air conditioning, ventilation and exhaust systems are to be suitably screened and integrated with the building in order to guarantee an integrated appearance.
17. All building construction shall comply with the requirements of the Building Code of Australia and in particular, fire egress and fire safety requirements.
18. Natural lighting must be incorporated into the design for large-scale factory or warehouse distribution buildings.



**Figure 1: (Top Left: Warehouse distribution building with varied architectural elements, varied external finishes and ancillary offices located on the front façade of the building)**



**Figure 2: (Top Right: Factory / Warehouse distribution building with ancillary offices to the side of the building, providing strong vertical modulation and visual interest to the building)**





Figure 3: (Top Left: Two storey ancillary offices with strong vertical fin wall projections in front of a factory / warehouse building)



Figure 4: Top Right: Two storey ancillary offices on the front façade of a warehouse distribution building and vertical architectural elements along the building)



Figure 5: (Top Left: Factory / warehouse distribution building with horizontal colour banding on the building elevations with advertising signage matching the key vertical front façade element)



Figure 6: (Top Right: Warehouse distribution building with two-storey ancillary offices on the front facade)

## 5 ENERGY AND WATER EFFICIENCY

### 5.1.1 Objectives

- (a) Encourage development that achieves the principles of ecological sustainable development.
- (b) Ensure development incorporates passive solar design principles, energy and water efficiency and conservation and opportunities for natural ventilation.

### 5.1.2 Development Controls

1. The following energy efficiency measures are to be employed as a minimum as part of any development application.
  - (a) designing heating/cooling systems to target only those spaces which require heating or cooling, not the whole building.
  - (b) Reduce reliance on artificial lighting by incorporating natural light. Sectioning lighting throughout the development to cater for current and future business needs.
  - (c) appliances and products (e.g. fridges, computers, dishwashers) achieve a minimum 4 stars on the energy rating label.
2. The following water saving measures shall be incorporated in all industrial developments.

(a) A rainwater tank is to be installed onsite and sited to enable easy maintenance and cleaning. The rainwater tank is to be fitted with a first flush device and may be used for watering landscaped areas. Where possible, rainwater should supply toilets in the development.

(b) Water fixtures and appliances (dishwashers, shower heads, taps, toilets, urinals etc) are to be 3.5 stars or better rated.

(c) Select water efficient plants and/or, indigenous vegetation for use in landscaped areas.

Alternatives to the above water savings methods can be presented to Council and they will be assessed on merit.

## 6 SAFETY AND SECURITY

### 6.1 Objectives

- (a) To encourage appropriate natural surveillance and sightlines, in order to minimise potential crime risks within sites and the surrounding industrial areas.
- (b) To provide unimpeded sight lines, particularly along pedestrian pathways from public roads and car parking areas within the site.
- (c) To provide adequate lighting throughout the development site including lighting between building entrance points and car parking areas in accordance with Crime Prevention through Environmental Design (CPTED) principles.

### 6.2 Development Controls

#### 6.2.1 Entrances and natural surveillance

- 1. The front door to a building should face the road, wherever possible.
- 2. Any administration offices or showrooms must be located at the front of the building with windows facing the public road.
- 3. The street number of the building must be visible from the road to allow visitors and emergency service vehicles to easily identify the building.
- 4. Lighting (including bollard lighting) should be provided to the external entry path and the car parking area using vandal resistant light fixtures.
- 5. Lighting design should address the principles of Crime Prevention through Environmental Design (CPTED).
- 6. Compliance with the requirements of Chapter E2: Crime Prevention through Environmental Design (CPTED) in this DCP.

## 7 CARPARKING REQUIREMENTS

### 7.1 Objectives

- (a) To ensure adequate provision is made for on-site car parking for employee's and visitor's vehicles.

- (b) To encourage the provision of car parking areas that are integrated with the form and arrangement of buildings on-site.
- (c) To provide disabled car parking in accordance with the Access part of this DCP and the relevant Australian Standard.
- (d) To ensure car parking areas are attractive by requiring landscaping of all car parking areas.
- (e) To ensure opportunities for cycling to work are provided by encouraging the provision of bicycle parking areas and associated facilities within industrial developments.
- (f) To ensure car parking areas are integrated with the landscape design of the development site, in order to screen the car parking from the public road frontage as much as possible.

## 7.2 Development Controls

1. Car parking is to be provided in accordance with the requirements of the Car Parking, Access, Servicing / Loading Facilities and Traffic Management chapter in Part E of this DCP.
2. All car parking required by Council shall be provided 100% on-site.
3. The use of stacked car parking spaces is generally not permitted, except where the development is for a purpose built facility and the proponent can provide appropriate evidence that any stacked car parking spaces will be used only by employees and that appropriate documentary evidence is provided which outlines the management procedures that will be put in place by the specific organisation to guarantee the effective use of any stacked parking arrangement.
4. All developments shall provide a minimum of one (1) disabled car parking space which is clearly marked and located in close proximity to the main entrance to the building. For developments involving 50 or more car parking spaces, at least 2% or part thereof of these spaces shall be dedicated as disabled car parking spaces and located in close proximity to the main entrance to the building.
5. All car parking areas including access roadways shall be constructed of hard-standing, all weather-material with parking bays and manoeuvring areas clearly line marked.
6. The provision of bicycles is required in accordance with requirements of the Car Parking, Access, Servicing / Loading Facilities and Traffic Management chapter in Part E of this DCP and should be designed to encourage increased use of bicycles as a means of transportation to the workplace. The provision of bicycle storage facilities and showering / change rooms for staff is required to be shown on the architectural plans submitted with the Development Application.



Figure 7: Landscaping within car park providing shading for vehicles and visual relief of car parking areas.

## 8 LOADING DOCK FACILITIES, VEHICULAR ACCESS AND MANOEUVRING REQUIREMENTS

### 8.1 Objectives

- (a) To ensure that loading facilities required in association with factory or warehouse distribution centre developments do not detract from the amenity of adjoining land uses or public open space areas.
- (b) To ensure that adequate areas are set aside on the site to allow for the safe and efficient manoeuvring of delivery and service vehicles.
- (c) To ensure truck access and manoeuvring on site is safe and efficient and minimises any potential vehicular and / or pedestrian conflicts.
- (d) To ensure traffic circulation arrangements within the site are compatible with the local road system by implementing appropriate controls on the ingress and egress to / from sites.

### 8.2 Development Controls

- 1. Servicing and loading dock facilities shall be provided in accordance with the Car Parking, Access, Servicing / Loading Facilities and Traffic Management chapter in Part E of the DCP.
- 2. Each factory building / unit shall provide a suitable loading bay facility which is designed to accommodate a large rigid truck. However, buildings with a gross floor area of greater than 3,000 square metres shall provide loading dock facilities and manoeuvring areas capable of accommodating both semi-trailers and large rigid trucks.
- 3. Each factory / warehouse distribution centre unit shall be provided with a suitable loading bay external to the factory / warehouse building.
- 4. All loading and unloading activities shall take place wholly within the loading bay, at all times. No loading or unloading activity shall take place within any car parking area, landscaping area, pedestrian footway or any road reserve.
- 5. Loading docks shall be located so they are not visible from any adjoining residential area and do not transmit excessive noise onto any adjoining residential area.
- 6. Loading docks shall be positioned wherever possible, away from the public road frontage. Where such facilities can only be provided to the public frontage, appropriate landscaping will be required in front of the loading facility to adequately screen the development.
- 7. All loading dock facilities must guarantee satisfactory on-site manoeuvring areas for trucks in accordance with the Australian Standard AS 2890.2 Design Vehicular and Turning templates.  
  
Note: Council will assess the adequacy of proposed manoeuvring areas provided for on-site truck manoeuvring with reference to the standard vehicle turning templates as per the Australian Standard AS 2890.2 Design Vehicular and Turning templates.
- 8. All developments must be designed to ensure that the standard truck for each building / unit is able to complete a semi-circular turn on the site, in order to guarantee that all truck movements into / from the site are in a forward direction.
- 9. Truck turning circles shall not encroach upon any building, car parking space or landscaped area.

10. Access arrangements should be designed in accordance with the NSW Roads & Traffic Authority's Traffic Generating Guidelines and Australian Standard AS 2890.1 (2004). However, it is desirable that separate access arrangements be made available for standard passenger vehicles and trucks upon the development site, in order to minimise potential vehicular conflicts.
11. All internal two-way access roads shall have a minimum width of 7 metres. Lesser widths may be provided if the internal road system is designed to a single one-way circulation arrangement within the site including any loading dock facilities. Directional signage shall be shown on all internal roadways (where required) to facilitate the orderly movement of trucks and other vehicles within the site.
12. As per the provisions of C2.4 of the Building Code of Australia, emergency vehicular access must be provided from a public road. In this respect, the internal access road must have an unobstructed 6 metre width with no part of the building being more than 18 metres away from the access road. The minimum 6 metre wide access road shall be reserved for vehicular and pedestrian access only and not built upon or used for any other purpose.
13. All car parking areas, manoeuvring areas and internal roadways must be provided with a drainage system comprising surface inlet pits. Therefore, Council will require the lodgement of appropriate stormwater drainage layout plans and calculations for the proposed stormwater drainage system. The proposed stormwater drainage system must be designed in accordance with Council's requirements for stormwater drainage and on-site detention as per the Stormwater Management Chapter in Part E of this DCP.

## **9 LANDSCAPING REQUIREMENTS**

### **9.1 Objectives**

- (a) To use landscaping to improve the appearance of industrial developments.
- (b) To ensure that landscaping is provided to enhance the streetscape environment and amenity of industrial areas.
- (c) To screen unsightly land uses and outdoor storage areas.

### **9.2 Development Controls**

1. Landscaping is required to be integrated with the overall development and should be used to improve the streetscape appearance of industrial development and associated car parking and loading areas.
2. A minimum 10% of the site area is required to be landscaped. The majority of such landscaping should be provided within the front property building line setback area and the side property boundaries.
3. Where an existing site has less than 10% landscaping for the total site area, Council will seek to achieve the provision of 10% landscaping on any unused portion of the land or within surplus car parking areas.
4. The provision of dense landscaping within the front property boundary to public roads is required in order to visually soften the bulk of large developments when viewed from the public road.
5. A minimum 5 metre set back from the front boundary is to be provided for landscaping along the full length of the property with frontage to an arterial or sub- arterial road. A 3 metre minimum deep dense landscaped area is required along the full length of the property frontage to a

collector or local road. This area is to be a mulched planted area and must include trees planted at a minimum rate of one tree per 25m<sup>2</sup>.

6. Trees are to be planted at a rate of 1 tree per 10 car spaces. Tree species shall be selected to provide at least a 4 - 6 metre canopy spread at maturity. A minimum 1.5 metre wide landscape strip is required to be provided after every fifth parking space. Trees shall be a minimum 100 Litre size and shall be planted in minimum two (2) cubic metres of planting medium. Trees are to be protected by the use of such devices as bollards, kerbs and/or tree guards.
7. No structures, basement car parks, driveways, hard paving, are permitted within the landscaped setbacks.
8. Car parking areas which adjoin public roads or adjoining non – industrial land uses are to be visually screened by dense landscaping.
9. The planting of low shrubs to a maximum mature height of 1 metre is recommended along any pedestrian footpath area, in order to provide adequate pedestrian safety, particularly at night-time.
10. Parking and circulation areas are to be delineated by planter beds at the ends of parking bays.
11. Planter beds shall be a minimum width of 1.5 metres and shall be contained by a 150mm concrete kerb.
12. All car parking spaces shall contain concrete wheel stops.
13. Retaining wall heights are to be generally restricted up to a maximum height of 2.5m. Where walls exceed 2.5metres, the wall is to be terraced with a minimum 1.5m mulched planted area, which is to be planted with tall shrubs to provide adequate visual screening.
14. Pedestrian and vehicular movement is to be clearly separated by use of design devices such as change in paving, kerb, bollards, line marking. Pedestrian paths are to be minimum 1.5 metres in width.
15. Fencing forward of the front building alignment to be palisade type maximum height 1.8m. Gates where possible are to be sliding type gates, to prevent conflicts with access to and within the site.
16. An external shaded seating area for meal breaks is to be provided.
17. Contrasting paving is required at driveway thresholds. Large expanses of car parking are to be broken up by the use of contrasting paving.
18. Fire hydrants, electricity substations, sprinkler tanks and / or waste collection and storage facilities must not be located within the front landscaped area.
19. A fully automatic irrigation system is required in all car park planter beds. Tree root barriers should be installed around the edge of planter beds to reduce future maintenance.

### 9.2.1 Landscape Plan

1. The submission of a scaled and dimensioned Landscape Plan is required for all applications. This Landscape Plan must be prepared by a Landscape Architect or Designer with appropriate qualifications. A Landscape Architect is a person eligible for corporate membership of the Australian Institute of Landscape Architects. A Landscape Designer must be eligible for membership of the Australian Institute of Landscape Design and Management. The Landscape Plan, which is to be scaled at 1:100 or 1:200 must indicate:

- (a) Existing site information, north point, site boundaries, dimensions, trees and vegetation, including trees on neighbouring properties that will be effected by the development.
- (b) Proposed buildings/structures, underground/overhead services, easements, right-of-ways, roadways, car parks, footpaths.
- (c) Location of external building structures i.e. Retaining walls including levels on the top and bottom of the walls, fences, materials, heights and finishes.
- (d) Basic design levels to AHD of both hard and soft landscape areas including existing and proposed contours, spot heights, areas of cut and fill and finished levels.
- (e) Proposed surface treatment of all landscape areas (eg paving, driveways, mulched planted areas, edging, turf, water).
- (f) Each plant identified and catalogued in a plant schedule describing mature height and spread, quantity, proposed container size and staking. The plant schedule should be divided into trees, shrubs and ground covers.
- (g) Construction or detail drawings, sections and elevations for outdoor structures, garden beds and planting, paving, edging, tree protection and retaining walls.
- (h) Design details for special situations e.g. erosion, creek bank stabilisation.
- (i) Location and details of lighting.
- (j) Location of proposed drainage (both surface and sub-surface). The landscape and drainage plans must be compatible.
- (k) Specification notes for soil preparation, plant material, tree protection etc.
- (l) Details of minimum 12 months maintenance schedule.
- (m) Provide taps or an irrigation system to ensure that all landscape works are adequately watered, the location of which is to be included on the landscape plan.
- (n) Design measures to minimise crime risk including but not limited to: provision of external lighting to pathways, driveways and outdoor areas; shrubs higher than 1m to be setback from the edge of pathways; types of trees that have sufficiently high canopy when fully grown so that pedestrian vision is not impeded.

### 9.2.2 Arborist Report

1. An Arborist Report is required in relation to any significant tree on the subject site (other than an exempt tree) and trees on neighbouring properties that will be affected by the development, if it is 3 metres or more in height, or has a trunk diameter of 200mm or more at a height of 1 metre from the ground, or has a branch spread of 3 metres or more.
2. The Arborist Report is to be prepared by a qualified Arborist, which is a person who is eligible for membership as a 'Consulting Arborist' with the National Arborist Association of Australia or the Institute of Australian Consulting Arboriculturists, and who has attained a Level 5 Certificate of Horticulture / Arboriculture or equivalent. The report must identify trees on the site survey plan by number and provide details of the following:
  - (a) Genus and species of each tree;
  - (b) Health, amenity value and S.U.L.E. (Safe Useful Life Expectancy) rating of each tree;

- (c) Impact of the development on each tree;
  - (d) Impact of retaining trees on the proposed development;
  - (e) The Tree Protection Zone (TPZ) required for each tree proposed to be retained;
  - (f) Any root barriers necessary, type and their location; and
  - (g) Any branch or root pruning which may be required for the trees.
3. The following table, from British Standard BS5837 (1991), is provided as a guide to developers of suitable development setbacks from existing trees.

**Table 3: Protection of trees: minimum distances for protective fencing around trees**

Tree age	Tree vigour	Trunk dia. Mm	Min. distance m
Young (age less than 1/3 life expectancy)	Normal	<200	2.0
		200 to 400	3.0
		>400	4.0
Young	Low	<20	3.0
		200 to 400	4.5
		>400	6.0
Middle age (1/3 to 2/3's life expectancy)	Normal	<250	3.0
		250 to 500	4.5
		>500	6.0
Middle age	Low	<250	5.0
		250 to 500	7.5
		>500	10.0
Mature	Normal	<350	4.0
		350 to 750	6.0
		>750	8.0
Mature and over mature	Low	<350	6.0
		350 to 750	9.0
		>750	12.0

**Note 1:** It should be emphasised that this table relates to distances from the centre of tree to protective fencing. Other considerations, particularly the need to provide adequate space around the tree including allowances for future growth and also working space around the tree will usually indicate that the structure should be further away.



**Note 2:** With appropriate precautions, temporary site works can occur within the protected area e.g. for access or scaffolding.

4. Trees proposed for industrial sites are to be suitable species that fulfil the following criteria: medium sized, hardy, long lived, pollution resistant, drought resistant, not prone to failing or dropping limbs. In addition trees must be true to type, of good health and vigour, free from pests and disease, free from injury, be self supporting (tree must not be tied to stakes) and meet the NATSPEC criteria. Refer to Table 4. for NATSPEC criteria. and Table 5. for the schedule of suitable species for industrial zones.
5. Site landscaping must be integrated with the stormwater management controls. In particular, the location and nature of on site stormwater detention basins should not conflict with landscaping areas and objectives.
6. Existing trees on site and on adjacent properties are to be surveyed and accurately plotted with levels and extent of canopy. This information is to be indicated on the Landscape Plan and clearly show whether the trees are to be retained or removed. If the proposed development impacts on significant trees an Arborist Report must be submitted that has been completed by a qualified Arborist.
7. The developer is to provide street trees to street frontages of the development site. Trees to be minimum container size 100L and must be true to type, of good health and vigour, free from pests and disease, free from injury, be self supporting (tree must not be tied to stakes) and meet the following NATSPEC criteria in Table 4:

**Table 4: NATSPEC Criteria**

	Height (m)	Calliper (mm) 300mm above ground level	Minimum Rootball Diameter (mm)
Thin Stemmed 100L Tree	3	40	500
Thick Stemmed 100L Tree	2.5	50	500

8. Street trees to be planted in mulched, edged areas minimum dimensions 1.2m x 1.2m, including root control barriers to back of kerb and to foot path alignment, and a robust timber tree guard to protect tree from damage, or as per conditions of consent.
9. Suitable street trees for industrial areas in the Wollongong Local Government area can be obtained from Chapter E6 Landscaping in the DCP.



- ## Definitions

**S.U.L.E. – Safe Useful Life Expectancy** - The S.U.L.E. rating system, based on Barrell 2001, rates existing trees on their safe useful life expectancy, and are determined in view of both the current state of health and age of the tree.

**Tree** - Is a perennial plant with a self-supporting stem or trunk, when mature, and for the purpose of this DCP means any tree (other than an exempt tree) including the roots of that tree, if it is 3 metres or more in height, or has a trunk diameter of 200mm or more at a height of 1 metre from the ground, or has a branch spread of 3 metres or more.

**Tree Protection Zone** - The Tree Protection Zone (TPZ) defines the optimal distance from the trunk of a tree that should be maintained free of development and construction activity.

## 10 OUTDOOR STORAGE AREAS

### 10.1 Objectives

- (a) To ensure outdoor storage areas are appropriately accommodated on-site.
- (b) To minimise the visual impact of outdoor storage area on the streetscape of the locality.
- (c) To ensure open storage areas are properly screened to minimise any adverse visual effects of the development.

### 10.2 Development Controls

- 1. Where any storage area for raw materials or finished goods is proposed to be provided outside the confines of the building, full details of the storage area will require formal development consent.
- 2. All outdoor storage areas are to be positioned at the rear or side of buildings with no storage areas being permitted within the front setback area of either the primary street frontage or any secondary street frontage.
- 3. Outdoor storage areas shall be adequately screened from public view by a minimum 2 metre high masonry fence.
- 4. The maximum height of goods and materials stored within the storage area shall be restricted to no more than the height of the screening structure. However, Council may permit a variation from this requirement where Council is of the opinion, that: (i) the location and overall height of the goods and materials will not pose any adverse overshadowing, amenity or visual impact upon any adjoining sensitive land use such as residential development or (ii) the siting and overall height of the goods and materials will not pose any adverse amenity impact upon the public domain or upon streetscape in the immediate locality.

## 11 SHIPPING CONTAINER STORAGE FACILITIES

### 11.1 Objectives

- (a) To ensure that the storage of shipping containers does not cause any adverse visual impact upon the streetscape or amenity of the surrounding locality.
- (b) To ensure the storage of shipping containers is restricted to specific designated storage areas only within a site and that the storage areas are well screened from view from any road frontage or any abutting or nearby residential area.
- (c) To ensure all semi-trailer trucks and trailers carrying shipping containers are contained wholly within the confines of the subject site and not on any public road.

## 11.2 Development Controls

1. The storage of shipping containers shall take place within a designated storage area behind the front building line setback. The storage of shipping containers within the front setback area of a development is not permitted.
2. All shipping container storage areas shall be screened from view from any road frontage and from any adjoining residential area by landscaping or other form of screening to the satisfaction of Council.
3. All storage areas for shipping containers shall provide sufficient on-site truck manoeuvring areas, in order to ensure all trucks can enter and leave the site in a forward direction.
4. All shipping container storage areas shall be separate from truck manoeuvring / parking areas and employee car parking areas.
5. All trailers used for the carrying of shipping containers to / from the site (whether with or without prime movers) shall be prohibited from standing on any public road.
6. The stacking of shipping containers may be acceptable where it can be demonstrated that the overall height of the stacked shipping containers will not result in any adverse visual or amenity impact upon any adjoining land use. However, the stacking of shipping containers on sites adjoining residential areas will not be supported, except where such containers are situated a minimum distance of 20 metres from the common property boundary with the residential area and any such stacking of containers does not pose any adverse overshadowing, amenity or visual impact upon the adjoining residential property(s).
7. Any refrigerated shipping containers shall be located within a central part of the site, if the site abuts a residential area or is adjacent to a dwelling not associated with the development in which the refrigerated shipping container is stored.
8. Any weighbridge or control device shall be sited at least 30 metres from the site entrance, in order to prevent any queuing of container freight trucks on any public road.
9. All trucks carrying shipping containers shall travel along specified roads, at all times. Documentary evidence will be required to be provided in support of any Development Application outlining the proposed routes to / from the subject site.

## 12 MOTOR VEHICLE REPAIR WORKSHOPS

### 12.1 Objectives

- (a) To ensure that motor vehicle repair workshops provide satisfactory vehicle storage areas and parking facilities on-site; and
- (b) To minimise any environmental problems through the emission of odours, noise, material storage, overspray and liquid spillage.

### 12.2 Development Controls

1. All vehicles awaiting servicing, repair and / or collection are to be stored on approved parking bays only and are prohibited from standing or being stored on any designated visitor parking area, public open space area or the public road carriageway or footpath.
2. All work shall be confined wholly within the building. No work is to be carried out on motor vehicles in any car parking area or any public road.

3. Where spray painting is proposed, spray painting booths shall be provided to the requirements of Australian Standard AS 4114.
4. Spray painting shall be exhaust ventilated so that no odour is noticeable in any adjoining residential area.
5. A Trade Waste agreement is to be obtained from Sydney Water prior to the commencement of works for any waste water generated and to be discharged into Sydney Water's wastewater system.
6. Storage bins for scrap body panels and motor parts are to be provided. These bins are to be fully screened from any public road frontage and car parking area and must be emptied on a regular basis. The proposed location of storage bins shall be shown on the site plan accompanying a Development Application.
7. The car parking requirements for a motor vehicle repair operation shall be commensurate with the car parking requirements contained in this part of the DCP.
8. All vehicles including tow trucks are to enter and leave the site in a forward direction, at all times.

## **13 FENCING**

### **13.1 Objectives**

- (a) To ensure that fencing does not detract from the overall streetscape and visual amenity of the surrounding locality.
- (b) To provide appropriate security for the development and any outdoor storage areas.

### **13.2 Development Controls**

1. All fencing in industrial developments shall be constructed of palisade or decorative open style metal type fencing with a maximum 2.4 metre height.
2. The use of sheet metal fencing or chain wire fencing on the front property boundary is not permitted.
3. In cases where residential land uses abut the common side or rear property boundary, timber paling, colorbond or decorative masonry fencing may be permitted in order to provide appropriate visual relief to the residential property. A maximum 2.2 metre fence height (ie at any point) will be permitted along the common property boundary between an industrial site and an abutting residential property.
4. All front entry gates shall be constructed to swing inwards into the site or slide across the frontage, at all times.
5. Masonry retaining walls along the street frontage shall be restricted to 600mm in height. Palisade or other decorative open metal type fencing may be erected on top of the masonry wall provided the total height of the masonry wall and fence is a maximum 2.4 metres in height.



Figure 9: Palisade fencing

## 14 USE OF FACTORY / WAREHOUSE UNITS

### 14.1 Objective

- (a) To ensure that appropriate assessment is made upfront to ensure the proposed fit-out and use of the relevant factory unit or warehouse unit takes into account relevant fire safety and Building Code of Australia (BCA) requirements.

### 14.2 Development Control

1. Under certain circumstances, separate development consent may be required for the initial occupancy or change of use of a factory unit or warehouse unit. Applicants are recommended to contact the Duty Building Surveyor in the Customer Service Centre, to provide advice as to whether formal development consent is required for their intended use and / or whether an upgrading of the building is likely to be necessary to ensure BCA and fire safety compliance.

## 15 ABRASIVE BLASTING INDUSTRY

### 15.1 General

1. Abrasive blasting is used in a wide range of industries for many different purposes including the removal of rust, scale, paint, graffiti, mildew, and various forms of surface preparation. Abrasive material is propelled on to the surface at high speed, using air pressure, water pressure, or centrifugal force.
2. The most common method of abrasive blasting uses compressed air to propel abrasive material from a blast pot, through a blasting hose to a nozzle that is manually controlled by the operator. Blasting is done in commercially built blast rooms, blasting yards, or inside temporary enclosures erected on-site. Other methods use wet abrasive blasting or water jetting with or without an abrasive. Automated abrasive blasting machines such as centrifugal wheel systems and tumblers are also occasionally used.

### 15.2 Objectives

- (a) To encourage abrasive blasting within fully enclosed booths with venting to the atmosphere via an appropriate dust collector filter, wherever possible.

- (b) To ensure all waste material collected from the site must be either gathered for reconstitution or disposed of at a site approved by the DECCW.
- (c) To ensure wet abrasive blasting activities are carried out at least 30 metres distance away from any other adjoining land use activity.

## 15.3 Development Controls

### 15.3.1 Abrasive Blasting Booth

1. Where possible all abrasive blast cleaning should be carried out in a totally enclosed booth vented to the atmosphere via a dust collector, preferably a fabric filter.
2. For an abrasive blast cleaning booth the following criteria should be complied with:-
  - (a) The fabric filter or dust collector should be properly designed and maintained. The Department of Environment, Climate Change and Water (DECCW) advises that the appropriate air to cloth ratio is 0.01 to 0.03 metres per second. However, different types of filters are available having variable air to cloth ratios. The most efficient filter for the particular application should be the goal.
  - (b) All particulate wastes generated by the blast cleaning should be removed from the booth and either re-used or transported from the site without causing any visible emissions;
  - (c) Spent filters should be bagged or contained before disposal;
  - (d) The condition of the fabric filters should be monitored by assessing emission levels so that they are replaced before their efficiency is reduced.
  - (e) The booth should be designed to enable continuous or frequent recovery of spent abrasive agent.
  - (f) Immediate action should be taken to rectify any problems causing any visible emissions from the abrasive blast cleaning work area or associated operations;
  - (g) The residual concentration limits of particulate material in the air discharged to atmosphere from the booth after passing through the filter should not exceed 150 milligrams per cubic metre.

**Note:-** An emission level for particulate material has been proposed for the National Guidelines which is 100 milligrams per cubic metre using Best Practicable Technology (BPT).

3. All waste material collected from the site must be either gathered for reconstitution or disposed of at a site approved by the DECCW. (Whytes Gully Waste Disposal Depot has been approved for this purpose subject to the waste being properly contained and placed at the disposal site in a manner that controls dust emissions).

### 15.3.2 Metal Plate and Sections Abrasive Blasting

1. Commercial units for the abrasive blast cleaning of metal plate or other solid sections are available with a plate or section cleaning machine. The cleaning machine should discharge to the atmosphere via a suitable fabric filter dust collector.

### 15.3.3 Wet Abrasive Cleaning

1. When it is impracticable to use a suction system, wet abrasive cleaning can be carried out provided that:-

- (a) A buffer distance of 30 metres or twice the height of the work platform, whichever is the greater, exists around the blast cleaning operation. A buffer distance of less than the above may be permitted if effective screens are used to prevent particulate emissions escaping from the site.
- (b) The blasting agent is thoroughly wetted to prevent a visible emission;
- (c) The waste material is removed before it is able to dry out and become airborne or can be washed away causing sedimentation in drains and watercourses or harm to the environment.
- (d) Special collection and treatment facilities will be required to be designed for wastes such as sodium chromate, sodium dichromate, potassium dichromate, sodium nitrate, chromic acid, hydrochloric acid or sodium bicarbonate solids.
- (e) All waste material must be disposed to an appropriate disposal site approved by the DECC. (Whytes Gully Waste Disposal Depot has been approved for this purpose subject to the waste being properly contained and placed at the disposal site in a manner that controls dust emissions).

#### 15.3.4 Outdoors Blast Cleaning

1. Outdoors blast cleaning operations should only be conducted where it is impractical to clean items in a booth or with a plate or section cleaning machine, e.g. items which are too large or too heavy to fit into a booth or which are existing fixed structures. In such cases all plant and equipment associated with the outdoor blasting operation should be located within a regulated area on site and appropriately sign posted.
2. Outdoors blast cleaning should preferably be carried out using a blasting gun or an airless applicator which extracts excess blasting agent together with any dust generated.
3. All outdoor blasting involving structures such as bridges or buildings should be totally enclosed or sections enclosed progressively such that no visible emissions escape to the environment. The air supply for the operator should be supplied via a hose from outside the enclosure and all waste material should be collected and disposed of appropriately. No waste material should be allowed to fall into rivers, creeks or storm water drains.
4. If the material being removed during blast cleaning contains toxic concentrations of substances such as lead, arsenic, chromium, etc., then advice should be sought about collection and disposal of the contaminated abrasive. If there is an inability to confirm that the material does not contain these substances, the material should be considered toxic and compliance with AS 1361.1-1995 is necessary.

#### 15.3.5 Surface Run-off Control

1. Pollution control devices should be provided on the site to control surface run-off whenever abrasive blasting operations are carried out external to an abrasive blasting booth.
2. The control may include site bunding that surrounds the area where particulate fallout is likely to occur. This bund should be graded towards a point that is directly attached to a pollution control pit/sedimentation pond.
3. This pollution control pit requires regular monitoring and regular maintenance to remove accumulated sludge.
4. All sludge must be disposed of at an appropriate disposal site approved by the DECCW.



## 16 INDUSTRIAL DEVELOPMENT ADJOINING A RESIDENTIAL ZONE

### 16.1 Objectives

- (a) To ensure any new industrial development is sympathetic with the streetscape character and amenity of an adjoining residential precinct.
- (b) To ameliorate any potential adverse amenity, noise, privacy or overshadowing impacts upon any adjoining or neighbouring residential development from any proposed new industrial building or proposed alterations and additions to an existing industrial building.

### 16.2 Development Controls

1. Where a new factory / warehouse distribution building abuts a residential zone, the front building line setback shall be in accordance with the minimum front setback requirements as listed in Table 1 of clause 3.1.2 in this chapter or the front building line setback of the adjoining residential development, whichever is the greater.
2. As per sub-clause 3.1.2(6), a minimum 3 metre side or rear building line setback is required for any industrial building abutting a residential zone. The setback distance for an industrial building shall be further increased by an additional one (1) metre for every additional metre, above 5 metres in building height. The setback area between the building and the common property boundary is to be densely planted with evergreen trees and shrubs which, at maturity, help screen the development from the adjoining residential precinct. The details of the proposed trees and shrub planting shall be reflected on the required Landscaping Plan and must be consistent with the Landscaping Chapter in Part E of this DCP.
3. The submission of shadow diagrams for hourly intervals between 9.00 am and 3.00 pm for the 21<sup>st</sup> June winter solstice period will be required for any new industrial building or alterations and additions to an existing industrial building abutting a residential zone or a dwelling not associated with the subject site which prove that at least all habitable living room windows in an adjoining dwelling and at least 50% of the rear private courtyard area of an adjoining residential property receive at least 3 hours of direct sunlight between 9.00 am and 3.00 pm on the 21<sup>st</sup> June winter solstice period.
4. Sources of noise such as garbage collection, deliveries, plant and machinery, parking areas and air conditioning plants should be sited away from adjoining residential properties, wherever practicable or where necessary, screened by walls or other acoustical treatment.
5. Loading/ unloading areas should be located so they are not visible from any adjoining residential area and do not transmit any excessive noise onto any abutting residential development. The submission of a noise impact assessment report may be required with the Development Application where loading / unloading facilities are proposed to be positioned in proximity to any adjoining noise sensitive land use such as residential dwellings and educational establishments.
6. Noise emissions from the operation of an industrial premises must not exceed an LA10<sub>T(15 minute)</sub> noise emissions criteria of 45dB(A) during the day (7.00 am and 6.00 pm), when measured at the common boundary property boundary with the nearest residential property.

#### Note

LA10<sub>T(15 minute)</sub> is the sound pressure level that is exceeded for 10% of the time when measured over a 15 minute period.

For the purpose of noise measures required the LA10 noise level must be measured or computed at any point described above over a period of 15 minutes using “FAST” response on the sound level meter.

For the purpose of the noise criteria for this section, 5dB(A) must be added to the measured level if the noise is substantially tonal or impulsive in character. The location or point of impact can be different for each development, for example, at the closest residential receiver or at the closest boundary of the development.

The noise emission limits identified apply for prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

- (a) Documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;
  - (b) Where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversion conditions should be developed and implemented.
7. The hours of operation for any industrial development adjoining a residential zone will generally be restricted to between 7.00 am and 6.00 pm Mondays to Fridays and 7.00 am to 1.00 pm Saturdays with no activities or work permitted on Sundays and / or Public Holidays.
8. Council may consider a variation to the general hours of operation referred to in sub-clause 6 where a Development Application is supported by a Noise Impact Assessment report. The report shall be prepared by a suitably qualified and experienced consultant who is a member of the Australian Acoustical Society (AAS) or the Australian Association of Acoustical Consultants (AAAC). The report should identify all potential noise sources / activities including plant and equipment, garbage collection, loading / unloading deliveries etc.

For Council to consider any variation to the standard hours of the operation, the report must prove that the LA10 <sup>T(15 minute)</sup> maximum average noise emission level for the development (inclusive of all potential noise generating sources / activities) will be no more than 5dB(A) above the LA90 background noise emission level throughout the evening and night-time periods, when measured at the common property boundary with the nearest residential property.

## 17 RETAILING IN INDUSTRIAL AREAS

### 17.1 Neighbourhood Shops

#### 17.1.1 Objectives

- (a) To encourage small neighbourhood shops which provide for the daily convenience needs of people who live or work in the surrounding industrial estate.
- (b) To limit the location, number and size of small neighbourhood shops within an industrial estate to maintain the role and character of the industrial area by primarily catering for industrial development and to maintain the viability of any existing or approved neighbourhood shop in the industrial area.

#### 17.1.2 Development Controls

- 1. Any proposed neighbourhood shop must be limited to the retail sale of small daily convenience goods such as foodstuffs, drinks, personal care products, newspapers and the like which provide for the daily needs of people who live or work in the local industrial estate.

2. A neighbourhood shop must be restricted to a maximum gross floor area (GFA) of 100m<sup>2</sup>, to ensure that the shop primarily caters for the daily convenience needs of people who live or work in the subject local industrial estate and to ensure that the development does not cause any potential significant adverse effect upon the viability of a nearby business zone identified as per Council's adopted retail hierarchy strategy in Chapter B4 in this DCP.
3. A minimum 400 metre straight line separation distance is required between a proposed neighbourhood shop and any existing or approved neighbourhood shop or any neighbouring business zoned land.

## **17.2 Take –away food and drink premises**

### **17.2.1 Objectives**

- (a) To encourage small take away food and drink premises which primarily provide for the sale of food and / or drinks for immediate consumption away from the premises by people who live or work in the surrounding industrial estate.
- (b) To limit the location, number and size of take away food and drink premises within an industrial estate to maintain the role and character of the industrial area by primarily catering for industrial development and to maintain the viability of an existing or approved take away food and drink premises or kiosk in the industrial area or within a nearby business zone.

### **17.2.2 Development Controls**

1. Any proposed take away food and drink premises shall primarily provide for the retail sale of food and / or drinks for the immediate consumption away from the premises.
2. Any take away food and drink premises within an industrial area shall be restricted to a maximum gross floor area of 100m<sup>2</sup>.
3. A minimum 400 metre straight line separation distance is required between a proposed take away food and drink premises and any existing or approved take away food and drink premises or any neighbouring business zoned land.

## **17.3 Kiosks**

### **17.3.1 Objectives**

- (a) To encourage the establishment of kiosks which provide for the retail sale of food, light refreshments and other small convenience items to meet the daily convenience needs of people who live or work in a local industrial area.
- (b) To limit the location, number and size of kiosks within an industrial estate to maintain the role and character of the industrial area by primarily catering for industrial development and to maintain the viability of an existing or approved kiosk or takeaway food and drink premises.

### **17.3.2 Development Controls**

1. Any kiosk shall be restricted to the retail sale of food, light refreshments and other small daily convenience items such as newspapers and the like.
2. Any kiosk shall be restricted to a maximum gross floor area (GFA) of 30m<sup>2</sup>.
3. A minimum 400 metre straight line separation distance is required between a proposed kiosk and any existing or approved kiosk or takeaway food and drink premises or any nearby business zoned land.

## 18 YALLAH INDUSTRIAL ESTATE

### 18.1 Development Controls

#### 18.1.1 Building height

1. The Yallah Industrial Estate is within the flight path of the Illawarra Regional Airport. Therefore, no development is permitted to penetrate the Obstacle Limitation Surfaces for the Illawarra Regional Airport. Further information regarding the specific height restriction for development upon land within the Yallah Industrial estate should be obtained from Council.

#### 18.1.2 Floodlighting restrictions within flight path

1. Given that the majority of lands within the Yallah Industrial Estate are within the flight path of the Illawarra Regional Airport, the provision of floodlighting to industrial premises within the Yallah Industrial Estate is not permitted.

#### 18.1.3 Use of non-reflective building materials

1. Since the majority of lands within the Yallah Industrial Estate are within the flight path of the Illawarra Regional Airport, all building materials must be of a low-reflective finish. All external building materials / finishes must have a low level of reflectivity and hence, zincalume external materials and finishes will not be permitted.
2. The glass reflectivity of any building shall not exceed 20%.
3. The submission of a schedule of proposed external materials and finishes board and A4 sized colour photograph of the schedule of proposed external materials and finishes board is required to be submitted with any Development Application.

## 19 JARDINE STREET INDUSTRIAL ESTATE

### 19.1 Development Controls

1. Any proposed building on a lot adjoining residential properties shall be setback a distance equal to the height of the building, in order to avoid any potential overlooking or overshadowing problems. An absolute 3 metre minimum setback distance is required for the provision of a dense landscaping buffer screen and / or drainage purposes.
2. The provision of two (2) street trees per development site will be required to be planted within Council's footpath. The street trees shall be either:
  - (i) *Syzygium paniculatum* (where there are no electricity wires);
  - (ii) *Acmena smithii var minor* (where there are electricity wires); or
  - (iii) Native trees as listed in the Landscaping Section of this DCP and endorsed by Council's Infrastructure Division (Design & Technical Services Section).

Accordingly, applicants may wish to liaise with Council's Infrastructure Division (Design & Technical Services Section) to determine what street tree species should be planted within the footpath area.

## **20 ADVERTISING STRUCTURES / SIGNS**

### **20.1 Development Controls**

1. All advertising signage or structures for industrial developments shall be in accordance with the requirements of State Environmental Planning Policy No. 64 – Advertising and Signage (SEPP 64) and Chapter C1 Advertising Signage and Structures of this DCP.

## **21 STORMWATER DRAINAGE REQUIREMENTS & FLOOD STUDY REQUIREMENTS**

### **21.1 Objectives**

- (a) To provide for the effective and efficient disposal of stormwater run-off.
- (b) To minimise stormwater run-off from development sites, wherever possible.
- (c) To improve water quality of stormwater run-off from all industrial developments.
- (d) To ensure Water Sensitive Urban Design (WSUD) measures are incorporated into the design and construction of industrial developments.
- (e) To encourage the re-use and recycling of stormwater run-off and reduce the reliance on potable water by incorporating WSUD principles.
- (f) To ensure appropriate flood impact assessment is undertaken for sites subject to flood inundation.

### **21.2 Development Controls**

#### **21.2.1 Stormwater drainage & stormwater quality controls**

1. Water sensitive urban design treatment measures should be incorporated into the following developments:
  - (a) Industrial developments (including major alterations and additions to existing industrial buildings) involving a gross floor area of 4,000 square metres;
  - (b) Industrial subdivisions involving 5 or more proposed allotments or a site area of 4,000 square metres or more (whichever is the lesser);
  - (c) Warehouse distribution centre developments involving a gross floor area of 5,000 square metres or more.
2. Water sensitive urban design treatment measures shall be designed in accordance with the Water Sensitive Urban Design chapter in Part E of the DCP.
3. Stormwater including overland flows entering and discharging from the site must be satisfactorily managed. The site drainage network must provide the capacity to safely convey stormwater run-off resulting from design storm events.
4. All developments must provide for stormwater drainage and on-site detention in accordance with the requirements of Stormwater Management chapter in Part E of this DCP.

5. For sites which slope downwards away from the public road, the submission of documentary evidence is required from all relevant downstream property owners, which confirms that each property owner raises no objection to the discharge of stormwater by way of drainage pipelines through their properties to connect up with Council's stormwater drainage system. This documentary evidence must also confirm that each property owner has no objection to the creation of an easement covering the width of the drainage pipeline(s) on their respective property title(s).

### **21.2.2 Flood impact assessment**

1. Any development upon a site which is identified as "flood hazard – affected" on Council's Property system must also comply with the requirements of the Floodplain Management Chapter in Part E of the DCP and the NSW State Government's Floodplain Development Manual. In this respect, a flood study is likely to be required to be prepared and hence, applicants should consult with Council's Infrastructure Division to determine whether a flood study is required and the necessary content of any such study

## **22 RIPARIAN CORRIDOR MANAGEMENT**

### **22.1 Development Controls**

1. Any proposed industrial subdivision or factory / warehouse development involving waterfront land on, in or within 40 metres of any bed of a river, creek or intermittent watercourse, lake or estuary must comply with the requirements of Chapter E23 Riparian Corridor Management in this DCP.

## **23 UTILITY INFRASTRUCTURE SERVICES**

### **23.1 Development Controls**

1. Satisfactory arrangements are required for:
  - (a) The provision of reticulated water and sewerage;
  - (b) The provision of underground electricity; and
  - (c) The provision of underground telecommunications.
2. Applicants are encouraged to consult with Sydney Water, in order to ensure that all industrial allotments can be satisfactorily serviced with reticulated water and sewerage.

Additionally, applicants should liaise with Sydney Water to determine what water pressure will be available in the reticulated water supply system. In the event that a sprinkler tank is required to be provided by the applicant / developer the water pressure from a sprinkler tank shall be in accordance with the Australian Standard AS 2118.1 – 1999 – Automatic Fire Sprinkler Systems. Any sprinkler tank will be required to be positioned behind the front building line and not within any landscaped area.

3. Applicants are also recommended to liaise with Integral Energy or another electricity provider prior to the lodgement of the Development Application, in order to ascertain the exact requirements for the provision of electricity supplies to the development. As part of this consultation, the applicant will be required to ascertain whether an electricity sub-station is required. In the event that an electricity sub-station is required, the sub-station must be located behind the front building line of the building and not within any landscaping area.

4. Applicants should also liaise with a telecommunications carrier to ascertain the requirements for the provision of telecommunications to the site.

Any consent issued for the industrial land subdivision will require the submission of documentary evidence that satisfactory arrangements have been made with Sydney Water, the electricity provider and the telecommunications provider to service each lot in the subdivision.

## 24 SUBDIVISION OF INDUSTRIAL LAND

### 24.1 Development Controls

#### 24.1.1 Minimum Lot Size & Width Requirements

1. The minimum subdivision lot size requirement for lands within the IN1 General Industrial, IN2 Light Industrial and IN3 Heavy Industrial zones shall be in accordance with the relevant Lot Size map as controlled in Wollongong Local Environmental Plan 2009.
2. The minimum lot width requirement for lands zoned either IN1 General Industrial, IN2 Light Industrial and IN3 Heavy Industrial zones shall be in accordance with the Table below.

**Table 6 Minimum Lot Width Requirements**

Industrial Zone	Minimum Lot Width Requirement
IN1 General Industrial Zone	50 metres
IN2 Light Industrial Zone	30 metres
IN3 Heavy Industrial Zone	100 metres

3. Battle-axe shaped allotments shall comply with the minimum lot width requirements at the building line as referred to in the Table above. For the purposes of this clause, the building line for battle-axe shaped allotments is 10 metres from the battle-axe handle.
4. Where battle-axe shaped lots are proposed, the access handle must be a minimum width of 8 metres for the servicing of up to two(2) allotments.
5. A maximum of two (2) battle-axe allotments are permitted to share a common battle-axe handle. Where two(2) battle-axed shaped lots share a common battle-axe handle, the creation of reciprocal rights of carriageway benefiting and burdening each of the affected allotments will be required as part of the subdivision.
6. All battle-axed shaped allotments shall provide fire hydrant servicing in accordance with the requirements of the New South Wales Fire Brigade, New South Wales Rural Fire Service and any relevant Australian Standard.
7. Corner allotments are to be provided with a 3 metre x 3 metre splay corner.

## 25 ROAD DESIGN & CONSTRUCTION REQUIREMENTS - ROAD TYPES AND CHARACTERISTICS FOR PUBLIC ROADS

1. The design of any road as part of a subdivision shall be in accordance with the following Table 7 for each specific road type.

**Table 7: Road Type Characteristics & Construction Requirements**

ROAD TYPE	MAXIMUM TRAFFIC VOLUME	DESIGN SPEED (Km/hr)	MINIMUM ROAD CARRIAGEWAY WIDTH (m)	MINIMUM VERGE WIDTH EACH SIDE (m)	MINIMUM TOTAL ROAD RESERVE WIDTH(m)
<b>Arterial Roads*</b>	>10,000 vehicles / day	80	Min.18.5m (including 4m wide central median)*	Min.4.25m with upright kerbing*	Min.27m*
<b>Sub-Arterial / Major Collector Roads*</b>	>5,000 up to 10,000 vehicles per day	60 / 70	Min.16m (including 4m wide central median)*	4.25m with upright kerbing*	Min.24.5m*
<b>Other Industrial Roads</b>	Up to 5,000 vehicles / day	50 /60	Min.12m	4m with upright kerbing	Min. 20 m
<b>Cul-de-sacs</b>	Up to 2,000 vehicles	50	Min. 12m	4m with upright kerbing	Min.20m  Min. 28m diameter turning head

**Additional Requirements:**

- (1) The design and construction for each road type as indicated in the Table above shall also be in accordance with the design requirements contained in Wollongong City Council's "Wollongong Subdivision Code" dated 24 February 2003. Also refer to Council's Subdivision Code for general subdivision design and the construction requirements for roads, stormwater drainage, utility services etc.
- (2) Road carriageways must be widened at bends to allow for wider vehicular travel paths (Austroads Turning Templates)
- (3) The road design should be compatible with the existing road pattern in the locality.
- (4) The minimum spacing of staggered intersections in a local road network should be 20 metres.
- (5) Any subdivision proposal adjoining a rear lane shall be designed so as to provide both vehicular and pedestrian access to the front road.
- (\*) Early upfront consultation is recommended with both the NSW Roads & Traffic Authority and Council's Infrastructure Division, in order to determine the exact total road reserve and road carriageway width requirements for arterial and sub-arterial roads.
2. A deceleration lane may also be required for development sites fronting a main arterial or sub-arterial road. This requirement may in certain cases, be based upon advice received from the NSW Roads & Traffic Authority in accordance with provisions of SEPP (Infrastructure) 2007 relating to traffic generating development and / or Council's own traffic generation impact and access arrangement assessments of the proposed development.

Accordingly, applicants are recommended to discuss any proposal for industrial development on an arterial road or sub-arterial road with Council's Infrastructure Division (Traffic & Transport



Section) for appropriate advice as to whether a deceleration lane may be required for a particular development.

3. Notwithstanding Table 7, Council may permit the provision of car parking areas within the front building line setback area provided to a minimum 5 metre deep dense landscaped area being provided along the front property boundary line for properties abutting an arterial or sub-arterial road, or a minimum 3 metre deep dense landscaped area being provided from the front property boundary line for properties abutting a collector or local road.
4. Portico or special entrance features which are integrated into the building and which provide visual interest, may encroach into the front setback by a maximum of 2 metres.
5. Side and rear setbacks may be required depending upon the nature of adjoining development and whether the subject site is adjacent to a stormwater drainage system or additional setbacks are required for the provision of satisfactory fire truck access as per the Building Code of Australia and / or the specific requirements of the NSW Fire Brigades including the NSW Fire Brigades Code of Practice – Building Construction – NSWFB Vehicle Requirements. Therefore, applicants are encouraged to discuss this aspect with Council staff, prior to the lodgement of the Development Application.
6. A minimum 3 metre side or rear building line setback is required for any industrial building abutting a residential zone. The setback distance for an industrial building shall be further increased by an additional one (1) metre for every additional one (1) metre, above 5 metres in the building height. The setback area between the building and the common property boundary is to be appropriately planted with suitable evergreen trees and shrubs which, at maturity, help screen the development from the adjoining residential development. The details of the proposed trees and shrub planting shall be reflected on the required Landscaping Plan and must be consistent with the Landscaping Chapter in Part E of this DCP.

## **25.1 Road infrastructure construction works**

1. Where a subdivision of land fronts an existing public road in poor condition the developer will be required to provide and / or reconstruct kerb and gutter or fully construct the road structure and pavement for the full length of the existing road frontage at full cost to the applicant as per the requirements of Council's Subdivision Code.

## **26 RESTRICTED ACCESS TO ARTERIAL OR SUB-ARTERIAL ROADS**

### **26.1 General**

1. Direct access to any arterial or sub-arterial road will not be permitted where alternate public road access is available. However, direct property access to / from an arterial or sub-arterial road will not be restricted until such time as alternate public road access is available.

### **26.2 Creation of legal restrictions prohibiting direct access to designated roads (arterial or sub-arterial roads)**

1. Council may require as a condition of consent as part of any subdivision or development that a suitable restriction on the use of land be created pursuant to the provisions of Section 88B of the Conveyancing Act 1919, in order to legally prohibit direct access to / from any adjoining Arterial or Sub-Arterial Road where alternative direct public road access is available to / from the subject site.

## 26.3 Temporary access to designated roads (arterial or sub-arterial roads)

1. Temporary access may be granted to a designated road (arterial or sub-arterial road) where alternate public access has not yet been completed. However, this temporary access arrangement will be dependent upon the nature of the access arrangement in relation to the arterial or sub-arterial road. Additionally, the formal concurrence of the NSW Roads & Traffic Authority may be required.

## 27 STREET LIGHTING

1. Electric street lighting systems are to be provided for roads and intersections as well as pedestrian crossing and traffic calming device locations in accordance with AS / NZS 1158 Road Lighting as indicated in the following Table 8.

**Table 8: Road Type - Street Lighting Requirements**

Road Type	Street Lighting Category (AS 1158)
Arterial Roads	V4
Connector Road (>7000 vehicles / day)	P3
Connector Road (<7000 vehicles / day)	P4
Access Road in Business Areas	P3
Access Road	P4
Laneway	P5
Public Pathways & Cycleways	P4
Car parks	P11
Traffic Calming Device (including roundabout)	Horizontal illuminance min. of 3.5 lux
Pedestrian Refuge	Horizontal illuminance min. of 3.5 lux

Note: Category of illumination is defined in AS 1158 Part 1.1 and Part 3.1. All lighting designs are to be prepared in accordance with AS / NZS 1158 for the above specified categories.

## 28 STRATA SUBDIVISION OF MULTI-UNIT FACTORY / WAREHOUSE DISTRIBUTION CENTRE COMPLEXES

### 28.1 Development Controls

1. Any strata subdivision of a multi-unit factory or warehouse distribution centre complex shall guarantee that each unit is provided with the appropriate level of car parking as per the car parking requirements contained in this DCP. Any visitor car parking, visitor bicycle parking and / visitor motorcycle parking shall be incorporated in the common area of any strata plan.



Part D – Locality Based DCPs / Precinct Plans

## Chapter D13: Wollongong City Centre

### Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>	4.3	Vehicular driveways and manoeuvring areas	46
1.1	City Centre Character Areas	1	4.4	On-site parking	47
<b>2</b>	<b>BUILDING FORM</b>	<b>5</b>	4.5	Site facilities and services	48
2.1	General	5	<b>5</b>	<b>ENVIRONMENTAL MANAGEMENT</b>	<b>50</b>
2.2	Building to street alignment and street setbacks	5	5.1	General	50
2.3	Street frontage heights in commercial core	8	5.2	Energy efficiency and conservation	51
2.4	Building depth and bulk	9	5.3	Water conservation	52
2.5	Side and rear building setbacks and building separation	12	5.4	Reflectivity	53
2.6	Mixed used buildings	15	5.5	Wind mitigation	53
2.7	Deep soil zone	18	5.6	Waste and recycling	54
2.8	Landscape design	20	<b>6</b>	<b>RESIDENTIAL DEVELOPMENT STANDARDS</b>	<b>55</b>
2.9	Planting on structures	20	6.1	SEPP 65 and residential flat design code	55
2.10	Sun access planes	23	6.2	Housing choice and mix	56
2.11	Development on classified roads	28	6.3	Dwelling houses	57
<b>3</b>	<b>PEDESTRIAN AMENITY</b>	<b>28</b>	6.4	Multi dwelling housing	57
3.1	General	28	6.5	Dual occupancy	57
3.2	Permeability	29	6.6	Basement Carparks	57
3.3	Active street frontages	31	6.7	Communal open space	58
3.4	Safety and security	33	6.8	Private open space	59
3.5	Awnings	34	6.9	Overshadowing	60
3.6	Vehicular footpath crossings	36	6.10	Solar access	60
3.7	Pedestrian overpasses, underpasses and encroachments	39	6.11	Natural ventilation	60
3.8	Building exteriors	39	6.12	Storage	61
3.9	Advertising and signage	41	<b>7</b>	<b>PLANNING CONTROLS FOR SPECIAL AREAS</b>	<b>65</b>
3.10	Views and view corridors	43	7.1	Special areas with heritage items	65
<b>4</b>	<b>ACCESS, PARKING AND SERVICING</b>	<b>45</b>	7.2	Special areas and Development Standards	68
4.1	General	45	7.3	Non-residential development in the enterprise corridor zone	74
4.2	Pedestrian access and mobility	46			

7.4	Special area design guidelines	76
7.5	Design excellence	77
<b>8</b>	<b>WORKS IN THE PUBLIC DOMAIN</b>	<b>78</b>
<b>9</b>	<b>GLOSSARY / DEFINITIONS</b>	<b>79</b>

## Figures

Figure 1.1: Map of DCP Area	1
Figure 1.2: Land Zoning Map	4
Figure 2.1: Building lines and street setbacks	7
Figure 2.2: Specific street alignment and street setbacks	8
Figure 2.3: Permissible street frontage heights	9
Figure 2.4: In the Commercial Core buildings are to be built to street alignment with upper level set back	10
Figure 2.5: In residential locations buildings to have landscaped setbacks	11
Figure 2.6: Building bulk controls	12
Figure 2.7: Building depth controls	12
Figure 2.8 (left): Side setbacks for all development in the Commercial Core	15
Figure 2.9: Side setbacks for all development in all zones except in the Commercial Core	16
Figure 2.10: Rear setback for all development in all zones except in the Commercial Core	16
Figure 2.11: Separation for multiple buildings on a single site in the Commercial Core and Mixed Use (city edge) zones	16
Figure 2.12: Mixed use buildings	17
Figure 2.13: Communal Public Space with deep soil allows for tree planting and high quality landscape	18
Figure 2.14: Encourage high quality landscape on structures and in internal communal courtyards	21
Figure 2.15: Planting on roof structures and terraces creates an interesting outlook from adjacent adjoining buildings	21
Figure 2.16: Special building envelope control locations	24
Figure 2.17 (top): Sun access diagram heights contours showing maximum heights above ground	25
Figure 2.18 (bottom) Sun access diagram, height contours showing maximum building heights above ground	25
Figure 2.19: (top) Sun access diagram heights contours showing maximum building height above ground	26
Figure 2.20: (middle) Sun access diagram height contours showing maximum building height above ground	26
Figure 2.21: (bottom) Sun access diagram height contours showing maximum building height above ground	26
Figure 2.22: The sun access plane formula diagram	27

Figure 3.1: Permeability	30
Figure 3.2: Lanes and arcades add to the richness of a city	31
Figure 3.3: Active street frontages promote safe pedestrian environment	32
Figure 3.4: Active street frontages	33
Figure 3.5: Continuous street awnings offer good pedestrian amenity	34
Figure 3.6: Awnings	36
Figure 3.7: Restrictions on vehicular entries	37
Figure 3.8: Driveway crossing dimensions	38
Figure 3.9: Select high quality masonry finishes with accent colours	41
Figure 3.10: Under awning signage	41
Figure 3.11: Signage Zones	42
Figure 3.12: Significant views	45
Figure 6.1: Natural ventilation	61
Figure 7.1: Areas with special control/ principles	65
Figure 7.2: St Michael's Cathedral and square	66
Figure 7.3: West Crown Street shops	69
Figure 7.4: View looking along Market Street to St. Michael's Cathedral	70
Figure 7.5: East Crown Street Shops	71
Figure 7.6: Market Square	72
Figure 7.7: Natural Mutual Life Association Building, 1938 in Keira Street	73
Figure 7.8: Enterprise Corridor	76

## 1 INTRODUCTION

The Wollongong City Centre precinct applies to all lands contained within the Wollongong City Centre as shown in Figure 1.1.

This part of the DCP provides the site specific planning requirements for development within the Wollongong City Centre precinct. In the event of any inconsistency between this part of the DCP and any other part of the DCP, the site specific planning requirements in this part of the DCP will prevail.



Figure 1.1: Map of DCP Area

### 1.1 City Centre Character Areas

1. The future character of the Wollongong city centre is set out within the Wollongong City Centre Plan that includes the Vision, Local Environmental Plan, Civic Improvements Plan and this Development Control Plan.
2. The character objectives for these land use zones are described below, and the development controls within this DCP aim to develop and reinforce the characteristics of each area, enhance

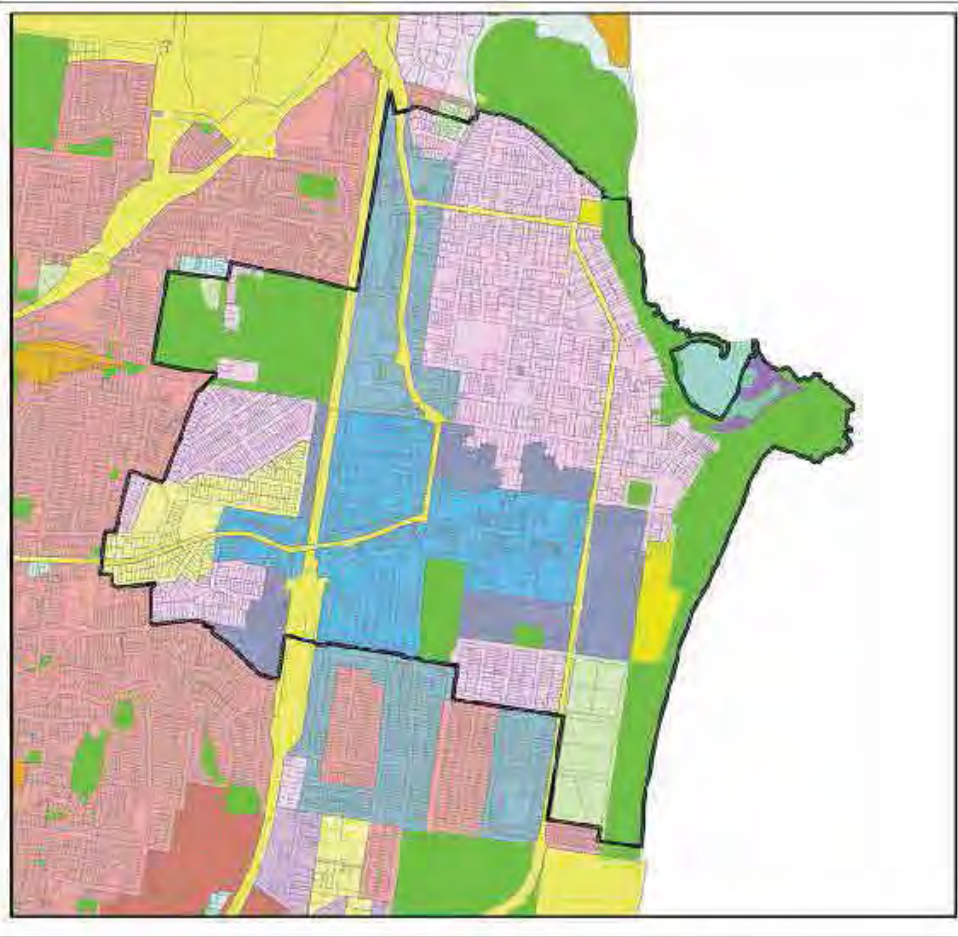
the vibrancy and activity along streets and provide for sustainable growth within the city centre. See Figure 1.2.

3. **Commercial Core** – provides for a wide range of retail, business, office, civic and cultural entertainment and community uses, including tourism and leisure uses, and residential uses within mixed use developments.
4. The commercial core is the ‘heart of the city’, where the focus is on high quality buildings, streetscapes, public art, outdoor eating and a collection of attractive public spaces such as a new forecourt to the railway station, rejuvenated MacCabe Park and Crown Street Mall, new civic square on Crown Street and an attractive collection of laneways and arcades. The primary retail focus is Crown Street Mall. The core retail area along Crown Street is generally characterised by street enclosing buildings forming continuous building facades that provide for an active street frontage to all commercial core streets. Streets are to have continuous awnings to give weather protection to concentrated pedestrian street activity.
5. **Mixed Use (City Edge)** – west of the railway station, this area provides for a mixture of compatible land uses to the commercial core, including commercial, retail, cultural, entertainment, tourism, leisure, recreation, social, educational, health and high density residential development.
6. The upgrading of the railway station will offer a safe and attractive street environment and railway/bus interchange facility. The scale of new development is to have a transition in scale between the high form at the station to a medium rise to the north and south of Crown Street. Pedestrian activity will focus around the railway station, in Crown Street and along Gladstone Avenue towards the TAFE campus. New development is to have active frontages and continuous awnings to protect pedestrian activity.
7. East of Corrimal Street, the Mixed Use (City Edge) provides for a mixture of compatible land uses to the commercial core, including commercial and retail, cultural and entertainment, tourism, leisure and recreation, social, educational, health and higher density residential development. The area is characterised by the relaxed beach character with residential buildings sitting in the landscape with more generous street setbacks. Buildings along Corrimal Street (between Market and Stewart Streets) and Crown Street (nb. northern side, east of Corrimal Street) are to be built to street alignment and have awnings and active street frontages.
8. North of Market Street and south of Stewart Street is a transition area between the commercial core and predominately residential areas to the north and south. It allows for high density residential development that can take advantage of views towards the escarpment and the foreshore, with retail and business uses encouraged at ground level along major streets. Building heights allow for view sharing and retention of significant views, with higher buildings located on the lower lying land along Burelli Street.
9. **Special Activities – Hospitals and Medical Research and Development** – is an area clustered around the Wollongong Hospital and along Crown Street, west of the railway station.
10. This area has an excellent potential to become a hub of innovation, education and research in the city centre. The area can be supported by student and nursing staff accommodation, medical centres, doctors’ surgeries, specialise rooms and associated uses. The upgrading of the railway station will offer a safe and attractive street environment and railway/bus interchange facility. The scale of new development is to be of a transition scale between the high buildings at the station to medium rise buildings to the north and south of Crown Street.
11. **Enterprise Corridor** – will promote business activity along Flinders Street, particularly business uses requiring larger footprint buildings and good vehicular access and exposure. The area will cater also for the complementary business, office, retail and light industrial uses. The importance of Flinders Street (the Princes Highway) as a business address is reinforced by increasing the scale and activation of buildings along the street, with service uses such as parking and goods storage away from street frontages. Residential development incorporated in mixed use developments, is encouraged within walking distance of the North Wollongong rail station and in



areas abutting the general residential zone to the east. The character of the area will be of an attractive city boulevard lined with trees and high quality buildings of medium scale with large showroom windows fronting the street with landscaped setbacks.

12. **Tourist and Private Recreation** – this area is largely occupied by existing entertainment and sporting uses (WIN Stadium). The precinct is to be activated by complementary uses that address the street and promote extended use of the area during non-event times. Complementary uses include tourist development, tourist facilities (restaurants, gyms) and convention centres. Improved integration of the area with the city is envisaged, with specific requirements for improved pedestrian linkages between the foreshore and the Mixed Use (City Edge) along Burelli, Stewart and Bank Streets and activation of Crown and Harbour Streets. The future vision for the area will be focusing on the 'city beach' character along the eastern edge of the city centre with alfresco dining and tourist uses facing the beach frontage.
13. **General Residential** – the general residential zone in Wollongong city centre is ideally located within easy walking distance to both the commercial core and the major recreational areas along the foreshore. The topography of the area allows for good view opportunities towards the escarpment and foreshore. Scale and form of new residential development should be compatible with the character of the locality, providing for higher density residential use, local convenience shops and longer stay tourist accommodation in serviced apartments.
14. Development controls aim to promote high levels of residential amenity, high quality landscaping and onsite open space provisions, combined with setbacks and building depth controls to ensure that building bulk and scale is compatible with good residential amenity, view sharing and a sustainable living environment.
15. **Working Waterfront and Public Recreation** – the waterfront area encompasses the working waterfront land use zone and those parts of the public recreation zone fronting the foreshore. The area offers recreational activities to the city, neighbouring residential areas and the wider Illawarra community. The natural and historic attributes of the area, including the State significant Belmore Basin Heritage Conservation Area, lighthouse, North Beach and natural features of the foreshore are to be protected commensurate with an increase in tourist and visitor use.
16. Scale and bulk of development is to consider the natural topography of the setting, with buildings of small scale, sympathetic to the setting.
17. Foreshore improvement works and enhanced community facilities and buildings are planned to improve visitor amenity and provide for a vibrant beachside and maritime environment. Boating and marine activities within the working waterfront zone combined with specialist shops and food outlets are encouraged in this area.



### Figure 1.2: Land Zoning Map



## 2 BUILDING FORM

### 2.1 General

1. Building form and character refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. The Wollongong City Centre LEP includes provisions for land use, building heights and sun access planes, floor space ratio and design excellence. The development provisions in this section of the DCP on building form are intended to encourage high quality design for new buildings, balancing character of Wollongong with innovation and creativity. The resulting built form and character of new development should contribute to an attractive public domain in central Wollongong and produce a desirable setting for its intended uses.
2. The controls in this section aim to:
  - a) Establish the scale, dimensions, form and separation of buildings appropriate for the setting in the city centre;
  - b) Achieve attractive and sustainable Wollongong city form within the city context;
  - c) Provide a strong definition of the public domain;
  - d) Achieve active street frontages with good physical and visual connections between buildings and the street;
  - e) Ensure there is consistency in the main street frontages of buildings having a common alignment;
  - f) Provide for pedestrian comfort and protection from weather conditions;
  - g) Define the public street to provide spaces that are clear in terms of public accessibility and safety, and are easy to maintain;
  - h) Ensure building depth and bulk is appropriate to the environmental setting and landform, allows for view sharing and provides good internal building amenity;
  - i) Ensure building separation is adequate to protect amenity, daylight penetration and privacy between adjoining developments;
  - j) Encourage mixed use development with residential components that achieve active street fronts and maintain good residential amenity;
  - k) Achieve an articulation and finish of building exteriors that contributes to a high quality and sustainable urban environment; and
  - l) Provide for high quality landscape to contribute to the amenity of the city centre and a sustainable urban environment.

### 2.2 Building to street alignment and street setbacks

#### 2.2.1 General

1. Street setbacks and building alignments establish the front building line. They help to create the proportions of the street and can contribute to the public domain by enhancing streetscape character and the continuity of street facades. Street setbacks can also be used to enhance the setting and address for the building. They provide for landscape areas, entries to ground floor apartments and deep soil zones. Street setbacks are measured from the street boundary to the outside face of the external wall of the building.
2. In the commercial core, buildings are to be built up to the street alignment to reinforce the urban character and improve pedestrian amenity and activity at street level. Above street frontage height, tall buildings are to be set back to provide for sunlight to streets, and daylight to pedestrian areas and lower levels of other buildings. They offer comfortable wind conditions,

view corridors, an appropriate building scale for pedestrians, and good growing conditions for street trees. In the residential locations and some Mixed Use (City Edge) locations, buildings are to be setback to a consistent building line.

3. The definition of “building line or setback” is provided in the Wollongong City Centre LEP 2007.

### 2.2.2 Objectives

- a) To provide a hierarchy of street edges from commercial core with no street setbacks to residential locations with landscaped setbacks.
- b) To establish the desired spatial proportions of the street and define the street edge.
- c) To increase a clear transition between public and private space.
- d) To locate active uses, such as shopfronts, closer to pedestrian activity areas.
- e) To assist in achieving visual privacy to apartments from the street.
- f) To create good quality entry spaces to lobbies, foyers or individual dwelling entrances.
- g) To allow an outlook to, and surveillance of, the street.
- h) To allow for street landscape character, where appropriate.
- i) To maintain shared views to the ocean.
- j) To maintain sun access to the public domain.

### 2.2.3 Development Controls

- a) Street building alignment and setbacks are specified in Figure 2.1 and Figure 2.2 and, in the following table. These street building lines and setbacks also apply to basement portions of buildings.

**Table 2.1: Street building alignments and setbacks**

Zone	Building line or setback from street alignment
Commercial Core	Build to the street alignment or specified setback with 4m minimum further setback above street frontage height.
Mixed Use (City Edge)	Build to 3m from the street alignment.  Except in Crown Street (nb. northern side only east of Corrimal Street) and Corrimal Street (between Market and Stewart Streets), where building frontage is to be built to street alignment. A 10.36m setback applies in Corrimal Street between Market and Smith Streets.
General Residential	4m minimum setback.  Except in Bourke Street between Kembla and Cliff Road where building frontage is to be built to street alignment. Except in Corrimal Street north of Market Street, and Kembla Street north of Corrimal Street to George Hanley Drive, where a 10.36m setback applies.
Enterprise Corridor	4m minimum setback in Flinders Street.  Except in Station Street where building frontage is to be built to street alignment.

Special Activities: 4m minimum setback for development.

Hospitals & Medical

Research & Development

- b) Notwithstanding the above, development is to meet the street building line and setback for specific streets as shown in Figure 2.2.
- c) Balconies may project up to 600 mm into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level. Balconies are not permitted to encroach above the public road reserve.
- d) Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible (see also Building Exteriors at 3.7)
- e) The Commercial Core, Mixed Use (city edge) and Enterprise Corridor zones are subject to a requirement for corner properties to provide a 6m x 6m corner splay.

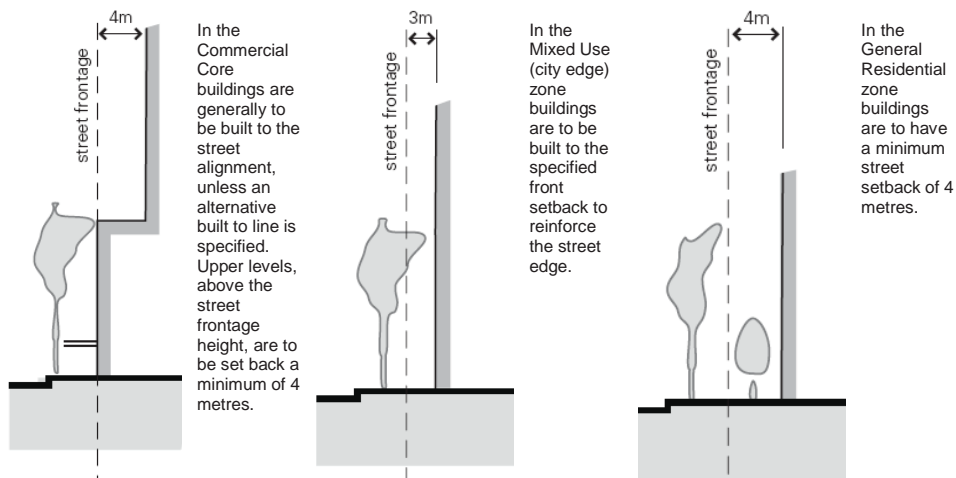


Figure 2.1: Building lines and street setbacks



Figure 2.2: Specific street alignment and street setbacks

## 2.3 Street frontage heights in commercial core

### 2.3.1 General

1. Buildings built to the street alignment and with a height to street width ratio of approximately 1:1 give a sense of enclosure to the street that is appropriate for a city centre. In Wollongong, streets in the Commercial Core are generally 20 metres wide, generating a preferred street front height of between 12m and 24m, subject to context and sun access requirements.
2. Controls setting street front heights apply within the commercial core where buildings are to be built to the street alignment.

### 2.3.2 Objectives

- a) To achieve comfortable street environments for pedestrians in terms of daylight, scale, sense of enclosure and wind mitigation as well as a healthy environment for street trees.
- b) To reinforce the intrinsic character of Wollongong City Centre while enabling flexibility in building design.
- c) To enhance the distinctive character of Special Areas with compatible development.

- d) To protect solar access to key streets and public spaces.

### 2.3.3 Development Controls

The street frontage height of buildings in the Commercial Core are not to be less than 12m or greater than 24m above mean ground level on the street front as shown in Figure 2.3.

Notwithstanding the above, the street front height of new buildings are to be consistent with the sun access controls in Clause 2.9.

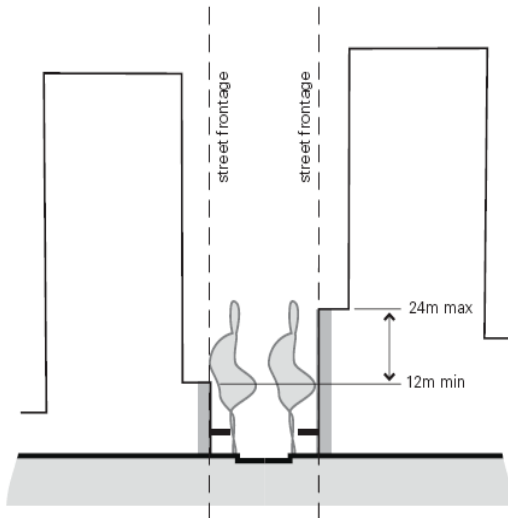


Figure 2.3: Permissible street frontage heights

## 2.4 Building depth and bulk

### 2.4.1 General

1. Wollongong features a temperate climate and pleasant outdoor conditions for much of the year. Controlling the size of upper level floor plates in new buildings allows for good internal amenity access to natural light and ventilation and mitigates potential adverse effects that tall and bulky buildings may have on the public domain.
2. Building depth is related to building use. Typically, mixed use buildings have larger commercial floor plates combined with smaller residential floors. The following controls are therefore classified into residential or commercial at the detail level.



**Figure 2.4: In the Commercial Core buildings are to be built to street alignment with upper level set back**

### 2.4.2 Objectives

- a) To promote the design and development of sustainable buildings.
- b) To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.
- c) To provide viable and useable commercial floor space.
- d) To achieve usable and pleasant streets and public domain at ground level by controlling the size of upper level floor plates of buildings.
- e) To achieve a city skyline sympathetic to the topography and context.
- f) To allow for view sharing and view corridors.
- g) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form and articulation of facades.



**Figure 2.5: In residential locations buildings to have landscaped setbacks**

### 2.4.3 Development Controls

- a) The maximum floorplate sizes and depth of buildings are specified in Figures 2.6 and 2.7, and in the following table (which does not apply to building frontages up to the street front height in the commercial core):

Building use	Maximum floor plate size (gross floor area)	Maximum building depth (excludes balconies)
Non-residential	1,200m <sup>2</sup>	
Commercial Core	above 24m height	25m
Residential and serviced apartments in Commercial Core	900m <sup>2</sup> above 24m height	18m
Residential and serviced apartments outside the Commercial Core	900m <sup>2</sup> above 12m height	18m

- b) At street frontage height levels, and where development is built from street edge to street edge, articulate buildings using atria, light wells and courtyards to improve internal building amenity and achieve substantial daylighting at every level, and cross ventilation and/or stack effect ventilation.

- c) All points on an office floor should be no more than 10m from a source of daylight (eg. window, lightwell or skylight) in buildings less than 24m in height, and no more than 12.5m from a window in buildings over 24m in height.

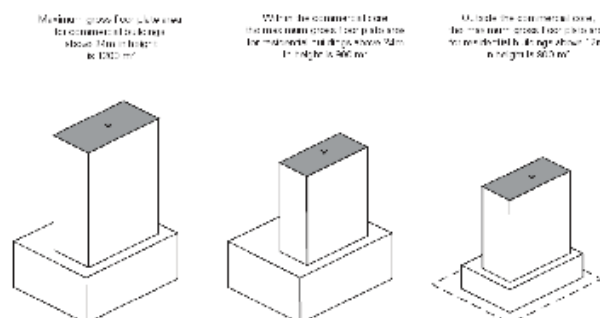


Figure 2.6: Building bulk controls

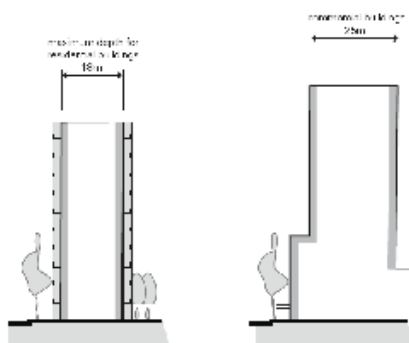


Figure 2.7: Building depth controls

## 2.5 Side and rear building setbacks and building separation

### 2.5.1 General

1. Side and rear setbacks, where provided, allow ventilation, daylight access and view sharing, increase privacy, and reduce adverse wind effects. Building separation increases in proportion to building height to ensure appropriate urban form, amenity and privacy for building occupants. In residential buildings and serviced apartments, separation between windows on side and rear facades and other buildings is particularly important for privacy, acoustic amenity and view sharing. Setbacks for residential development in the Commercial Core are different to other zones to reflect the different settings and forms of buildings in the different zones.
2. For commercial buildings, separation distances are smaller due to the reduced requirement for privacy, noise and daylight access.
3. Separation for Mixed Use buildings containing residential and commercial uses is to be in accordance with specified distances for each component use.



4. The definition of “building line or setback” is provided in the Wollongong City Centre LEP 2009.

### 2.5.2 Objectives

- a) To ensure an appropriate level of amenity for building occupants in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.
- b) To achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

### 2.5.3 Development Controls

**Note:** For the purpose of this section, **commercial buildings** means all non-residential buildings (including hotel accommodation, but not serviced apartments). **Principal windows and balconies** means the main window of a living room or main bedroom, or the edge of primary balcony of a dwelling.

- a) The minimum building setbacks from the side and rear property boundaries are specified in Figures 2.8 to 2.11, and in the following table:
- b) For multiple buildings on the same site in the Commercial Core and Mixed Use (city edge) zones, minimum separation distances are shown in Figure 2.12.
- c) In mixed use buildings, setbacks for the residential component are to be the distances specified above for residential development in the specified zone.
- d) If the specified setback distances cannot be achieved when an existing building is being refurbished or converted to another use, appropriate visual privacy levels are to be achieved through other means, for example, the construction of screens. These will be assessed on merit by the consent authority.
- e) In certain circumstances, Council may consider a variation to the side and rear setback requirements through appropriate architectural features (eg splayed windows which achieve oblique outlooks) provided that:
  - i) A minimum separation between the main walls of 6 metres is maintained,
  - ii) Separation is between sections of building walls that include only service room windows,
  - iii) Views are available obliquely to site boundaries; and
  - iv) Privacy screens are provided to all balconies and windows for all units / suites along the building facade.

Zone	Building condition	Minimum	Minimum
		side setback	rear setback
Commercial Core	Up to street frontage heights	0m	0m
	Residential uses (habitable rooms) between street frontage height and 45m	12m	12m
	All uses (including non-habitable residential) between street frontage height and 45m	6m	6m
	All uses above 45m	14m	14m
All other zones	Residential uses up to 12m in height		
	- habitable rooms with openings and balconies	6m	6m
	- non-habitable rooms and habitable rooms without openings	3m	4.5m
	Residential uses between 12m & 24m		
	- habitable rooms with openings and balconies	9m	9m
	-non-habitable rooms and habitable rooms without openings	4.5m	4.5m
	Residential uses above 24m		
	- habitable rooms with openings and balconies and up to 45m	12m	12m
	- non-habitable rooms and habitable rooms without openings	6m	6m
	All residential uses above 45m	14m	14m
	Commercial uses up to 24m	3m	9m
	Commercial uses above 24m	6m	12m

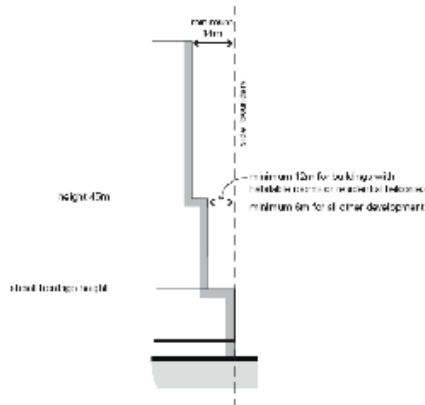


Figure 2.8 (left): Side setbacks for all development in the Commercial Core

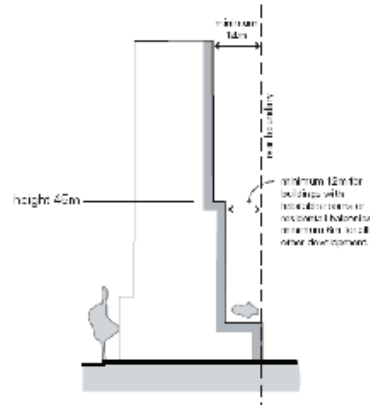


Figure 2.9 (right): Rear setbacks for all development in the Commercial Core

## 2.6 Mixed used buildings

### 2.6.1 General

1. Mixed-use developments provide for a variety of uses and activities within city centres, encouraging use of the city outside the working day, adding vibrancy and life to the city streets. Different uses within the same building are best located to a pattern and layout suitable to the mix of uses, with retail and business activity at ground level to assist street activation and residential uses, requiring privacy and noise mitigation, located above street level (see Figure 2.13).
2. Mixed use development within the city centre is preferred in sustainable locations, close to transport (rail station), and recreational areas (foreshore).

### 2.6.2 Objectives

- a) To encourage a variety of mixed-use developments in the city centre.
- b) To create lively streets and public spaces in the city centre
- c) To increase the diversity and range of shopping and recreational activities for workers, residents and visitors.
- d) To enhance public safety by increasing activity in the public domain on week nights and on weekends.
- e) To minimise potential conflicts and achieve compatibility between different uses.
- f) To minimise conflicts between permitted land use and heritage buildings.
- g) To ensure that the design of mixed-use buildings addresses residential amenity.
- h) To create separate, legible and safe access and circulation in mixed use buildings.
- i) To ensure that mixed use buildings address the public domain and the street.

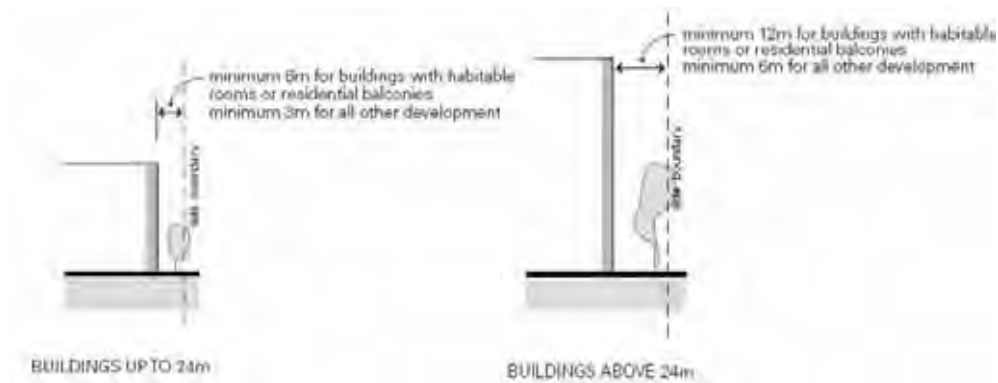


Figure 2.9: Side setbacks for all development in all zones except in the Commercial Core

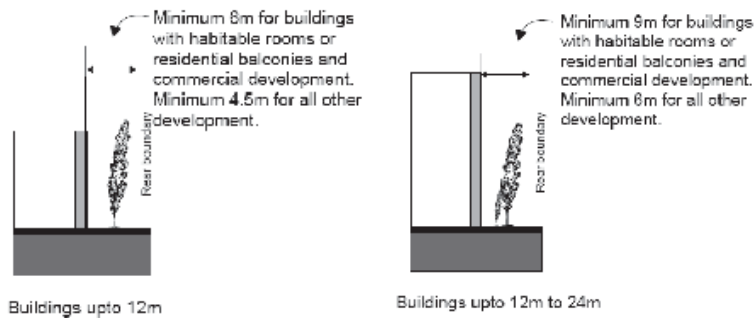


Figure 2.10: Rear setback for all development in all zones except in the Commercial Core

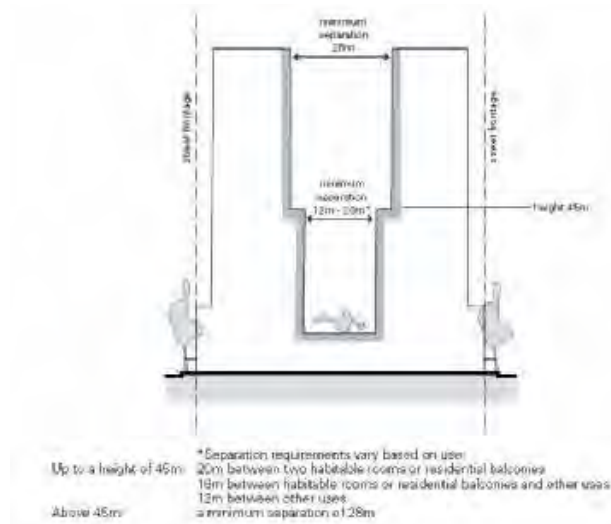


Figure 2.11: Separation for multiple buildings on a single site in the Commercial Core and Mixed Use (city edge) zones

### 2.6.3 Development Controls

- a) Provide flexible building layouts which allow variable tenancies or uses on the first two floors of a building above the ground floor.
- b) Minimum floor to ceiling heights are 3.3 metres for commercial office and 3.6 metres for active public uses, such as retail and restaurants in the B3 Commercial Core zone. In the B4 Mixed Use zone, the ground floor and first levels of a building shall incorporate a minimum 3 metre floor to ceiling height clearance, to maximise the flexibility in the future use of the building.
- c) Separate commercial service requirements, such as loading docks, from residential access, servicing needs and primary outlook.
- d) Locate clearly demarcated residential entries directly from the public street.
- e) Clearly separate and distinguish commercial and residential entries and vertical circulation.
- f) Provide security access controls to all entrances into private areas, including car parks and internal courtyards.
- g) Provide safe pedestrian routes through the site, where required.
- h) Front buildings onto major streets with active uses.
- i) Avoid the use of blank building walls at the ground level.
- j) For mixed use buildings that include food and drink premises uses, the location of kitchen ventilation systems shall be indicated on plans and situated to avoid amenity impacts to residents.



Figure 2.12: Mixed use buildings

## 2.7 Deep soil zone

### 2.7.1 General

1. Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including:
  - (a) Promoting healthy growth of large trees with large canopies,
  - (b) Protecting existing mature trees, and
  - (c) Allowing infiltration of rainwater to the water table and reduction of stormwater runoff.

### 2.7.2 Objectives

- a) To provide an area on sites that enables soft landscaping and deep soil planting, permitting the retention and/or planting of trees that will grow to a large or medium size.
- b) To limit building bulk on a site and improve the amenity of developments, allowing for good daylight access, ventilation, and improved visual privacy.
- c) To provide passive and active recreational opportunities.

### 2.7.3 Development Controls

- a) All residential developments must include a deep soil zone (See Figure 2.14).
- b) The deep soil zone shall comprise no less than 15% of the total site area preferably provided in one continuous block and shall have a minimum dimension (width or length) of 6 metres.
- c) For residential components in mixed use developments in the Commercial Core, Mixed Use (city edge) and Enterprise zones, the amount of deep soil zone may be reduced commensurate with the extent of non-residential uses. Where non-residential components result in full site coverage and there is no capacity for water infiltration, the deep soil component must be provided on structure, in accordance with the provisions of Section 2.8. In such cases, compensatory stormwater management measures must be integrated within the development to minimise stormwater runoff.
- d) Where deep soil zones are provided, they must accommodate existing mature trees as well as allowing for the planting of trees/shrubs that will grow to be mature trees.
- e) No structures, works or excavations that may restrict vegetation growth are permitted in this zone (including but not limited to basements, car parking, hard paving, patios, decks and drying areas).



Figure 2.13: Communal Public Space with deep soil allows for tree planting and high quality landscape



## 2.8 Landscape design

### 2.8.1 General

1. Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. Good landscaping provides breathing space, passive and active recreational opportunities and enhances air quality in city centres. It is fundamental to the amenity and quality of outside space for residential flats and multi-dwelling housing.

### 2.8.2 Objectives

- a) To ensure landscaping is integrated into the design of development.
- b) To add value and quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.
- c) To improve stormwater quality and control run-off.
- d) To improve the microclimate and solar performance within the development.
- e) To improve urban air quality and contribute to biodiversity.

### 2.8.3 Development Controls

- a) The following documents must be considered for site planning and landscape design:
  - i) Chapter E6 – Landscaping in the DCP.
  - ii) Wollongong City Centre Public Domain Technical Manual (Appendix 2 to this DCP).
- b) Remnant vegetation must be maintained throughout the site wherever practicable, particularly significant trees.
- c) A long-term landscape management plan must be provided for all landscaped areas, in particular the deep soil landscape zone.
- d) The plan must outline how landscaped areas are to be maintained for the life of the development.
- e) Chapter E17 Preservation and Management of Trees and Other Vegetation in this DCP provides for the protection of all trees with a girth greater than 200mm or a height over three metres, or a spread over three metres.

## 2.9 Green roofs, green walls and planting on structures

### 2.9.1 General

1. The following controls apply in the Commercial Core, Mixed Use (city edge) and Enterprise zones for planting on roof tops or over car park structures, particularly for communal open space required as a component of mixed use residential development, and in non-residential developments where the landscaping proposed is not on natural ground e.g. green roofs and walls, podiums, rooftop gardens (Figures 2.15 and 2.16).

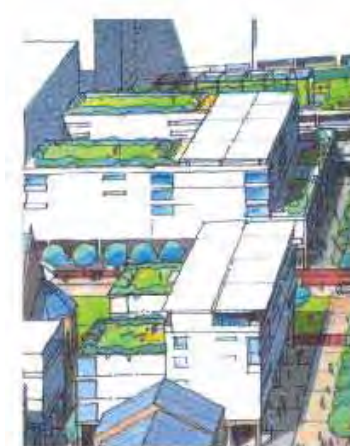
### 2.9.2 Objectives

- a) To contribute to the quality and amenity of open space on roof tops and internal courtyards.
- b) To encourage the establishment and healthy growth of trees in urban areas.
- c) To encourage the use of green walls and roofs in communal open space, and to enhance the environmental performance of the development.





**Figure 2.14: Encourage high quality landscape on structures and in internal communal courtyards**



**Figure 2.15: Planting on roof structures and terraces creates an interesting outlook from adjacent adjoining buildings**

### **2.9.3 Development Controls**

- a) Design for optimum conditions for plant growth by:
  - i) Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established,
  - ii) Providing appropriate soil conditions and irrigation methods, and
  - iii) Providing appropriate drainage.
- b) Design planters to support the appropriate soil depth and plant selection by:
  - i) Ensuring planter proportions accommodate the largest volume of soil possible and soil depths to ensure tree growth, and
  - ii) Providing square or rectangular planting areas rather than narrow linear areas.
- c) Increase minimum soil depths in accordance with:

- i) The mix of plants in a planter for example where trees are planted in association with shrubs, groundcovers and grass,
  - ii) The level of landscape management, particularly the frequency of irrigation,
  - iii) Anchorage requirements of large and medium trees, and
  - iv) Soil type and quality.
- d) Provide sufficient soil depth and area to allow for plant establishment and growth. The following minimum standards are recommended:

Plant type	Definition	Soil volume	Soil Depth	Soil area
Large trees	12-18m high, up to 16m crown spread at maturity	150m <sup>2</sup>	1,200mm	10m x 10m or equivalent
Medium trees	8-12m high, up to 16m crown spread at maturity	35m <sup>2</sup>	1,000mm	6 x 6m or equivalent
Small trees	6-8m high, up to 16m crown spread at maturity	9m <sup>2</sup>	800mm	3.5m x 3.5m or equivalent
Shrubs			500-600mm	
Ground cover			300-450mm	
Turf			200mm	

(Source Apartment Design Guide, 2015)

Plant type	Min-soil depth	Min-soil volume
Large trees (over 8m high)	1.3m	150 cu m
Medium trees (2m to 8m high)	1.0m	35 cu m
Small trees (up to 2m high)	800mm	9 cu m
Shrubs and ground cover	500mm	n/a

## 2.10 Sun access planes

Sun access planes establish building heights around the following parks and community places:

MacCabe Park on 21 June from 12 noon to 2pm.

Civic Square on 21 June from 11am to 3pm.

Market Square on 21 June from 12 noon to 2pm.

Pioneer Park on 21 June from 12 noon to 2pm.

### 2.10.1 Sun Access Diagrams

The sun access diagrams show building height contours that will achieve well scaled buildings enclosing these key public spaces with building frontage heights and setbacks required to protect sun access.

The sun access diagrams also provide controls for an appropriate transition of building heights from the street frontage height to the maximum development height permissible in the LEP by controlling the number of setbacks.

### 2.10.2 Objectives

- a) To allow sunlight access to significant public spaces in the city centre.
- b) To provide for an appropriate transition in building heights from key public spaces.
- c) To provide well scaled enclosure to the significant public spaces.

### 2.10.3 Development Controls

- a) Refer to Figure 2.17 and sun access diagrams in Figures 2.18 to 2.22 for relevant height and setback controls for development adjacent to key public spaces.

### 2.10.4 Sun Access Planes

The height contours are based on sun access planes for mid winter.

A sun access plane projects above land shown as affected by the plan on the Sun Plane Protection Map and is located by applying the following formula:

$$H = V + (D \times \tan a)$$

Where:

'H' is the height, measured in metres, of a point in a sun access plane.

'V' is the height, specified for this factor in the sun access planes table and measured in metres above ground level, at the part of the street alignment specified in the sun access planes table for the relevant sun access plane.

'D' is the horizontal distance, from that part of the street alignment to the point in the sun access plane, measured in metres away from the relevant park or community place along the horizontal bearing measured from true north, specified in the sun access planes table for the relevant sun access plane.

'a' is the vertical angle in degrees, specified for this factor in the sun access planes table, corresponding to the horizontal bearing for the relevant sun access plane.



Figure 2.16: Special building envelope control locations

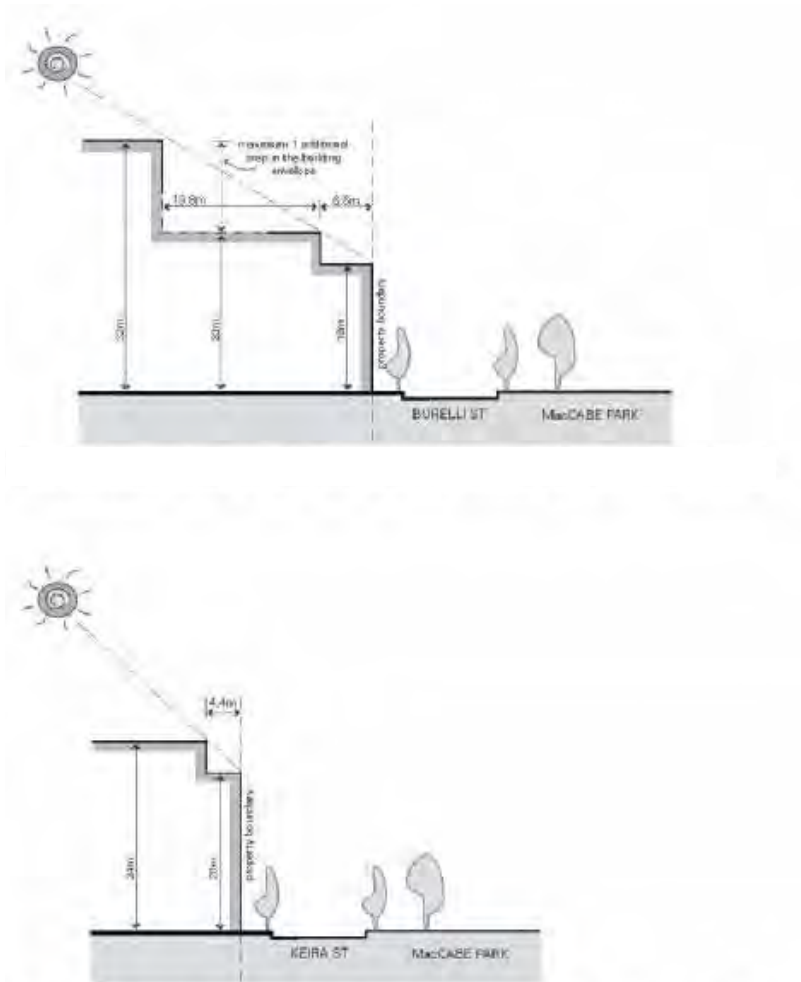


Figure 2.17 (top): Sun access diagram heights contours showing maximum heights above ground

Figure 2.18 (bottom) Sun access diagram, height contours showing maximum building heights above ground

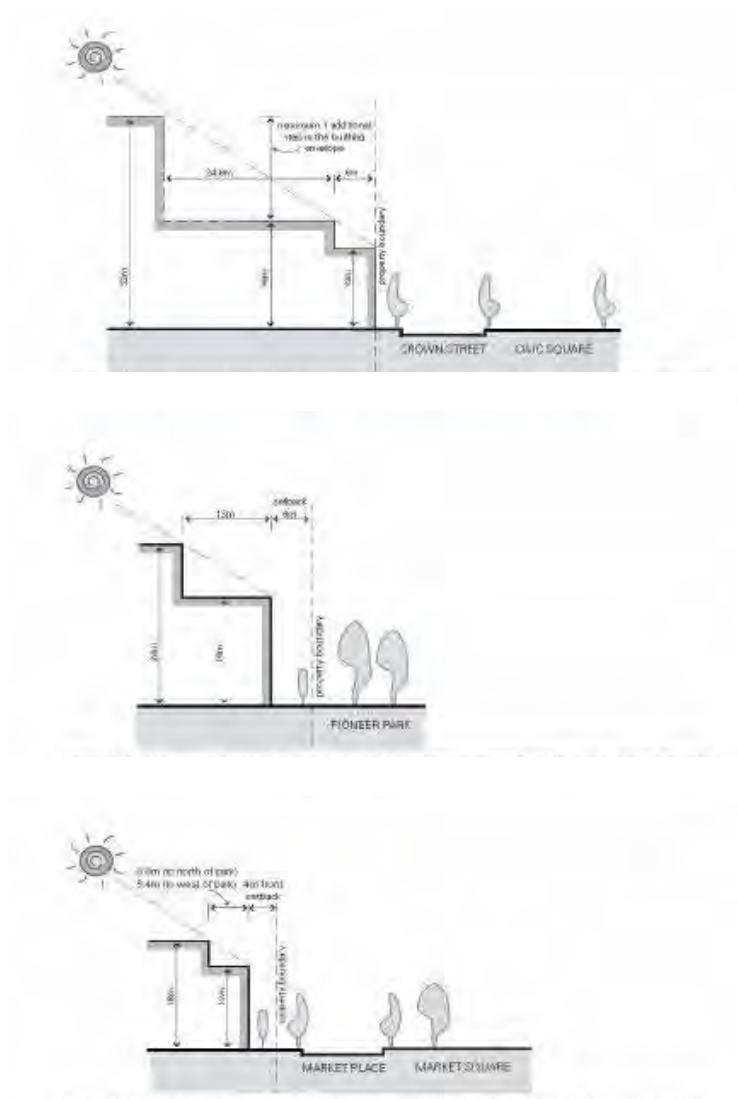


Figure 2.19: (top) Sun access diagram heights contours showing maximum building height above ground

Figure 2.20: (middle) Sun access diagram height contours showing maximum building height above ground

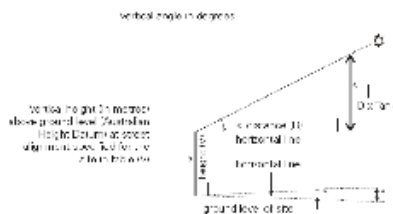
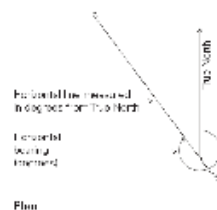
Figure 2.21: (bottom) Sun access diagram height contours showing maximum building height above ground

Table 2.2: Sun access planes

Park or community place	Time (21 June)	Horizontal Bearing (degrees)	Vertical angle (degrees) (a)	Vertical height above ground level as part of street alignment
MacCabe Park	12 noon	359.30	32.08	16m on the northern alignment of Burelli Street between Keira Street and Church Street 20m on the western alignment of Keira Street between Ellen Street and Burelli Street.
	2pm	329.02	25.18	
Civic Square	11am	15.30	30.30	12m on the northern alignment of Crown Street.
	3pm	316.37	17.49	
Market Square	12 noon	359.30	30.08	12m on the northern and western alignment of Market Place.
	2pm	329.02	25.18	
Pioneer Park	12 noon	359.30	32.08	16m on the northern boundary of the park.
	2pm	329.02	25.18	

The following sequence illustrates how to use the formula:

Formula 1:  $\theta = \arctan\left(\frac{v}{h}\right)$



Note: The sun access plane formula calculates the height to a point on the sun access plane from a point horizontal with ground level at the street alignment. For sites with ground levels different to the street alignment, the difference should be taken into account by the user in determining the height of a point in the sun access plane vertically above ground. Refer to LDCP sun access diagrams in Clause 2.8 for confirmation of building heights at the street or park edge and for appropriate setbacks.

Figure 2.22: The sun access plane formula diagram

## 2.11 Development on classified roads

### 2.11.1 Objectives

- a) To ensure that new development does not compromise the effective and ongoing operation and function of classified roads; and
- b) To prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.

### 2.11.2 Development Controls

- a) Consent must not be granted to the development of land that has a frontage to a classified road unless the consent authority is satisfied that:
- b) Where practicable, vehicular access to the land is provided by a road other than the classified road; and
- c) The safety, efficiency and ongoing operation of the classified road will not be adversely affected by the proposed development as a result of:
  - i) The design of the vehicular access to the land, or
  - ii) The emission of smoke or dust from the proposed development, or
  - iii) The nature, volume or frequency of vehicles using the classified road to gain access to the land, and
- d) The development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the proposed development.

## 3 PEDESTRIAN AMENITY

### 3.1 General

Pedestrian amenity incorporates all those elements of individual developments that directly affect the quality and character of the public domain. The pedestrian amenity provisions are intended to achieve a high quality of urban design and pedestrian comfort in the public spaces of the city centre. The pedestrian environment provides people with their primary experience of and interface with the city. This environment needs to be safe, functional and accessible to all. It should provide a wide variety of opportunities for social and cultural activities. The pedestrian environment is to be characterised by excellence of design, high quality materials and a standard of finish appropriate to a regional city centre. The city's lanes, arcades and through site links should form an integrated pedestrian network providing choice of routes at ground level for pedestrians.

The controls in this section aim to increase the vitality, safety, security and amenity of streets, laneways, arcades and through site links by:

Encouraging future through site links,

Ensuring provision of awnings along the Commercial Core street frontages and Crown Street in Mixed Use (city edge),

Protecting significant views and vistas along streets, and

Mitigating adverse impacts on the street arising from driveway access crossings, advertising signage and selection of building finishes and materials.



## 3.2 Permeability

Through site links provide access connections between the long sides of street blocks for pedestrian and vehicular access at street level. These links provide an important function in the form of lanes, shared zones, arcades and pedestrian ways.

### 3.2.1 Objectives

- a) To improve access in the city centre by providing through site links as redevelopment occurs.
- b) To ensure that through site links have active frontages along their length where possible.
- c) To provide for pedestrian amenity and safety.
- d) To encourage removal of vehicular entries from primary street frontages.
- e) To retain and develop lanes as useful and interesting pedestrian connections as well as for service access.

### 3.2.2 Development Controls

- a) Through site links, arcades, shared ways and laneways are to be provided as shown in Figure 3.1.
- b) Where possible, existing dead end lanes are to be extended through to the next street as redevelopment occurs.
- c) New through site links should be connected with existing and proposed through block lanes, shared zones, arcades and pedestrian ways and opposite other through site links.
- d) Existing publicly and privately owned lanes are to be retained.
- e) The design and finish of new through site links need to be provided in accordance with Council's City Centre Public Domain Manual.

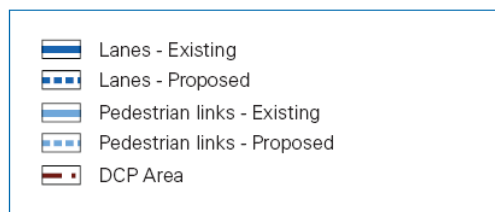
### 3.2.3 Pedestrian Links

Through site links (arcades) for pedestrians are to be provided as shown in Figure 3.1, and:

- a) Have active frontages,
- b) Be clear and direct throughways for pedestrians,
- c) Provide public access at all business trading times or as otherwise stipulated by Council's conditions of approval,
- d) Have a minimum width of 4m non-leasable space clear of all obstructions (including columns, stairs and escalators),
- e) Where practicable, have access to natural light for at least 30% of their length,
- f) Where air conditioned, have clear glazed entry doors comprising at least 50% of the entrance, and
- g) Have signage at street entries indicating public accessibility and the street to which the through site link connects.



Figure 3.1: Permeability



Internal arcades will not be approved in preference to activation of an existing or required lane. Where developments front a lane that is also a pedestrian route, provide an active frontage and design details that create visual interest such as landscaping, awnings, paved finishes and good lighting.

### 3.2.4 Lanes

- New through site laneways for pedestrians and vehicles are to be provided as indicated in Figure 3.1.
- Lanes are to:
  - have active frontages,

- ii) be clear and direct throughways for pedestrians,
  - iii) provide public access at all times or as otherwise stipulated by Council's conditions of approval,
  - iv) have a minimum width of 6m clear of all obstructions, and
  - v) have signage indicating public accessibility and the street to which the lane connects.
- c) Where lanes are primarily used for building access and servicing, 'safer by design' principles must be demonstrated (refer to Section 3.3).



Figure 3.2: Lanes and arcades add to the richness of a city

### 3.3 Active street frontages

Active street frontages promote an interesting and safe pedestrian environment. Busy pedestrian areas and non-residential uses such as shops, studios, offices, cafes, recreation and promenade opportunities promote the most active street fronts (Figure 3.3).

Residential buildings can also activate the street by providing a clear street address, direct access from the street and direct outlook over the street.

#### 3.3.1 Objectives

- a) To promote pedestrian activity and safety in the public domain.
- b) To maximise active street fronts in Wollongong city centre.
- c) To define areas where active streets are required or are desirable.

Active frontage uses are defined as one or a combination of the following at street level:

Entrance to retail.

Shop front.

Glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12 metres frontage.

Café or restaurant if accompanied by an entry from the street.

Active office uses, such as reception, if visible from the street.

Public building if accompanied by an entry.



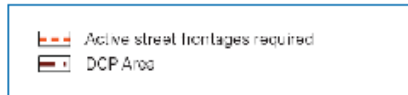
**Figure 3.3: Active street frontages promote safe pedestrian environment**

### **3.3.2 Development Controls**

- a) In commercial and mixed use development, active street fronts are encouraged in the form of non-residential uses on ground level.
- b) Active street fronts in the form of non-residential uses on ground level are required along streets, lanes and through site links shown in Figure 3.4 for all buildings in the Commercial Core and Tourist zones, and for mixed use buildings in the Mixed Use (city edge) and Enterprise zones.
- c) Active ground floor uses are to be at the same general level as the footpath and be accessible directly from the street.
- d) For all non-residential ground floor frontages outside the streets shown in Figure 3.4, provide clear glazing where ever possible to promote passive surveillance and contribute to street activity.
- e) Restaurants, cafes and the like are to consider providing openable shop fronts.
- f) Residential developments are to provide a clear street address and direct pedestrian access off the primary street front, and allow for residents to overlook all surrounding streets.
- g) Provide multiple entrances for large developments including an entrance on each street frontage.



Figure 3.4: Active street frontages



### 3.4 Safety and security

A safe and secure environment encourages activity, vitality and viability, enabling a greater level of security. Planning and design can identify and address safety and security issues through the use of environmental and technical measures.

#### 3.4.1 Objectives

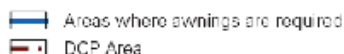
- Address safety, security and crime prevention requirements in the planning and design of development (including the NSW Police 'Safer by Design' crime prevention through environmental design (CPTED) principles).
- Reduce opportunities for crime through environmental design and the provision of natural and technical surveillance opportunities.
- Control access through the provision of physical or implied barriers which can be used to attract, channel or restrict the movement of people.
- Implement territorial reinforcement by encouraging community ownership of public space.
- Promote space management by ensuring that public open space is effectively utilised and maintained.

### 3.4.2 Development Controls

- a) Ensure that the building design allows for casual surveillance of accessways, entries and driveways.
- b) Avoid creating blind corners and dark alcoves that provide concealment opportunities in pathways, stairwells, hallways and carpark.
- c) Provide entrances which are in visually prominent positions and which are easily identifiable, with visible numbering.
- d) Where private open space is located within the front building alignment any front fencing must be of a design and/or height which allows for passive surveillance of the street.
- e) Provide adequate lighting of all pedestrian access ways, parking areas and building entries. Such lighting should be on a timer or movement detector to reduce energy consumption and glare nuisance.
- f) Provide clear lines of sight and well-lit routes throughout the development.
- g) Where a pedestrian pathway is provided from the street, allow for casual surveillance of the pathway.
- h) For large scale retail and commercial development with a GFA of over 5,000m<sup>2</sup>, provide a 'safety by design' assessment in accordance with the CPTED principles.
- i) Provide security access controls where appropriate.
- j) Ensure building entrance(s) including pathways, lanes and arcades for larger scale retail and commercial developments are directed to signalised intersections rather than mid-block in the Commercial zone, Mixed Use (city edge) and Enterprise Corridor zones.



Figure 3.5: Continuous street awnings offer good pedestrian amenity



## 3.5 Awnings

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. They encourage pedestrian activity along streets and in conjunction with active edges such as retail frontages, support and enhance the vitality of the local area. Awnings, like building entries, provide a public presence and interface within the public domain and contribute to the identity of a development.

### 3.5.1 Objectives

- a) To provide shelter for public streets where most pedestrian activity occurs.
- b) To address the streetscape by providing a consistent street frontage in the city centre.

### 3.5.2 Development Controls

- a) Continuous street frontage awnings are to be provided for all new developments as indicated in Figure 3.6.
- b) Awning design must match building facades and be complementary to those of adjoining buildings.
- c) Wrap awnings around corners for a minimum six metres from where a building is sited on a street corner.
- d) Awnings dimensions should generally be:
  - i) Minimum soffit height of 3.3 metres,
  - ii) Low profile, with slim vertical fascias or eaves (generally not to exceed 300mm height),
  - iii) Setback a minimum of 1.2 metres from the kerb, and
  - iv) Generally minimum 2.4 metres deep.
- e) To control sun access/protection, canvas blinds along the street edge may be permitted, subject to design merit and assessment.
- f) Signage on blinds is not permitted.
- g) Provide under awning lighting to facilitate night use and to improve public safety.





Figure 3.6: Awnings

### 3.6 Vehicular footpath crossings

Vehicle crossings over footpaths disrupt pedestrian movement and threaten safety. The design of vehicle access to buildings also influences the quality of the public domain. Overly wide and high vehicle access points detract from the streetscape and the active use of street frontages.

The design and location of vehicle access to developments should minimise both conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Design of driveways and vehicle access is to be in accordance with the provision of section 4.2.

#### 3.6.1 Objectives

- To make vehicle access to buildings more compatible with pedestrian movements and the public domain.
- To ensure vehicle entry points are integrated into building design and contribute to high quality architecture.



### 3.6.2 Development Controls

#### Location of Vehicle Access

- a) No additional vehicle entry points will be permitted into the parking or service areas of development along those streets identified as significant pedestrian circulation routes in Figure 3.7.
- b) In all other areas, one vehicle access point only (including the access for service vehicles and parking for non-residential uses within mixed use developments) will be generally permitted.
- c) Where practicable, vehicle access is to be from lanes and minor streets rather than primary street fronts or streets with major pedestrian and cyclist activity.
- d) Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on-site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide vehicle access points so that they are capable of shared access at a later date.
- e) Vehicle access may not be required or may be denied to some heritage buildings.



Figure 3.7: Restrictions on vehicular entries

## Design of Vehicle Access

- Wherever practicable, vehicle access is to be a single lane crossing with a maximum width of 2.7 metres over the footpath, and perpendicular to the kerb alignment. In exceptional circumstances, a double lane crossing with a maximum width of 5.4 metres may be permitted for safety reasons (refer Figure 3.8).
- Vehicle access ramps parallel to the street frontage will not be permitted.
- Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building façade.
- Vehicle entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.

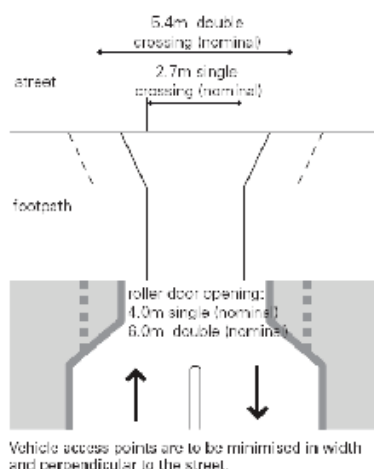


Figure 3.8: Driveway crossing dimensions

## Porte Cocheres

Porte cocheres disrupt pedestrian movement and do not contribute to active street frontage. They may only be permitted in exceptional circumstances for hotels and major tourist venues subject to a high quality urban design, streetscape, heritage and pedestrian amenity considerations. They are not permitted in those streets shown with significant pedestrian circulation at Figure 3.7.

If justified, porte cocheres should preferably be internal to the building with one combined vehicle entry and exit point, or one entry and one exit point on two different street fronts of the development.

In exceptional circumstances for the buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it:

Is constructed entirely at the footpath level,

Provides active street frontage uses in addition to any hotel entry or lobby at its perimeter,

Is of high quality design and finish, and

Provides for safe and clear pedestrian movement along the street.

### 3.7 Pedestrian overpasses, underpasses and encroachments

Streets represent important components of the public domain and provide the best potential amenity and safety when activated by pedestrians. Streets offer sky exposure, sunlight and air, a sense of orientation and direct access to the main frontages of buildings. A successful city street provides a comfortable interface between pedestrians and exposure for business. Generally, pedestrians should be encouraged to use the street level to enhance and contribute to street life, to promote activity and interest, and to maximise safety and security of the public domain. Wollongong's climate does not warrant pedestrian isolation from the street, and any conflicts between pedestrians and vehicles are to be resolved at the street level.

Pedestrian overpasses are discouraged as they have a negative impact on the streetscape quality and on views and vistas along streets. New pedestrian underpasses will only be considered where they would directly connect to major transport nodes such as railway stations and substantially improve pedestrian safety and access.

#### 3.7.1 Objectives

- a) To promote pedestrian activation of streets and public places.
- b) To promote 'safer by design' and crime prevention principles.
- c) To encourage pedestrian circulation at street level.
- d) To protect views and vistas along streets.

#### 3.7.2 Development Controls

- a) New overpasses over streets will generally not be approved. In exceptional circumstances, new overpasses over service lanes may be considered by the consent authority subject to assessment of impacts on safety and crime prevention, streetscape amenity and activation of the public domain. In such circumstances, overpasses are to be fully glazed, not greater than 6 metres wide or more than one level high. Refer to AS 5100.1 – 2004.
- b) Longitudinal development under the road reserve is not permitted. The siting of basement car parks beneath the road reserve is not permitted for private developments. Stratum road closures for this purpose will not be permitted.
- c) Underpasses may be considered by the consent authority for direct connection under adjacent streets to railway stations:
  - i) Where they would substantially improve pedestrian safety and accessibility, and
  - ii) Incorporate active uses, particularly at entry and exit points.
- d) Access to underpasses should be provided directly from a public footpath at the street alignment (rather than reducing the space of the footpath). This will ensure public access at all times and enhance the use and activities of the public domain.
- e) All underpasses are to have a minimum width of 4.5 metres clear of all fixed obstructions, a minimum ceiling height of 4 metres and a minimum depth of 3 metres.

### 3.8 Building exteriors

Wollongong's cityscape and public domain is defined by its buildings, streets and public places. The maintenance and improvement of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

#### 3.8.1 Objectives

To ensure that new buildings in Wollongong:

- a) Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.

- b) Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.
- c) Present appropriate design responses to nearby development that complement the streetscape.
- d) Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.
- e) Maintain a pedestrian scale in the articulation and detailing of the lower levels of the building.
- f) Contribute to a visually interesting skyline.

### 3.8.2 Development Controls

- a) Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of:
  - i) Appropriate alignment and street frontage heights.
  - ii) Setbacks above street frontage heights.
  - iii) Appropriate materials and finishes selection.
  - iv) Façade proportions including horizontal or vertical emphasis.
  - v) The provision of enclosed corners at street intersections.
- b) Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged.
- c) Articulate facades so that they address the street and add visual interest.
- d) External walls should be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes, such as face brickwork, rendered brickwork, stone, concrete and glass.
- e) Finishes with high maintenance costs, those susceptible to degradation or corrosion from a coastal or industrial environment or finishes that result in unacceptable amenity impacts, such as reflective glass, are to be avoided.
- f) To assist articulation and visual interest, avoid expanses of any single material.
- g) Limit opaque or blank walls for ground floor uses to 30% of the street frontage.
- h) Maximise glazing for retail uses, but break glazing into sections to avoid large expanses of glass.
- i) Highly reflective finishes and curtain wall glazing are not permitted above ground floor level (see Section 5.3).
- j) A materials sample board and schedule is required to be submitted with applications for development over \$1 million or for that part of any development built to the street edge.
- k) Minor projections up to 450mm from building walls in accordance with those permitted by the Building Code of Australia may extend into the public space providing it does not fall within the definition of gross floor area and there is a public benefit, such as:
  - i) Expressed cornice lines that assist in enhancing the streetscape,
  - ii) Projections such as entry canopies that add visual interest and amenity, and
  - iii) Provided that the projections do not detract from significant views and vistas (see Figure 3.12).
- l) The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building.



Figure 3.9: Select high quality masonry finishes with accent colours

### 3.9 Advertising and signage

Advertisements and advertising structures are an important element of the built environment. These provisions are intended to protect the significant characteristics of buildings, streetscapes, vistas and the city skyline and to encourage well designed and well positioned signs which contribute to the vitality and legibility of Wollongong city centre and which respect the amenity of residents and pedestrians and the safety of motorists. (Figures 3.10 and 3.11).

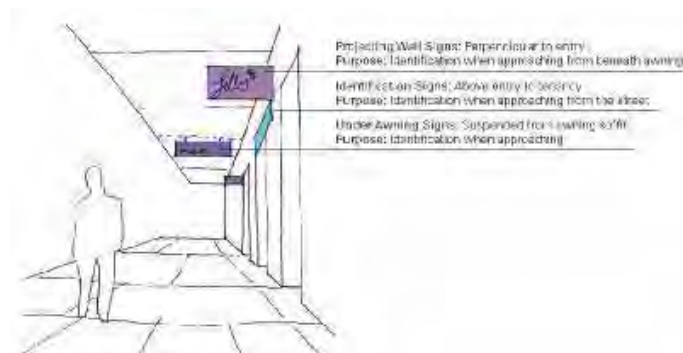
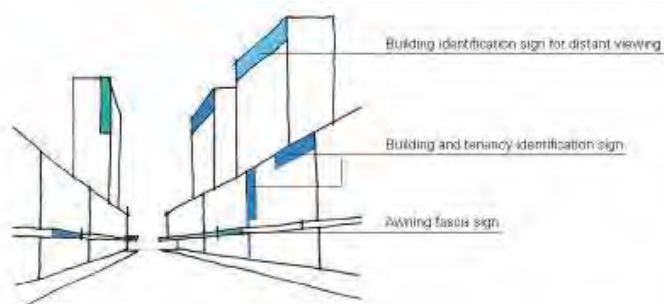


Figure 3.10: Under awning signage



**Figure 3.11: Signage Zones**

In considering innovative design proposals for signs not envisaged by these provisions or where there are issues of interpretation, the consent authority will consider the design excellence of the proposed design and the degree to which it meets the objectives of this section.

### 3.9.1 Objectives

- a) To ensure that all advertising achieves a very high level of design quality in terms of graphic design, its relationship to the architectural design of buildings and the character of streetscapes.
- b) To limit the overall amount of advertising through the provision of fewer, more effective signs, to avoid the creation of visual clutter on buildings and streetscapes.
- c) To promote signs that add character to the streetscape and assist with way finding and the pedestrian useability of the city.
- d) To promote signs that complement the architectural style and use of buildings.
- e) To consider the amenity of residential development and the visual quality of the public domain.
- f) To encourage corporate logos and colours in signs that achieve a high degree of compatibility with the architecture of the building.
- g) To ensure that the location and design of signs are consistent with road safety principles.

### 3.9.2 Development Controls

General location and design of signs.

- a) Signs are to be designed and located to:
  - i) Relate to the use of the building,
  - ii) Be visually interesting and exhibit a high level of design quality,
  - iii) Be integrated and achieve a high degree of compatibility with the architectural design of the supporting building having regard to its composition, fenestration, materials, finishes, and colours, and ensure that architectural features of the building are not obscured,
  - iv) Have regard to the view of the sign and any supporting structure, cabling and conduit from all angles, including visibility from the street level and nearby higher buildings and against the skyline, and
  - v) Have only a minimal projection from the building.
- b) Signs that contain additional advertising promoting products or services not related to the approved use of the premises or site (such as the logos or brands of products eg soft drinks, brewers, photographic film, etc) are not permitted.
- c) Signs painted on or applied on the roof are prohibited.

- d) Corporate colours, logos and other graphics are encouraged to achieve a very high degree of compatibility with the architecture, materials, finishes and colours of the building and the streetscape.
- e) In considering applications for new signs the consent authority must have regard to the number of existing signs on the site and in its vicinity and whether that signage is consistent with the provisions of this section and whether the cumulative impact gives rise to visual clutter.
- f) A signage strategy shall be submitted with a development application for a building where the signage details are not known for future uses within the building. The strategy shall include elevations that indicate signage zones on the building into which future signs will be located and details of other controls relating to theme, illumination and size, where appropriate.

### 3.9.3 Illuminated signs

- a) Illuminated signs are not to detract from the architecture of the supporting building during daylight.
- b) Illumination (including cabling) of signs is to be:
  - i) Concealed, or
  - ii) Integral with the sign, or
  - iii) Provided by means of carefully designed and located remote or spot lighting.
- c) The ability to adjust the light intensity of illuminated signs is to be installed where the consent authority considers necessary.
- d) A curfew may be imposed on the operation of illuminated signs where continuous illumination may impact adversely on the amenity of residential buildings, serviced apartments or other visitor accommodation, or have other adverse environmental effects.
- e) Up-lighting of signs is prohibited. Any external lighting of signs is to be downward pointing and focused directly on the sign and is to prevent or minimise the escape of light beyond the sign.

### 3.9.4 Signs and Road Safety

- a) Signs are regarded as prejudicial to the safety of the travelling public if they:
  - i) Obscure or interfere with road traffic signs and signals or with the view of a road hazard, oncoming vehicles, or any other vehicle or person, or an obstruction which should be visible to drivers or other road users,
  - ii) Give instructions to traffic by use of the word 'stop' or other directions, which could be confused with traffic signs,
  - iii) Are of such a design or arrangement that any variable messages or intensity or lighting impair drivers' vision or distract drivers' attention, and
  - iv) Are situated at locations where the demand on drivers' concentration due to road conditions are high such as at major intersection or merging and diverging lanes.

## 3.10 Views and view corridors

Views contribute to the character and amenity of a city, enhancing the sense of place and identity. The physical setting of the Wollongong city centre between the coast and escarpment provides for special views of this natural setting and associated elements.

It is important that views to the ocean and the escarpment be maintained from as many points as possible at street level. In the redevelopment of some sites consideration should be given to opening up new significant views. Views are regarded as significant when they terminate at places of architectural, landscape, or cultural significance. This may include views of the foreshore, major parks or publicly significant objects or heritage buildings.

A silhouette is the outline of a building against the sky. The silhouettes of many buildings are significant and contribute to the identity of the commercial core of the city and its skyline. The massing and

arrangement of the skyline and existing building silhouettes should be carefully considered and proposed development should be carefully designed so that its appearance complements the city skyline.

### 3.10.1 Objectives

- a) To maintain and enhance views from the city centre to the foreshore, escarpment and significant objects (such as the lighthouse) wherever possible.
- b) To enhance views along city streets.
- c) To protect silhouettes of the tops of major buildings or structures as seen against the sky or backdrop of the escarpment or foreshore.

### 3.10.2 Development Controls

- a) Existing views shown in Figure 3.12 are to be protected to the extent that is practical in the planning and design of development.
- b) The redevelopment of sites with potential to open a blocked view shown in Figure 3.12 must take into account the restoration of that view.
- c) Align buildings to maximise view corridors between buildings.
- d) Remove or avoid installation of built elements that obstruct significant views.
- e) Carefully consider tree selection to provide views along streets in Figure 3.12 and keep under storey planting low where possible.
- f) Site analysis must address views with the planning and design of building forms taking into account existing topography, vegetation and surrounding development.





Figure 3.12: Significant views

## 4 ACCESS, PARKING AND SERVICING

### 4.1 General

This section contains detailed objectives and controls on pedestrian access, vehicular access, on-site parking and site facilities, including refuse collection and removal.

To satisfy the aims and zoning objectives of the Wollongong LEP 2009, controls in this section aim to:

- Facilitate the development of building design excellence appropriate to a regional city;
- Require parking and servicing provisions to be contained within development sites to an amount and rate adequate for the economic and sustainable growth of the city centre;
- Provide for safe and secure access;
- Minimise impacts on city amenity, the public domain and streetscape, and
- Ensure that access is provided for the disabled and mobility impaired.

## 4.2 Pedestrian access and mobility

Any new development must be designed to ensure that safe and equitable access is provided to all, including people with a disability.

### 4.2.1 Objectives

- a) To provide safe and easy access to buildings to enable better use and enjoyment by people regardless of age and physical condition, whilst also contributing to the vitality and vibrancy of the public domain.
- b) To ensure buildings and places are accessible to people with a disability.

### 4.2.2 Development Controls

- a) Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity.
- b) The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, AS 2890 Pt 1, or as amended) and the Disability Discrimination Act 1992 (as amended).
- c) The development must provide at least one main pedestrian entrance with convenient barrier free access in all developments to at least the ground floor.
- d) The development must provide continuous access paths of travel from all public roads and spaces as well as unimpeded internal access.
- e) Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours in accordance with Council's Public Domain Technical Manual.
- f) Building entrance levels and footpaths must comply with the longitudinal and cross grades specified in AS 1428.1:2001, AS/NZS 2890.1:2004 and the Disability Discrimination Act.

## 4.3 Vehicular driveways and manoeuvring areas

### 4.3.1 Objectives

- a) To minimise the impact of vehicle access points and driveway crossovers on streetscape amenity, pedestrian safety and the quality of the public domain by:
  - i) Designing vehicle access to required safety and traffic management standards;
  - ii) Integrating vehicle access with site planning, streetscape requirements, traffic patterns; and
  - iii) Minimising potential conflict with pedestrians.

### 4.3.2 Development Controls

- a) Driveways should be:
  - i) Provided from lanes and secondary streets rather than the primary street, wherever practical.
  - ii) Located taking into account any services within the road reserve, such as power poles, drainage pits and existing street trees.
  - iii) Located a minimum of 6 metres from the perpendicular of any intersection of any two roads.
  - iv) If adjacent to a residential development setback a minimum of 1.5m from the relevant side property boundary.
- b) Vehicle access is to be designed to:
  - i) Minimise the impact on the street, site layout and the building façade design; and
  - ii) If located off a primary street frontage, integrated into the building design.

- c) All vehicles must be able to enter and leave the site in a forward direction without the need to make more than a three point turn.
- d) Design of driveway crossings must be in accordance with Council's standard Vehicle Entrance Designs, with any works within the footpath and road reserve subject to a s138 Roads Act approval.
- e) Driveway widths must comply with the relevant Australian Standards.
- f) Car space dimensions must comply with the relevant Australian Standards.
- g) Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, (AS 2990.1).
- h) Vehicular ramps less than 20m long within developments and parking stations must have a maximum grade of 1 in 5 (20%). Ramp widths and design must be in accordance with AS 2890.1.
- i) Access ways to underground parking should not be located adjacent to doors or windows of the habitable rooms of any residential development.
- j) For residential development in the General Residential zone, use semi-pervious materials for all uncovered parts of driveways/spaces to provide for some stormwater infiltration.

## 4.4 On-site parking

On-site parking includes underground (basement), surface (at-grade) and above ground parking, including parking stations.

Parking rates for commercial and retail development are specified within Part E of this DCP.

### 4.4.1 Objectives

- a) Facilitate an appropriate level of on-site parking provision in the city to cater for a mix of development types.
- b) Minimise the visual impact of on-site parking.
- c) Provide adequate space for parking and manoeuvring of vehicles (including service vehicles and bicycles).
- d) To promote Wollongong city centre as a more lively and vibrant place by providing parking incentives for certain developments in the city centre.
- e) To encourage economic growth in the city centre.
- f) To recognise the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking.

### 4.4.2 Development Controls

#### General (all development)

- a) On-site parking must meet the relevant Australian Standard (AS2890.1 2004 – Parking facilities, or as amended).
- b) Council may require the provision of a supporting geotechnical report prepared by an appropriately qualified professional as information to accompany a development application to Council.
- c) Car parking and associated internal manoeuvring areas which are surplus to Council's specified parking requirements will count towards the gross floor area, but not for the purpose of determining the necessary parking.
- d) Any car parking provided in a building above ground level is to have a minimum floor to ceiling height of 2.8m so it can be adapted to another use in the future.
- e) On-site vehicle, motorcycle and bicycle parking is to be provided in accordance with Part E of this DCP.

- f) To accommodate people with disabilities, provide a minimum of 1% of the required parking spaces, or minimum of 1 space per development, (whichever is the greater) as an appropriately designated and signed disabled parking space.

### **Residential flat buildings**

- a) On-site parking is to be accommodated underground, or otherwise integrated into the design of the building.

### **Commercial developments within the commercial core and city edge zones**

- a) On-site parking is to be accommodated underground, or otherwise integrated into the design of the building.

### **Commercial developments and mixed use developments in all other zones**

- a) The impact of any on-grade car parking must be minimised by:
  - i) Locating parking on the side or rear of the lot away from the street frontage;
  - ii) Provision of fencing or landscape to screen the view of cars from adjacent streets and buildings;
  - iii) Allowing for safe and direct access to building entry points; or
  - iv) Incorporating car parking into landscape design of the site (such as plantings between parking bays to improve views, selection of paving material and screening from communal and open space areas).
- b) Natural ventilation should be provided to underground parking areas where possible, with ventilation grilles and structures;
  - i) integrated into the overall façade and landscape design of the development,
  - ii) not located on the primary street façade, and
  - iii) oriented away from windows of habitable rooms and private open space areas.

## **4.5 Site facilities and services**

### **4.5.1 Objectives**

- a) To ensure that site facilities (such as clothes drying areas, mail boxes, recycling and garbage disposal units/areas, screens, lighting, storage areas, air conditioning units and communication structures) are effectively integrated into the development and are unobtrusive.
- b) To ensure that site services and facilities are adequate for the nature and quantum of development.
- c) To establish appropriate access and location requirements for servicing.
- d) To ensure service requirements do not have adverse amenity impacts.

### **4.5.2 Development Controls**

#### **Mail boxes**

- a) Provide letterboxes for residential building and/or commercial tenancies in one accessible location adjacent to the main entrance to the development.
- b) They should be integrated into a wall where possible and be constructed of materials consistent with the appearance of the building.
- c) Letterboxes shall be secure and large enough to accommodate articles such as newspapers.

#### **Communication structures, air conditioners and service vents**

- a) Locate satellite dish and telecommunication antennae, air conditioning units, ventilation stacks and any ancillary structures:

- i) Away from the street frontage,
  - ii) Integrated into the roof scape design and in a position where such facilities will not become a skyline feature at the top of any building, and
  - iii) Adequately setback from the perimeter wall or roof edge of buildings.
- b) A master antennae must be provided for residential apartment buildings. This antenna shall be sited to minimise its visibility from surrounding public areas.

## Waste (garbage) storage and collection

### General (all development)

- a) All development is to adequately accommodate waste handling and storage on-site. The size, location and handling procedures for all waste, including recyclables, is to be determined in accordance with Council waste policies and advice from relevant waste handling contractors.
- b) Access for waste collection and storage is preferred from rear lanes, side streets or rights of ways.
- c) Waste storage areas are to be designed to:
  - i) Ensure adequate driveway access and manoeuvrability for any required service vehicles,
  - ii) Located so as not to create any adverse noise impacts on the existing developments or sensitive noise receptors such as habitable rooms of residential developments, and
  - iii) Screened from the public way and adjacent development that may overlook the area.
- d) The storage facility must be well lit, easily accessible on grade for movement of bins, free of obstructions that may restrict movement and servicing of bins or containers and designed to minimise noise impacts.

### Location requirements for Waste Storage Areas and Access

- a) Where waste volumes require a common collection, storage and handling area, this is to be located:
  - i) For residential flat buildings, enclosed within a basement or enclosed carpark,
  - ii) For multi-housing, at ground behind the main building setback and façade, or within a basement or enclosed carpark,
  - iii) For commercial, retail and other development, on-site in basements or at ground within discrete service areas not visible from main street frontages.
- b) Where above ground garbage collection is prohibitive or impractical due to limited street frontage, or would create an unsafe environment, an on-site basement storage area must be provided.
- c) Where a mobile compaction vehicle is required to enter the site, the access and circulation area shall be designed to accommodate a vehicle with the following dimensions:

Position	Dimension
Vehicle length	12300mm
Vehicle width	3500mm
Vehicle height – travel	
(Safe height in confined areas – top door closed and forks down)	3800mm
Vehicle height – operation	
(Top door open with a bin at full tipping position)	6000mm

### Service docks and loading/unloading areas

- a) Provide adequate space within any new development for the loading and unloading of service/delivery vehicles.
- b) Preferably locate service access off rear lanes, side streets or rights of way.
- c) Screen all service doors and loading docks from street frontages and from active overlooking from existing developments.
- d) Design circulation and access in accordance with AS2890.1.

### Fire service and emergency vehicles

- a) For developments where a fire brigade vehicle is required to enter the site, vehicular access, egress and manoeuvring must be provided to, from and on the site in accordance with the NSW Fire Brigades Code of Practice – Building Construction – NSWFB Vehicle Requirements.
- b) Generally, provision must be made for NSW Fire Brigade vehicles to enter and leave the site in a forward direction where:
  - i) NSW Fire Brigade cannot park their vehicles within the road reserve due to the distance of hydrants from the building or restricted vehicular access to hydrants; or
  - ii) The site has an access driveway longer than 15m.

### Utility Services

The provision of utility services and access for regular servicing and maintenance must be considered at the concept stage of site development.

- a) Development must ensure that adequate provision has been made for all essential services including water, sewerage, electricity and telecommunications and stormwater drainage to the satisfaction of all relevant authorities.
- b) The applicant must liaise with the relevant power authority with regard to the need for a conduit to be installed within the foot way area for the future provision of an underground power supply and extension of the conduit up to the wall of the existing or proposed building.
- c) The development must ensure that ready connection of the building(s) can be made in future when underground power is installed and the overhead connection is replaced with a connection to the underground line.
- d) The applicant must liaise with the power authority with regard to the retention, relocation, or removal of any existing power pole.

## 5 ENVIRONMENTAL MANAGEMENT

### 5.1 General

This section deals with energy efficiency requirements of buildings, water use and conservation, wind and solar impacts and waste management.

#### 5.1.1 Strategy

To satisfy the aims and zoning objectives of the Wollongong City Centre LEP 2007, controls in this section aim to;

- (a) Facilitate the development of building design excellence appropriate to a regional city,
- (b) Ensure environmental impacts of new development are managed in a sustainable and economical way,

- (c) Ensure a healthy environment,
- (d) Provide an adequate and renewable supply of resources, and
- (e) Ensure application, where appropriate, of the BASIX or **National Built Environment Rating System (NABERS)**, ~~Australian Greenhouse Ratings (AGR) certification systems.~~

## 5.2 Energy efficiency and conservation

The ability of development to optimise thermal performance, thermal comfort and day lighting will contribute to the energy efficiency of the buildings, provide increased amenity to occupants and reduce greenhouse emissions and, with them, the cost of supplying energy.

### 5.2.1 Objectives

- a) To reduce the necessity for mechanical heating and cooling.
- b) To minimise greenhouse gas ~~emissions~~ **emissions**.
- c) To use natural climatic advantages of the coastal location such as cooling summer breezes, and exposure to unobstructed winter sun.

### 5.2.2 Development Controls

#### Residential

New dwellings, including multi-unit development within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy – Building Sustainability Index (BASIX). **Council encourages all applicants to go beyond minimum BASIX requirements incorporating passive solar design and energy efficiency measures for residential development.**

#### Non-Residential

For all non-residential development:

- a) Improve the control of mechanical space heating and cooling by:
  - i) Designing heating/cooling systems to target only those spaces which require heating or cooling, not the whole building.
- b) Improve the efficiency of hot water systems by:
  - i) Insulating hot water systems, and
  - ii) Installing water saving devices, such as flow regulators, ~~3 stars~~ **3.5 stars** rated shower heads, dual flush toilets and tap aerators.
- c) Reduce reliance on artificial lighting and designing lighting systems to target only those spaces which require lighting at any particular 'off peak' time, not the whole building.

~~For all commercial development over \$5 million:~~

~~Provide an Energy Efficiency Report from a suitably qualified consultant to accompany any development application for new commercial office development with a construction cost of \$5 million or more that demonstrates a commitment to achieve no less than a 4 star rating under the Australian Building Greenhouse Rating Scheme.~~

**An energy efficiency report from a suitably qualified consultant is to accompany any development application for non-residential development with a construction cost of \$1million or greater. This report must demonstrate commitment to achieving a minimum of 4 stars Green Star rating (design and as built tool) or 4 stars NABERS rating (energy tool) for the development.**

From 1<sup>st</sup> November 2006 all non-residential development Class 5-9 will need to comply with the Building Code of Australia energy efficiency provisions.

## 5.3 Water conservation

Building design can contribute to environmental sustainability by integrating measures for improved water quality and efficiency of use. Water can be conserved in two ways; by reducing water demand from the mains and re-using water, which would otherwise be lost, as run off or waste water. By integrating water use efficiency; water collection and water reuse measures into building associated infrastructure design development can contribute to environmentally sustainable outcomes.

### 5.3.1 Objectives

- a) To reduce per-capita mains consumption of potable water.
- b) To harvest rainwater and urban stormwater runoff for use.
- c) To reduce wastewater discharge.
- d) To capture, treat and reuse wastewater where appropriate.
- e) To safeguard the environment by improving the quality of water run-off.
- f) To ensure infrastructure design is complementary to current and future water use.

### 5.3.2 Development Controls

#### Residential

New dwellings, including a residential component within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy – Building Sustainability Index (BASIX). Council encourages all residential development to go beyond the minimum BASIX requirements and enhance the water efficiency for their development.

#### Non-residential

- a) The following water saving measures are to be incorporated into non-residential building. Water fixtures (shower heads, taps, toilets, urinals etc) are to be 3-stars 3.5 stars or better rated.
  - i) Appliances (dishwashers, clothes washers etc) are to be 3-stars 3.5 stars or better rated with respect to water use efficiency. Demonstrate, if necessary, how these requirements will be achieved for replacement appliances, appliances not installed at construction or bought in by occupants following construction,
  - ii) Stormwater runoff control, capture and reuse, including water quality management in accordance with Council's guidelines,
  - iii) Select water efficient plants and/or, indigenous vegetation for landscape in accordance with Council's recommendations,
  - iv) Use non-potable water for watering gardens and landscape features, and
  - v) Operating details for swimming pools and water features including filling, draining and maintenance activities. Covers are to be included in the design and operational aspects of swimming pool installations.
- b) Alternatives to the above water savings methods can be presented to Council and they will be assessed on merit.



## 5.4 Reflectivity

Reflective materials used on the exterior of buildings can result in undesirable glare for pedestrians and potentially hazardous glare for motorists. Reflective materials can also impose additional heat load on other buildings. The excessive use of highly reflective glass should be discouraged. Buildings with a glazed roof, façade or awning should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

### 5.4.1 Objective

- a) To restrict the reflection of sunlight from buildings to surrounding areas and buildings.

### 5.4.2 Development Controls

- a) New buildings and facades should not result in glare that causes discomfort or threatens safety of pedestrians or drivers.
- b) Visible light reflectivity from building materials used on facades of new buildings should not exceed 20%.
- c) Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar glare from the proposed development on pedestrians or motorists may be required.

## 5.5 Wind mitigation

Windy conditions can cause discomfort and danger to pedestrians, and downdrafts from buildings can inhibit the growth of street trees. Conversely, moderate breezes that penetrate the streets can enhance pedestrian comfort and disperse vehicle emissions and air conditioning plant exhausts.

### 5.5.1 Objectives

- a) To ensure that new developments satisfy nominated wind standards and maintain comfortable conditions for pedestrians.
- b) To ensure that the moderate breezes are able to penetrate the streets of Wollongong city centre.

### 5.5.2 Development Controls

- a) To ensure public safety and comfort the following maximum wind criteria are to be met by new buildings:
  - i) 10 metres/second in retail streets,
  - ii) 13 metres/second along major pedestrian streets, parks and public places, and
  - iii) 16 metres/second in all other streets.
- b) Site design for tall buildings (towers) should:
  - i) Set tower buildings back from lower structures built at the street frontage to protect pedestrians from strong wind downdrafts at the base of the tower,
  - ii) Ensure that tower buildings are well spaced from each other to allow breezes to penetrate city centre,
  - iii) Consider the shape, location and height of buildings to satisfy wind criteria for public safety and comfort at ground level, and
  - iv) Ensure usability of open terraces and balconies.
- c) A Wind Effects Report is to be submitted with the DA for all buildings greater than 32m in height,
- d) For buildings over 50m in height, results of a wind tunnel test are to be included in the report.

## 5.6 Waste and recycling

The minimisation of waste from development can reduce impacts on the public domain, contribute to the amenity of the building and limit the potential harmful impacts to the environment. Waste management refers to all stages of development from construction and use through to demolition. It also includes the way in which waste is stored and collected.

### 5.6.1 Objectives

- a) To minimise waste generation and disposal to landfill with careful source separation, reuse and recycling.
- b) To avoid the generation of waste through design, material selection and building practices.
- c) To plan for the types, amount and disposal of waste to be generated during demolition, excavation and construction of the development.
- d) To ensure efficient storage and collection of waste and quality design of facilities.

### 5.6.2 Development Controls

- a) All development must comply with Council's Technical Policy for the Management of all Wastes Associated with Building Sites.

### Non-residential development

- a) Development applications for all non-residential development must be accompanied by a waste management plan that addresses:
  - i) Best practice recycling and reuse of construction and demolition materials,
  - ii) Use of sustainable building materials that can be reused or recycled at the end of their life,
  - iii) Handling methods and location of waste storage areas in accordance with the provisions of Section 4.4.3 of this DCP, such that handling and storage has no negative impact on the streetscape, building presentation or amenity of occupants and pedestrians, and
  - iv) Procedures for the on-going sustainable management of green and putrescible waste, garbage, glass, containers and paper, including estimated volumes, required bin capacity and on-site storage requirements.

The waste management plan is to be prepared by a specialist waste consultant and is subject to approval by Council.

### Residential development

Provision must be made for the following waste generation:

- a) In developments not exceeding six dwellings, individual waste storage facilities may be permitted.
- b) In development of more than six units or dwellings, or where the topography or distance to the street collection point makes access difficult for individual occupants, a collection and storage area is required. The storage area must be located in a position which is;
  - i) Not visible from the street,
  - ii) Easily accessible to dwelling occupants,
  - iii) Accessible by collection vehicles (or adequately managed by the body corporate to permit relocation of bins to the approved collection point),
  - iv) Has water and drainage facilities for cleaning and maintenance, and
  - v) Does not immediately adjoin private open space, windows or clothes drying areas.

- c) Subject to Council collection policy, common garbage storage areas must be sized to either accommodate the number of individual bins required or to accommodate sufficient larger bins with the following minimum dimensions:

Bin size	Dimensions
660 litres	1070 x 910 x 635mm
240 litres	1180 x 740 x 570mm

The size and number of the waste bins shall be determined having regard to the need for either on-site access by collection vehicles or the requirement for bins to be wheeled to the street for collection by a contractor. If transferred to the street for collection, the body corporate or a caretaker must be responsible for the movement of bins to their collection point.

Residential Flats	Multi Unit Housing
Waste	
80 litres per week/flat	120 litres per week/dwelling
Recycling	
80 litres per week/flat	120 litres per week/dwelling
Green waste	
A communal waste bin of sufficient capacity to accept waste from any landscaped areas	120 litres per fortnight/dwelling

## 6 GENERAL RESIDENTIAL DEVELOPMENT CONTROLS

### 6.1 SEPP 65 and residential flat design code

In addition to other controls in this DCP, the provisions in the Residential Flat Design Code associated with State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development (SEPP 65) are adopted in this DCP to apply to residential development in the Wollongong City Centre including flats, multi dwelling housing, any residential component of a mixed use development, and serviced apartments that are strata titled. In particular, Parts 2 and 3 of the code are to apply to the city centre and include provisions for the following:

Site configuration including deep soil zones, fences and walls, landscape design, open space, orientation, planting on structures, and stormwater management;

Site amenity including safety and visual privacy;

Site access including building entries, parking, pedestrian and vehicle access;

Building configuration including apartment layout, balconies, ceiling heights, flexibility, ground floor apartments, internal circulation, mixed use and storage;

Building amenity including acoustic privacy, daylight access and natural ventilation;

Building form including awnings and signage, facades and roof design; and

Building performance including energy efficiency, maintenance, waste management and water conservation.

Where there is an inconsistency between other provisions in this DCP and the Residential Flat Design Code, this DCP prevails to the extent of the inconsistency.

## 6.2 Housing choice and mix

A choice of apartment types and mix of sizes in the city centre caters for a variety of socio-economic groups.

In addition to the provisions for apartment mix at Part 03 of the Residential Flat Design Code, the following additional controls apply.

(These controls do not apply to single dwellings).

### 6.2.1 Objectives

- a) Ensure that residential development provides a mix of dwelling types and sizes to cater for a range of household types.
- b) Ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.
- c) Ensure a sufficient proportion of dwellings include accessible layouts and **universally designed** features to accommodate changing requirements of residents.
- d) Ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

### 6.2.2 Development Controls

- a) Where residential units are proposed at ground level within the Mixed Use (City Edge) and Special Activities zone, a report must be provided with the development application demonstrating how future commercial uses can be accommodated within the ground level design. The report must address:
  - i) Access requirements including access for persons with a disability (Compliance with Disability Discrimination Act 1992),
  - ii) Any upgrading works necessary for compliance with the Building Code of Australia, and
  - iii) Appropriate floor to ceiling heights.
- b) To achieve a mix of living styles, sizes and layouts within each residential development, comply with the following mix and size:
  - i) Studio and one bedroom units must not be less than 10% of the total mix of units within each development,
  - ii) Three or more bedroom units must not be less than 10% of the total mix of units within each development, and
  - iii) For smaller developments (less than six dwellings) achieve a mix appropriate to locality.
- c) For development built by (or on behalf of) the Department of Housing, an alternative mix of unit types may be approved, subject to housing needs being demonstrated by the Department.
- d) For residential apartment buildings and multi-unit housing, ~~40%~~ **20%** of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.
- e) Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings

where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.

- f) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
- g) Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard for disabled parking spaces.
- h) For all residential apartment buildings and multi-unit housing, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans.
- i) Ceiling heights of apartments must be selected to encourage the penetration of natural sunlight into all areas of the building. Provide the following minimum floor to ceiling heights, for residential zones, as required by the Residential Flat Design Code:
  - i) 2.7m minimum for all habitable rooms on all floors;
  - ii) 2.25m to 2.4m minimum for non-habitable rooms on all floors;
  - iii) for two storey apartments, 2.4m minimum for the second storey if 50% or more of the apartment has 2.7m minimum ceiling heights;
  - iv) for two storey units with a two storey void space, 2.4m minimum ceiling heights;
  - v) attic spaces, 1.5 minimum wall heights at edge of room with a 30 degree minimum ceiling slope.

### 6.3 Dwelling houses

Where there is an inconsistency between the provisions of this part of the DCP and other parts of the DCP, this part of the DCP will prevail to the extent of the inconsistency.

### 6.4 Multi dwelling housing

Where there is an inconsistency between the provisions of this part of the DCP and other parts of the DCP, this part of the DCP will prevail to the extent of the inconsistency.

### 6.5 Dual occupancy

Where there is an inconsistency between the provisions of this part of the DCP and other parts of the DCP, this part of the DCP will prevail to the extent of the inconsistency.

### 6.6 Basement Car parks

#### 6.6.1 Objective

- a) Integrate the siting, scale and design of basement parking into the site and building design.

#### 6.6.2 Development Controls

- a) The scale and siting of the basement car park must not impact upon the ability of the development to satisfy minimum landscaping and deep soil zone requirements.
- b) The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2m above natural or finished ground level, when measured at any point on the outside walls of the building. On sloping sites, a change in level in the basement must be provided to achieve this maximum 1.2m height.

Generally variation to this 1.2m height will not be supported however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2m height must be included in the total gross floor area calculation for the development.

- c) In addition, the following must be satisfied:
  - i) Landscaped terraces are provided in front of the basement podium to reduce the overall visual impact;
  - ii) The height of the basement does not result in the building having a bulk and scale which dominates the streetscape; and
  - iii) The main pedestrian entry to the building is identifiable and readily accessible from the street frontage.
- d) The following setbacks from front, side and rear boundaries apply to basement podiums:
  - i) Where the height of the basement podium (measured to the top of any solid wall located on the podium) is less than 1.2m above natural or finished ground level (whichever distance is greater), the basement podium may extend to the property boundary. A minimum 1.5m wide landscaped planter must be provided on the perimeter of any section of the basement podium which is located on a side or rear property boundary. Such planter must prevent direct access to the outer edge of the podium, to minimise direct overlooking of adjacent dwellings and open space areas.
  - ii) Any portion of the basement which exceeds 1.2m above natural or finished ground level (whichever distance is greater) must be setback from the property boundaries by a ratio 1:1 (height: setback). A minimum setback of 1.5m applies in this instance, with this area to be landscaped. For the purpose of determining the height of the basement, any solid walls located on the podium shall be included in the overall height calculation.
- e) Where parking is provided in a basement, ventilation structures for the basement parking and air conditioning units must be orientated away from windows of habitable rooms and private open space areas. Ventilation grills must be integrated into the design of the façade of the building to minimise their visual impact.
- f) The visual impact of all basement walls must be minimised through the use of various design techniques including well proportioned ground level articulation and relief, mixed finishes and materials, terracing and/or dense landscaping.
- g) Basements must be protected from inundation from 100-year ARI flood levels (or greater).

## 6.7 Communal open space

### 6.7.1 Objectives

- a) Ensure that communal open spaces are of adequate size to be functional.
- b) Provide communal open space which is accessible by all residents.

### 6.7.2 Development Controls

- a) Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at 5m<sup>2</sup> per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5m.
- b) The communal open space must be easily accessible and within a reasonable distance from apartments, be integrated with site landscaping, allow for casual social interaction and be capable of accommodating recreational activities.
- c) Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must not contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.

- d) Areas of the communal open space which are to be paved or which will contain shade structures, swimming pools or the like cannot be located within the deep soil zone.
- e) The communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.

## 6.8 Private open space

### 6.8.1 Objectives

- a) Ensure that private open spaces are of sufficient size to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate.
- b) Ensure functionality of private open space by reducing overlooking and overshadowing of such spaces.
- c) Reduce the dominance of balconies in determining building form.

### 6.8.2 Development Controls

- a) Private open space must be provided for each dwelling within a residential apartment building in the form of a balcony, courtyard, terrace and/or roof garden.
- b) Private open space for each dwelling within a residential apartment building must comply with the following:
  - i) The courtyard/terrace for the ground level dwellings must have a minimum area of 25m<sup>2</sup> and a width of 2 metres. This area must be separated from boundaries by at least 1.5m with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas.
  - ii) The primary private open area of at least 70% of the dwellings within a residential apartment building must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
  - iii) Private open space areas (courtyards) must not extend forward to the front building setback by greater than 900mm.
  - iv) Private open space should be sited in a location which provides privacy, solar access, and pleasing outlook and has a limited impact on neighbours.
  - v) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.
  - vi) Clearly define private open space through use of planting, fencing or landscaping features.
  - vii) Screen private open space where appropriate to ensure privacy.
  - viii) Provide balconies with operable screens or similar in locations where noise or high winds prohibit reasonable outdoor use (i.e. next to rail corridors, busy roads and tall towers).
- c) Where private open space is provided in the form of a balcony, the following requirements must also be met:
  - i) Avoid locating the primary balconies where they address side setbacks.
  - ii) The balcony must have a minimum area of 12m<sup>2</sup> open space a minimum depth of 2.4 metres.
  - iii) The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.
  - iv) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.
  - v) Individual balcony enclosures are not supported. Balcony enclosures must form part of an overall building façade design treatment and should not compromise the functionality of a balcony as a private open space area.

## 6.9 Overshadowing

### 6.9.1 Objective

- a) Minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.

### 6.9.2 Development Controls

- a) The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas.
- b) Adjacent residential buildings and their public spaces must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on 21 June.
- c) In determining access to sunlight, overshadowing by fences, roof overhangs and changes in level must be taken into consideration. Overshadowing by vegetation should also be considered, where dense vegetation appears as a solid fence. Refer to Land and Environment Court Planning Principles – Parsonage vs Ku-Rin-Gai Council (2004).
- d) In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.

## 6.10 Solar access

### 6.10.1 Objective

- a) Provide an appropriate level of natural sunlight to living spaces to improve residential amenity and minimise the use of artificial light.

### 6.10.2 Development Controls

- a) Residential apartment buildings must aim to maximise their level of northern exposure to optimise the number of dwellings having a northern aspect. Where a northern aspect is available, the living spaces and balconies of such apartments must typically be orientated towards the north.
- b) The development must maximise the number of apartments with a dual orientation. Single aspect, single storey apartments should preferably have a northerly or easterly aspect and a reduced depth to allow for access of natural light to all habitable spaces.
- c) Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation.
- d) The living rooms and private open space of at least 70% of apartments should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm.
- e) The number of single aspect apartments with a southerly aspect (south-westerly to south-easterly) is limited to a maximum of 10% of the total number of apartments proposed.
- f) Provide vertical shading to eastern and western windows. Shading can take the form of eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.

## 6.11 Natural ventilation

### 6.11.1 Objective

- a) Encourage apartment design which allows for natural ventilation of habitable rooms.
- b) Provide natural ventilation in non-habitable rooms, where possible.
- c) Reduce energy consumption by minimising the use of mechanical ventilation.



### 6.11.2 Development Controls

- a) Provide residential apartment buildings with a building depth of between 10 and 18m. The depth is measured across the shortest dimension of the building. Dwellings should be a maximum depth of 21m measured from the outside of the balcony.
- b) Variation to this standard will only be considered where it can be demonstrated that apartments will achieve the minimum requirements with regard to natural ventilation. This may be achieved where apartments have a wider frontage, or increased ceiling and window height to allow for greater penetration of natural light. The building depth is measured across the shortest access, excluding the depth of any unenclosed balconies.
- c) A minimum of sixty percent (60%) of all residential apartments shall be naturally cross ventilated.

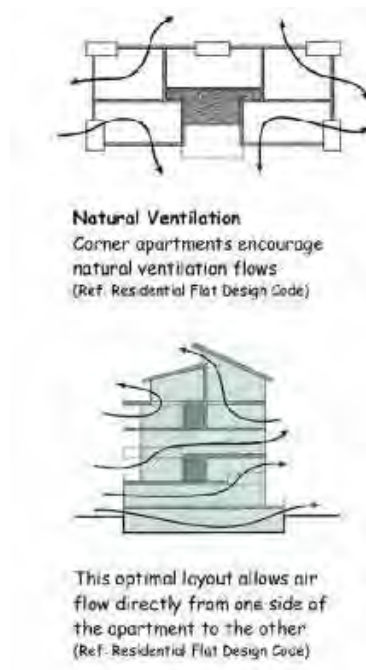


Figure 6.1: Natural ventilation

- d) Twenty five percent (25%) of kitchens within a development must have access to natural ventilation. Where kitchens do not have direct access to a window, the back of the kitchen must be no more than 8m from a window.
- e) Single aspect apartments must be limited in depth to 8m from a window.

## 6.12 Visual privacy

### 6.12.1 General

Visual privacy measures are designed to protect the privacy and amenity of occupants within a residential apartment or serviced apartment. Visual privacy measures allow occupants to carry out private functions within all rooms in the apartment as well as private balconies or open space courtyards, through limiting direct views or overlooking issues from adjoining buildings.

### 6.12.2 Objectives

The key objectives for visual privacy are:

- (a) To provide reasonable levels of visual privacy externally and internally, during the day and at night.
- (b) To maximise outlook and views from principal rooms and private open space without compromising visual privacy.

### 6.12.3 Development controls

- 1. New buildings should be sited and oriented to maximise visual privacy between buildings through compliance with minimum front, side and rear setback / building separation requirements.
- 2. The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony / open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.
- 3. Buildings are to be designed to increase privacy without compromising access to sunlight and natural ventilation through the following measures:
  - (a) Off-setting of windows in new buildings from windows in existing adjoining building(s).
  - (b) Recessed balconies and / or vertical fin elements between adjoining balconies to improve visual privacy.
  - (c) Provision of solid, semi-solid or dark tinted glazed balustrading to balconies.
  - (d) Provision of louvers or screen panels to windows and / or balconies.
  - (e) Provision of perimeter landscaped screen / deep soil planting.
  - (f) Incorporating planter boxes onto apartment balconies to improve visual separation between apartments within the development and adjoining buildings.
  - (g) Provision of pergolas or shading devices to limit overlooking of lower apartments or private open space courtyards / balconies.

## 6.13 Acoustic Privacy

Acoustic privacy is a measure of sound insulation between residential apartments and between external and internal spaces.

### 6.13.1 Objective

The main objective of acoustic privacy is to ensure a high level of amenity for occupants within residential apartments and / or serviced apartments in the development.

### 6.13.2 Development Controls

- 1. Residential apartments should be arranged in a mixed use building, to minimise noise transition between apartments by:
  - (a) Locating busy, noisy areas next to each other and quieter areas, next to other quieter areas (eg living rooms with living rooms and bedrooms with bedrooms);

- (b) Using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical services or corridors and lobby areas; and
  - (c) Minimising the amount of party (shared) walls with other apartments.
- 2. All residential apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).
- 3. Noise transmission from common corridors or outside the building is to be minimised by providing seals at entry doors.
- 4. In order to assist acoustic control of impact noise between units:
  - (a) A common wall shall have a Field Sound Transmission Class (FSTC) of not less than 50 if it separates;
    - (i) Sole occupancy units,
    - (ii) A sole occupancy unit from a plant room, stairway, public corridor, hallway or the like.
  - (b) A wall separating a bathroom, sanitary compartment, laundry or kitchen in one sole occupancy unit from a habitable room (other than a kitchen) in an adjoining unit, shall have an FSTC of not less than 55.
  - (c) A floor separating sole occupancy units must not have an FSTC less than 50.
- 5. In order to assist acoustic control of impact noise between units:
  - (a) A floor shall have an Impact Isolation Class (IIC) of not less than 50 if it separates;
    - (i) Habitable rooms of sole occupancy units
    - (ii) A sole occupancy unit from a plant room, stairway, public corridor, hallway or the like.
  - (b) A floor separating a bathroom, sanitary compartment, laundry or kitchen in one sole occupancy unit from a habitable room (other than a kitchen) in an adjoining unit, shall have an FSTC of not less than 55.
  - (c) Walls between sole occupancy units shall comply with the impact sound resistance standards specified in the BCA.
- 6. All residential buildings and serviced apartments are to be constructed so that the repeatable maximum  $L_{Aeq}$  (1 hour) level not does exceed the following levels:
  - (a) In a naturally ventilated - windows closed condition:
    - (i) Sleeping areas (night time only: Hours - 2200-0700) - 35dB
    - (ii) Living areas (24 hours) - 45dB
  - (b) In a naturally ventilated - windows open condition, (ie, windows open up to 5% of the floor area, or attenuated natural ventilation open to 5% of the floor area):

- (i) Sleeping areas (night time only: Hours - 2200-0700) - 45dB
- (ii) Living areas (24 hours) - 55dB
- (c) Where a naturally ventilated - windows open condition cannot be achieved, it is necessary to incorporate mechanical ventilation or air conditioning.
- (d) The following repeatable maximum  $L_{Aeq}$  (1 hour) levels shall not be exceeded when doors and windows are shut and mechanical ventilation or air conditioning is operating:
  - (i) Sleeping areas (night time only: Hours - 2200-0700) - 38dB
  - (ii) Living areas (24 hours) - 46dB

Note: These levels correspond to the combined measured level of external sources and the ventilation system operating normally.

7. The Statement of Environmental Effects (SEE) accompanying the development must demonstrate that the abovementioned noise criteria for windows to sleeping areas and living areas and Field Sound Transmission Class (FSTC) criteria for walls and floors have been met for each residential apartment or serviced apartment in the development through the provision of appropriate acoustic treatment measures. The proposed acoustic measures must also be shown on the required architectural floor layout and elevation plans for the development.

Alternatively, the Statement of Environmental Effects (SEE) may include an acoustical impact assessment study which outlines alternative acoustic treatment measures for any residential apartments and / or serviced apartments in the development. The acoustic impact assessment study must be carried out by a suitably qualified and experienced acoustic consultant (ie a person who is a Member of the Australian Acoustical Society, the Institution of Engineers or the Association of Australian Acoustical Consultants).

## 6.14 Storage

### 6.14.1 Objective

- a) Provide accessible storage for larger household items which cannot be readily accommodated within dwellings.

### 6.14.2 Development Controls

- a) For residential apartment buildings provide a secure space to be set aside exclusively for storage as part of the basement. The storage area must comply with the following requirements:

Dwelling	Storage	Storage
	Area	Volume
One bedroom apartments	3m <sup>2</sup>	3m <sup>3</sup>
Two bedroom apartments	4m <sup>2</sup>	8m <sup>3</sup>
Three or more bedroom apartments	5m <sup>2</sup>	10m <sup>3</sup>

## 7 PLANNING CONTROLS FOR SPECIAL AREAS

The following controls are in addition to the general controls elsewhere in this part of the DCP. Controls for special areas apply to Heritage Conservation Areas and to special areas, including the Enterprise Corridor Zone, the Railway Precinct and the Civic and Cultural Precinct as identified in Figure 7.1.



Figure 7.1: Areas with special control/ principles

### 7.1 Special areas with heritage items

#### 7.1.1 Development of Heritage Items Generally

Heritage items are identified in Schedule 5 of the Wollongong Local Environmental Plan 2009 (LEP). Works to listed heritage items, or development on listed heritage sites, or within Heritage Conservation

Areas, are subject to the provisions of Clause 35 of the LEP 2009. As part of the assessment process, the consent authority must have regard to:

Heritage provisions in the City Centre LEP,

Wollongong Heritage DCP,

Heritage objectives as listed below,

The relevant Statement of Significance for each item,

The development principles and controls contained in this section,

Any conservation management plan, heritage impact statement or study required by the consent authority in response to proposed development of these areas, and

For development that affects a heritage item, information addressing relevant issues must be included in a Statement of Heritage Impact submitted with the development application (DA).

Development within the curtilage of a listed item, or a Heritage Conservation Area, or which will impact upon the setting of a heritage item or Heritage Conservation Area is also subject to the following provisions. Where there is a discrepancy with general controls elsewhere in the DCP the following objectives and controls are to apply.

### Objectives

- a) To facilitate the conservation and protection of heritage items and Heritage Conservation Areas and their settings.
- b) To reinforce the special attributes and qualities of heritage items by ensuring that development has regard to the fabric and prevailing character of the item or special area e.g., scale, proportions, materials and finishes.
- c) To conserve, maintain and enhance existing views and vistas to buildings and places of historic and aesthetic significance.



Figure 7.2: St Michael's Cathedral and square

### Conservation Criteria

As new development within the study area must ensure that the significance of heritage items and their setting are retained and enhanced. Development applications relating to heritage listed sites or sites within Heritage Conservation Areas must demonstrate how the proposed work will not adversely affect the heritage significance of the site and the area around it.

For sites in the vicinity of heritage items or Heritage Conservation Areas, an assessment of the impact of the proposal on the setting of nearby heritage items or Heritage Conservation Areas is to be undertaken.

Relevant criteria to be considered will vary for each proposal depending on the nature of development, the proximity of the development to surrounding heritage items and conservation areas as well as other factors. For this reason, each proposal will need to be considered on a case by case basis using the following general principles:

- a) **Scale.** The scale and bulk of any new building or work must be in scale with the original building and new development must not obstruct important views or vistas of the item. In the case of infill work in a conservation area, the scale of the new building must be similar to those around it. Where this is not feasible, sufficient curtilage around the heritage item must be included to assist interpretation of its heritage significance. In some circumstances, where site depth would allow, a higher building could be erected behind a heritage shopfront.
- b) **Siting.** If the existing street façade of the building is sympathetic to the character of the street, then alteration must be avoided. New work is best located to the rear or side of the building.
- c) **Architectural form.** The basic architectural form of any new work needs to respect what exists. Issues to consider are the roof form, proportion and location of windows and doors.
- d) **Architectural detailing.** It is important to be aware of the particular era and architectural style of the building or buildings and make sure that any proposed changes are contextual to the period. For example, it is not appropriate to mix Victorian features with a California Bungalow. Overuse of historical architectural features on new work should be avoided, with preference given to uncomplicated interpretive forms and detailing.
- e) **Materials and finishes.** Reuse existing materials where possible. New materials and detailing must be compatible with the original and consideration must be given to the colour, texture and type of materials and finishes.
- f) **Use.** The best use for a building is usually the one for which it is built. Where this is not possible, a use sympathetic to the layout of the building and requiring minimal alterations will be more compatible.
- g) **Original fabric.** It is important to minimise alterations to the original fabric and where possible, repair rather than replace individual elements, such as windows and doors.
- h) **The aging process.** The patina of age on a building adds much to its character and significance. A worn step for example demonstrates the many years of feet crossing a threshold. Such features add to the uniqueness and character of a place and must be retained wherever this does not present a public safety risk.
- i) **Curtilage.** There are three types of heritage curtilage:
  - i) **Lot boundary.** The lot boundary is the most common type of curtilage. It may contain associated buildings, gardens, walls, fences and the like which contribute to the significance of the property. The majority of built items in Wollongong are listed within their lot boundary curtilage.
  - ii) **Reduced curtilage.** This curtilage is less than the lot boundary of the property and it arises where the significance of the item and its interpretation is not dependant on having a large curtilage extending to a lot boundary. Examples are a large estate with sufficient land on the lot that can be subdivided independent of the heritage significance of any item on that land, or a new dwelling adjacent but not impacting on the existing heritage item on that land. In such cases, it is necessary to identify a curtilage that enables the heritage significance of the item to be retained, and
  - iii) **Expanded curtilage.** This curtilage is greater than the property boundary. An expanded curtilage may be required to protect that landscape setting or visual catchment of an item. For example, the significance of some properties includes a visual link between the property itself and a harbour, river or topographical feature.
- j) **Infill development.** The key to successful infill development adjacent to a heritage item is reflected in design where the infill is of similar mass and character to the adjacent heritage building/s. This



may comprise use of the vertical (versus square) windows, verandas, balconies, positive roof pitches (i.e. 25 to 35 degrees) and general façade detailing. Buildings and landscaping may establish a character of an area and provide a sense of continuity and recognised community value. Unsympathetic infill will disrupt the unity of a group of buildings and may spoil the existing character. Architectural ‘good manners’ are important in areas of special character. An infill building must not precisely imitate its neighbour but use recognisable tools such as massing, scale, setback and orientation, detailing and materials, roof forms and coursing lines to complement adjacent heritage items.

Refer to the joint NSW Heritage Office and RAIA publication “Designing in Context: Guidelines for infill Development in the Historic Environment” (2005) for further guidance.

## 7.2 Special areas and Development Standards

These special areas are parts of the city centre that encompass one or more of the following:

A cluster of heritage items,

An important public domain area, or

A place that has strong community recognition as being linked to the origins of the city, its first plan and settlement.

These are identified in figure 7.1. Each area has its own set of objectives linked to the relevant development controls. These controls must be considered in addition to the other requirements of this section.

For the purposes of applying appropriate development controls, the North Beach Precinct and Belmore Basin Heritage Conservation Area which is listed as a State significant item in the WLEP 2009 and the North Beach Heritage Precinct which is listed on the State Heritage Register are considered under the controls established in the Conservation Management Plans.

### 7.2.1 Area 1: West Crown Street Shops

#### Objectives

- a) Promote conservation of early federation row of two-storey shops.
- b) Preserve the curvature of Crown Street to the point where it connects to West Crown Street.
- c) Preserve existing narrow lot layout as a reflection of early city subdivision patterns.
- d) Reduce number of over-scaled and inappropriate advertising signs.
- e) Encourage conservation of shop façade (including paintwork and possible restoration of classical detailing below awning level).
- f) Alleviate overshadowing and wind impacts on the streetscape.
- g) Promote consistency of street treatments such as awnings and lighting.

#### Development Standards

- a) Development in Area 1 must comply with the conservation criteria and development controls provided under Section 7.1.
- b) New development must retain and interpret the existing shopfront facades as part of the building design.
- c) New development and renovation of buildings must be designed by a suitably qualified registered architect.
- d) Shopfronts must be a maximum of six metres wide to retain fine grain of built form.



- e) Any other heritage conservation requirements of Council must be addressed.

#### *Height*

- i) A two-storey street wall must be retained with a minimum setback of four metres at the third storey.
- ii) Maximum building height to comply with the LEP 2007 and the sun access requirements.

#### *Signage (refer also section 3.8 Advertising and Signage)*

- i) Outdoor advertising signs and lighting must complement and be compatible with the building design in scale, style and colour.
- ii) Late 19<sup>th</sup>/early 20<sup>th</sup> Century style of outdoor advertising signs is required.
- iii) No signage is permitted on the roof of awnings or on structures extending above the awning.
- iv) Signs relating to products are not permissible over street awnings.



Figure 7.3: West Crown Street shops

### **7.2.2 Area 2: St Michael's Square/Law Courts/Market St West**

#### **Objectives**

- a) To maintain the established moderate scale and civic nature of the square and civic buildings.
- b) To preserve the significant view looking West along Market Street to St Michael's Cathedral and east along Market Street towards the coast.
- c) To maintain the view of the square from Church Street and the mall looking north.
- d) To maintain the courthouse clock tower and Cathedral steeples as the highest structures on the hill.

#### **Development Controls**

- a) Development in Area 2 must comply with the conservation criteria and development controls provided under section 7.1.
- b) The view of the cathedral against the skyline looking west along Market Street must be maintained. Future developments that propose to penetrate this view will not be permitted.

- c) The height of new developments immediately west of St Michael's must not exceed the existing ridgeline of the cathedral (R.L 43.45 AHD).
- d) Development surrounding St Michael's Square must be designed so as not to compromise the existing views to be appreciated to and from the site in other directions.
- e) Building lines for any future development within and surrounding this site (such as land to the north of St Michael's Square) must align with the existing zero front setback of the cathedral and its associated buildings.
- f) Four metre front setback to all new development fronting Market Street east of St Michael's Church.
- g) New development and renovation of buildings must be designed by a suitability qualified registered architect.
- h) Shopfronts must be a maximum of six metres wide to retain fine grain of built form.

### 7.2.3 Area 3: MacCabe Park

#### Objectives

- a) To enhance the spatial definition of the edges of MacCabe Park.
- b) To encourage a high level of daylight access to the public domain.
- c) To promote passive surveillance and greater utilisation of the park.
- d) To promote active and passive recreation opportunities.

#### Development Controls

- a) Development in Area 3 must comply with the conservation criteria and development controls provided under section 7.1
- b) Any development surrounding the park must comply with the street edge height requirements shown in sun access diagrams in Figure 2.17 of this DCP.
- c) Any development of MacCabe Park must be in accordance with a plan of management for the park.



Figure 7.4: View looking along Market Street to St. Michael's Cathedral

## 7.2.4 Area 4: East Crown Street

### Objectives

- a) To consolidate the remaining heritage character along east Crown Street between Kembla and Corrimal Streets.
- b) To promote appropriate and pleasant spatial links between the railway station and the foreshore.
- c) To alleviate overshadowing and undesirable wind action on prominent public and private open spaces.
- d) To encourage tourism, recreational and cultural uses and activities in appropriate locations, especially east of Corrimal Street.

### Development Controls

- a) Development in Area 4 must comply with the conservation criteria and development controls provided under Section 7.1.
- b) New Development and renovation of buildings must be designed by a suitably qualified registered architect.
- c) Residential development is only permitted in the form of mixed use development with at least the ground floor providing for shops, restaurant or commercial premises.

### Building Height

- a) A 9m high street wall must be retained with a minimum setback of at least 10 metres at the third storey and above on the northern side of the street (to maintain winter sunlight to the street).
- b) Maximum building height must not exceed the height specified in the LEP 2007.



Figure 7.5: East Crown Street Shops

### Façade

- a) Ground and first floor frontages of new buildings along East Crown Street from Kembla Street to Corrimal Street must be sympathetic to the late 19<sup>th</sup> Century Victorian and Italianate shop front styles without creating repetition of such styles.
- b) The appearance of building external finishes and colour must promote a sense of unity and character that consolidates the heritage environment.

### Signage (refer also section 3.8 Advertising and Signage)

- a) Outdoor advertising signs and lighting must complement and be compatible with the building design in scale, style and colour.
- b) 19<sup>th</sup> Century styles of outdoor advertising signs may be considered along Crown Street between Kembla and Corrimal Streets.

- c) Signs relating to products are not permissible over street awnings.
- d) No signage is permitted on the roof of awnings or on structures extending above the awning.



Figure 7.6: Market Square

### 7.2.5 Area 5: Market Square

#### Objectives

- a) To retain the established residential character and moderate scale of development on land surrounding Market Square.
- b) To maintain a high level of daylight access to the public domain.

#### Development Controls

- a) Development in Area 5 must comply with the conservation criteria and development controls provided under section 7.1.
- b) The maximum height of all development must not exceed heights defined in the LEP 2007.
- c) A minimum front setback of four metres for new development is required to enhance the spatial definition of the edges of Market Square.

### 7.2.6 Area 6: Keira Street

#### Objectives

- a) Reinforce and emphasise the historical street proportions and street wall of main street shop typologies along Keira Street.
- b) Retain the fine grain of shop front facades.
- c) Encourage further agglomeration of active uses (day and night) such as boutique restaurants, speciality shops, grocery stores, clubs and pubs (that characterise land north and south of Victoria Street).
- d) New development is to complement and not compete with the existing landmark on the northeast corner of Market and Keira Streets (formerly the National Mutual Life Association Building).

#### Development Controls

- a) Development in Area 6 must comply with the conservation criteria and development controls provided under Section 7.1.

### *Building Height*

- a) Maximum building height must not exceed 24 metres.

### *Setbacks*

- b) Front setback for two-storeys to be zero metres. Zero setback on the ground floor is to be strictly enforced for 100% of the street frontage.
- c) Front setback for third storey to be minimum four metres. New development on corner sites must maintain zero metres setback for 8m to 12m from the corner on the third storey.
- d) Side setbacks to be zero metres for a depth of 18m from the front boundary.

### *Façade*

- a) Finished floor level of ground to be no greater than 500m above the footpath level at any point on the street façade.
- b) Non-structural verandah posts located minimum 500mm from the road are encouraged.
- c) The top of the three-storey base to Keira Street is to finish with a parapet wall. If the building is only three storeys high a pitched roof of 25 to 35 degrees is also allowable.
- d) External materials are to be rendered brickwork painted with at least two colours, face brickwork or tiles. If face brickwork is used it is to match the colour of the bricks used at the Illawarra Hotel or upper floors of 135-145 Keira Street. The principal colour of any paintwork is to be in the heritage colour palette of brown or cream.
- e) The ground floor façade is to include fenestration detailing to emulate the five metres grain of shop fronts existing on Keira Street.

### *Signage (refer also Section 3.8 Advertising and Signage)*

- a) No signage permitted on the roof of awnings or on structures extending above the awning.
- b) Signs relating to products are not permissible over street awnings.
- c) Outdoor advertising signs and lighting must be compatible with the building design, style and colour.



**Figure 7.7: Natural Mutual Life Association Building, 1938 in Keira Street**

### 7.3 Non-residential development in the enterprise corridor zone

The Enterprise Corridor zone is identified as Area 7 in Figure 7.3. It allows for a range of commercial uses including industrial/warehouse uses, commercial offices and retailing as well as residential uses. The following controls seek to ensure that new development is compatible with existing land uses, and provide for a mix of business and employment uses and retail development as well as individual/warehouse development appropriate to its setting along a major approach to the city's commercial core.

The following controls apply to all non-residential development and are in addition to controls elsewhere in this part of the DCP. Where the controls in this section differ (except in relation to residential development), they shall override the requirement elsewhere in this part of the DCP.

#### 7.3.1 Objectives

- a) To ensure that new development is compatible with surrounding land uses.
- b) To promote streets with pedestrian activity, amenity and safety.
- c) To promote high quality well designed buildings.
- d) To provide for buildings fronting the street and legible street addresses and access.
- e) To ensure that high quality materials and finishes are used for buildings and the public domain.
- f) To provide for infiltration of stormwater below the ground surface and reduce stormwater runoff.
- g) To improve pedestrian and vehicle access and connections within the zone and with the city centre.
- h) To minimise and control vehicle access off Flinders Street (Princes Highway).
- i) To promote Flinders Street as a 'boulevard' providing a gateway entrance to the commercial core.
- j) To ensure that new development has appropriate access.
- k) To discourage subdivisions of land into small lots without a detailed plan.

#### 7.3.2 Development Controls

##### Land use

- a) In determining a development application, Council is to consider the suitability of proposed development in terms of its compatibility with existing development and impact on the amenity of surrounding properties relating to noise, vibration, odour, fumes, smoke, dust, waste and light spillage.
- b) Preferred areas for residential and mixed development are in 400m radius of North Wollongong Railway Station, to the eastern side of the area, abutting the general residential zone, and near open space areas (refer figure 7A).
- c) Preferred areas for commercial, retail and enterprise uses are fronting Flinders Street and on the southern part of the zone away from open space.
- d) Commercial office uses and retail uses in new mixed use development are to be located at ground level addressing the street frontage.

##### Building form

- a) Buildings are to front the street and provide a clear street address.
- b) Buildings are to present legible vehicle and pedestrian access points.
- c) Servicing areas and mechanical/electrical plants are to be screened from view from the public domain.
- d) A maximum of two advertising signs is allowed per building. Each sign is to relate to the use of the building. Refer to Section 3.7 of this part of the DCP for further controls and guidelines for signs.

### Landscaping

- a) Front building setbacks, including any car parking areas, are to include landscaping.
- b) Use existing and new drainage lines and channels for landscaped open space and stormwater management measures such as detention.
- c) No fences are to be provided on street frontages.

### Access, road connections and parking

- a) Vehicle and pedestrian access points are to be clear and legible.
- b) Driveways should be located more than 6m from an intersection or break in median strip, 25m from traffic lights and 1.5m to side boundaries.
- c) Car parking for commercial office and retail buildings, service areas and storage yards are to be located to the rear of buildings in basements – not on the street frontage.
- d) Industrial/warehouse buildings may have some car parking located in the front street setback subject to being integrated with approved landscaping.

### Subdivision

- a) The minimum site area for subdivision that is not part of a development application for building envelopes is 1,000 square metres.





Figure 7.8: Enterprise Corridor

## 7.4 Special area design guidelines

More detailed design guidelines will be developed by Council for special areas and for key sites scheduled for architectural competitions.



## 7.5 Design excellence

### 7.5.1 Design Review Panel

1. Any Development Application for land within the Wollongong City Centre for a development proposal involving a height of 35 metres or more and / or having a capital value of more than \$1,000,000 on a key site (ie being a site shown edged heavy black and distinctively coloured on the Key Sites Map in Wollongong Local Environmental Plan 2009) will be referred to the Design Review Panel for appropriate assessment, prior to determination of the application.
2. The Design Review Panel will also consider any Development Application for land within the Wollongong City Centre, where an applicant wishes architectural design advice on their development proposal, prior to determination of the application.
3. The Design Review Panel will consider applications at the pre-lodgement stage, in order to provide upfront design advice prior to the formal lodgement of the Development Application.
4. The Design Review Panel will consider whether the development exhibits design excellence and will have regard to the following matters:
  - (a) Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,
  - (b) Whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,
  - (c) Whether the proposed development detrimentally impacts on view corridors,
  - (d) Whether the proposed development detrimentally overshadows an area shown on the Sun Plane Protection Map in Wollongong Local Environmental Plan 2009 and taking into account the sun access diagram requirements under clause 2.10 in this chapter of the DCP,
  - (e) How the proposed development addresses the following matters:
    - (i) The suitability of the land for development,
    - (ii) Existing and proposed uses and use mix,
    - (iii) Heritage issues and streetscape constraints,
    - (iv) The location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,
    - (v) Bulk, massing and modulation of buildings,
    - (vi) Street frontage heights,
    - (vii) Environmental impacts such as sustainable design, overshadowing, wind and reflectivity,
    - (viii) The achievement of the principles of ecologically sustainable development,
    - (ix) Pedestrian, cycle, vehicular and service access, circulation and requirements,
    - (x) Impact on, and any proposed improvements to the public domain.

## **8 WORKS IN THE PUBLIC DOMAIN**

Any development requiring works to be carried out within the public domain in the Wollongong City Centre will be subject to compliance with the requirements of the Wollongong City Centre Public Domain Technical Manual at Appendix 2 to this DCP and any other specific Council requirements.

## 9 GLOSSARY / DEFINITIONS

### Above awning sign

A projecting sign on top of an awning.

### Awning

An awning is a predominantly horizontal structure that projects over a footpath from the host building to provide weather protection for pedestrians.

### Awning fascia sign

A sign on the fascia of an awning or verandah.

### Fascia sign

A sign on the fascia of an existing awning or verandah.

### Habitable room

Any room or area used for normal domestic activities, including living, dining, family, lounge, bedrooms, study, kitchen, sun room and play room.

### Identification sign

A sign used to identify a site, building, building use or tenant.

### Illuminated sign

A sign which is internally or externally lit by artificial lighting whether that lighting is integral to or separate from the sign, including signs that have flashing or sequenced lighting, spotlighting, directional, projected or laser lighting.

### Lane

An external space which is uncovered and open to the sky and which provides permanent pedestrian and/or vehicle connections through the city fabric at all hours.

### Through site link

An enclosed or partly enclosed arcade within a development that has a public character, provides right of way and is open and accessible at each end.

### Non-habitable room

Spaces of a specialised nature not occupied frequently or for extended periods, including bathrooms, toilets, pantries, walk-in wardrobes, corridors, lobbies, photographic darkrooms and clothes drying rooms.

### Porte cochere

A porch, often used in hotel development, large enough for vehicles such as tourist coaches to pass through.

### Projecting wall sign

A sign projecting in either a horizontal or vertical direction from the wall of a building.

### **Promotional sign**

A sign on land or a building that advertises either:

Goods or services not provided by an occupier of a significant portion of the premises on which the sign is attached, or

An event or activity not conducted on the land or in the building.

### **Roof sign**

A sign above parapet level of a building on the uppermost structural elements and attached to lift motor and plant rooms.

### **Silhouette**

A building outline viewed against the sky.

### **Street alignment**

The boundary between land allotments and a street or lane.

### **Street frontage height**

The vertical distance measured in metres at the centre of the street frontage from the average of the street levels at each end of the frontage to the parapet level of the frontage. The parapet level is the horizontal plane in which at least two thirds of the length of the top of the façade is situated. No part of the façade is to be less than 80 per cent of the height.

### **Under awning sign**

A sign located below or otherwise supported from the underside of an awning.

### **View**

An extensive or long range prospect of particular objects or geographic features.

### **Vista**

A view along a street terminated by a building or structure such as an obelisk.



Part E – General Controls – Design Controls

## Chapter E3: Car Parking, Access, Servicing/ Loading Facilities and Traffic Management

### Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>2</b>	<b>7.10 Allocation of Car Parking within a Strata titled Development</b>	<b>13</b>
<b>2</b>	<b>OBJECTIVES</b>	<b>2</b>	<b>7.11 Public Car Parks</b>	<b>13</b>
<b>3</b>	<b>DEFINITIONS</b>	<b>3</b>	<b>7.12 Electronic Parking Vacancy Signs</b>	<b>14</b>
<b>4</b>	<b>STATUTORY FRAMEWORK</b>	<b>3</b>	<b>7.13 Car Parking &amp; Access Construction Requirements</b>	<b>14</b>
4.1	Integrated Development – Section 91 of the Environmental Planning and Assessment Act 1979 & Roads Act 1993 (section 138)	3	<b>7.14 Directional Signage for Car Parking Areas</b>	<b>14</b>
4.2	State Environmental Planning Policy (Infrastructure) 2007	3	<b>8 VEHICULAR ACCESS</b>	<b>15</b>
<b>5</b>	<b>ADOPTION OF OTHER STANDARDS AND GUIDELINES</b>	<b>3</b>	8.1 General	15
<b>6</b>	<b>TRAFFIC IMPACT ASSESSMENT AND PUBLIC TRANSPORT STUDIES</b>	<b>4</b>	<b>9 LOADING / UNLOADING FACILITIES AND SERVICE VEHICLE MANOEUVRING</b>	<b>16</b>
6.1	Car Parking and Traffic Impact Assessment Study	4	9.1 Loading / Unloading and Manoeuvring Area Requirements	17
6.2	Preliminary Construction Traffic Management Plan	5	9.2 Noise Impact Assessment associated with Loading / Unloading Facilities	18
6.3	Public Transport Study	6	<b>10 PEDESTRIAN ACCESS</b>	<b>19</b>
<b>7</b>	<b>PARKING DEMAND AND SERVICING REQUIREMENTS</b>	<b>7</b>	<b>11 SAFETY &amp; SECURITY (CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN) MEASURES FOR CAR PARKING AREAS</b>	<b>19</b>
7.1	Car Parking, Motor Cycle, Bicycle Requirements and Delivery / Servicing Vehicle Requirements	7	<b>12 LANDSCAPING REQUIREMENTS FOR AT-GRADE CAR PARKING AREAS</b>	<b>19</b>
7.2	Disabled Access and Parking	7	<b>13 STORMWATER DRAINAGE / WATER SENSITIVE URBAN DESIGN</b>	<b>20</b>
7.3	Bicycle Parking / Storage Facilities and Shower and Change Facilities	8		
7.4	Waiver or Reduction of Parking Spaces	9		
7.5	Car Parking Credits for Existing Development	10		
7.6	Monetary Contributions for Off Site Car Parking Provision	10		
7.7	Car Parking Layout and Design	10		
7.8	Basement Car Parking	11		
7.9	Mechanical Parking Systems	12		

## 1 INTRODUCTION

1. This chapter of the DCP provides general requirements for the assessment and management of traffic impacts associated with development. This chapter also outlines Council's general requirements for the design and provision of car parking, motorcycle parking, bicycle parking and storage facilities in addition to access and loading facility requirements for specific developments.
2. This chapter includes specific reference to recognised design standards such as Australian Standard AS2890 Parts 1 – 6 and AUSTROADS, where appropriate.
3. This chapter should be read in conjunction with other parts of the DCP, especially Part B (Land use Based Controls), Part C (City Wide Land uses) and Part D (Site Specific / Locality Based Controls) in relation to any other specific traffic, access, parking and servicing requirements for a specific development in particular zone or locality. This chapter should also be read in conjunction with Part E, Waste Management, in respect to the provision of suitable waste and recycling storage facilities, access and manoeuvring arrangements for waste recycling truck management.
4. In the event of any inconsistency between the requirements of this chapter of the DCP and other Parts of this DCP, the other Parts of the DCP shall prevail to the extent of the inconsistency.

## 2 OBJECTIVES

1. The key objectives of this part of the DCP are to:
  - (a) Ensure that transport networks are able to support the proposed development in a manner that maintains safe levels of service.
  - (b) Provide adequate and safe vehicular access to sites without compromising streetscape qualities.
  - (c) Incorporate provisions that manage the demand for parking rather than seeking to accommodate peak demand.
  - (d) Recognise variable accessibility to public transport in parking rates for different parts of the city.
  - (e) Support an increase in bicycle and motorcycle usage by requiring provision of bicycle and motorcycle parking, storage and end-of-trip facilities for certain developments.
  - (f) Ensure that the design of access and parking areas meets relevant Australian Standards.
  - (g) Ensure that developments are designed to be accessible for pedestrians, cyclists and motorists.
  - (h) Provide adequate access, loading facilities and on-site manoeuvring for service and waste collection vehicles.
  - (i) Ensure that parking facilities are integrated into the design of developments and minimise visual impacts.
  - (j) Ensure safe access for pedestrians and people with a disability.

### 3 DEFINITIONS

**AUSTROADS** means AUSTROADS: *"Guide to Traffic Management"*.

**GFA** is "Gross floor area" and is defined in the LEP.

### 4 STATUTORY FRAMEWORK

#### 4.1 Integrated Development – Section 91 of the Environmental Planning and Assessment Act 1979 & Roads Act 1993 (section 138)

1. Under Section 91 of the Environmental Planning and Assessment Act 1979, an Integrated Development Application is required to be lodged where the concurrence of the NSW Roads and Traffic Authority is required under section 138 of the Roads Act 1993.
2. Under section 138 of the *Roads Act 1993* consent is required from the RTA (ie classified roads) and usually Council in other instances for the following:
  - (a) Erect a structure or carry out a work in, on or over a public road
  - (b) Dig up or disturb the surface of a public road
  - (c) Remove or interfere with a structure, work or tree on a public road
  - (d) Pump water into a public road from any land adjoining the road
  - (e) Connect a road (whether public or private) to a classified road
3. In regards to development affecting Classified Roads, concurrence will be required from the RTA prior to Development Consent being issued by Council.
4. However, an Integrated Development Application is not required to be lodged where Council is the consent authority and the approval authority under section 138 of the Roads Act. In such cases a Development Application for the proposed development is only required.

#### 4.2 State Environmental Planning Policy (Infrastructure) 2007

1. Under State Environmental Planning Policy (Infrastructure) 2007, Council is required to formally forward a Development Application to the NSW Roads and Traffic Authority (RTA) for certain developments listed in Columns 2 & 3 of Schedule 3 of the policy and to consider any representations made by the RTA.

### 5 ADOPTION OF OTHER STANDARDS AND GUIDELINES

1. For the purposes of this chapter of the DCP, the provisions of the most current version of the following Australian Standards are adopted (except where amended by specific development controls):
  - (a) AS 2890.1 Part 1: "Parking Facilities: Off-street Car Parking";
  - (b) AS 2890.2 Part 2: "Parking Facilities: Off-street Commercial Vehicle Facilities";

- (c) AS 2890.3 Part 3: "Bicycle Parking Facilities";
  - (d) AS 2890.5 Part 5: "On-street parking"; and
  - (e) AS 2890.6 Part 6: "Off Street Parking for People with Disabilities".
2. The following documents may also be used as best practice guidelines where specific development controls are not contained in this DCP or the relevant Australian Standard.
- (i) RTA: *"Guide to Traffic Generating Developments" December 2002, Issue 2.2;*
  - (ii) AUSTROADS: *"Guide to Traffic Management; and*
  - (iii) *Building Code of Australia.*

Note: Where the above mentioned standards and guidelines are superseded by updated versions, the version current at the date of lodgement of the Development Application shall apply to the development.

## 6 TRAFFIC IMPACT ASSESSMENT AND PUBLIC TRANSPORT STUDIES

### 6.1 Car Parking and Traffic Impact Assessment Study

1. A Car Parking / Traffic Impact Assessment Study shall be submitted in support of the following Development Applications:
  - (a) All Development Applications required to be referred to the NSW Roads and Traffic Authority under Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007; and
  - (b) Other Development Applications where in the opinion of Council may cause a potential significant adverse traffic generation or traffic management impact upon the surrounding road network.
2. The Car Parking / Traffic Impact Assessment Study must be prepared by a suitably qualified and experienced traffic engineering consultant.
3. The Car Parking / Traffic Impact Assessment Study shall be prepared in accordance with table 2.1 of the RTA Guide to Traffic Generating Developments 2002 (contact Council or the RTA for a copy of the guide).
4. Certain traffic generating developments will require intersection and / or network modelling to analyse the potential traffic impacts of the proposed development upon the surrounding road network and key intersections in the locality.
5. Accordingly, intersection modelling (eg SIDRA) will be required for any proposed traffic generating development as prescribed in Columns 1, 2 & 3 in Schedule 3 of SEPP (Infrastructure) 2007.
6. Network modelling may be required for traffic generating development as prescribed in Columns 1 & 2 in Schedule 3 of SEPP (Infrastructure) 2007. The need for such modelling will be determined by Council at the pre-lodgement stage.



7. The findings of the modelling analysis are to be addressed in the Car Parking / Traffic Impact Assessment Study with appropriate recommendations as to whether road upgrading, signalisation and / or other traffic management works are necessary to enable the proposed development.
8. Electronic modelling files generated as part of the modelling analysis are to be submitted to Council and the RTA in conjunction with the Car Parking / Traffic Impact Assessment Study.

## 6.2 Preliminary Construction Traffic Management Plan

1. A preliminary Construction Traffic Management Plan may be required where it is likely that the construction phase of a development may pose a significant impact upon traffic movement, on-street car parking availability and / or pedestrian safety.
2. The preliminary Construction Traffic Management plan is required to address the following matters / aspects:
  - (a) Assessment of the existing traffic conditions within the road network and key intersections in the locality;
  - (b) Assessment of the existing public domain and pedestrian areas in proximity to the proposed development;
  - (c) Assessment of the anticipated traffic generation associated with the construction of the proposed development;
  - (d) Proposed heavy vehicle routes for raw material delivery vehicles, demolition / construction heavy vehicles and other service vehicles;
  - (e) Assessment of the proposed construction impact of the proposed development upon the surrounding road network, on-street car parking and / or pedestrian areas;
  - (f) Proposed traffic control measures required for each phase of the demolition and construction program for the development;
  - (g) Proposed hours of the development during both the demolition and construction phases of the development;
  - (h) Proposed temporary parking or storage arrangements for heavy vehicles awaiting their turn to service the site, especially demolition and raw material heavy vehicles;
  - (i) Proposed car parking arrangements for construction workers, including demand management measures;
  - (j) Sight line distances and other safety issues;
  - (k) Proposed location, frequency and duration of any road closures required (i.e. during the demolition and / or construction phases of the development), in order to ensure vehicular, pedestrian and construction worker safety; and
  - (l) Other relevant matters (ie depending upon the circumstances of the site and the nature of the proposed development).
3. In certain cases, Council may elect to forward the preliminary Construction Traffic Management Plan to the NSW Roads and Traffic Authority for appropriate comment.

4. Should Council ultimately grant consent to the development, Council may also require the preparation of a Final Construction Traffic Management Plan, prior to the release of the Construction Certificate.

### 6.3 Public Transport Study

1. Large-scale residential subdivision residential apartment buildings, mixed use developments, retail shopping centres, business / commercial office developments, community facilities, educational establishments and entertainment facilities etc should be sited in proximity to public transport nodes such as regular bus routes and railway stations, in order to maximise user access to public transport.
2. A Public Transport Study will be required for the following developments:
  - (a) New or major extensions to educational establishments such as Universities and Colleges which provide facilities for 2,000 or more students and which are located outside the boundaries of the Wollongong City Centre.
  - (b) Business Parks or new large industrial developments involving a total gross floor area of 20,000m<sup>2</sup> or greater and which are outside the boundaries of the Wollongong City Centre.
  - (c) Other development (as determined by Council, at the pre-lodgement stage).
3. The Public Transport Study should be prepared by a suitably qualified and experienced traffic engineering consultant.
4. The Public Transport Study is required to address a range of issues, including (but not necessarily limited to) the following:
  - (a) Locality plan showing the proposed development site in relation to nearest practical public transport route, bus stops and / or railway station;
  - (b) Assessment of the condition of any existing pedestrian footway between nearest bus stop or railway station and the development site;
  - (c) Where the development site is more than 400 metres from the nearest bus stop, written evidence is required which proves that appropriate negotiations have taken place with the public transport operator and the NSW Ministry of Transport to obtain a bus route and bus stop, in close proximity to the development;
  - (d) Full details as to the proposed location and seating arrangements for the bus stop;
  - (e) Recommendations as to the provision of a shuttle bus service, to operate between the specific land use and the closest railway station, in order to improve public transport accessibility; and
  - (f) Recommendations as to the provision of new pedestrian facilities such as pedestrian footways, pedestrian refuges and / or necessary upgrading of any existing footway, in order to encourage pedestrian access to public transport.

## 7 PARKING DEMAND AND SERVICING REQUIREMENTS

### 7.1 Car Parking, Motor Cycle, Bicycle Requirements and Delivery / Servicing Vehicle Requirements

1. The car parking, motorcycle and bicycle requirements for specific land uses / developments are contained in Schedule 1 to this chapter of the DCP.
2. Where development proposals contain uses that fall into a number of different land use categories the parking requirements will be calculated by adding up the quantum of car parking, motorcycle and bicycle required for each land use component. Where a formula in the table results in fractions, numbers are to be rounded up to the nearest whole number. If a number of uses are present on the same development site the rounding off is to take place after the requirements for all uses have been summed together.
3. Requirements relating to staff parking refer to the maximum number of staff concurrently present on the site at any time.
4. In the circumstances where the car parking and / or other requirements are not defined by this chapter in the DCP for a particular land use or in the RTA Guide to Traffic Generating Developments, a detailed Car Parking and Traffic Impact Assessment Study will be required to be prepared for the proposed development.
5. The car parking component of the study must include:
  - (a) A detailed car parking survey of similar development located in localities which demonstrate similar traffic and parking demand characteristics;
  - (b) Assessment of the current traffic flow conditions in the local road network and performance of key intersections in the locality;
  - (c) Assessment of existing on-street car parking and whether the locality is experiencing traffic and on-street parking congestion issues;
  - (d) Anticipated traffic generation rate for the development;
  - (e) Assessment as to likely impact of the development on traffic flows and traffic safety within the local road network and the demand for on-street parking in the future as a result of the proposed development; and
  - (f) Assessment of the on-site car parking requirements based on the detailed car parking survey of other similar developments and localities.

### 7.2 Disabled Access and Parking

1. Disabled access and parking facilities are to be provided in accordance with *AS2890.6 (2009)*, *Building Code of Australia and the Commonwealth Disability Discrimination Act 1992*. The car parking rates for accessible car parking spaces are contained in Schedule 2 below (Table D3.5 of the BCA).
2. Each disabled person's parking space must be designed in accordance with the minimum dimensions as contained in the *AS2890.6 (2009)*. This shall be reflected on the relevant DA car parking layout plans. The disabled car parking spaces shall be clearly marked and signposted and located adjacent to the entrance exit with a minimum 2.5 metre head clearance in accordance with *AS2890.6 (2009)*.

3. The designated car parking spaces for people with a disability must be positioned directly adjacent to main lift lobby or access points servicing the development. In this regard, a continuous accessible path of travel must be provided to all levels within the subject building and all facilities in accordance with AS 1428.1 and the Access for People with a Disability chapter contained in Part E of this DCP.
4. The continuous accessible path of travel must be:
  - (a) From accessible parking spaces and passenger drop off points to entrances of buildings;
  - (b) To connect buildings, facilities and spaces that are on the same block or part of the same, complex, where topographically possible;
  - (c) To connect accessible entrances of a building to all accessible spaces and facilities within the building;
  - (d) To minimise distances travelled between accessible elements of buildings and facilities; and
  - (e) Provided between public domain areas to building entrances.
5. A continuous path of travel should be the most commonly used and direct path of travel. If for any reason this is not possible, clear signage indicating an alternative route must be provided.
6. The designated car parking spaces for people with a disability must be appropriately signposted and line marked. The details of such car parking spaces for people with a disability shall be reflected on the architectural plans submitted with the Development Application.
7. The main entry point to the building shall be in accordance with the current relevant Australian Standard 1428.1 - 2001 Design for Access and Mobility - Part 1 General Requirements for Access - Buildings. The proposed pedestrian ramps within the car parking areas shall incorporate gradients (with suitable landing intervals) in accordance with the current Australian Standard.

### 7.3 Bicycle Parking / Storage Facilities and Shower and Change Facilities

1. Developments are to be designed to provide suitable bicycle parking facilities. The provision of bicycle parking for a particular land use / development shall be in accordance with Schedule 1.
2. For commercial office / business premises and retail centres, suitable bicycle parking facilities should be provided for both tenants / workers as well as bicycle couriers.
3. Provision for access by vehicles and vehicle parking is not to compromise the equity and amenity of bicycle access and parking.
4. Bicycle parking is to be designed and constructed in accordance with AS 2890.3, *Parking Facilities Part 3: Bicycle Parking Facilities* OR Austroads: "*Guide to Traffic Management, Part 14: Bicycles (1995)*".
5. Bicycle parking facilities are to be provided in accordance with AS 2890.3, Table 1.1 for all user classes exempting class 4.
6. Shower, change facilities and personal lockers shall be provided in accordance with Table 1 below.

7. Bicycle parking devices should be designed to enable the wheels and frame to be locked to the device without damaging the bicycle. The parking device should be easily accessible to / from a public road. The bicycle parking device should not encroach into any pedestrian thoroughfare but should be positioned in full public view, wherever practicable.
8. The bicycle parking area should be designed to be protected from damage arising from the manoeuvring of motor vehicles and the opening of vehicle doors.
9. The bicycle parking area is to be well lit by appropriate existing or new lighting as per AS 1680.2 Table E1 or higher, if required for monitoring of the car park and access points by closed circuit television (CCTV).
10. The bicycle parking area should also be protected from the weather, as far as practicable.

**Table 1: Bicycle End-of-trip Facilities**

Required Bicycle Parking Spaces (refer to Schedule 1)	Shower & Change Cubicle	Personal Lockers
< 5 bicycle spaces	n/a	n/a
5 - 11 bicycle spaces	1	1 per bicycle space
11 – 20 bicycle spaces	2	1 per bicycle space
> 20 bicycle spaces	2 + 1 additional shower and change cubicle for every additional 10 bicycle spaces, or part thereof	1 per bicycle space

**Note:** Shower and change facilities may be provided in the form of shower/change cubicles in a unisex area or showers in both female and male change rooms.

## 7.4 Waiver or Reduction of Parking Spaces

1. Council has the discretion to waive or reduce the minimum number of car spaces required for a particular site if the reduced provision can be justified in the accompanying Car Parking and Traffic Impact Assessment study, in terms of:
  - (a) The amount of public car spaces in the locality;
  - (b) Proximity to public transport nodes;
  - (c) Opportunity for cross utilisation with another use; and
  - (d) An empirical assessment of car parking.

Note: The following car parking reductions can be applied in relation to public parking availability and public transport accessibility.

City Centre B3 Commercial Core and B4 Mixed Use Zones (excluding residential, office premises, retail and business premises uses):

- 30% reduction due to increased access to public parking and public transport

City Wide:

- 10% reduction\* if bus stop within 400m of site (measured along an existing footpath)
- 20% reduction\* if railway station within 800m of site (measured along an existing footpath)
- 10% reduction\* if public car park with greater than 50 car spaces within 400m of site (measured along an existing footpath)

\*Reductions are cumulative with a maximum final reduction of 30%

## 7.5 Car Parking Credits for Existing Development

1. Car parking credits for existing land uses / development will only be supported where written evidence is provided which proves that the existing development is operating lawfully in accordance with development consent.
2. For Development Applications involving a change of use\* or redevelopment which do not cause any net increase in the demand for car parking, Council may determine that the provision of any additional car parking is not required. In the majority of cases, a Car Parking Impact Assessment study will be required to demonstrate that the proposal will not necessitate any demand for additional parking and hence, to justify this car parking variation request.
3. The necessity of a Car Parking Impact Assessment study will be determined by Council at the formal pre-lodgement meeting for the proposed development.

\*For development applications involving a change of use within the B3 Commercial Core and B4 Mixed Use zones in the Wollongong City Centre, the provision of additional car parking is not required.

## 7.6 Monetary Contributions for Off Site Car Parking Provision

1. The provision of car parking on site in accordance with Schedule 1 (subject to Clause 7.4) may be found to be impractical or undesirable due to a number of factors. Some or all of the required parking may be provided as public parking through a monetary contribution to Council, in addition to Section 94A levies, via a Voluntary Planning Agreement (VPA).
2. Council may refuse to enter into such a VPA if there are no Council owned public parking facilities to be constructed near the development.

## 7.7 Car Parking Layout and Design

1. The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are to be in conformity with the current relevant Australian Standard AS2890.1 (2004). No sprinklers or other services shall encroach within the clear head clearance height requirement.
2. The layout of all car parking areas shall be in strictly accordance with Australian Standard AS 2890 and the following additional requirements:
  - (a) Parking areas must be designed so any vehicle which uses the area will be able to enter and leave the site in a forward direction without the need to make more than a three point turn.
  - (b) Stacked parking may be permitted in the following circumstances:

- (i) The applicant must demonstrate that there is a need for stacked parking and that the provision of stacked parking will not adversely affect the safe, efficient and effective use of the site;
  - (ii) No more than two cars are parked in a stacked arrangement, so that no more than one vehicle has to move to allow egress of another;
  - (iii) Provision shall be made on site for shifting cars without the movement of vehicles onto public streets;
  - (iv) Residential: only permitted where both spaces are utilised by the same dwelling and such spaces do not interfere with common manoeuvring areas; and
  - (v) Business or Industrial: only permitted for staff spaces, provided the spaces are used by the occupants of one tenancy.
- 3. Small car spaces will only be permitted where the total quantum of required standard sized car parking spaces has already been provided. Small car parking spaces must be designed in accordance with AS 2890.1, Clause 2.4 – Design of Parking Modules.
- 4. Car parking areas should be designed to ensure that through traffic is excluded or appropriately managed.
- 5. Pedestrian entrances / exits are to be separated from vehicular entry / exit points.
- 6. Developments with high pedestrian movements throughout the car parking area(s) such as major retail shopping centres, commercial offices and major entertainment / recreational facilities must incorporate clear and convenient pedestrian routes. The pedestrian routes within the car parking areas must take into account pedestrian desire lines and minimise potential vehicular / pedestrian conflict points. Pedestrian routes must be well lit and sited to maximise pedestrian visibility.
- 7. Car parking areas should incorporate traffic calming and pedestrian crossing facilities such as speed humps, raised thresholds, marked pedestrian crossing points and clear directional signage to pedestrian access points within the development. These must be provided within the car park in order to reduce speed and enhance pedestrian safety and accessibility in accordance with AS2890.1.
- 8. Gradients of ramps and access driveways shall be provided in accordance with Australian Standard AS2890.1 (2004) - Off Street Car Parking.
- 9. Wheel stops must be designed and installed in accordance with AS2890.1.
- 10. The provision of suitable barriers, line-marking and painted signage delineating vehicular flow movements within the car parking areas is also required, in order to improve traffic circulation within the car parking area.

## 7.8 Basement Car Parking

- 1. A minimum 2.4 metre headroom height shall be provided throughout any basement car parking and traffic circulation area.
- 2. A geotechnical and hydro-geological report (i.e. prepared by a suitably qualified engineer) may be required to be provided to Council, in order to address the issues of construction methodology and groundwater management for any proposed basement or sub-basement car parking area. The purpose of this report is to ensure that there is no ground settlement or movement, changes to groundwater level and / or adverse vibration impacts during construction which may result in an adverse impact upon any adjoining property or service infrastructure. The determination as to whether a geotechnical or hydro-geological report is necessary will be determined by Council at the pre-lodgement meeting or via written correspondence to Council requesting Council's written reply response (ie where a formal pre-lodgement meeting is not normally required for the development proposal as per the pre-lodgement meeting requirements in Part A of the DCP).

3. Additionally, full details showing how flood-proofing of the vehicular access, fire escape and any ventilation openings will be achieved.
4. Waste collection vehicles may enter building basements to collect waste and/or recyclables subject to the following requirements:
  - (a) Compliance with Australian Standard *AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities*;
  - (b) The height to the structural members and upper floor ceiling should allow for collection vehicle travel height/operational height, consistent with the type of vehicle nominated as the waste collection vehicle;
  - (c) Adequate provision of space clear of structural members or vehicle parking spaces to allow a typical three-point turn of collection vehicles or alternatively, provision should be made for a truck turn table within the basement car parking area; and
  - (d) The basement floor should be of industrial-type strength pavement and designed for a maximum wheel loading of seven tonnes per axle to accommodate garbage and recycling collection vehicles.
5. Wheel stops are to be provided to all car parking spaces, in order to minimise vehicle accidents / damage and to prevent vehicle encroachment into public domain areas or landscaping.

## 7.9 Mechanical Parking Systems

1. The use of mechanical parking systems will only be considered in cases where it can be demonstrated to the satisfaction of Council that the provision of conventional car parking (ie either at-grade or basement car parking) is not appropriate given inherent site constraints and the proposed mechanical parking system is not a result of an overdevelopment of the site.
2. Mechanical parking systems may provide for more space-efficient storage of vehicles than can be achieved with traditional at-grade parking. However, mechanical stacked car parking systems will only be considered to meet the car parking needs of owners / tenants only. Mechanical stacked car parking will not be supported for shared use or for visitor parking.
3. Where it is proposed to incorporate a mechanical parking system within a development, the following information is required, as part of a Car Parking / Traffic Impact Assessment Study:
  - (a) The company make and model of the proposed mechanical car parking stacking system;
  - (b) A demonstrated need for the system, including reasons why parking cannot be satisfactorily provided in an at-grade parking arrangement;
  - (c) Demonstrated compliance with all relevant clauses of AS2890.1;
  - (d) A demonstrated minimum internal headroom clearance of 1.90m in the entry level of the system;
  - (e) A demonstrated minimum internal vertical clearance of 1.55m on all other levels within the parking system;
  - (f) Details of security measures restricting the use of the system to owners / permanent residents of the building only (e.g. security key pads);
  - (g) Details of noise and vibration associated with the use of the system;



- (h) Details of a waiting bay, demonstrating that vehicles can safely and conveniently wait at the entry level for other vehicles to manoeuvre to or from the parking system. Waiting bays must be designed so as to not obstruct traffic flow within the parking level and to prevent any on-site queuing. Waiting bays would typically have identical dimensions to parking spaces as per AS2890.1 and are additional to the parking requirement of the development;
- (i) An assessment of the likely vehicle queuing impacts associated with system, with reference to the operating times of the system, peak vehicle movements and available queue lengths within the parking area;
- (j) Swept path turning templates demonstrating the ability of vehicles to turn into and out of the system in a single movement;
- (k) Assessment of the adequacy of the facility to cater for a range of vehicles from small sports cars up to large 4WDs (ie the facility is capable of storing the 100<sup>th</sup> percentile vehicle);
- (l) Proposed management procedures to be implemented in the running of the facility, including emergency response procedures.

Note:

1. All visitor and customer parking spaces and those spaces associated with adaptable housing must be provided in at-grade positions (i.e. separate to any mechanical parking system), and
2. The mechanical car parking stacker system and all associated infrastructure such as pits and ceiling indentations must be clearly shown on the architectural drawings of the car parking area, at the time of lodgement of the Development Application.

## 7.10 Allocation of Car Parking within a Strata titled Development

1. Where strata subdivision of a development is proposed, car parking spaces shall be allocated to strata lots or common property within the strata plan in accordance with the development consent conditions and approved plans issued for the development.
2. In some instances the identification of car parking spaces for specific uses and/or tenancies/ units within developments may be appropriate.

## 7.11 Public Car Parks

1. The establishment and operation of a public carpark requires formal Council consent and may also require concurrence from the NSW Roads & Traffic Authority, if the carpark triggers the threshold levels contained in Columns 2 or 3 in Schedule 3 of SEPP (Infrastructure) 2007. Additionally, the proposed operation of a public carpark also requires an Activity approval under Section 68 of the Local Government Act 1993. Therefore, a combined Development Application / Section 68 Activity Application may be lodged pursuant to the provisions of Section 78A (subsections 78A(2) & (3)) of the Environmental Planning and Assessment Act 1979.
2. The exact location of boom gates in a proposed public carpark is an important consideration to ensure adequate queuing lengths are available on-site, in order to minimise potential adverse queuing problems upon any public road.
3. The actual design queue length for a particular carpark must be determined by the nature and size of the proposed land use serviced by the subject carpark and the likely parking demand and access requirements, during peak periods. The design of any boom gate and the minimum queue length required within the site must be in accordance with the requirements of Australian Standard AS2890.1 (2004).

4. For developments which require the lodgement of a formal Car Parking and Traffic Impact Study, the study should help determine the desired location of any proposed boom gates / ticket booths and the minimum queue length required to satisfactorily service the development.

## 7.12 Electronic Parking Vacancy Signs

1. For large retail shopping centres and major entertainment / recreation facility developments with separate or multi-level car parking areas, Council may require the provision of electronic parking vacancy signage at each entry to the car parking area or each carpark level, in order to minimise potential additional traffic flow movement impacts within the development and upon the surrounding road network arising from patrons having to access different car parking areas in the development, in endeavour to find a vacant car parking space.

## 7.13 Car Parking & Access Construction Requirements

### General

1. All car parking areas and internal roads must be constructed of a hard-standing all-weather material (ie concrete or asphalt bitumen), which must be maintained to the satisfaction of Council, at all times.
2. The pavement construction shall be in accordance with the Subdivision Code and Council's Development Design and Construction Specifications requirements.
3. For large industrial or commercial office developments or major retail shopping centres, car parking areas should be designed to include water sensitive urban design treatment measures, in order to encourage infiltration of stormwater run-off rather than direct discharge of stormwater run-off into the piped drainage system.
4. Alternatively car parking areas may be sealed with an all-weather surface and high flows managed by detention storage and pollutants removed by suitably designed, installed and maintained devices (GPT, grass swales etc). Minimum trafficked area surface standards in this case are:
5. Low parking turnover (<50 movements) - flush seal (ie. two coat bitumen spray).
6. High parking turnover (>50 movements) - asphalt concrete.

### Certification of Construction

7. All parking area surfaces will be certified by a suitably qualified Engineer prior to occupation or use.

### Line Marking of Car Parking Spaces

8. All car parking areas shall be permanently line marked as detailed in AS 2890.

## 7.14 Directional Signage for Car Parking Areas

1. All car parking areas shall be provided with appropriate entry and exit advisory signage to direct vehicles into / from the carpark and to minimise potential vehicular conflicts. The details of the proposed entry / exit signage shall be reflected on the architectural plans submitted with the Development Application.

2. Where a one-way traffic circulation flow is proposed, all internal roads within car parking area shall be appropriately line marked with directional (arrow) signage to clearly indicate the direction of traffic circulation and to minimise potential vehicular conflicts. This requirement shall be reflected on the architectural plans (ie car parking layout plans) to be submitted with the Development Application.
3. All advisory signage and pavement marking is to be provided in accordance with AS 2890.1, Section 4.

## 7.15 Green Travel Plans

Council encourages the use of green travel plans throughout Wollongong, particularly for larger residential developments, offices, recreation facilities, business and retail premises in the Wollongong City Centre. A green travel plan is a tool to minimise the negative impacts of travel on the environment. It describes ways in which the use of sustainable transport may be encouraged for users of the development. Components/strategies of a Green Travel Plan will likely vary according to the nature of the development, but may include:

- a) identification and promotion of public transport options for customers accessing the site e.g. via website, business cards.
- b) encouragement of a car pool system for employees.
- c) encouragement of cycling and walking to the workplace through provision of bicycle parking, showers and lockers
- d) incentive schemes to encourage employees to commute using sustainable transport modes (such as provision of public transport vouchers/subsidised public transport tickets)
- e) allocation of designated parking spaces for a car sharing scheme, and/or
- f) prominent display of a large map of cycling routes for customers and residents (for example, in the foyer of a residential complex).

## 8 VEHICULAR ACCESS

### 8.1 General

1. Access to off-street parking areas must comply with Council's Standard Vehicle Entrance Designs, with any works within the footpath and road reserve subject to a section 138 *Roads Act 1993* approval.
2. Sight distances to be used for assessment and determination of a suitable driveway location shall be obtained from Australian Standard AS2890.1 (2004) for car use and Australian Standard AS2890.2 (2002) for any access to be used by a commercial vehicle.
3. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with AS 2890.1.
4. Generally, direct access to arterial or sub-arterial roads will not be permitted, except where no legal alternative access is available.
5. Where a development site has dual frontage to a classified road and a secondary road, all driveway crossings (ie entry and exit points) are to be provided via the secondary road unless it

can be demonstrated that this arrangement will have an unacceptable impact on road safety and traffic efficiency. This must be justified with suitable studies or modelling.

6. In cases where an access to a classified road is permitted, a deceleration lane may be required, in order to maintain traffic flow movements along the classified road and to minimise potential rear end vehicular accidents which may otherwise occur where vehicles turn into the site from a trafficable lane.
7. The area required for any deceleration lane must be provided within the development site itself with this portion of the land being dedicated as public road at no cost to the RTA or Council. Any necessary relocation of public infrastructure required due to a deceleration lane must be detailed in the architectural / section plans lodged with the Development Application with the costs of any such relocation, being fully borne by the developer.

## 9 LOADING / UNLOADING FACILITIES AND SERVICE VEHICLE MANOEUVRING

1. Site design must allocate adequate space for the loading, unloading, parking and manoeuvring of delivery and service vehicles within the subject property. Design of these areas shall comply with AS 2890.2.
2. Loading /unloading facilities shall be provided for the following land uses:
  - (a) Retail shopping centres / specialty retail shops,
  - (b) Commercial Offices / Business Development,
  - (c) Bulky good premises,
  - (d) Factory,
  - (e) Warehouse distribution centre,
  - (f) Light industrial retail outlets,
  - (g) Landscape supplies establishment,
  - (h) Retail or Wholesale Nursery,
  - (i) Residential flat building/Multi-dwelling housing/Shop top housing,
  - (j) Seniors housing (including housing for people with a disability),
  - (k) Take away food premises,
  - (l) Food and drink premises,
  - (m) Kiosk,
  - (n) Function,
  - (o) Function centre,
  - (p) Medical centre /health consulting room,
  - (q) Pub / Registered Club,
  - (r) Funeral home / Funeral chapel
  - (s) Other developed requiring loading or unloading facilities.
3. Schedule 1 identifies the various types of service vehicles to be catered for within the various development types. Special vehicles such as buses, garbage trucks and ambulances may have particular access, manoeuvring and operating conditions. The designer or applicant should refer to AS 2890.2 *Off-street parking (Part 2: Commercial vehicle facilities)* and Roads and Traffic Authority, 1993: "Guide to Traffic Generating Developments".
4. Table 3 provides the minimum parking / service bay and manoeuvring requirements for delivery and service trucks

**Table 2: Minimum Parking / Service Bay and Manoeuvring Design Requirements for Service and Delivery Trucks**

Truck Type	Design Dimensions	Design Turning Template
Small Rigid Vehicle	Minimum length – 6.4m Minimum height clearance – 3.5m	As per AS 2890.2
Medium Rigid Vehicle	Minimum length – 8.8m Minimum height clearance – 4.5m	As per AS 2890.2
Large Rigid Vehicle	Minimum length – 12.5m Minimum height clearance – 4.5m	As per AS 2890.2
Articulated Vehicle (Semi-Trailer)	Minimum length – 19.0m Minimum height clearance – 4.5m	As per AS 2890.2

## 9.1 Loading / Unloading and Manoeuvring Area Requirements

1. All small rigid trucks through to large rigid trucks and articulated heavy vehicles (semi-trailers) must be able to manoeuvre entirely on-site and enter and leave the site in a forward direction. All truck turning or manoeuvring areas must be separate from areas of normal pedestrian or vehicular traffic.
2. All loading and unloading activities shall take place wholly within the loading bay, at all times. No loading or unloading activity shall take place within any car parking area, landscaping area, pedestrian footway or any public road reserve.
3. The designated loading / unloading area shall be kept free for that purpose, at all times.
4. Loading / unloading facilities shall be located so they are not visible from any adjoining residential area and do not transmit excessive noise onto any adjoining residential area.
5. All loading dock facilities must guarantee satisfactory on-site manoeuvring areas for trucks in accordance with the Australian Standard AS 2890.2 Design Vehicular and Turning templates.
6. Council will assess the adequacy of proposed manoeuvring areas provided for on-site truck manoeuvring with reference to the standard vehicle turning templates as per the Australian Standard AS 2890.2 Design Vehicular and Turning templates.
7. All developments must be designed to ensure that the standard truck for each development as per Table 3 is able to complete a semi-circular turn on the site, in order to guarantee that all truck movements into / from the site are in a forward direction.
8. Truck turning circles shall not encroach upon any building, car parking space or landscaped area.
9. Access arrangements should be designed in accordance with the NSW Roads & Traffic Authority's Traffic Generating Guidelines and Australian Standard AS 2890.1 (2004). However, it is desirable that separate access arrangements be made available for standard passenger vehicles and trucks upon the development site, in order to minimise potential vehicular conflicts.

10. All internal two-way access roads shall have a minimum width of 7 metres. Lesser widths may be provided if the internal road system is designed to a single one-way circulation arrangement within the site including any loading dock facilities. Directional signage shall be shown on all internal roadways (where required) to facilitate the orderly movement of trucks and other vehicles within the site.
11. As per the provisions of C2.4 of the Building Code of Australia, emergency vehicular access must be provided from a public road. In this respect, the internal access road must have an unobstructed 6 metre width with no part of the building being more than 18 metres away from the access road. The minimum 6 metre wide access road shall be reserved for vehicular and pedestrian access only and not built upon or used for any other purpose.
12. Loading docks should also be positioned wherever possible, away from the street frontage. Where such facilities can only be provided to the street frontage, appropriate landscaping will be required in front of the loading facility to adequately screen the development.
13. All loading / unloading and manoeuvring areas should be located as far as practicable away from any abutting residential or other sensitive development. Where these activities are likely to result in loss of amenity in nearby residential areas, visual and acoustic screening approved by Council may be required to minimise the potential loss of amenity to adjoining residential or other sensitive development.
14. Queuing associated with the loading dock must not impact the operation of adjacent car parking areas, pedestrian paths, internal circulation roadways or public roads.

## 9.2 Noise Impact Assessment associated with Loading / Unloading Facilities

1. The submission of a noise impact assessment report may be required with a Development Application where loading dock facilities are proposed to be positioned in proximity to any adjoining noise sensitive land uses such as residential dwellings, Senior Living developments and educational establishments etc. This requirement will be at the discretion of Council.
2. The NSW Department of Environment and Climate Change's '*Environmental Criteria for Road Traffic Noise*' policy is to be used for the assessment of potential traffic noise impacts from the site.
3. The noise impact assessment report will be required to address the existing  $LA_{90}$  background &  $LA_{eq}$  ambient noise levels at the boundary to the nearest residential land uses during the daytime, evening and night-time periods. The noise impact assessment report must also address the predicted  $L_{A1}$  (maximum noise level) and  $L_{A10}$  average maximum noise level of the development, particularly in respect to the loading and unloading activities conducted within the loading dock facility of the development. The noise impact assessment report should also apply the NSW Department of Environment and Climate Change's '*Industrial Noise Policy*' sleep intrusiveness noise criteria and the amenity criteria in determining the noise impact upon sensitive residential land uses. The policy prescribes a sleep disturbance criterion of  $L_{A1(1 \text{ minute})} < L_{A90(15 \text{ minutes})} + 15\text{DB(A)}$ .
4. Any noise impact assessment report shall also provide recommendations on acoustic attenuation measures required to be provided to improve the acoustic performance of the loading dock facility and / or other operational restrictions (i.e. restricted delivery times for delivery trucks), bearing in mind the nature and frequency of proposed truck deliveries to / from the site and the predicted noise impacts arising from loading / unloading activities.

## 10 PEDESTRIAN ACCESS

1. New driveway crossings are required to be constructed at grade to facilitate and support access for pedestrians and disabled persons to and within the site.
2. Footpaths are to be provided for pedestrians to move from adjacent streets and footpaths onto the site and to destinations within the site. Particular attention is to be given to the movement of pedestrians to and from public transport stops, bicycle parking areas and disabled parking areas. Depending on the expected volumes of pedestrian traffic, weather protection for key pedestrian movement corridors should be integrated into the building design.
3. Provision for access by vehicles and vehicle parking is not to compromise the equity and amenity of pedestrian access.
4. Pedestrian facilities are to be designed in accordance with AUSTROADS *"Guide to Road Design Part 6A: Pedestrians AND Cyclist Paths (2009)"*.

## 11 SAFETY & SECURITY (CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN) MEASURES FOR CAR PARKING AREAS

1. The soffit of the roof slab, all walls and all columns of any basement car parking area in addition to the interior of all lift foyer areas, fire exits and other staircases must be painted in a white finish, in order to improve the visibility throughout the car park and to minimise potential 'dark spots'.
2. The exit fire stairs should also be wide and open, in order to improve visual surveillance into these areas from the car parking and traffic circulation areas within the facility.
3. The car parking area should also be designed to prevent blind corners and to maximise visibility and sightlines for both persons in vehicles and pedestrians.
4. All car parking spaces should be visible to approaching vehicles and not 'hidden'.
5. All pedestrian areas should follow pedestrian desire lines and be well lit.
6. The lighting of car parking areas must be in accordance with AS 1680 and lighting levels must be in accordance with AS 1680.2 Table E1 or higher if required for monitoring of the car park and access points by closed circuit television (CCTV).
7. All emergency lighting and exit lights are to be provided with "vandal – resistant" fittings suitable for use in an unsupervised car park.

## 12 LANDSCAPING REQUIREMENTS FOR AT-GRADE CAR PARKING AREAS

1. The provision of landscaping to car parking areas is designed to provide visual relief to the development site and to help screen the car parking area from adjoining properties and public road frontages.
2. Landscaping is required to be an integral part of all car parking areas and internal roads within a development.
3. Landscaping should be used throughout the car parking areas at regular intervals and around the perimeter of the car parking areas.

4. A minimum 3 metre deep front landscaped setback is required for car parking areas fronting a public road (excluding industrial developments where a 5 metre – 10 metre landscaped buffer screen may be required, depending upon the scale and height of the development).
5. A minimum 2 metre wide side landscaped buffer screen is required for all car parking areas.
6. A dense rear landscaped buffer screen setback may also be required, particularly where the zoning or land use of the rear abutting properties is different to the subject site. This requirement should be raised by the applicant at the formal pre-lodgement meeting of the proposed development with Council.
7. The provision of shade trees throughout the car parking area is also required. In this regard, the provision of 1.5 metre wide landscaped islands will be required for every 10 car parking spaces within each aisle of the car park.
8. The planting of trees and larger shrubs should occur in the centre of the landscape planter beds with small shrubs and groundcovers positioned at the edge of the planter boxes.
9. The selection of appropriate trees and shrubs within car parking areas is critical given that trees or shrubs which drop branches, gum or fruit or trees / shrubs which interfere with underground stormwater drainage pipes are not considered suitable for car parks.
10. Any existing trees with a satisfactory Safe Useable Life Expectancy (SULE) rating should be retained within the car parking area, wherever practicable.
11. Wheel stops or 150mm concrete kerbs or edge treatments must be used to prevent vehicles encroaching upon the landscaped areas. The use of bollards may also be appropriate in certain circumstances.
12. All proposed landscaping shall be in accordance with the Landscaping chapter contained in Part E of this DCP.
13. The Landscape concept plan is to be submitted with the Development Application.

## 13 STORMWATER DRAINAGE / WATER SENSITIVE URBAN DESIGN

1. Refer to the Stormwater Management chapter contained in Part E of this DCP for stormwater drainage and on-site stormwater detention requirements for off-street car parking and access areas.
2. For certain developments, the Water Sensitive Urban Design treatment measures may also be required for car parking and access areas in accordance with the requirements of the Water Sensitive Urban Design chapter in Part E of the DCP.

### Schedule 1 – Car Parking, Bicycle, Motorcycle and Delivery Vehicle Parking Requirements

Note: Variations to controls in Schedule 1 may be considered if supporting information is submitted in accordance with CI 7.4 of this Chapter.

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
----------	--------------------------	------------------------------	--------------------------------	--------------------------------------



Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
Boarding house	<i>City wide:</i> 0.5 car parking space per staff plus 1 car parking space per 5 beds	1 bicycle space per bed		NA
Dwelling house	<i>City wide:</i> 1 space per dwelling with a gross floor area of less than 125m <sup>2</sup> ; or 2 spaces per dwelling with a gross floor area of 125m <sup>2</sup> or greater  <i>Wollongong city centre:</i> 1 car parking space per dwelling	NA	NA	NA
Dual occupancy	<i>City wide:</i> 1 car parking space per dwelling (<125m <sup>2</sup> ) or 2 car parking spaces per dwelling (125m <sup>2</sup> or greater)	NA	NA	NA
Residential flat building / Multi-dwelling housing / Shop top housing / Attached Dwelling	<i>City wide:</i> 1 car parking space per dwelling (<70m <sup>2</sup> ) or 1.5 car parking spaces per dwelling (70-110m <sup>2</sup> ) or 2 car parking spaces per dwelling (>110m <sup>2</sup> ), plus 0.2 car parking spaces per dwelling for visitors  <i>Wollongong City Centre or within 400m of railway station (measured along existing footpath):</i> 0.75 car parking space per dwelling (<70m <sup>2</sup> ) or 1 car parking space per dwelling (70-110m <sup>2</sup> ) or 1.25 car parking spaces per dwelling (>110m <sup>2</sup> ), plus 0.2 car parking spaces per dwelling for visitors	1 bicycle space per 3 dwellings (residents) and 1 bicycle space per 12 dwellings (visitors)	1 motorcycle space per 15 dwellings	Large Rigid Vehicle (Waste Contractor)  >10 dwellings – side loading waste collection vehicle (refer to Chapter E7: Waste Management)
Seniors housing (including housing for people with a disability)	<i>Residential care facilities:</i> 1 car parking space per 10 beds (or 1 car parking space per 15 beds if the facility provides care for dementia patients only) plus 1 car parking space per 2 employees plus 1 ambulance space.	NA	NA	Large Rigid Vehicle

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	<p><i>Hostels:</i></p> <p>1 car parking space per 5 dwellings plus 1 car parking space per 2 employees plus 1 ambulance space</p> <p><i>Self contained dwellings:</i></p> <p>0.5 car parking space per bedroom or 1 car parking space per 5 dwellings where social housing</p> <p><u>Note:</u> The parking rates are based on the maximum rates indicated in SEPP (Housing for Seniors or People with a Disability) 2004</p>			
Hospitals	<p><i>City wide:</i></p> <p>1 car parking space per medical practitioner plus 1 car parking space plus 2 employee plus 1 car parking space per 2 beds.</p>	1 bicycle space per 5 car spaces	1 motor cycle space per 25 car spaces	Large Rigid Vehicle
Backpackers accommodation	<p><i>City wide:</i></p> <p>1 car parking space per 2 staff plus 1 car parking space per 5 beds</p>	1 bicycle space per 5 beds plus 1 car parking space per staff member	1 motor cycle space per 25 car parking spaces	NA
Bed and breakfast accommodation	<p><i>City wide:</i></p> <p>As per dwelling house plus 1 car parking space per guest bedroom</p>	NA	1 motor cycle space per 10 guest bedrooms	NA
Tourist and visitor accommodation	<p><i>City wide:</i></p> <p>1 car parking space per 2 staff members plus 1 car parking space per apartment / unit</p>	NA	1 motor cycle space per 10 apartments / units	Small Rigid Vehicle
Office premises	<p><i>City wide (excluding the B3 Commercial Core and B4 Mixed Use zones in Wollongong City Centre):</i></p> <p>1 car parking space per 40m<sup>2</sup> of GFA</p> <p><i>Zones B3 Commercial Core and B4 Mixed Use in Wollongong City centre (as per WLEP 2009):</i></p>	<p>1 bicycle space per 200m<sup>2</sup> GFA for staff plus 1 bicycle space per 750m<sup>2</sup> GFA for visitors</p>	1 motorcycle space per 25 car parking spaces	<p>&lt;1,000m<sup>2</sup> GFA – Small Rigid Vehicle</p> <p>&gt;1,000m<sup>2</sup> GFA 0 Large Rigid Vehicle</p>

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	1 car parking space per 60m <sup>2</sup> of GFA			
Business premises / Retail premises	<p><i>City wide (excluding the B3 Commercial Core and B4 Mixed Use zones in the Wollongong City Centre):</i></p> <p>1 car parking space per 40m<sup>2</sup> of GFA – business premises</p> <p>1 car parking space per 25m<sup>2</sup> of GFA – retail premises</p> <p><i>Zones B3 Commercial Core and B4 Mixed Use in Wollongong City Centre (as per WLEP2009):</i></p> <p>1 car parking space per 60m<sup>2</sup> of GFA</p> <p><i>Note 1:</i> Where there is an inconsistency between the parking rates specified for uses within the “Business premises” and “Retail premises” groups, the specific parking rates shall prevail except in Zones B3 and B4 in Wollongong city centre. For example, the specific parking rate for Medical Centre is 4/consulting room plus 1/3 employees. This rate would prevail over the general Business Premises rate of 1/40m<sup>2</sup>, except if the development is located in Zones B3 or B4 in Wollongong city centre.</p>	<p>1 bicycle space per 200m<sup>2</sup> GFA for staff plus 1 bicycle space per 750m<sup>2</sup> GFA for visitors – business premises.</p> <p>1 bicycle space per 750m<sup>2</sup> GFA for staff plus 1 bicycle space per 1000m<sup>2</sup> GFA for shoppers – retail premises.</p>	1 motorcycle space per 25 car parking spaces	<p>&lt;1,000m<sup>2</sup> GFA – Small Rigid Vehicle</p> <p>&gt;1,000m<sup>2</sup> GFA – Large Rigid Vehicle, Articulated Vehicle (Semi-Trailer)*</p>
Bulky goods premises	<p><i>City wide:</i></p> <p>1 car parking space per 30m<sup>2</sup> GFA (&lt;500m<sup>2</sup>) or 2 car parking spaces per 100m<sup>2</sup> (500-3000m<sup>2</sup>) or 2 car parking spaces per 150m<sup>2</sup> (&gt;3000m<sup>2</sup>)</p>	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car spaces	Large Rigid Vehicle – Articulated Vehicle (Semi-Trailer)*
Vehicle sales or hire premises	<p><i>City wide:</i></p> <p>0.75 car parking spaces per 100m<sup>2</sup> GFA plus 3 car parking spaces per work bay where servicing is</p>	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Articulated Vehicle (Semi-Trailer)

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	undertaken			
Car tyre fitting centres	<i>City wide:</i> 3 car parking spaces per work bay	1 bicycle space	1 motor cycle space per 3 work bays	Large Rigid Vehicle
Food and drink premises	<i>City wide:</i> 1 car parking space per 25m <sup>2</sup> GFA  (excluding specific premise types described below)	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
o Restaurant	<i>City wide:</i> 1 car parking space per 4 staff, plus 1 car parking space per 6m <sup>2</sup> or 1 car parking space per 4 seats whichever is the greater  <i>Note:</i> For change of use applications in Town Centres (as defined in Chapter B4 Development in Business Zones), the provision of additional parking will not be required	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
o Take-away food premises	<i>City wide:</i> 1 car parking space per 25m <sup>2</sup> GFA	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle  >500m <sup>2</sup> or drive through facility – Large Rigid Vehicle
o Pub	<i>City wide:</i> 1 car parking space per 2 staff plus 1 car parking space per 5m <sup>2</sup> GFA or 1 car parking space per 6 seats (whichever is the greater)	1 bicycle space per 25m <sup>2</sup> GFA	1 motorcycle space per 25 car parking spaces	<500m <sup>2</sup> GFA – Small Rigid Vehicle  >500m <sup>2</sup> GFA – Large Rigid Vehicle, Articulated Vehicle (Semi-Trailer)*
Neighbourhood shop	<i>City wide:</i> 1 car parking space per 25m <sup>2</sup> GFA	1 bicycle space per 25m <sup>2</sup> GFA	1 motorcycle space per 25 car parking	Small Rigid Vehicle

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
			spaces	
Kiosk	<i>City wide:</i> 1 car parking space per 25m <sup>2</sup> GFA	1 bicycle space per 25m <sup>2</sup> GFA	1 motorcycle space per 25 car parking spaces	Small Rigid Vehicle
Function centre	<i>City wide:</i> 1 car parking space per 2 staff plus 1 car parking space per 5m <sup>2</sup>	1 bicycle space per 25m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Large Rigid Vehicle
Market	<i>City wide:</i> 1 car parking space per 20m <sup>2</sup> of each stall area  Note: Major retail markets may require additional car parking as well as provision for an emergency vehicle	1 bicycle space per 10 stalls	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
Medical centre / Health consulting room	<i>City wide:</i> 4 car parking spaces per consulting room plus 1 car parking space per 3 employees	1 bicycle space per medical centre	1 motorcycle space per 25 car parking spaces	Small Rigid Vehicle
Hotel or motel accommodation	<i>City wide:</i> 1 car parking space per 2 staff members plus 1 car parking space per unit / apartment  <i>Wollongong City Centre:</i> 1 car parking space per 4 staff plus 1 car parking space per motel unit or  0.5 car parking space per hotel unit / apartment  <i>Zones B3 Commercial Core and B4Mixed Use in Wollongong city centre (as per WLEP):</i>  1 car parking space per 40m <sup>2</sup> GFA, where the hotel or motel accommodation is not strata subdivided  If a restaurant is included in the hotel	NA	1 motor cycle space per 25 car parking spaces	>15 units/ apartments – Large Rigid Vehicle

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	/ motel which is available to the general public, then an additional 15 car parking spaces per 100m <sup>2</sup> GFA of the restaurant shall be included			
Registered Club	<i>City wide:</i>  1 car parking space per 2 staff plus 1 car parking space per 5m <sup>2</sup> GFA or 1 car parking space per 6 seats (whichever is the greater)	1 bicycle space per 25m <sup>2</sup> GFA	1 motorcycle space per 25 car parking spaces	<500m <sup>2</sup> GFA – Small Rigid Vehicle  >500m <sup>2</sup> GFA – Large Rigid Vehicle, Articulated Vehicle (Semi-Trailer)*
Funeral home / Funeral chapel	<i>City wide:</i>  1 car parking space per 4 seats plus 1 car parking space per funeral service area	NA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
Restricted premises	<i>City wide:</i>  1 car parking space per 40m <sup>2</sup>	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
Video stores	<i>City wide:</i>  6 car parking spaces per 100m <sup>2</sup> GFA	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle
Service station / convenience store / fast food restaurant	<i>City wide:</i>  1 car parking space per 2 staff plus 3 car parking space per work bay plus 1 car parking space per 25m <sup>2</sup> of retail convenience store plus 10 car parking spaces for any ancillary fast food restaurant component	2 bicycle spaces	1 motor cycle space per 10 car parking spaces	Articulated Vehicle (Semi-Trailer)
Timber and building supplies	<i>City wide:</i>  1 car parking space per 45m <sup>2</sup> GFA	1 bicycle space per 200m <sup>2</sup> GFA of factory building	1 motor cycle space per 25 car parking spaces	Large Rigid Vehicle –  Articulated Vehicle (Semi-Trailer)*
Veterinary hospital	<i>City wide:</i>	NA	NA	Small Rigid Vehicle plus

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	3 car parking spaces per consulting room plus a loading / unloading area to cater for horse trailers etc (If the veterinary hospital involves care for larger animals)			trailer parking / manoeuvring
Industry	<p><i>City wide:</i></p> <p>1 car parking space per 75m<sup>2</sup> GFA; or</p> <p>1 car parking space per 150m<sup>2</sup> GFA for buildings greater than 5,000m<sup>2</sup> where the facility is purpose built for a particular business and where it can be demonstrated that staff car parking is satisfactorily catered for</p>	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	<p>&lt;500m<sup>2</sup> GFA – Small Rigid Vehicle</p> <p>&gt;500m<sup>2</sup> GFA - Large Rigid Vehicle, Articulated Vehicle (Semi-Trailer)*</p>
Warehouse / Distribution centre	<p><i>City wide:</i></p> <p>1 car parking space per 75m<sup>2</sup> GFA; or</p> <p>1 car parking space per 150m<sup>2</sup> GFA for buildings greater than 10,000 square metres of gross floor area where the facility is purpose built for a particular business and where it can be demonstrated that employee car parking is satisfactorily catered for</p>	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space 25 car parking spaces	<p>Large Rigid Vehicle –</p> <p>Articulated Vehicle (Semi-Trailer)*</p>
Light Industrial Retail Outlets	<p><i>City wide:</i></p> <p>1 car parking space per 25m<sup>2</sup> GFA of gross floor area</p>	1 bicycle space per 200m <sup>2</sup> GFA	1 motorcycle space per 25 car spaces or part thereof	<p>&lt;500m<sup>2</sup> GFA – Small Rigid Vehicle</p> <p>&gt;500m<sup>2</sup> GFA - Large Rigid Vehicle</p>
Landscape and garden supplies	<p><i>City wide:</i></p> <p>1 car parking space per 30m<sup>2</sup> GFA of any building used for retailing plus 1 car parking space per 45m<sup>2</sup> for outdoor areas used for retail display purposes plus 1 car parking space per 200m<sup>2</sup> for areas used exclusively for propagation or storage, whether indoor or outdoor.</p>	NA	1 motorcycle space per 25 car parking spaces	<p>Large Rigid Vehicle –</p> <p>Articulated Vehicle (Semi-Trailer)*</p>

Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
Retail Plant Nursery	<i>City wide:</i>  10 car parking spaces plus 1 additional car parking space per 100m <sup>2</sup> of building GFA or land area used for the retailing of plants	NA	1 motorcycle space per 25 car parking spaces	Large Rigid Vehicle –  Articulated Vehicle (Semi-Trailer)*
Vehicle body repair shop / Vehicle repair station	<i>City wide:</i>  1 car parking space per 2 employees plus 3 car parking spaces per work bay	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Large Rigid Vehicle
Manufactured home estate	<i>City wide:</i>  Car Parking as per Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005	NA	NA	Large Rigid Vehicle
Caravan park	<i>City wide:</i>  1 car parking space per site  Note: In accordance with Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005	NA	NA	Large Rigid Vehicle  (Waste collection trucks and Coaches)
Educational establishment	<i>1 car parking space per staff member plus 1 car parking space per 10 Year 12 students.</i>	1 bicycle space per 10 students above grade 4	1 motor cycle space per 25 car parking spaces	Large Rigid Vehicle
Child Care Centres	1 space for each member of staff present at any one time.  plus  1 visitor space per 6 children.  plus  1 space as per Off Street Parking for People with Disabilities.  plus	1 bicycle space per 200m <sup>2</sup> GFA	1 motor cycle space per 25 car parking spaces	Small Rigid Vehicle - Medium Rigid Vehicle



Land Use	Car Parking Requirements	Bicycle Parking Requirements	Motorcycle Parking Requirement	Delivery / Service Truck Requirement
	2 large spaces (3.2m x 5.5m) for parents requiring the use of strollers			
Place of Public Worship	1 space per 20m <sup>2</sup> GFA, or 1 space per 10 seats, whichever is the greater	1 bicycle space per 10 car parking spaces	1 motor cycle space per 25 car parking spaces	Small Rigid Truck

**Note\*:** The determination as to the standard truck size for a particular development will be dependent upon the nature and scale of the development and will be determined by Council at the pre-lodgement meeting stage.

**Schedule 2 – Car Parking Requirements for People with a Disability**

Building Code of Australia Classification	Car Parking Requirements (Table D3.5 of the BCA)
<p>Class 3a</p> <p>Boarding-houses, Guest Houses, Hostels or Backpackers Accommodation</p>	<p>Calculated by multiplying the total number of car parking spaces by the:-</p> <ul style="list-style-type: none"> <li>(i) Percentage of accessible sole-occupancy units to the total number of sole-occupancy units;</li> <li>(ii) Percentage of beds to which access for people with a disability is provided to the total number of beds provided.</li> </ul> <p>The calculated number shall be taken to the next whole figure.</p>
<p>Class 3b</p> <p>Residential part of a Hotel or Motel</p>	<p>1 car parking space for every 100 car parking spaces or part thereof.</p>
<p>Class 5,7,8 and 9c</p> <p>Standalone car parks, workshops, industry uses, office premises and aged care premises</p>	<p>1 car parking space for every 100 car parking spaces or part thereof.</p>
<p>Class 6</p> <p>Retail uses</p> <p>(a) Up to 1000 car parking spaces</p> <p>(b) For each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces</p>	<p>1 car parking space for every 50 car parking spaces or part thereof</p> <p>1 car parking space</p>
<p>Class 9a</p> <p>(a) Hospital</p> <p>(b) Hospital (Outpatient Area)</p> <p>(i) Up to 1000 car parking spaces; and</p> <p>(ii) For each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces.</p> <p>(c) Nursing Home</p> <p>(d) Clinic or day surgery not forming part of a hospital</p>	<p>1 car parking space for every 100 car parking spaces or part thereof.</p> <p>1 car parking space for every 50 car parking spaces or part thereof.</p> <p>1 car parking space.</p> <p>1 car parking space for every 100 car parking spaces or part thereof.</p> <p>1 car parking space for every 100 car parking spaces or part thereof.</p>

Building Code of Australia Classification	Car Parking Requirements (Table D3.5 of the BCA)
Class 9b	
(a) Educational Establishment	1 car parking space for every 100 car parking spaces or part thereof.
(b) Other Assembly Buildings	
(i) Up to 1000 car parking spaces; and	1 car parking space for every 50 car parking spaces or part thereof.
(ii) For each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces	1 car parking space.



## Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2</b>	<b>OBJECTIVES</b>	<b>1</b>
<b>3</b>	<b>DEFINITIONS</b>	<b>1</b>
<b>4</b>	<b>MINIMUM INFORMATION REQUIREMENTS TO ACCOMPANY A DEVELOPMENT APPLICATION</b>	<b>3</b>
4.1	Site and Context Analysis Plan	4
4.2	Landscape Concept Plan	5
<b>5</b>	<b>NEIGHBOURHOOD AMENITY AND CHARACTER</b>	<b>7</b>
5.1	Landscape Character	7
5.2	Streetscape Character	7
5.3	Site Amenity	8
<b>6</b>	<b>GENERAL LANDSCAPING REQUIREMENTS</b>	<b>8</b>
6.1	Planting Requirements	8
6.2	Excavation	9
6.3	Retaining walls	9
6.4	Planting on a slab or podium	9
6.5	Embankments	10
6.6	Noxious Weeds	10
6.7	Street Trees	11
<b>7</b>	<b>CAR PARKING AREAS</b>	<b>13</b>
<b>8</b>	<b>POST DEVELOPMENT CONSENT</b>	<b>14</b>
8.1	Tree Protection during Construction	14
8.2	Maintenance	15

## 1 INTRODUCTION

This chapter outlines Council's requirements for the lodgement of landscaping plans and other information in support of a Development Application.

This Chapter should be read in conjunction with (but not limited to) the development controls in the following chapters:

- A1 Introduction;
- B1 Residential Development;
- B2 Residential Subdivision;
- B3 Mixed Use Development;
- B4 Development in Business Zones;
- B5 Industrial Development;
- E2 Crime Prevention Through Environmental Design;
- E11 Heritage Conservation;
- E15 Water Sensitive Urban Design;
- E17 Management of Trees; and
- E22 Riparian Land Management.

## 2 OBJECTIVES

- (a) To define the landscaping provisions necessary for the Development Application process.
- (b) To ensure that landscaping is appropriate to characteristics of its locality, preserving and contributing to its natural, cultural, heritage and visual character.
- (c) Minimise the impacts from development on natural site features in particular retaining existing trees where feasible.
- (d) Facilitate long term improvements to the landscape of the Wollongong LGA.

## 3 DEFINITIONS

Green roof	A roof surface that supports the growth of vegetation, comprised of a waterproofing membrane, drainage layer, organic growing medium (soil) and vegetation. Green roofs can be classified as either extensive or intensive, depending on the depth of substrate used and the level of maintenance required. Intensive green roofs are generally greater than 300mm deep and are designed as accessible landscape spaces with pathways and other features. Extensive green roofs are generally less than 300mm deep and are generally not trafficable.
Green wall	There are two main types of green walls: green facades and living walls. Green facades are simple systems where plants are grown directly into soil and trained up a frame or trellis system to cover the wall. Living walls are more complex systems where panels or pockets of vegetation are fixed directly to the wall. The use of soil in a living wall is generally minimal and plants are fed primarily through nutrients in the irrigation water.
Landscaped Area	Means a part of a site used for growing plants, grasses and trees, which does not include any building, structure or hard paved area and which is no less than 1.5m measured in any direction. The landscaped area consists of any part of the site which is not occupied by any building, basement or hard surface such as driveways, parking areas or paved areas of courtyards, decks, balconies or terraces. The landscaped area also includes landscaping on the podium, where that section of the podium is less than or equal to 1.2m in height and the minimum

soil depth requirements of this DCP are achieved. Any landscaped area on the site which is less than 1.5m in width is not included within the landscaped area calculations.

**Tree** Is a perennial plant with a self-supporting stem or trunk, when mature, and for the purpose of this DCP means any tree (other than an exempt tree) including the roots of that tree, if it is 3 metres or more in height, or has a trunk diameter of 200mm or more at a height of 1 metre from the ground, or has a branch spread of 3 metres or more.

**Tree Protection Zone** The Tree Protection Zone (TPZ) is defined as the optimal distance from the trunk of a tree that should be maintained free of development and construction activity in accordance with AS4970-2009 in order to protect the tree and keep the tree viable.

## 4 MINIMUM INFORMATION REQUIREMENTS TO ACCOMPANY A DEVELOPMENT APPLICATION

1. Table 1 outlines the requirements to accompany a Development Application for different types of development:

**Table 1: Landscape Requirements** at Development Application Stage

Development Type	Required	Category		
		1	2	3
Residential Subdivision (Two (2) Lots)	Site and Context Analysis	x		
Residential Subdivision (Up to 10 Lots inclusive)	Landscape Concept Plan		x	
Residential Subdivision (> 10 Lots)	Landscape Concept Plan			x
Dual Occupancy (Attached or Detached)	Landscape Concept Plan and Site and Context Analysis	x	x	
Multi-dwelling Development (Up to 10 dwellings inclusive)	Landscape Concept Plan		x	
Multi-dwelling Development (> 10 dwellings)	Landscape Concept Plan			x
Residential Flat Building	Landscape Concept Plan			x
Mixed Use Developments	Landscape Concept Plan			x
Business or Retail Development (< \$1 million)	Landscape Concept Plan		x	
Business or Retail Development (> \$1 million)	Landscape Concept Plan			x
Community, educational, health, aged care/housing, tourism, Child Care facilities, Place of Public Worship	Landscape Concept Plan			x
Industrial Development (excluding minor alterations and additions to existing building)	Landscape Concept Plan			x
Industrial Development (minor alterations and additions to existing building)	Landscape Concept Plan		x	
Telecommunications and Radiocommunications Facilities	Landscape Concept Plan			x
Development in the Illawarra Escarpment	Landscape Concept Plan			x
Rural Development	Landscape Concept Plan		x	

Category	Qualifications required by Landscape Designer
1	No formal qualifications required.
2	Landscape Architect or Landscape Designer with Landscape Associate Diploma or similar and at least 3 years postgraduate experience in landscape design.
3	Registered Landscape Architect or eligible for registration with the Australian Institute of Landscape Architects.

## 4.1 Site and Context Analysis Plan

1. Site and Context Analysis Plan is critical in providing the foundation of landscape design for smaller development types outlined in Table 1.
2. Information to be included in the Site and Context Analysis is contained in the following Site and Context Analysis Checklist:

### Site and Context Analysis Plan – Landscaping Checklist

Information in the Site and Context Analysis must be prepared accordance with Chapter A1 Clause 9 Site and Context Analysis as well as:

#### Trees and vegetation

- Tree survey including existing trees on the site and trees on adjacent properties that will be affected by the development,
- All trees must be accurately located by a registered surveyor,
- Show the trunk location and level to AHD,
- Show an accurate portrayal of the canopy spread,
- Inner and outer bushfire protection zone areas and any trees requiring removal as a result,
- Should the land be bushfire prone the landscape plan must be coordinated with the Arborist Report and in accordance with the Planning for Bushfire Protection Guidelines.

Developers are to involve an arborist in the initial stages of planning a development to determine which trees are suitable to be retained. Suitability of a tree should be based on the following:

- Tree's health,
- Amenity value,
- Ability of the tree to cope with changes to the site conditions,
- Significance of the tree,
- The location of the tree on the site, and
- Extent of the protection zone that would be required (an area in which no building, excavation, service lines or level changes must occur)



## 4.2 Landscape Concept Plan

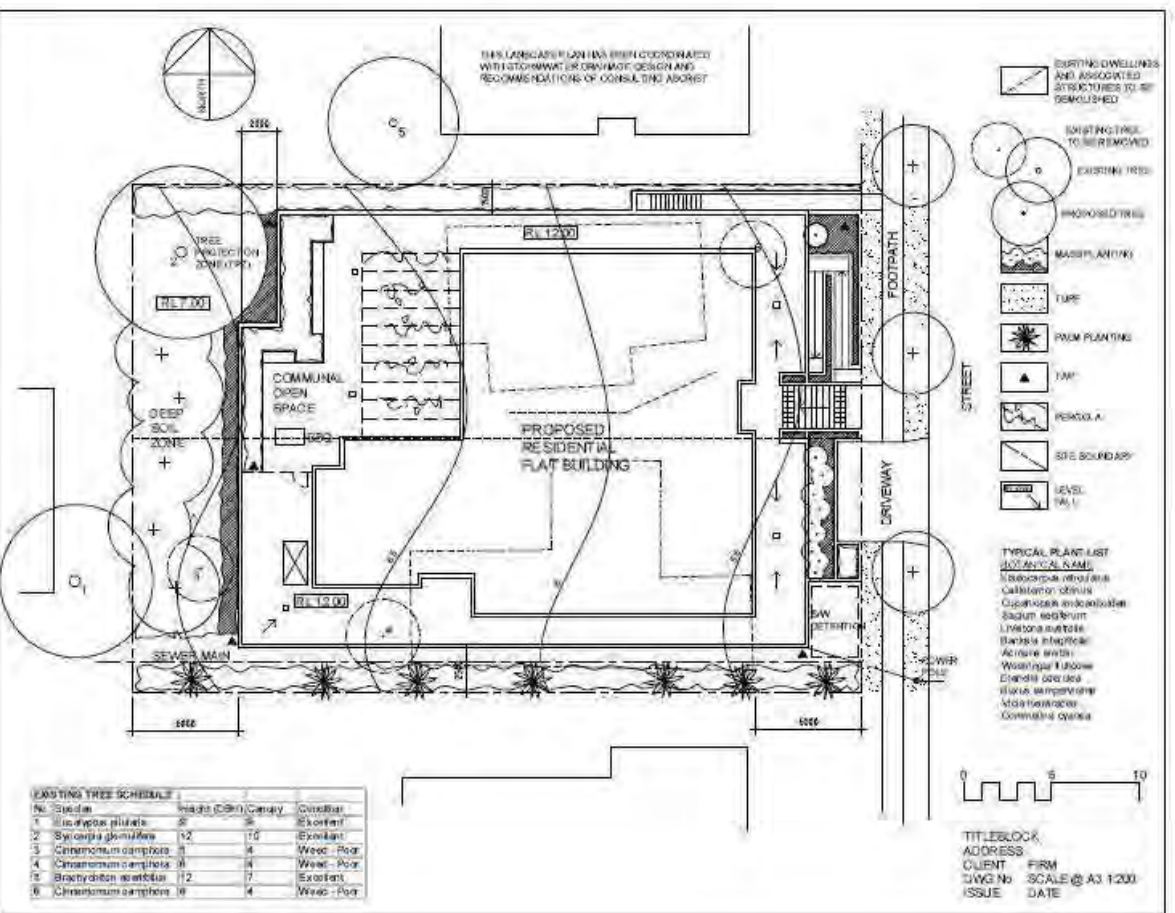
1. The lodgement of a Landscape Concept Plan is required for certain development types as outlined in Table 1.
2. The Landscape Concept Plan should outline the overall landscape objectives and the context of the surrounding urban and landscape setting.
3. The minimum information requirements for a Landscape Concept Plan are listed below:

### Landscape Concept Plan – Checklist

1. Drawn to scale,
2. Landscape Consultant declaration in relation to the compatibility of the landscape plan with the stormwater and bushfire documentation.
3. Existing site information and proposed development as per Chapter A1 Clause 9 Site and Context Analysis
4. Drainage/Bushfire/Arborist report must be coordinated where appropriate.
5. Proposed Landscape Design:
  - Suggested plant species list suitable with site conditions e.g. acid sulphate soils, overshadowing throughout the day etc;
  - Location of various planting layers including groundcovers, shrubs, trees and palms showing canopy at maturity;
  - Location of proposed drainage including subsurface and surface drainage, stormwater detention basins, and water quality control devices – in concept form only;
  - Landscape areas outside the building envelope, balcony planting, roof gardens and internal courtyards etc, and their proposed treatment (e.g. mass planting beds, paving, lawn, water etc);
  - Design details for special situations in concept form e.g. raised planting bed sections, creeks and watercourse treatment and weed eradication; and
  - Proposed surface treatment of landscaped areas (e.g. paving, driveways, mulched planted areas, edging, turfed)
  - All retaining walls including levels top and bottoms of walls.

\* Landscaping maintenance is required to be undertaken for a minimum of 6 months after completion of the development unless otherwise specified by Council.

\* For large sites with extensive planting that may or will require regular pruning or maintenance, or for sites including a green roof or wall, a “Maintenance Schedule” should be prepared detailing the types of works that will be required to maintain the Landscape Plan once approved.



**Figure 1: Example Only - Landscape Concept Plan**

## **5 NEIGHBOURHOOD AMENITY AND CHARACTER**

### **5.1 Landscape Character**

1. Landscape design should reinforce the identified natural attributes of the site, including, but not limited to watercourses, landmark elements, views and vistas and significant trees.
2. Remnant native vegetation should be retained, managed and incorporated into landscape design, wherever practicable.
3. Landscape design should also maintain or improve the amenity and visual quality of the site. Landscaping measures are required to help to screen visually obtrusive land uses or buildings.

### **5.2 Streetscape Character**

1. The assessment of the prevailing streetscape character of a locality is required as part of the preparation of the Landscape Concept Plan for a proposed development.
2. The Landscape Concept Plan should ensure that all positive streetscape elements are incorporated into the design of proposed landscaping measures. Key features contributing to the streetscape character of the locality may include:
  - (a) Street trees.
  - (b) Remnant stands of trees.
  - (c) Architectural character.
  - (d) Prevailing built form, including dwelling types, prevailing front setbacks, building height / form etc.
  - (e) Existing uses (eg residential, industrial etc).
  - (f) Heritage buildings or heritage conservation areas.
  - (g) Car parking, especially the level of on-street parking and off-street parking.
  - (h) Linkages with other open space areas in the locality.
  - (i) Street furniture, fences, gates etc.
3. Landscaping should be used to soften the impact of buildings and to assist in providing visual relief to buildings.
4. Landscaping should also be used to soften the impact of car parking areas, when viewed from the public domain.
5. The developer is responsible for the construction of footpath paving for the entire frontage of the development for the full width of the verge where Council deems it appropriate.
  - (a) The type of paving is to be in accordance with:
    1. The Wollongong City Council Public Domain Technical Manual within the City Centre.
    2. Determined by Council according to the location.

- (b) A nominal two percent (2%), minimum one percent (1%), maximum two and a half percent (2.5%) cross fall to be provided from property line to back of kerb.
  - (c) The driveway entry threshold finish from the property boundary line to the face of the kerb must match the footpath and be designed to withstand predicted traffic loadings.
  - (d) The driveway threshold finish within the property boundary line should contrast with the driveway entry.
  - (e) Footpath must be installed to the satisfaction of Wollongong City Council.
  - (f) A Landscape Plan is to be submitted to Council prior to the issue of the Construction Certificate showing proposed paving and location of all services.
6. A change in driveway pavement is required at the entrance threshold within the property boundary to clearly show to motorists they are crossing a pedestrian area. Between the property boundary and the kerb, the developer must construct the driveway pavement in accordance with the conditions, technical specifications and levels to be obtained from the Council's Manager of Works. This requirement shall be reflected on the Construction Certificate plans and any supporting documentation.

### 5.3 Site Amenity

1. The landscape design should maximise the area of the deep soil zone, especially around existing trees to provide sufficient root depth as well as deep soil zones around the perimeter of a site.
2. Landscaping should be used to highlight architectural features, define entry points, indicate direction and frame and filter views into the site.
3. Small trees or large shrubs should be used to help screen service areas.
4. Private open space should be clearly defined and provide satisfactory privacy and amenity to occupants.
5. Public open space / communal open space areas must incorporate appropriate landscaping and be designed to maximise natural surveillance opportunities whilst providing adequate shade trees.
6. Communal open space for multi-dwelling housing or attached dwellings must be accessible from all dwellings in the development and should incorporate suitable passive surveillance to improve safety.

## 6 GENERAL LANDSCAPING REQUIREMENTS

### 6.1 Planting Requirements

1. All garden areas are to be prepared to a minimum depth of 300mm and free of weed species. This may comprise imported planting mix or a mixture of site soil and soil conditioner.
2. Plants utilised in the landscape works must be those species specified on the approved final Landscape Concept Plan unless approval is obtained in writing from Council. (Examples of recommended plant species for the Wollongong Local Government Area are included in Table 3).
3. Plants shall be healthy, of good form and be true to species and size. They must be free from pests and disease, and shall not be root bound.
4. All trees (excluding street trees) are to be at least 1 metre height and are to be advanced specimens, free of disease.

5. All shrubs are to be in 5 litre containers and at least 500mm in height. These are to be advanced specimens and free of disease.
6. All ground covers are to be advanced specimens and free of disease.
7. Double staking of trees is permitted and trees are to be loosely tied where required.
8. Advanced trees and shrubs are to be planted into good quality soil and humus. The planting hole shall be twice the width and the same depth as the plant container.
9. In lawns, tree pits are required to be backfilled with good quality soil (or site soil if good quality), mixed with a suitable soil conditioner.
10. Landscaping should comprise a mix of canopy trees, shrubs and groundcovers.
11. Trees should be planted well clear of underground services or overhead electricity wires.
12. Any sites adjoining any natural areas or creek lines with native vegetation must use locally indigenous species (no cultivars) in the landscape plan and must have regard to any impacts of water flows and flooding.
13. Trees should be planted in areas that are capable of supporting the expected size of the mature tree.

## 6.2 Excavation

1. Bulk excavation works shall be limited to those areas approved by Council.
2. All areas disturbed as a result of excavation shall be stabilised prior to the carrying out of landscape works.

## 6.3 Retaining walls

1. Retaining walls over 600mm high are to be designed and certified by a qualified and experienced Engineer.
2. Retaining walls should be constructed with materials consistent with the building style and adjacent properties.

## 6.4 Green walls, green roofs and planting on a slab or podium

### Planting on a slab or podium

1. The use of green roofs is encouraged particularly where this forms part of a communal open space arrangement in a mixed use development, and for non-residential development in the Wollongong City Centre.
2. An average soil depth and volume of 1000mm, 500mm and 300mm is provided for trees, shrubs, groundcover and lawns is provided in the table below respectively.

Plant type	Definition	Soil volume	Soil Depth	Soil area
Large trees	12-18m high, up to 16m crown spread at maturity	150m <sup>2</sup>	1,200mm	10m x 10m or equivalent
Medium trees	8-12m high, up to 16m crown spread at maturity	35m <sup>2</sup>	1,000mm	6 x 6m or equivalent
Small trees	6-8m high, up to 16m crown spread at maturity	9m <sup>2</sup>	800mm	3.5m x 3.5m or equivalent
Shrubs			500-600mm	
Ground cover			300-450mm	
Turf			200mm	

- Square, rectangular and round planter boxes are preferable to linear, narrow planters.
- Planter boxes should be designed and constructed proportionally to accommodate the largest proportion of soil possible.
- Green roofs, green walls, and planter areas on suspended slabs are to be designed by a Structural Engineer to determine and design for loads such as soil saturation.
- Landscaping documentation should include details illustrating water-proofing, soil containment, filter fabric, drainage outlets, subsoil drainage methods, irrigation, and external finishes to the retaining wall / planter box.
- Adequate filtration should be provided with at least two layers of filter fabric to ensure silt does not discharge into the storm water system.

## 6.5 Embankments

- All landscaped embankments having a slope of 1:3 or greater shall be reinforced using stabilisation techniques to prevent erosion or slumping. Stabilisation techniques may include but are not limited to, the use of dense ground covers, erosion control netting, mesh or rock stabilisation.
- The maximum slope of turfed areas in public open spaces is to be to be 1:6 to ensure the safety of individual carrying out maintenance.

## 6.6 Noxious Weeds

Noxious weed species are to be eradicated from the development site prior to commencement of landscaping works. Council may also advise of additional species to be removed prior to building approval.

A list of Noxious Weeds in the Wollongong LGA can be obtained from the NSW Industry and Investment website <http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/noxweed>, or the Illawarra District Noxious Weeds Authority <http://www.southerncouncils.nsw.gov.au/index.pl?page=117>.

## 6.7 Street Trees

1. Street trees, where appropriate should seek to provide:
  - (a) Shade; and
  - (b) Enhancement of visual quality of the streetscape.
2. All street trees should be retained and protected during the construction phase of a development.
3. Street trees should be installed at regular intervals (e.g. between 5 – 10 metres apart) to enhance the appearance of the locality. The tree species type and required intervals for the street tree planting will be determined by Council during the application assessment process, depending upon the nature of the development.
4. The location of Street Trees should take into account overhead and underground services.
5. At the time of planting street trees require the installation of root barriers directly adjacent to the kerb to prevent future damage to the kerb, guttering or road.
6. Where trees are to be planted in areas with hard surfaces, suitable grates are to be laid around the tree to protect the roots and enable water infiltration.
7. Minimum plant requirements for Street Trees are:
  - (a) Pot size of 100 litres or greater,
  - (b) Height of 2.5 metres or greater,
  - (c) Calliper 400 millimetres or greater, and
  - (d) Rootball diameter of 500 millimetres or greater.
8. Street Trees must meet the following NATSPEC criteria:

	Height (m)	Calliper (mm) 300 mm above ground level	Minimum Rootball Diameter (mm)
<b>Thin Stemmed 100L Tree</b>	3	40	500
<b>Thick Stemmed 100L Tree</b>	2.5	50	500

9. All street trees or streetscape landscaping requirements should be included in the Landscape Concept Plan. Refer to Table 2 for suitable Street Tree Species for the Wollongong LGA.

**Table 2: Recommended Street Tree Species for the Wollongong LGA.**

	Height (metres)	Local Native Species	Shade tree in car parks	Coastal	1. Sandstone Plateau	2. Coastal Escarpment	3. Coastal Plain	4. Foothills / Plain	5. City	6. Berkeley Hills	7. Dapto Plain	8. Lake Side
<i>Syzygium smithii</i> syn <i>Acmena smithii</i> Lilly Pilly	7-10	X		X		X			X			
<i>Syzygium smithii</i> var. <i>minor</i> syn <i>Acmena</i> <i>Smith</i> var <i>Minor</i> Lilly Pilly	4					X	X	X	X	X	X	X
<i>Alphitonia excelsa</i> Red Ash	10	X	X			X	X	X	X	X		
<i>Backhousia myrtifolia</i> Grey Myrtle	4-8	X	X			X	X	X	X			
<i>Banksia integrifolia</i> Coast Banksia	6-10	X	X	X	X		X	X	X			X
<i>Banksia serrata</i> Old Man Banksia	7	X	X	X	X							
<i>Brachychiton acerifolius</i> Illawarra Flame Tree	10-15	X				X	X	X	X	X	X	
<i>Cupaniopsis anacardioides</i> Tuckeroo #	5-8	X	X	X		X	X	X	X	X	X	X
<i>Elaeocarpus reticulatus</i> Blueberry Ash	5-8	X	X		X	X	X	X	X	X	X	
<i>Fraxinus griffithii</i> Evergreen Ash #	6-10		X			X	X	X	X	X	X	X
<i>Glochidion ferdinandi</i> Cheese Tree	8-10	X	X		X	X	X	X	X	X	X	X
<i>Hymenosporum flavum</i> Native Frangipani	6-10				X	X	X	X	X	X	X	
<i>Lagerstroemia indica</i> Crepe Myrtle	4-6				X		X	X	X	X	X	
<i>Melaleuca decora</i>	6-10	X	X			X	X		X	X	X	



	Height (metres)	Local Native Species	Shade tree in car parks	Coastal	1. Sandstone Plateau	2. Coastal Escarpment	3. Coastal Plain	4. Foothills / Plain	5. City	6. Berkeley Hills	7. Dapto Plain	8. Lake Side
White Cloud Tree												
<i>Melaleuca linariifolia</i> Snow in Summer	5-8	X	X		X		X	X	X	X	X	X
<i>Pittosporum rhombifolium</i> White Holly	6-12	X			X	X	X	X	X	X	X	
<i>Pyrus ussuriensis</i> Ornamental Pear - Manchurian	8-12				X	X	X	X	X	X	X	
<i>Syzygium australe</i> Brush Cherry	8-10	X	X	X	X	X	X	X	X	X	X	X
<i>Syzygium luehmannii</i> Small Leaf Lilly Pilly	7-10				X	X	X	X	X	X	X	
<i>Syzygium paniculatum</i> Magenta Lilly Pilly*	8-10	X	X		X	X	X	X	X	X	X	
<i>Tristaniaopsis laurina</i> Water Gum	5-10	X	X	X	X	X	X	X	X	X	X	
* Endangered species – requires National Parks licence for propagation and sale. # Invasive: Do not plant near natural vegetation.												

## 7 CAR PARKING AREAS

1. Development shall aim to provide car parking that does not dominate the development and to provide shade to a minimum of 50% of parked vehicles.
2. Large car park development should break up the extent of paving areas with internal planting beds
3. Planting beds must have sufficient deep soil area for the trees to grow.
4. Landscaping is to be consistent with the Chapter E2 Crime Prevention through Environmental Design.
5. Where the car park adjoins a side or rear boundaries development should provide a 1.5 metre wide planting bed
6. Where car parking spaces do not front a planting bed 3 metres wide, every tenth car parking space requires a planting bed for tree planting. The minimum dimension of the planting bed is 2.5 metres by 5.5 metres (one car space).

7. Parking spaces fronting planting beds must have wheel stops to protect the planting from damage.
8. Trees in car parks should be long-lived species that do not drop branches or soft fruit that may damage vehicles.
9. Pedestrian and vehicular movement is to be clearly separated by use of design devices such as change in paving, kerb, bollards, line marking. Dedicated pedestrian paths are to be included in multi-lane car parking areas. Pedestrian paths are to be a minimum 1.2m wide.

## **8 POST DEVELOPMENT CONSENT**

1. Upon completion of the landscaping work, the developer/ applicant must contact the Principal Certifying Authority (PCA) and arrange for the inspection of the work. A Landscape Completion Certificate is to then be issued to the PCA by a Landscape Architect / Landscape Designer. The individual who prepared the Landscape Concept Plan or Landscape Plan is the desired person to certify the landscape work upon completion.
2. The Completion Certificate must state the landscape work has been constructed in accordance with the approved Landscape Concept Plan or Landscape Plan and Landscape conditions.

### **8.1 Tree Protection during Construction**

#### **8.1.1 Objectives**

1. To ensure tree protection is undertaken prior to and during construction.

#### **8.1.2 Requirements**

1. The developer must install tree protection in accordance with the Landscape Concept Plan and/ or Development Consent before any works are commenced on site.
2. The developer must engage an arborist to certify that trees to be retained are protected by fencing and other measures, prior to the commencement of any such excavation or land clearing works.
3. The developer must ensure that once the tree protection is installed it is not to be removed or altered in anyway without written consent from Council.
4. Protective fencing must be practically placed to protect the remaining protection zone where access to a site requires vehicles access across the protection zone of a tree and Council has approved this arrangement.
5. A 350mm layer of mulch must be placed on the access way for the duration of the construction period to reduce compaction. This must be inspected and approved before work commences.
6. The developer may also be required to have an arborist inspect and report on the tree/s at monthly intervals during construction. This report must be submitted to Council or the Principal Certifying Authority within one week after each inspection.
7. Changes to the development which may affect trees/ vegetation which have been specified to be retained, will require an amended Development Application. Changes may include:
  - a. Any level changes within the dripline of trees;
  - b. Incorrectly located trees; or
  - c. Requests to remove trees

## 8.2 Maintenance

### 8.2.1 Objectives

1. To ensure landscaping will be maintained in good condition at all times.
2. To enable larger developments to carry out regular maintenance on trees within the property according to an approved plan and reducing the need for individual Tree Management Permits.

### 8.2.2 Requirements

1. Landscape maintenance schedules where required, should cover a minimum period of 6 months and address the following:
  - (a) Pruning / trimming (frequency, method, plant type requirements),
  - (b) Fertilising (e.g. types and frequency),
  - (c) Weeding,
  - (d) Re-mulching,
  - (e) Watering and irrigation,
  - (f) Pest/ disease control,
  - (g) Lawns (e.g. mowing frequency, method, watering, fertilising),
  - (h) Rubbish, leaf litter, drain clearing,
  - (i) Stakes and ties,
  - (j) Tree maintenance (fertiliser frequency and methods, special tree requirements).
2. Watering must be carried out at sufficient intervals to maintain the landscaping.
3. Spraying of herbicide, insecticide and / or fungicides must be carried out in accordance with the manufactures directions.
4. Plant species that do not survive must be replaced in accordance with the Landscape Concept Plan.
5. Hard surfaces and landscape structures are to be maintained in an appropriate manner.

**Table 3: Recommended plant species for the Wollongong Local Government Area**

Note: This list is does not apply to street trees. Street trees must be selected in consultation with Wollongong City Council.

Species <i>* Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Acacia binervata</i>	Two Veined Hickory	Tree			Y		Y	Y
<i>Acacia binervia</i> *	Coastal Myall	Tree			Y			
<i>Acalypha wilkesiana</i> *	Fijian Fire plant	Shrub	Y	Y				
<i>Acer palmatum</i> *	Japanese Maple	Tree			Y		Y	
<i>Acmena smithii</i> (syn, <i>Syzygium smithii</i> )	Lilly Pilly	Tree		Y	Y	Y	Y	Y

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Acokanthera oblongifolia</i> *	Bushman's Poison	Shrub		Y	Y	Y		
<i>Adiantum aethiopicum</i>	Maidenhair Fern	Fern			Y	Y	Y	
<i>Adiantum formosum</i>	Giant Maidenhair	Fern		Y	Y	Y	Y	
<i>Agathis robusta</i> *	Queensland Kauri	Tree			Y			
<i>Agonis flexuosa</i> *	Willow-myrtle	Small Tree		Y	Y			
<i>Alectryon subcinereus</i>	Native quince	Small Tree			Y		Y	
<i>Allocasuarina distyla</i>		Shrub						Y
<i>Allocasuarina littoralis</i>	Black Sheoak	Tree		Y	Y		Y	Y
<i>Allocasuarina nana</i>	Dwarf Sheoak	Shrub						Y
<i>Allocasuarina torulosa</i>	Forest Oak	Tree			Y		Y	
<i>Allocasuarina verticillata</i>	Drooping Sheoak	Tree	Y					
<i>Alocasia brisbanicum</i>	Cunjevoi	Perennial				Y	Y	
<i>Alphitonia excelsa</i>	Red Ash	Tree			Y		Y	Y
<i>Alpinia caerulea</i> *	Native Ginger	Perennial			Y		Y	
<i>Angophora costata</i>	Smooth Barked Apple	Tree						Y
<i>Angophora floribunda</i>	Rough Barked Apple	Tree		Y	Y	Y		
<i>Angophora hispida</i>	Dwarf Apple	Shrub						Y
<i>Antigonon leptopus</i> *	Coral Vine	Vine / Climber						
<i>Araucaria cookii</i> *	Cooks Pine	Tree	Y	Y			Y	
<i>Araucaria cunninghamii</i> *	Hoop Pine	Tree	Y		Y			
<i>Araucaria heterophylla</i> *	Norfolk Island Pine	Tree					Y	
<i>Arbutus unedo</i> *	Irish Strawberry	Small tree		Y	Y			
<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	Tree		Y	Y	Y	Y	
<i>Aristolochia elegans</i> *	Dutchman's Pipe	Vine / Climber						

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Asplenium australasicum</i>	Bird's Nest Fern	Fern		Y	Y		Y	
<i>Austrodanthonia bipartita</i>	Wallaby Grass	Grass		Y	Y	Y		
<i>Austrodanthonia caespitosa</i>	Common Wallaby Grass	Grass		Y	Y	Y		
<i>Austrodanthonia racemosa</i>	Striped Wallaby Grass	Grass		Y	Y	Y		
<i>Austromyrtus dulcis*</i>	Midginberry	Shrub		Y	Y	Y		
<i>Austrostipa ramossissima</i>	Speargrass	Grass			Y	Y		
<i>Backhousia citriodora*</i>	Lemon-scented Myrtle	Tree			Y	Y	Y	
<i>Backhousia myrtifolia</i>	Grey Myrtle	Small Tree			Y		Y	Y
<i>Banksia ericifolia</i>	Heath Banksia	Shrub						Y
<i>Banksia integrifolia</i>	Coast Banksia	Small Tree	Y					Y
<i>Banksia marginata</i>	Silver Banksia	Shrub						Y
<i>Banksia serrata</i>	Old Man Banksia	Small Tree		Y				Y
<i>Banksia spinulosa</i>	Hairpin Banksia	Shrub						Y
<i>Bauhinia corymbosa*</i>	Climbing Bauhinia	Vine / Climber						
<i>Bauhinia galpinii*</i>		Shrub		Y	Y	Y		
<i>Baumea acuta</i>	Pale Twig-rush	Sedge/ Rush		Y	Y	Y		
<i>Billardiera scandens</i>	Apple Berry	Vine / Climber		Y	Y	Y	Y	
<i>Blechnum cartilagineum</i>	Gristle Fern	Fern		Y	Y	Y	Y	
<i>Boronia megastigma*</i>	Brown Boronia	Shrub		Y	Y	Y		
<i>Bothriochloa biloba</i>	Redleg	Grass			Y	Y		
<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	Tree			Y		Y	
<i>Brachychiton populneus</i>	Kurrajong	Tree			Y		Y	Y
<i>Buckinghamia celsissima*</i>	Ivory Curl Tree	Shrub			Y			
<i>Buxus sempervirens*</i>	Box	Shrub		Y	Y	Y	Y	

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Caesalpinia ferrea</i> *	Leopard tree	Small tree		Y	Y	Y		
<i>Callicoma serratifolia</i>	Black Wattle	Shrub			Y		Y	Y
<i>Callistemon citrinus</i>	Lemon Scented Bottlebrush	Shrub						Y
<i>Callistemon</i> 'Harkness'	Gawler Hybrid Bottlebrush	Shrub			Y			Y
<i>Callistemon</i> 'Kings Park Special'	Bottlebrush	Shrub			Y			Y
<i>Callistemon polandii</i> *	Bottlebrush	Shrub			Y			
<i>Callistemon salignus</i>	Willow Bottlebrush	Tree			Y	Y	Y	
<i>Callistemon viminalis</i> *	Weeping Bottlebrush	Shrub			Y	Y		
<i>Callitris rhomboidea</i>	Port Jackson Pine	Tree			Y			Y
<i>Calodendron capense</i> *	Cape Chestnut	Tree					Y	
<i>Camellia japonica</i> *	Japanese Camellia	Shrub			Y			
<i>Camellia sasanqua</i> *	Sasanqua Camellia	Shrub			Y			
<i>Carex appressa</i>		Sedge/ Rush		Y	Y	Y	Y	
<i>Carex longibrachiata</i>	Bergalia tussock	Sedge/ Rush		Y				
<i>Cassine australis</i>	Red Olive Plum	Small Tree		Y	Y		Y	Y
<i>Casuarina cunninghamiana</i>	River Oak	Tree			Y	Y		
<i>Casuarina glauca</i>	Swamp Oak	Tree		Y	Y	Y		
<i>Caustis flexuosa</i>	Old Man's Beard	Sedge/ Rush						Y
<i>Ceratopetalum apetalum</i>	Coachwood	Tree			Y		Y	Y
<i>Ceratopetalum gummiiferum</i>	New South Wales Christmas Bush	Tree			Y			Y
<i>Choisya ternata</i> *	Mexican Orange-blossom	Shrub		Y	Y	Y	Y	
<i>Choricarpa leptopetala</i>	Brush Turpentine	Tree		Y	Y		Y	

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Cissus antarctica</i>	Kangaroo Grape	Vine / Climber						
<i>Cissus hypoglauca</i>	water vine	Vine / Climber						
<i>Clematis aristata</i>	Old Man's Beard	Vine / Climber		Y	Y	Y	Y	
<i>Clematis glycinoides</i>	Old Man's Beard	Vine / Climber			Y	Y		Y
<i>Clerodendrum tomentosum</i>		Shrub				Y	Y	Y
<i>Codiaeum variegatum*</i>	Croton	Shrub			Y		Y	Y
<i>Coleonema pulchrum*</i>	Pink Diosma	Shrub	Y	Y	Y			
<i>Commersonia fraseri</i>	Brown Kurrajong	Shrub			Y		Y	Y
<i>Cordyline petiolaris*</i>	Broad Leaved Palm Lilly	Shrub			Y			
<i>Cordyline stricta</i>	Narrow Leaved Palm Lily	Shrub			Y			
<i>Cordyline terminalis*</i>	Palm Lily	Shrub			Y			
<i>Correa alba</i>	White Correa	Shrub	Y		Y			Y
<i>Crinum pedunculatum</i>	Crinum Lily	Perennial	Y		Y	Y		
<i>Cryptomeria japonica*</i>	Japanese Cedar	Tree			Y	Y	Y	
<i>Cupaniopsis anacardioides</i>	Tuckeroo	Small Tree	Y	Y	Y			
<i>Cupressus macrocarpa*</i>	Monterey Cypress	Tree		Y	Y			
<i>Cupressus sempervirens</i> var. <i>stricta*</i> Lombardy Poplar	Lombardy Cypress	Tree			Y			
<i>Cupressus torulosa*</i>	Bhutan Cypress	Tree			Y			
<i>Cyathea australis</i>	Rough Treefern	Fern			Y	Y	Y	
<i>Cymbopogon refractus</i>	Barb-wire grass	Grass			Y	Y		
<i>Cynodon dactylon</i>	Couch	Grass	Y	Y	Y	Y		Y
<i>Daphne odora*</i>	Winter Daphne	Shrub		Y	Y	Y	Y	
<i>Davallia pyxidata</i>	Hare's Foot Fern	Fern		Y	Y	Y	Y	

Species <i>*_Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Desmodium varians</i>		Vine / Climber			Y	Y	Y	Y
<i>Dichelachne crinita</i>	Longhair Plume Grass	Grass			Y	Y	Y	Y
<i>Dichelachne rara</i>	Plume Grass	Grass			Y	Y		Y
<i>Dicksonia antarctica</i>	Soft Treefern	Fern			Y	Y	Y	
<i>Digitaria didactyla</i> *	Qld Blue Couch	Grass		Y	Y	Y		
<i>Dodonaea viscosa</i>	Native Hop	Shrub		Y	Y	Y	Y	
<i>Doodia aspera</i>	Rasp Fern	Fern		Y	Y	Y	Y	
<i>Doryanthes excelsa</i>	Gymea Lily	Perennial		Y	Y	Y	Y	Y
<i>Duboisia myoporoides</i>	Corkwood	Shrub		Y	Y	Y	Y	
<i>Echinipogon caespitosus</i>	Hedgehog grass	Grass		Y	Y	Y		
<i>Ehretia acuminata</i>	Koda	Tree			Y		Y	
<i>Elaeocarpus grandis</i> *	Giant Qandong	Tree			Y		Y	
<i>Elaeocarpus kirtonii</i>	Silver Quandong	Tree			Y		Y	
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	Small Tree			Y		Y	Y
<i>Emmenosperma alphonoides</i>	Bonewood	Tree			Y		Y	
<i>Entolasia marginata</i>	Bordered Panic	Grass		Y	Y	Y	Y	
<i>Entolasia stricta</i>	Wiry Panic	Grass		Y	Y	Y	Y	
<i>Eragrostis brownii</i>	Brown's love-grass	Grass		Y	Y	Y		
<i>Eriostemon australasius</i>	Wax Flower	Shrub			Y			Y
<i>Escallonia macrantha</i> *	Common Escallonia	Shrub			Y			
<i>Eucalyptus globoidea</i>	White stringybark	Tree			Y	Y		
<i>Eucalyptus (Corymbia) calophylla</i> *	Marri	Small tree		Y	Y			
<i>Eucalyptus (Corymbia) gummifera</i>	Red Bloodwood	Tree						Y
<i>Eucalyptus (Corymbia) maculata</i>	Spotted Gum	Tree			Y			



Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Eucalyptus amplifolia</i>	Cabbage Gum	Tree		Y	Y	Y		
<i>Eucalyptus bosistoana</i>	Coast Grey Box	Tree			Y	Y		
<i>Eucalyptus botryoides</i>	Bangalay Gum	Tree	Y		Y			
<i>Eucalyptus caesia*</i>	Gunguru	Small Tree		Y	Y			
<i>Eucalyptus cinerea*</i>	Argyle Apple	Tree			Y	Y		
<i>Eucalyptus curtisii*</i>	Plunkett Mallee	Small Tree		Y	Y			
<i>Eucalyptus elata</i>	River Peppermint	Tree			Y	Y	Y	
<i>Eucalyptus eugenioides</i>	Stringybark	Tree			Y			
<i>Eucalyptus haemastoma</i>	Scribbly Gum	Tree						Y
<i>Eucalyptus longifolia</i>	Woollybutt	Tree			Y	Y		
<i>Eucalyptus microcorys*</i>	Tallow Wood	Tree			Y			
<i>Eucalyptus paniculata</i>	Grey Ironbark	Tree			Y		Y	Y
<i>Eucalyptus pilularis</i>	Blackbutt	Tree			Y		Y	Y
<i>Eucalyptus quadrangulata</i>	White Topped Box	Tree					Y	
<i>Eucalyptus racemosa</i>	Scribbly Gum	Tree						Y
<i>Eucalyptus robusta</i>	Swamp Mahogany	Tree		Y	Y	Y		
<i>Eucalyptus saligna</i>	Sydney Blue Gum	Tree			Y		Y	
<i>Eucalyptus sideroxylon</i>	Red Ironbark	Tree			Y			
<i>Eucalyptus sieberi</i>	Silvertop Ash	Tree						Y
<i>Eucalyptus tereticornis</i>	Forest Red Gum	Tree		Y	Y			
<i>Eucalyptus viminalis*</i>	Manna Gum	Tree			Y	Y		
<i>Eucryphia moorei</i>	Eastern Leatherwood	Small Tree					Y	
<i>Euonymus japonicus*</i>	Spindletree	Shrub	Y	Y	Y			
<i>Eustrephus latifolius</i>	Wombat Berry	Vine / Climber	Y	Y	Y	Y		
<i>Feijoa sellowiana*</i>	Feijoa	Small Tree			Y	Y		

Species  *Not native to Illawarra	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Ficus coronata</i>	Sandpaper Fig	Small Tree			Y	Y	Y	Y
<i>Ficus macrophylla</i>	Moreton Bay Fig	Tree			Y		Y	
<i>Ficus obliqua</i>	Small Leaved Fig	Tree		Y	Y		Y	Y
<i>Ficus rubiginosa</i>	Port Jackson Fig	Tree		Y	Y		Y	Y
<i>Ficus superba</i> var. <i>henneana</i>	Deciduous Fig	Tree			Y		Y	
<i>Flindersia australis</i> *	Australian Teak	Tree			Y	Y	Y	
<i>Fortunella japonica</i> *	Cumquat	Shrub		Y	Y			
<i>Fraxinus</i> 'Raywood'	Claret Ash	Tree			Y	Y	Y	
<i>Gahnia aspera</i>	Saw Sedge	Sedge/ Rush		Y				
<i>Gardenia jasminoides</i> *	Gardenia	Shrub			Y	Y	Y	
<i>Geijera latifolia</i>	Brush Wilga	Tree			Y		Y	
<i>Geitonoplesium cymosum</i>	Scrambling Lily	Vine / Climber		Y	Y	Y	Y	
<i>Gelsemium sempervirens</i> *	Yellow jasmine	Vine / Climber		Y	Y	Y		
<i>Gleichenia dicarpa</i>	Pouched Coral Fern	Fern			Y	Y	Y	
<i>Glochidion ferdinandi</i>	Cheese Tree	Small Tree			Y	Y	Y	Y
<i>Gmelina leichardtii</i>	White Beech	Tree			Y	Y	Y	
<i>Goodenia ovata</i>		Shrub			Y			Y
<i>Graptophyllum excelsum</i> *	Scarlet Fuchsia	Shrub			Y		Y	
<i>Grevillea banksii</i> *	Banks Grevillea	Shrub			Y			Y
<i>Guioa semiglauca</i>	Guioa	Small Tree		Y	Y			
<i>Gymnostachys anceps</i>	Settlers' Flax	Sedge/ Rush		Y			Y	
<i>Hakea dactyloides</i>		Shrub			Y			Y
<i>Hakea salicifolia</i>	Willow Hakea	Shrub			Y			Y
<i>Hardenbergia violacea</i>	False Sarsparilla	Vine /		Y	Y	Y	Y	Y

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
		Climber						
<i>Heliotropium arborescens*</i>	Cherry Pie	Shrub		Y	Y			
<i>Hibbertia dentata</i>	Twining Guinea Flower	Vine / Climber		Y	Y	Y	Y	
<i>Hibbertia scandens</i>	Golden Guinea Flower	Vine / Climber			Y	Y	Y	Y
<i>Hibiscus diversifolius</i>	Swamp Hibiscus	Shrub	Y	Y	Y	Y		
<i>Hibiscus heterophyllus</i>	Native Hibiscus	Tree					Y	
<i>Hibiscus rosa-sinensis*</i>	Hibiscus	Shrub	Y	Y	Y			
<i>Hibiscus splendens</i>	Pink Hibiscus	Small Tree			Y		Y	
<i>Hibiscus syriacus*</i>	Syrian Hibiscus	Shrub		Y	Y	Y		
<i>Hibiscus tiliaceus*</i>	Coast Cottonwood	Small Tree			Y		Y	
<i>Hymenosporum flavum*</i>	Native Frangipani	Small Tree	Y	Y				
<i>Hypericum calycinum*</i>	Aaron's beard	Shrub		Y	Y	Y		
<i>Iboza riparia*</i>	Nutmeg Bush	Shrub	Y	Y	Y			
<i>Imperata cylindrica</i>	Blady grass	Grass	Y	Y	Y	Y		Y
<i>Indigofera australis</i>	Australian Indigo	Shrub		Y	Y	Y	Y	
<i>Jacksonia scoparia</i>	Dogwood	Shrub			Y			Y
<i>Joycea pallida</i>	Red Anther Wallaby grass	Grass			Y			Y
<i>Juncus usitatus</i>	Common Rush	Sedge/ Rush		Y	Y	Y	Y	
<i>Juniperus conferta*</i>	Shore Juniper	Shrub	Y	Y	Y	Y	Y	
<i>Juniperus procera*</i>	East African Juniper	Tree			Y		Y	Y
<i>Kennedia prostrata</i>	Running Postman	Vine / Climber		Y	Y	Y		Y
<i>Kennedia rubicunda</i>	Dusky Coral Pea	Vine / Climber			Y		Y	
<i>Kunzea ambigua</i>	Tick Bush	Shrub			Y			Y

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Lagerstroemia indica</i> *	Crepe Myrtle	Tree			Y	Y	Y	
<i>Lasiopetalum ferrugineum</i>	Rusty Velvet-bush	Shrub		Y	Y		Y	Y
<i>Lavandula dentata</i> *	French Lavender	Shrub		Y	Y			
<i>Lepidosperma laterale</i>	Sword-sedge	Sedge/ Rush		Y	Y	Y	Y	
<i>Leptospermum juniperinum</i>		Shrub			Y	Y		Y
<i>Leptospermum laevigatum</i>	Coastal Tea Tree	Shrub	Y					
<i>Leptospermum morrisonii</i>	Morrison's Tea Tree	Shrub			Y			Y
<i>Leptospermum polygalifolium</i>	Common Tea Tree	Shrub			Y			Y
<i>Leptospermum rotundifolium</i> *	Shoalhaven Tea-tree	Shrub		Y	Y			Y
<i>Leptospermum scoparium</i>	Manuka	Shrub			Y			Y
<i>Liquidambar styraciflua</i> *	Liquidambar	Small Tree		Y	Y	Y	Y	
<i>Livistona australis</i>	Cabbage Tree Palm	Tree					Y	
<i>Lomandra longifolia</i>	Lomandra	Perennial	Y		Y		Y	Y
<i>Lomandra longifolia</i>	Mat Rush	Sedge/ Rush	Y	Y	Y	Y	Y	
<i>Lophostemon confertus</i> *	Brush Box	Tree		Y	Y	Y		Y
<i>Lophostemon suaveolens</i> *	Swamp Brushbox	Tree			Y			Y
<i>Macadamia tetraphylla</i> *	Macadamia	Tree				Y		Y
<i>Magnolia grandiflora</i> *	Magnolia	Tree		Y	Y	Y	Y	
<i>Melaleuca armillaris</i>	Bracelet Honey Myrtle	Tree			Y			
<i>Melaleuca bracteata</i> *	Black Tea-tree	Small Tree		Y	Y			Y
<i>Melaleuca decora</i>	White Cloud Tree	Tree			Y			
<i>Melaleuca diosmifolia</i> *	Green Honey Myrtle	Shrub			Y			Y
<i>Melaleuca ericifolia</i>	Swamp Paperbark	Shrub		Y	Y	Y		
<i>Melaleuca erubescens</i> *		Shrub			Y			Y

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Melaleuca hypericifolia</i>		Shrub	Y		Y			Y
<i>Melaleuca laterita*</i>	Robin Red Breast	Shrub			Y			Y
<i>Melaleuca leucadendra*</i>	Weeping Paperbark	Tree		Y	Y	Y		Y
<i>Melaleuca linariifolia</i>	Snow in Summer	Small Tree			Y	Y		
<i>Melaleuca nesophila*</i>		Shrub			Y			Y
<i>Melaleuca quinquenervia*</i>	Paperbark	Small Tree		Y	Y	Y		Y
<i>Melaleuca styphilioides</i>	Prickly Paperbark	Tree		Y	Y		Y	
<i>Melastoma affine*</i>		Shrub			Y	Y		Y
<i>Melia azedarach</i> var. <i>australasica</i>	White Cedar	Tree			Y	Y		
<i>Melicope micrococca</i>	White Euodia	Tree			Y		Y	
<i>Metasequoia glyptostroboides*</i>	Dawn Redwood	Small Tree			Y		Y	
<i>Metrosideros collina</i> var. <i>villosa*</i>	Lehua	Tree			Y			
<i>Metrosideros excelsa*</i>	New Zealand Christmas Bush	Tree			Y		Y	
<i>Microstela stipoides</i>	Weeping Grass	Grass		Y	Y	Y	Y	
<i>Morinda jasminoides</i>	Jasmine Morinda	Vine / Climber			Y		Y	
<i>Morus nigra*</i>	Mulberry	Small Tree			Y		Y	
<i>Muehlenbeckia complexa*</i>	Maidenhair Creeper	Vine / Climber	Y	Y	Y	Y		
<i>Mussaenda frondosa*</i>	Mussaenda	Shrub		Y	Y			
<i>Myoporum acuminatum</i>	Boobialla	Tree		Y	Y	Y		
<i>Myoporum acuminatum</i>	Boobialla	Shrub		Y	Y	Y	Y	
<i>Myoporum boninense</i> subsp. <i>australis</i>	Boobialla	Shrub	Y	Y	Y			
<i>Nerium oleander*</i>	Oleander	Shrub	Y	Y	&			
<i>Notelaea venosa</i>	Veined mock olive	Small Tree		Y		Y		

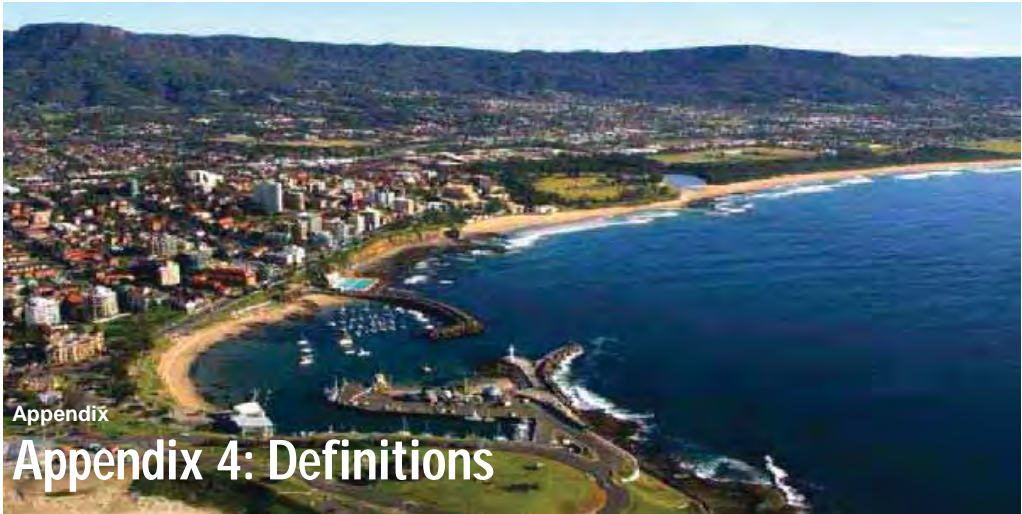
Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Omalanthus populifolius</i>	Bleeding Heart	Small Tree			Y	Y	Y	
<i>Oplismenus aemulus</i>	Basket Grass	Grass		Y	Y	Y	Y	
<i>Oplismenus imbeciliis</i>	Basket Grass	Grass		Y	Y	Y	Y	
<i>Pandanus tectorius*</i>	Screw Pine	Shrub	Y	Y				
<i>Pandorea jasminoides*</i>	Bower-of-beauty	Vine / Climber		Y	Y	Y	Y	
<i>Pandorea pandorana</i>	Wonga Wonga Vine	Vine / Climber		Y	Y	Y	Y	
<i>Panicum pygmaeum</i>	Dwarf Panic	Grass			Y	Y	Y	
<i>Panicum simile</i>	Two Colour Panic	Grass			Y	Y		
<i>Pararchidendron pruinosa</i>	Snowwood	Small Tree			Y	Y	Y	Y
<i>Paspalum distichum</i>	Water Couch	Grass	Y	Y	Y	Y		
<i>Pellaea falcata</i>	Sickle Fern	Fern		Y			Y	
<i>Persoonia linearis</i>	Narrow-leaved Geebung	Shrub						Y
<i>Persoonia levis</i>	Broad-leaved Geebung	Shrub						Y
<i>Philotheca myoporoides</i>	Long-leaf Wax-flower	Shrub		Y				Y
<i>Pimelea ligustrina</i>	Tall Rice-flower	Shrub			Y		Y	
<i>Pittosporum multiflorum</i>	Orange thorn	Shrub			Y	Y	Y	
<i>Pittosporum revolutum</i>	Brisbane Laurel	Shrub		Y	Y		Y	Y
<i>Pittosporum rhombifolium*</i>	White Holly	Tree			Y		Y	
<i>Pittosporum tobira*</i>	Tobera	Shrub			Y			
<i>Pittosporum undulatum</i>	Sweet Pittosporum	Tree			Y			
<i>Planchonella australis</i>	Black apple	Tree		Y	Y		Y	Y
<i>Platanus x hybrida*</i>	Plane Tree	Small Tree			Y	Y	Y	
<i>Platycerium bifurcatum</i>	Stag Horn	Fern		Y	Y	Y	Y	
<i>Platycerium superbum</i>	Elk Horn	Fern			Y	Y	Y	
<i>Plectranthus graveolens</i>	Spur-flower	fleshy		Y	Y	Y		

Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
		shrub						
<i>Plumbago auriculata*</i>	Cape Plumbago	Shrub			Y			
<i>Poa labillardieri</i> var. <i>labillardieri</i>	Tussock Grass	Grass		Y	Y	Y		
<i>Poa sieberiana</i>	Grey Tussock Grass	Grass			Y	Y		
<i>Podocarpus elatus</i>	Plum Pine	Tree			Y			
<i>Polyscias elegans</i>	Celery Wood	Tree		Y	Y		Y	
<i>Polyscias murrayi</i>	Pencil Cedar	Tree		Y	Y		Y	Y
<i>Polyscias sambucifolius</i>	Elderberry Panax	Shrub			Y		Y	Y
<i>Pomaderris aspera</i>	Hazel Pomaderris	Shrub			Y		Y	
<i>Prostanthera incisa</i>	Mintbush	Shrub						
<i>Prostanthera lasianthos*</i>	Victorian Christmas bush	Shrub			Y		Y	
<i>Protea cynaroides*</i>	King Protea	Shrub		Y	Y			Y
<i>Prunus seracifera</i> 'Nigra'*	Purple-leaf Cherry-plum	Tree			Y		Y	Y
<i>Punica granatum*</i>	Pomegranate	Shrub		Y	Y	Y		
<i>Pyrostegia venusta*</i>	Orange trumpet-creeper	Vine / Climber		Y	Y	Y		
<i>Quisqualis indica*</i>	Rangoon Creeper	Vine / Climber		Y	Y	Y		
<i>Radermachera sinica*</i>	Asian Bell	Small Tree		Y	Y	Y	Y	
<i>Rhagodia candolleana</i>	Coastal Saltbush	Shrub	Y		Y			
<i>Rhodamnia rubescens</i>	Scrub turpentine	Tree			Y		Y	
<i>Ricinocarpus pinifolius</i>	Wedding Bush	Shrub		Y				Y
<i>Rosa banksiae*</i>	Banksia Rose	Vine / Climber		Y	Y	Y		
<i>Rubus moluccanus</i> var. <i>trilobus</i>	Molucca Bramble	Vine / Climber		Y	Y			Y
<i>Rubus parviflorus</i>	Native Raspberry	Vine / Climber		Y	Y	Y	Y	

Species <i>*_Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Russelia equisetiformis*</i>	Coral Plant	Shrub	Y	Y	Y			
<i>Scolopia braunii</i>	Flintwood	Tree		Y	Y		Y	
<i>Scaveola calendulacea</i>		Shrub	Y		Y			
<i>Solandra grandiflora*</i>	Chalice Vine	Vine / Climber	Y	Y	Y	Y		
<i>Sorbus aucuparia*</i>	Rowan	Small Tree			Y	Y	Y	
<i>Spartium junceum*</i>	Spanish Broom	Shrub		Y	Y	Y		
<i>Sporobolus creber</i>	Slender Rat's Tail	Grass	Y	Y	Y	Y		
<i>Stenocarpus salignus</i>	Scrub Beefwood	Small Tree					Y	
<i>Stenocarpus sinuatus*</i>	Firewheel Tree	Tree			Y		Y	Y
<i>Stephania japonica</i>	Snake Vine	Vine / Climber		Y	Y	Y		
<i>Stephanotis foribunda*</i>	Chaplet Flower	Vine / Climber		Y	Y	Y		
<i>Sticherus flabellatus</i>	Umbrella Fern	Fern			Y	Y	Y	
<i>Streblus brunonianus</i>	Whalebone	Shrub			Y		Y	
<i>Strelitzia reginae*</i>	Bird of Paradise	Perennial		Y	Y	Y		
<i>Syncarpia glomulifera</i>	Turpentine	Tree			Y	Y	Y	
<i>Syzygium australe</i>	Brush Cherry	Tree			Y		Y	Y
<i>Syzygium luehmnnanii*</i>	Small Leaf Lilly Pilly	Tree			Y	Y	Y	
<i>Syzygium oleosum</i>	Blue Lilly Pilly	Tree		Y	Y		Y	
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Tree		Y	Y		Y	Y
<i>Tasmannia insipida</i>	Brush peperwood	Tree		Y	Y		Y	Y
<i>Taxodium distichum*</i>	Swamp Cypress	Small Tree			Y	Y	Y	
<i>Telopea speciosissima</i>	Waratah	Shrub						Y
<i>Themeda australis</i>	Kangaroo Grass	Grass	Y	Y	Y	Y		Y
<i>Thryptomene calycina*</i>	Grampians Thryptomene	Shrub		Y				Y



Species <i>*Not native to Illawarra</i>	Common Name	Form	Coastal Front Line	Coastal Second Line	Coastal Plain/General Purpose	Floodplains	Rainforest / Escarpment	Plateau - Hawkesbury Sandstone
<i>Tibouchina x 'Alstonville'*</i>		Tree			Y			
<i>Todea barbara</i>	King Fern	Fern			Y	Y	Y	
<i>Toona ciliata</i>	Red Cedar	Tree		Y	Y			
<i>Trachelospermum jasminoides*</i>	Star-jasmine	Vine / Climber		Y	Y	Y		
<i>Tristaniopsis collina</i>	Hill Kanuka	Tree			Y		Y	
<i>Tristaniopsis laurina</i>	Water Gum	Tree		Y	Y		Y	Y
<i>Tylophora barbata</i>		Vine / Climber		Y	Y	Y		Y
<i>Ulmus parvifolia*</i>	Chinese Elm	Tree			Y		Y	Y
<i>Viburnum x burkwoodii*</i>		Shrub			Y	Y	Y	
<i>Viminaria juncea</i>	Native Broom	Shrub			Y	Y		Y
<i>Vitex trifolia*</i>		Shrub	Y					
<i>Westringia fruticosa</i>	Coastal Rosemary	Shrub	Y					
<i>Wisteria sinensis*</i>	Wisteria	Vine / Climber			Y	Y		
<i>Xylomelum pyriforme</i>	Woody Pear	Shrub						Y
<i>* Not native to Illawarra</i>								



## Contents

1	Definitions	1
---	-------------	---

**Aboriginal Object:** Means any deposit, object or other material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of an area of New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

**Absorption Trench (Onsite Sewage Management):** Means a trench or trenches excavated into the ground and filled with aggregate and piping or arch fabric, used for the absorption of effluent.

**Absorption Trench (Stormwater):** An excavation that has been filled with material or prefabricated void units that are conducive to the drainage of stormwater and which are designed to drain vertically or side-ways, into adjacent sub-surface in-situ void or fill material.

**Acceptable Risk:** Acceptable risk for loss of life is taken as, one order of magnitude, lower than the tolerable risk for the person most at risk, as shown in the risk matrix as published in AGS 2007. Acceptable risk for loss of property is taken as low or very low in the risk matrix as published in AGS 2007 as amended. NOTE: This does not preclude development on sites where the risk has been identified as being moderate provided that measures are taken as described in the above mentioned risk matrix as published in AGS 2007 as amended (refer to clause 5.3.(c)).

**Access Handle:** Means that portion of land within a battleaxe lot which has a road frontage and may contain the access driveway.

**Accredited Auditor:** Means a person who is accredited by a professional body approved by the Minister for Planning. Accredited auditors may act as a Principal Certifying Authority (PCA) and may issue:

- Complying Development Certificates;
- Construction Certificates;
- Compliance Certificates;
- Occupation Certificates.

**Acid Sulfate Soils:** Means naturally occurring sediments and soils containing iron sulfides (principally pyrite) or their precursors or oxidation products, whose exposure to oxygen leads to the generation of sulfuric acid (for example, by drainage or excavation).

**Adaptable Housing:** Housing that is designed and built to accommodate future changes to suit occupants with mobility impairment or life cycle needs (Australian Standard AS 4299:Adaptable Housing).

**Advertising Sign:** Means a sign, notice, device or representation in the nature of an advertisement, whether illuminated or not which is: (a) visible from any public road, public place or public reserve and (b) is not a road traffic signal or sign.

**Advertisement:** Has the same meaning as in the Act defined as a sign, notice, device or representation in the nature of an advertisement visible from any public place or public reserve or from any navigable water.

**Advertising Area:** Means the entire area of a sign face, including any margin, frame or embellishment which forms an integral part of the sign and in the case of an advertising structure with more than 1 sign face, the maximum surface area of the combined faces.

**Advertising Structure:** Has the same meaning as in the Act defined as a structure used or to be used principally for the display of an advertisement.

**Aerated Wastewater Treatment System:** Means a wastewater treatment system typically involving sedimentation, aerobic biological oxidation, aerobic sludge digestion and effluent disinfection with final discharge of effluent to a land application area.

**Affordable Housing:** Has the same meaning as in the Act defined as housing for very low income households, low income households or moderate income households, being such households as are prescribed by the regulations or as are provided for in an environmental planning instrument.

**AGS (2007):** Means Australian Geomechanics Society's *Practice Note Guidelines for Landslide Risk Management 2007* (AGS 2007) originally cited in *Australian Geomechanics* Vol 42 No 1 March 2007.

**Agriculture:** Means any of the following:

- a) Animal boarding or training establishments,
- b) Aquaculture,
- c) Extensive agriculture,
- d) Farm forestry,

- e) Intensive livestock agriculture,
- f) Intensive plant agriculture.

**Alluvium:** Material eroded, transported and deposited by streams.

**Allotment:** Is the legal parcel of land which has been created via subdivision and registered with the Land Property Information service normally having a Lot number and a Deposited Plan number.

**Alteration:** Means the making structural or non-structural changes to the exterior or interior of a heritage item such as to the detail, fabric, finish or appearance. It may involve conservation, maintenance or repair works necessary to ensure the conservation, adaptive reuse or continued upkeep of a heritage building.

**Amusement Centre:** Means a building or place (not being part of a pub or registered club) used principally for playing:

- a) Billiards, pool or other like games, or
- b) Electronic or mechanical amusement devices, such as pinball machines, computer or video games and the like.

**Animal Boarding Or Training Establishment:** Means a building or place used for the breeding, boarding, training, keeping or caring of animals for commercial purposes (other than for the agistment of horses), and includes any associated riding school or ancillary veterinary hospital.

**Annual Exceedance Probability (AEP):** Is the probability that a flood of a given or larger magnitude will occur within a period of one year. Its reciprocal is equivalent to average recurrence interval.

**Ancillary Residential Structure:** Is a non habitable building ancillary to a dwelling-house and includes a garage, carport, shed, cabana, pergola, deck, swimming pool (inground and above ground), outside spa, Jacuzzi, hot tub, aviary, retaining wall, fence, shade sail, water tank etc.

**Antecedent:** Pre-existing conditions (eg. wetness of soils).

**Application/s:** Means an application for the determination of Council for development which includes an Integrated Development Application, Development Application, Section 96 Application or Section 82A Application.

**Aquaculture:** Has the same meaning as in the Fisheries Management Act 1994 defined as follows: Aquaculture means:

- a) Cultivating fish or marine vegetation for the purposes of harvesting the fish or marine vegetation or their progeny with a view to sale, or
  - b) Keeping fish or marine vegetation in a confined area for a commercial purpose (such as a fish-out pond),
- but does not include:
- c) Keeping anything in a pet shop for sale or in an aquarium for exhibition (including an aquarium operated commercially), or
  - d) Anything done for the purposes of maintaining a collection of fish or marine vegetation otherwise than for a commercial purpose, or
  - e) Any other thing prescribed by the regulations (made under the Fisheries Management Act 1994).

**Arborist:** A qualified Arborist is a person who is eligible for membership as a 'Consulting Arborist' with the National Arborists Association of Australia or the Institute of Australian Consulting Arboriculturalists and who has obtained a Level 5 Certificate of Horticulture / Arboriculture or equivalent.

**Areal:** Variation over an area of a particular parameter.

**Average Recurrence Interval:** The expected or average interval of time between exceedences of a rainfall or flood event of given magnitude.

**Arterial Road:** Means a road shown on the Wollongong Local Environmental Plan 2009 maps being an arterial road or a road declared to be a main road, controlled access road, secondary road or a tollway under the Roads Act 1993.

**Asbestos:** Means the fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite. (OHS Regulations 2001).

**Asbestos Removal Work:** Means any work, in which bonded or friable asbestos material is removed, repaired or disturbed. (OHS Regulation 2001).

**At-grade Car parking:** Any car parking provided on the ground level of a building or at ground level outside a building.

**Attached Dwelling:** Means a building containing 3 or more dwellings, where:

- (a) Each dwelling is attached to another dwelling by a common wall, and
- (b) Each of the dwellings is on its own lot of land (not being an individual lot in a strata plan or community title scheme), and
- (c) None of the dwellings are located above any part of another dwelling.

**Australian Height Datum (AHD):** A standard datum for expressing vertical information.

**Australian Rainfall & Runoff:** A technical manual providing guidance on current drainage design practice published by the Institute of Engineers Australia.

**Average Recurrence Interval (ARI):** Means the long-term average number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.

**AUSTROADS:** Means AUSTROADS: "Guide to Traffic Engineering Practice".

**Average Exceedance Probability (AEP):** Means the magnitude of a storm.

**Average Recurrence Interval (ARI):** The average period between the recurrence of a storm event of at least a given rainfall intensity. The ARI represents a statistical probability. For example, a 10 year ARI indicates an average of 10 events over 100 years. The ARI is not the period between actual events.

**Backpackers' Accommodation:** Means tourist and visitor accommodation:

- a) That has shared facilities, such as a communal bathroom, kitchen or laundry, and
- b) That will generally provide accommodation on a bed basis (rather than by room).

**Backwater Profile:** Longitudinal profile of the water surface in a stream where the water surface is raised above its normal level by a natural or artificial obstruction.

**Balcony:** Means an open area above ground level, not being an enclosed room or area, attached to or integrated with a dwelling for the exclusive enjoyment of the occupant or occupants of a dwelling but does not include a basement podium or roof terrace defined elsewhere within this DCP.

**Basement car park:** Refers to a car parking area wholly or partly accommodated underground, below a building. The roof of this space, including any solid walls on the podium, must not exceed 1.2m in height above natural ground level or finished ground level, whichever is the greatest distance.

**Basement podium:** Means the supporting structure over any portion of the basement for support of the structure above. The basement podium may be accessible for use from the dwelling/s it adjoins and does not include a balcony or roof terrace defined elsewhere in this DCP.

**Battleaxe lot:** Is a lot where only the access handle has direct road frontage.

**BCA:** Means the Building Code of Australia.

**Beach:** Refers to the sandy shore of the sea at mean high water mark.

**Bed And Breakfast Accommodation:** Means tourist and visitor accommodation comprising a dwelling (and any ancillary buildings and parking) where the accommodation is provided by the permanent residents of the dwelling and:

- a) Meals are provided for guests only, and
- b) Cooking facilities for the preparation of meals are not provided within guests' rooms, and
- c) Dormitory-style accommodation is not provided.

**Biochemical Oxygen Demand (BOD5):** Means the amount of oxygen required for the biological decomposition of organic matter, measured over a period of 5 days.

**Blackwater:** Means human faeces and urine and wastewater heavily and directly contaminated with human faeces and urine generated from a toilet, urinal, bidette or bidet. Blackwater may also contain contaminated solid material, such as toilet paper. Although not strictly water-based, human faeces and urine entering a waterless composting toilet is considered as "blackwater".

**Block:** Refers to a group of subdivided lots, the edge of which is bound by public roads, and in some cases, public roads and public open space.

**Boarding House:** Means a building:

- a) That is wholly or partly let in lodgings, and

- b) That provides lodgers with a principal place of residence for 3 months or more, and
- c) That generally has shared facilities, such as a communal bathroom, kitchen or laundry, and
- d) That has rooms that accommodate one or more lodgers,

But does not include backpackers' accommodation, a group home, a serviced apartment, seniors housing or hotel or motel accommodation.

**Brothel:** Has the same meaning as in the Act.

**Buildable land:** Means land on which the erection of a building is not constrained by being flood prone, subject to instability, subject to easements or restrictions of access.

**Building:** Has the same meaning as in the Act defined to include part of a building and any structure or part of a structure, but not including a manufactured home, a moveable dwelling or associated structure (or part of a manufactured home, moveable dwelling or associated structure).

**Building envelope:** Means the three dimensional shape within which a development must fit. It defines the limits for the siting (including setbacks) and height of any buildings.

**Building Footprint:** Means the area of land measured at finished ground level that is enclosed by the external walls of a building or any attached balconies or terraces.

**Building Height (or Height of Building):** Means the vertical distance between ground level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

**Building Identification Sign:** Means a sign that identifies or names a building and that may include the name of a building, the street name and number of a building, and a logo or other symbol, but that does not include general advertising of products, goods or services.

**Building Sustainability Index (BASIX):** A web-based planning tool for the assessment of the potential performance of new residential development in terms of its energy efficiency and water usage efficiency. A BASIX certificate must be submitted with a Development Application or a Complying Development Certificate for any new residential development. BASIX is implemented under State Environmental Planning Policy (Building Sustainability Index) 2004.

**Building Line or Setback:** Means the horizontal distance between the property boundary or other stated boundary (measured at 90 degrees from the boundary) and:

- a) A building wall, or
- b) The outside face of any balcony, deck or the like, or
- c) The supporting posts of a carport or verandah roof,

Whichever distance is the shortest.

**Building work:** Means any physical activity involved in the erection of a building or alterations and additions to a building or structure.

**Bulky Goods Premises:** Means a building or place used primarily for the sale by retail, wholesale or auction of (or for the hire or display of) bulky goods, being goods that are of such size or weight as to require:

- a) A large area for handling, display or storage, or
- b) Direct vehicular access to the site of the building or place by members of the public for the purpose of loading or unloading such goods into or from their vehicles after purchase or hire,

But does not include a building or place used for the sale of foodstuffs or clothing unless their sale is ancillary to the sale or hire or display of bulky goods.

**Bush Fire Hazard Reduction Work:** Has the same meaning as in the Rural Fires Act 1997 defined as follows:

**Bush Fire Hazard Reduction Work:** Means:

- a) The establishment or maintenance of fire breaks on land, and
- b) The controlled application of appropriate fire regimes or other means for the reduction or modification of available fuels within a predetermined area to mitigate against the spread of a bush fire,
- c) But does not include construction of a track, trail or road.

**Bushfire Prone Land:** Is land that can support a bush fire or is likely to be subject to bush fire / ember attack. In general, bush fire prone land identifies vegetation types and associated buffer zones.

**Business Identification Sign:** Means a sign:

- a) That indicates:
  - i) The name of the person or business, and
  - ii) The nature of the business carried on by the person at the premises or place at which the sign is displayed, and
- b) That may include the address of the premises or place and a logo or other symbol that identifies the business,
- c) But that does not include any advertising relating to a person who does not carry on business at the premises or place.

**Business Premises:** Means a building or place at or on which:

- a) An occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or
- b) A service is provided directly to members of the public on a regular basis, and may include, without limitation, premises such as banks, post offices, hairdressers, dry cleaners, travel agencies, internet access facilities, medical centres, betting agencies and the like, but does not include sex services premises.

**Campervan:** Means a moveable dwelling that is designed so as to be registrable as a motor vehicle under the Traffic Act 1909 and includes a camper trailer.

**Car Park:** Means a building or place primarily used for the purpose of parking motor vehicles, including any manoeuvring space and access thereto, whether operated for gain or not.

**Caravan:** Means a moveable dwelling that is designed so as to be registrable as a trailer under the Traffic Act 1909 but does not include a campervan /camper trailer.

**Caravan Park:** Means land (including a camping ground) on which caravans (or caravans and other moveable dwellings) are, or are to be, installed or placed.

**Catchment:** Area draining into a particular creek system, typically bounded by higher ground around its perimeter.

**Category 1 Remediation Work:** Contaminated land remediation work that requires formal development consent as per the legislative requirements under State Environmental Planning Policy No. 55 – Remediation of Land.

**Category 2 Remediation Work:** Contaminated land remediation work that does not require formal development consent as per the legislative requirements under State Environmental Planning Policy No. 55 – Remediation of Land.

**Ceiling Height:** Means the vertical distance from the ceiling level at the outside wall to natural ground level or finished ground level whichever is lower. For a 'cathedral', raked or curved ceiling, or where the roof structure of the building serves the same purpose as the ceiling of a conventional building, the ceiling height is measured as the vertical distance from the pitching point at the outside wall to natural ground level or finished ground level, whichever is lower.

**Character:** Has two specific elements, namely:

- a) "Existing character" relates to the current patterns of natural and urban geography which may be observed in an area; and
- b) "Desired or future character" which provides objectives for the future development of a suburb and which emphasizes the important existing features or qualities of the area that should be maintained or enhanced.

**Child Care Centre:** Means a building or place used for the supervision and care of children that:

- a) Provides long day care, pre-school care, occasional child care or out-of-school-hours care, and
- b) Does not provide overnight accommodation for children other than those related to the owner or operator of the centre, but does not include:
  - c) A building or place used for home-based child care, or
  - d) An out-of-home care service provided by an agency or organisation accredited by the NSW Office of the Children's Guardian, or
  - e) A baby-sitting, playgroup or child-minding service that is organised informally by the parents of the children concerned, or
  - f) A service provided for fewer than 5 children (disregarding any children who are related to the person providing the service) at the premises at which at least one of the children resides, being a service that is not advertised, or
  - g) A regular child-minding service that is provided in connection with a recreational or commercial facility (such as a gymnasium), by or on behalf of the person conducting the facility, to care for children while the children's parents are using the facility, or
  - h) A service that is concerned primarily with the provision of:

- i) Lessons or coaching in, or providing for participation in, a cultural, recreational, religious or sporting activity, or
- ii) Private tutoring, or
- i) A school, or
- j) A service provided at exempt premises (within the meaning of section 200 of the Children and Young Persons (Care and Protection) Act 1998), such as hospitals, but only if the service is established, registered or licensed as part of the institution operating on those premises.

**Civil Design:** Means a design where the development includes any road, drain, excavation or fill placement which has been prepared by a civil engineer.

**Civil Engineer:** Means a civil or structural engineer who is a member or is eligible for membership of a professional engineering institution, is university degree qualified with a minimum of five years relevant professional practice during the last ten years as a civil engineer, and is listed on the National Professional Engineers Register, and either has or is employed by a corporation which has professional indemnity insurance of not less than \$2 million, such insurance being evidenced to Council to be in force, for the year in which any information is submitted to the Council in accordance with this policy. The professional indemnity insurance must have retroactive cover extending back to at least the engineer's first submission to Council.

**Clearing Native Vegetation:** Has the same meaning as in the Native Vegetation Act 2003 defined meaning any one or more of the following:

- a) Cutting down, felling, thinning, logging or removing native vegetation,
- b) Killing, destroying, poisoning, ringbarking, uprooting or burning native vegetation.

(See Division 3 of Part 3 of the Native Vegetation Act 2003 for the exclusion of routine agricultural management and other farming activities from constituting the clearing of native vegetation if the landholder can establish that any clearing was carried out for the purpose of those activities.)

**Cliff-top:** On land adjacent to the foreshore, is defined as that position where a change in grade of the land is evident, downwards towards the cliff edge or face.

**Coastal Building Line:** Is the distance a structure must be setback from the cliff top or foreshore lands.

**Collection Well:** Means a tank used for the collection and temporary storage of effluent discharged from a septic tank.

**Communal Open Space:** Means useable shared open space within the proposed development for the recreation and relaxation of all residents of a residential or mixed use development.

**Community Facility:** Means a building or place:

- a) Owned or controlled by a public authority or non-profit community organisation, and
- b) Used for the physical, social, cultural or intellectual development or welfare of the community,
- c) But does not include an educational establishment, hospital, retail premises, place of public worship or residential accommodation.

**Community Sensitive Locations:** These may include areas:

- Where occupants are located for long periods of time, for instance residences;
- That are frequented by children, for instance schools, child care centres;
- Where there are people with particular health concerns for instance hospitals, aged care centres; and
- Considered significant to indigenous communities.

**Complying Development Certificate (CDC):** A certificate that states a particular proposed development is complying development and (if carried out as specified in the certificate) will comply with all development control applicable to the development. A complying development certificate may be issued either by Council or an accredited certifier.

**Consent Authority:** Means Wollongong City Council.

**Construction Certificate (CC):** A certificate stating that construction drawings and specifications are consistent with the development consent and relevant construction standards such as the Building Code of Australia. A construction certificate may be issued either by the Council or an accredited certifier.



**Contaminated Land:** Land in, on or under which any substance is present at a concentration above that naturally present in, on or under the land and that poses, or is likely to pose, an immediate or long term risk to human health or the environment.

**Contaminated Land Planning Guidelines:** Guidelines notified in accordance with section 145C of the Environmental Planning and Assessment Act 1979 (Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land).

**Conveyance:** A measure of the carrying capacity of the channel section. Flow is directly proportional to conveyance for steady flow. From Manning's equation, the proportionality factor is the square root of the energy slope.

**Council:** Means Wollongong City Council.

**Corner Apartment:** Is an apartment located in the corner position of a building which has frontage to two elevations.

**Corner Lot:** Is a lot which has a frontage to two roads on adjacent boundaries.

**Covenant:** A restriction on the use of land recorded on the property title and binding upon successors in title under the Conveyancing Act 1919. Covenants may be either positive (imposing positive obligations) or negative (imposing restrictions).

**CPEng:** Means Chartered Professional Engineer.

**CPGeo:** Means Chartered Professional Geologist.

**Crime Prevention thought Environmental Design (CPTED):** It aims to reduce the opportunities for crime by increasing the effort and risk for offenders, as well as reducing the rewards. CPTED recognises that any design strategy needs to be part of a holistic approach to crime prevention, incorporating social, environment and community development strategies.

**Cross Over Apartments:** Apartments with two opposite aspects and with a change in level between one side of the building and the other.

**Cross Through Apartments:** Apartments on one level with two opposite aspects.

**Crematorium:** Means a building in which deceased persons or pets are cremated, and includes a funeral chapel.

**Critical Depth:** If discharge is held constant and the water depth allowed to decrease, as in the case of water approaching a free overfall, velocity head will increase, pressure head will decrease, and total energy will decrease toward a minimum value where the rate of the decrease in the pressure head is just counterbalanced by the rate of increase in velocity head. This is the critical depth. More generally, the critical depth is the depth of flow that would produce the minimum total energy head, and it depends on cross section geometry and water discharge.

**Critical Flow:** The state of flow where the water depth is at the critical depth and when the inertial and gravitational forces are equal. When Froude  $N^0 = 1.0$ .

**Crown Maintenance Pruning:** Is defined as in Australian Standard AS 4373 –2007 "Pruning of Amenity Trees" and generally involves a reduction in tree foliage and branches by up to 10 per cent in any one (1) year with no reduction in the height of the main trunk.

**Culvert:** An enclosed conduit (typically pipe or box) that conveys stormwater below ground.

**Cumulative Impact:** The sum of the impacts from a number of different sources or over time.

**Curtilage:** In relation to a heritage item or conservation area, means the area of land (including land covered by water) surrounding a heritage item, a heritage conservation area, or building, work or place within a heritage conservation area, that contributes to its heritage significance.

**dBA:** Means the decibels of the 'A-scale' – a set of frequency -weighted scale of noise which allows for lack of sensitivity of the ear to sound at very high and very low frequencies.

**DCP:** Means Development Control Plan.

**Dead tree:** Means any tree that is no longer capable of performing any one of the following processes:

- Photosynthesis;
- Take up of water through the root system;
- Hold moisture in its cells; or
- Produce new shoots.

**DECC:** Department of Environment and Climate Change.

**Deep Soil Zone:** Refers to an area of the site that is not to be built upon, or underneath, thereby leaving an area of deep, soft soil for substantial deep-rooted vegetation, natural vegetation and natural drainage. This area may be included in private open space but is not included in the minimum private open space area calculations.

**Demolish:** In relation to a heritage item, or a building, work, relic or tree within a heritage conservation area, means wholly or partly destroy, dismantle or deface the heritage item or the building, work, relic or tree.

**Demolition Plan:** Means a plan and / written statement which outlines the procedures to be carried out for the demolition of a building or work.

**Depot:** Means a building or place used for the storage (but not sale or hire) of plant, machinery or other goods (that support the operations of an existing undertaking) when not required for use.

**Development:** Means the construction, alteration or demolition of buildings, including swimming pools, roads, dams, ponds and drains, and the excavation and/or filling of land or any other works that requires the prior approval of Council.

**Drainage:** Means any activity that intentionally alters the hydrological regime of any locality by facilitating the removal of surface or ground water. It may include the construction, deepening, extending, opening, installation or laying of any canal, drain or pipe, either on the land or in such a manner as to encourage drainage of adjoining land.

**Design Floor Level:** A minimum floor level specified to be above standard flood level (eg 0.5 metres above).

**Designated Development:** Development declared as 'designate development' by Schedule 3 of the Environmental Planning and Assessment Regulation 2000.

**Detailed Investigation:** An investigation to define the extent and degree of contamination to assess potential risk posed by contaminants to human health and the environment and to obtain sufficient information for the development of a remedial action plan of required.

**Development Opportunity Envelope:** Identifies a building envelope that ensures that development is not visible from important viewing locations for that section of the escarpment.

**Development site:** Refers to the lands within which the development (ie the subject of the Development Application) relates.

**Domestic Greywater Diversion:** Means the installation and operation of a system for diverting greywater generated on sewer residential premises to a garden or lawn on those premises, but does not include the manual collection and re-use of greywater (for example, by means of a bucket or similar receptacle).

**Domestic Greywater Treatment System (DGTS):** Means a system that collects, treats and disinfects greywater for re-use for toilet and urinal flushing, or for use in surface irrigation in dedicated non-trafficable areas or other land application systems.

**Driveway Crossing:** Refers to a carriageway extending from the edge of the roadway frontage to the property boundary to connect to the first vehicular ramp or driveway encountered, and carrying one or two-way traffic.

**Driveway:** Refers to the carriageway contained within the development site, which carries one or two way traffic.

**Dual Occupancy:** Means 2 dwellings (whether attached or detached) on one lot of land (not being an individual lot in a strata plan or community title scheme), but does not include a secondary dwelling.

**Dual Aspect Development:** Apartments which have at least two major external walls facing in different directions, including corner, cross over and cross through apartments.

**DWE:** Department of Water and Energy.

**Dwelling:** Means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile.

**Dwelling House** means a building containing only one dwelling.

**Earthworks:** means excavation or filling.

**Ecologically Sustainable Development** has the same meaning as in the Environmental Planning and Assessment Act 1979 and the Protection of the Environment Administration Act 1991.

**Educational Establishment** means a building or place used for education (including teaching), being:

- a) A school, or
- b) A tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act.

**Effective Warning Time:** The time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken.

**Effluent Application Field (EAF) area:** Means the minimum required disposal field size (ie directly wetted area) that is to be constructed within the ESD (Ecological Sustainable Development) area and has been determined in accordance with AS/NZS 1547 (2000), based on the ability of the site's soils to receive effluent without creating health risks or hydraulic failure.

**Electricity Generating Works:** Means a building or place used for the purpose of making or generating electricity.

**Electromagnetic radiation (EMR) or electromagnetic energy (EME):** The radiation in the microwave and radiofrequency band of the electromagnetic spectrum.

**Embankment:** The low permeability earth fill wall of a dam comprising the crest, batter slopes and foundation.

**Engineering Geologist:** Means a specialist engineering geologist who is university degree qualified, is a member or is eligible for membership of a professional institution and who has achieved chartered professional status being either CPEng or CPGeo or RPGeo with Landslide Risk Management as a core competence; with a minimum of five years practice during the last ten years as an engineering geologist in regions of the Sydney Basin underlain by Narrabeen or Coal Measures geological strata or who is able to demonstrate relevant experience with similar geology and either has or is employed by a corporation which has professional indemnity insurance of not less than \$2 million, such insurance being evidenced to Council to be in force, for the year in which any information is submitted to the Council in accordance with this policy. The professional indemnity insurance must have retroactive cover extending back to at least the engineer's first submission to Council.

**Entertainment Facility** means a theatre, cinema, music hall, concert hall, dance hall and the like, but does not include a pub, nightclub or registered club.

**Environmental Facility** means a building or place that provides for the recreational use or scientific study of natural systems, and includes walking tracks, seating, shelters, board walks, observation decks, bird hides or the like, and associated display structures.

**Escarpment:** A cliff or steep slope, of some extent, generally separating two level or gently sloping areas.

**Evapotranspiration (ET) Bed:** Means a system of effluent disposal that uses the loss of water from the soil by evaporation and from plants by transpiration from beds that are essentially shallow trenches.

**Excavation:** Means the removal of soil or rock, whether moved to another part of the same site or to another site, but does not include garden landscaping that does not significantly alter the shape, natural form or drainage of the land.

**Exempt Development:** Development that is declared to be 'exempt' under Wollongong Local Environmental Plan 2009.

**Exhibition Home:** Means a dwelling built for the purposes of the public exhibition and marketing of New Dwellings, whether or not it is intended to be sold as a private dwelling after its use for those purposes is completed, and includes any associated sales or home finance office or place used for displays.

**Exhibition Village:** Means 2 or more exhibition homes and associated buildings and places used for house and land sales, site offices, advisory services, car parking, food and drink sales and other associated purposes.

**Existing Ground Level:** Means the ground level in existence immediately prior to the commencement of proposed building or site works.

**Extractive Industry** means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.

**Extractive Material:** Means sand, soil, gravel, rock or similar substances that are not minerals within the meaning of the Mining Act 1992.

**Extreme Flood:** Means an estimate of the probable maximum flood, which is the largest flood likely to ever occur.

**Farm Stay Accommodation:** Means tourist and visitor accommodation provided to paying guests on a working farm as a secondary business to primary production. "Extractive material" means sand, soil, gravel, rock or similar substances that are not minerals within the meaning of the Mining Act 1992.

**Fill:** The depositing of soil, rock or other similar extractive material obtained from the same or another site, but does not include:

- (a) The depositing of topsoil or feature rock imported to the site that is intended for use in garden landscaping, turf or garden bed establishment or top dressing of lawns and that does not significantly alter the shape, natural form or drainage of the land, or

- (b) The use of land as a waste disposal facility

**Final Geotechnical Certificate:** Means a certificate prepared by a geotechnical engineer or engineering geologist in accordance with form M17 of this Plan.

**Final Structural Certificate:** Means a certificate prepared by a structural engineer in accordance with form M16 of this policy.

**Finished Ground Level:** Means the level of the finished ground surface.

**Flood:** Is a relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with major drainage as defined by the FMM before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences excluding tsunamis.

**Flood Awareness:** An appreciation of the likely effects of flooding and knowledge of the relevant flood warning and evacuation procedures.

**Flood Compatible Building Components:** A combination of measures incorporated in the design and /or construction of buildings or structures subject to flooding and the use of flood compatible materials for the reduction or elimination of flood damage.

**Flood Compatible Materials:** Materials used in building which are resistant to damage when inundated.

**Flood Evacuation Strategy:** The strategy for the evacuation of areas within effective warning time during periods of flood as specified within any policy of Council, the FRMP, the relevant State government disaster plan or advice received from the State Emergency Service (SES) or as determined in the assessment and determination of individual Development Applications.

**Flood Hazard:** The potential for damage to property or persons due to flooding.

**Flood Liable Land:** Is the area of land which is subject to inundation by the probable maximum flood (PMF).

**Flood Mitigation Work** means work designed and constructed for the express purpose of mitigating flood impacts. It involves changing the characteristics of flood behaviour to alter the level, location, volume, speed or timing of flood waters to mitigate flood impacts. Types of works may include excavation, construction or enlargement of any fill, wall, or levee that will alter riverine flood behaviour, local overland flooding, or tidal action so as to mitigate flood impacts.

**Flood Storage:** Part of the floodplain that is important for the temporary storage of floodwaters during the passage of a flood.

**Floodplain:** The portion of a river valley, adjacent to the river channel, which is covered with water when the river overflows during flood or inundation periods.

**Floodplain Development Manual:** Refers to the NSW State Government document dated April 2005 and titled "Floodplain Development Manual: The Management of Flood Liable Land."

**Floodplain Management Manual (FMM):** Refers to the document dated January 2001, published by the New South Wales Government and entitled "Floodplain Management Manual: the management of flood liable land" which has been superseded by the "Floodplain Development Manual: the management of flood liable land April 2005".

**Floodplain Risk Management Plan (FRMP):** Means a plan prepared for one or more floodplains in accordance with the requirements of the FMM or its predecessor.

**Floodplain Risk Management Study (FRMS):** Means a study prepared for one or more floodplains in accordance with the requirements of the FMM or its predecessor.

**Floodways:** Areas of the river channel and floodplain where a significant volume of water flows during flood periods. Floodways are areas which, even if only partially blocked would cause significant redistribution of flood flow, which may in turn adversely affect other areas. These areas are also generally characterised (but not always) by areas of deeper flow or the areas where higher velocities occur.

**Floor Space Ratio (FSR):** Is the ratio of the gross floor area of a building to the area of the site on which it is situated.

**Food and Drink Premises:** Means retail premises used for the preparation and retail sale of food or drink for immediate consumption on or off the premises, and includes restaurants, cafes, take away food and drink premises, milk bars and pubs.

**Foreshore Area:** Means the land between the foreshore building line and the mean high water mark of the nearest Foreshore building line: Is a factor of safety expressed as a height above the design flood level. Freeboard provides a factor of safety to compensate for uncertainties in the estimation of flood levels across the floodplain, such as wave action, localised hydraulic behaviour and impacts that are specific event related, such as levee and embankment settlement, and other effects such as 'greenhouse' and climate change.

**Forecast (ANEF) Contour:** Means the Australian Noise Exposure Forecast contours surrounding the Illawarra Regional Airport at Albion Park Rail and marked on a ANEF map which highlight the level of noise exposure from aircraft operating out of the Illawarra Regional Airport.

**Freeboard:** Is a factor of safety expressed as a height above the design flood level. Freeboard provides a factor of safety to compensate for uncertainties in the estimation of flood levels across the floodplain, such as wave action, localised hydraulic behaviour and impacts that are specific event related, such as levee and embankment settlement, and other effects such as 'greenhouse' and climate change.

**Frontage:** Refers to the street alignment at the front of a lot.

**Front Building Line:** Is the perpendicular distance a building or structure is set back from the front property boundary at the primary street frontage of a lot.

**Froude N<sup>o</sup>:** A measure of flow instability - below a value of one, flow is tranquil and smooth, above one, flow tends to be rough and undulating (as in rapids).

**Funeral Home** means premises used to arrange and conduct funerals and memorial services, and includes facilities for the short-term storage, dressing and viewing of bodies of deceased persons and premises with mortuary facilities.

**Gate Valve:** Means a stop cock used to prevent the flow of effluent at the collection side of the suction line.

**Geotechnical:** Relating to Engineering and the materials of the earth crust.

**Geotechnical Engineer:** Means a specialist geotechnical engineer who is university degree qualified, is a member of or is eligible for membership of a professional engineering institution and who has achieved chartered professional status being either CPEng or CPGeo or RPGeo with Landslide Risk Management as a core competence; with a minimum of five years practice during the last 10 years as an geotechnical engineer in regions of the Sydney Basin underlain by Narrabeen or Coal Measures geological strata or who is able to demonstrate relevant experience with similar geology and either has or is employed by a corporation which has professional indemnity insurance of not less than \$2 million, such insurance being evidenced to Council to be in force, for the year in which any information is submitted to the Council in accordance with this policy. The professional indemnity insurance must have retroactive cover extending back to at least the engineer's first submission to Council.

**Geotechnical Hazards:** Means a condition with the potential for causing the movement of soil, rock or debris which may cause injury or death to persons or damage to, or destruction of property.

**Geotechnical report:** Means a report prepared by and/or technically verified by a geotechnical engineer or engineering geologist as defined by this DCP, which incorporates each of the elements, where applicable to the type of development, described in section 5.2 'Requirements for the preparation of geotechnical reports' of this policy.

**Gradient:** Slope or rate of fall of land/pipe/stream.

**Granny Flat:** Means the smaller of two dwellings, where:

- a) The dwellings are both on the same lot and no other dwelling is on that lot;
- b) At least one of the dwellings is occupied by the owner of the lot on which the dwellings stand.

**Green roof:** A roof surface that supports the growth of vegetation, comprised of a waterproofing membrane, drainage layer, organic growing medium (soil) and vegetation. Green roofs can be classified as either extensive or intensive, depending on the depth of substrate used and the level of maintenance required. Intensive green roofs are generally greater than 300mm deep and are designed as accessible landscape spaces with pathways and other features. Extensive green roofs are generally less than 300mm deep and are generally not trafficable.

**Green wall:** There are two main types of green walls: green facades and living walls. Green facades are simple systems where plants are grown directly into soil and trained up a frame or trellis system to cover the wall. Living walls are more complex systems where panels or pockets of vegetation are fixed directly to the wall. The use of soil in a living wall is generally minimal and plants are fed primarily through nutrients in the irrigation water.

**Greywater (Sullage):** Means domestic wastewater excluding toilet waste and may include wastewater arising from a hand basin, shower, bath, spa bath, clothes washing machine, laundry tub, dishwasher and kitchen sink.

**Greywater Diversion Device (GDD):** Is a device that diverts (or diverts and collects), and directs untreated greywater to a sub-surface irrigation area.

**Gross Floor Area** means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- a) The area of a mezzanine, and
- b) Habitable rooms in a basement or an attic, and

c) Any shop, auditorium, cinema, and the like, in a basement or attic,

but excludes:

- a) Any area for common vertical circulation, such as lifts and stairs, and
- b) Any basement:
  - i) Storage, and
  - ii) Vehicular access, loading areas, garbage and services, and
- c) Plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
- d) Car parking to meet any requirements of the consent authority (including access to that car parking), and
- e) Any space used for the loading or unloading of goods (including access to it), and
- f) Terraces and balconies with outer walls less than 1.4 metres high, and
- g) Voids above a floor at the level of a storey or storey above.

**Ground Level (Existing)** means the existing level of a site at any point.

**Ground Level (Finished)** means, for any point on a site, the ground surface after completion of any earthworks (excluding any excavation for a basement, footings or the like) for which consent has been granted or that is exempt development.

**Ground Level (Mean)** means, for any site on which a building is situated or proposed, one half of the sum of the highest and lowest levels at ground level (finished) of the outer surface of the external walls of the building.

**Groundwater:** Means the body of water that fills the pore spaces of the soil and subsoil and includes seepage from springs.

**Group Home:** Means a dwelling that is a permanent group home or a transitional group home.

**Gully:** Narrow ravine, small valley.

**Habitable floor area:** Means:

- In a residential situation: a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom;
- In an industrial or commercial situation: an area used for offices or to store valuable possessions susceptible to flood damage in the event of a flood.

**Habitable room:** Means a room used for normal domestic activities, and:

- Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room and sunroom; but
- Excludes a bathroom, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room and other spaces of a specialised nature occupied neither frequently nor for extended periods.

**Habitable Roof Space:** Is space within the roof a building which can be used for residential purposes, where the height of the building does not exceed the ridge height specified in the height table.

**Habitat Tree:** Means any tree which has developed hollows in the trunk or limbs and which is suitable for nesting birds, arboreal marsupials (possums), micro-bats or which support the growth of locally indigenous epiphytic plants such as orchids.

**Hazard:** Is a source of potential harm or a situation with a potential to cause loss. In relation to this plan, the hazard is flooding which has the potential to cause harm or loss to the community.

**Headwall:** Wall constructed around inlet or outlet of a culvert.

**Health Consulting Rooms** means a medical centre that comprises one or more rooms within (or within the curtilage of) a dwelling house used by not more than 3 health care professionals who practise in partnership (if there is more than one such professional) who provide professional health care services to members of the public.

**Health Services Facility** means a building or place used as a facility to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes the following:

- a) Day surgeries and medical centres,
- b) Community health service facilities,
- c) Health consulting rooms,
- d) Facilities for the transport of patients, including helipads and ambulance facilities,
- e) Hospitals.

**Heavy Industry:** Means an industry that requires separation from other land uses because of the nature of the processes involved, or the materials used, stored or produced. It may consist of or include a hazardous or offensive industry or involve the use of a hazardous or offensive storage establishment.

**Height:** Means the number of storeys in a building which can be intersected by the same vertical line

**Heritage Conservation Area:** Means any area listed in Schedule 5 Part 2 of Wollongong Local Environmental Plan 2009.

**Heritage Conservation Management Plan** means a document prepared in accordance with guidelines prepared by the Department of Planning that documents the heritage significance of an item, place or heritage conservation area and identifies conservation policies and management mechanisms that are appropriate to enable that significance to be retained.

**Heritage Impact Statement** means a document consisting of:

- a) A statement demonstrating the heritage significance of a heritage item, archaeological site, place of Aboriginal heritage significance or other heritage conservation area, and
- b) An assessment of the impact that proposed development will have on that significance, and
- c) Proposals for measures to minimise that impact.

**Heritage Item:** Means a building, work, archaeological site or place listed in Schedule 1 of Wollongong Local Environmental Plan 1990 and the site of which is described in Schedule 1 and shown edged heavy black or edged broken heavy black on the heritage map.

**Heritage Significance** means historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value.

**Highway Service Centre** means a building or place used as a facility to provide refreshments and vehicle services to highway users, and which may include any one or more of the following:

- a) Restaurants or take away food and drink premises,
- b) Service stations and facilities for emergency vehicle towing and repairs,
- c) Parking for vehicles,
- d) Rest areas and public amenities.

**Home-Based Child Care** means a dwelling used by a resident of the dwelling for the supervision and care of one or more children and that satisfies the following conditions:

- a) The service is appropriately licensed within the meaning of the Children and Young Persons (Care and Protection) Act 1998,
- b) The number of children (including children related to the carer or licensee) does not at any one time exceed 7 children under the age of 12 years, including no more than 5 who do not ordinarily attend school.

**Home employment:** Means an occupation which is carried on in, or from a dwelling, or within or from the curtilage of a dwelling-house or residential apartment building, by the permanent residents of the dwelling, and which does not involve any of the following

- a) The employment on the premises of persons other than those residents;
- b) Interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products or grit, oil or otherwise;
- c) The display of goods, whether in a window or otherwise;
- d) The exhibition of any notice, advertisement or sign (other than a notice, advertisement or sign exhibited to indicate the name and occupation of those residents);
- e) The use of the premises as a brothel or bed and breakfast accommodation.

**Home Business:** Means a business carried on in a dwelling, or in a building ancillary to a dwelling, by one or more permanent residents of the dwelling that does not involve:

- a) The employment of more than 2 persons other than those residents, or

- b) Interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, traffic generation or otherwise, or
- c) The exposure to view, from any adjacent premises or from any public place, of any unsightly matter, or
- d) The exhibition of any notice, advertisement or sign (other than a notice, advertisement or sign exhibited on that dwelling to indicate the name of the resident and the business carried on in the dwelling), or
- e) The sale of items (whether goods or materials), or the exposure or offer for sale of items, by retail, except for goods produced at the dwelling or building,

but does not include bed and breakfast accommodation, home occupation (sex services) or sex services premises.

**Home Industry:** Means a light industry carried on in a dwelling, or in a building ancillary to a dwelling, by one or more permanent residents of the dwelling that does not involve:

- a) The employment of more than 2 persons other than those residents, or
- b) Interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, traffic generation or otherwise, or
- c) The exposure to view, from any adjacent premises or from any public place, of any unsightly matter, or
- d) The exhibition of any notice, advertisement or sign (other than a notice, advertisement or sign exhibited on that dwelling to indicate the name of the resident and the light industry carried on in the dwelling), or
- e) The sale of items (whether goods or materials), or the exposure or offer for sale of items, by retail, except for goods produced at the dwelling or building, but does not include bed and breakfast accommodation or sex services premises.

**Home Occupation:** Means an occupation carried on in a dwelling, or in a building ancillary to a dwelling, by one or more permanent residents of the dwelling that does not involve:

- a) The employment of persons other than those residents, or
- b) Interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, traffic generation or otherwise, or
- c) The display of goods, whether in a window or otherwise, or
- d) The exhibition of any notice, advertisement or sign (other than a notice, advertisement or sign exhibited on that dwelling to indicate the name of the resident and the occupation carried on in the dwelling), or
- e) The sale of items (whether goods or materials), or the exposure or offer for sale of items, by retail,

but does not include bed and breakfast accommodation, a brothel or home occupation (sex services).

**Home Occupation (Sex Services):** Means the provision of sex services in a dwelling that is a brothel, or in a building that is a brothel and is ancillary to such a dwelling, by no more than 2 permanent residents of the dwelling and that does not involve:

- a) The employment of persons other than those residents, or
- b) Interference with the amenity of the neighbourhood by reason of the emission of noise, traffic generation or otherwise, or
- c) The exhibition of any notice, advertisement or sign, or
- d) The sale of items (whether goods or materials), or the exposure or offer for sale of items, by retail, but does not include a home business or sex services premises.

**Hoardings:** Are structures or fences erected on or adjacent to a property to form barrier between demolition and construction sites and the public domain. Hoarding structures may consist of fencing, scaffolding and / or overhead structures as either individual elements or integrated together to form a uniform hoarding.

- A "Type A Hoarding" is a hoarding comprising of a fence.
- A "Type B Hoarding" is an overhead structure situated over footpaths.
- A "Type C Hoarding" is a full- face scaffold.

**Hotel or Motel Accommodation:** Means tourist and visitor accommodation (whether or not licensed premises under the Liquor Act 1982):

- a) Comprising rooms or self-contained suites, and
- b) That may provide meals to guests or the general public and facilities for the parking of guests' vehicles,

but does not include backpackers' accommodation, a boarding house, bed and breakfast accommodation or farm stay accommodation.



**Industry:** Means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing or adapting, or the research and development of any goods, chemical substances, food, agricultural or beverage products, or articles for commercial purposes, but does not include extractive industry or a mine.

**Hydrology:** A term given to the study of rainfall and runoff processes as relates to the derivation of flood discharges.

**Hydrograph:** A graph of flood flow against time.

**Hydraulic:** A term given to the study of water flow, as relates to the evaluation of flow depths, levels and velocities.

**IFD:** Intensity - Frequency – Duration Rainfall parameters used to describe rainfall at a particular location.

**Infill Development:** Refers to new urban development within an existing urban development area.

**Infill Residential Subdivision:** Is the subdivision of a lot of land which has a residential zoning and which is bounded by existing residential development.

**Information and Education Facility:** Means a building or place used for providing information or education to visitors, and the exhibition or display of items, and includes an art gallery, museum, library, visitor information centre and the like.

**Integrated housing:** Means development that consists of:

- The Torrens Title or Community Title subdivision of land into 5 or more lots; and
- The erection of a single dwelling-house on each of the lots created by that subdivision;

Where approval is given concurrently for the subdivision and development of the lots.

**Investigation area:** Land declared to be an 'investigation area' by a declaration under Division 2 of Part 3 of the Contaminated Land Management Act 1997.

**Investigation order:** An order issued by the NSW Department of Environment & Climate Change under Division 2 of Part 3 of the Contaminated Land Management Act 1997.

**Irregular Shaped Allotment:** Means an allotment which is not square or rectangular in shape.

**Isohyets:** Lines joining points of equal rainfall.

**Isolated Lot:** Means a lot which is bounded on both sides by properties (or a property and second street frontage) which comprises existing or proposed multi unit development other than a single dwelling house.

**Land Application Area:** Means the area of land intended for the disposal of effluent and includes the ecological sustainable development area.

**Land Reshaping:** Involves a combination of filling and excavation.

**Landscaped Area** Means a part of a site used for growing plants, grasses and trees, but does not include any building, structure or hard paved area.

**Living Area:** Means a principle living space such as a living room, dining room, family room, kitchen, rumpus room or the like which is used for normal domestic activities. It does not include a bedroom, study, bathroom, laundry, utility room or room serving a similar function.

**Local Overland Flooding:** Means inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.

**Long-Term Site:** Means a dwelling site in a caravan park that is designated as being a long-term site (ie for periods in excess of 3 months).

**Lot:** Refers to an individual parcel of subdivided land.

**Low impact facility:** Means a telecommunications facility that is exempt from state and council local planning requirements under the Telecommunications (Low – impact Facilities) Determination 1997.

**Maintenance:** In relation to a heritage item or a building, work, archaeological site, tree or place within a heritage conservation area, means ongoing protective care. It does not include the removal or disturbance of existing fabric, alterations, such as carrying out extensions or additions, or the introduction of new materials or technology.

**Major Section:** Is defined as a 'single portion of a manufactured home or relocatable home, being a portion:

- (a) That contains a total living space (excluding the living space contained in any associated structure) of at least 20 cubic metres and
- (b) That comprises all the major components of that portion of the home, including the chassis or frame, the external and internal walls, the roof and ceilings, the floors, the windows and doors, the internal plumbing and wiring, the tiling, the kitchen, bathroom and laundry fittings (other than stoves, refrigerators, washing machines and other whitegoods) and the built-in cupboards and cabinets.

**Manning's n:** A measure of channel or pipe roughness.

**Manufactured Home:** Means a self-contained dwelling (that is a dwelling that includes at least one kitchen, bathroom, bedroom and living area and that also includes toilet and laundry facilities) being a dwelling:

**Manufactured Home Estate:** Means land on which manufactured homes are or are to be erected.

**Market:** Means retail premises comprising an open-air area or an existing building used for the purpose of selling, exposing or offering goods, merchandise or materials for sale by independent stall holders, and includes temporary structures and existing permanent structures used for that purpose on an intermittent or occasional basis.

**Mean High Water Mark:** Means the position where the plane of the mean high water level of all ordinary local high tides intersects the foreshore, being 1.44m above the zero of Fort Denison Tide Gauge and 0.515m Australian Height Datum.

**Medical Centre:** Means business premises used for the purpose of providing health services (including preventative care, diagnosis, medical or surgical treatment, counselling or alternative therapies) to out-patients only, where such services are principally provided by health care professionals, and may include the ancillary provision of other health services.

**Merit approach:** Is an approach, the principles of which are embodied in the FMM which weighs social, economic, ecological and cultural impacts of land use options for different flood prone areas together with flood damage, hazard and behaviour implications, and environmental protection and well being of the State's rivers and floodplains.

**Minor Development:** Developments discharging less than 55L/S and discharging to kerb.

**Mixed use development:** Means a development which includes residential uses in conjunction with one or more non residential uses such as:

- Business premises;
- Commercial offices;
- Shops or other retail premises;
- Community facilities;
- Entertainment facilities; or
- Refreshment rooms.

**Mound System:** Means a raised effluent application system that is used where natural soils are extremely permeable and/or underlying groundwaters are seasonally close to the ground surface.

**Moveable Dwelling:** Is defined as:

- (a) Any tent or any caravan or other van or portable device (whether on wheels or not) used for human habitation or
- (b) A manufactured home, or
- (c) Any conveyance, structure or thing of a class or description prescribed by the regulations for the purposes of this definition.

**Multi Dwelling Housing:** Means 3 or more dwellings (whether attached or detached) on one lot of land (not being an individual lot in a strata plan or community title scheme) each with access at ground level, but does not include a residential flat building.

**Native Flora:** Means any plant-life that is indigenous to New South Wales, whether vascular or non-vascular and in any stage of biological development, and includes fungi and lichens, and marine vegetation within the meaning of Part 7A of the Fisheries Management Act 1994.

**Native Vegetation:** Has the same meaning as in the Native Vegetation Act 2003 defined as follows:

- a) Native vegetation means any of the following types of indigenous vegetation:
  - i) Trees (including any sapling or shrub, or any scrub),
  - ii) Understorey plants,
  - iii) Groundcover (being any type of herbaceous vegetation),
  - iv) Plants occurring in a wetland.
- b) Vegetation is indigenous if it is of a species of vegetation, or if it comprises species of vegetation, that existed in the State before European settlement.
- c) Native vegetation does not include any mangroves, seagrasses or any other type of marine vegetation to which section 205 of the Fisheries Management Act 1994 applies.

**Natural Ground Level:** Means the level of the ground surface prior to commencement of any construction work on the site.

**Natural Ventilation:** A range of techniques that combine natural airflow within building design characteristics to induce fresh air into a building and exhaust stale air. Natural ventilation is also used as a means to reduce the temperature of a building's thermal mass.

**Net Floor Area:** The whole of the lettable floor area of a building where the area of each floor is taken to be the floor area within the internal faces of the outside walls, excluding staircases, amenities, lifts, corridors and other public areas but including any storage areas.

**Normal Depth:** The depth that would exist if the flow were uniform.

**Noxious Weed:** Means a plant declared noxious under the *Noxious Weeds Act 1993*.

**Occupation Certificate:** A certificate issued by the Principal Certifying Authority that authorises the occupation and use of a new building or a change of building use for an existing building.

**Offensive Industry** means any development for the purpose of an industry that would, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), emit a polluting discharge (including, for example, noise) in a manner that would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality.

**Office Premises** means a building or place used for the purpose of administrative, clerical, technical, professional or similar activities that do not include dealing with members of the public at the building or place on a direct and regular basis, except where such dealing is a minor activity (by appointment) that is ancillary to the main purpose for which the building or place is used.

**On-site Sewage Management System (OSSM) or On-site Wastewater Management (OSWM) System:** Means an on-site system used for the purpose of holding or processing, or reusing or otherwise disposing of sewage or by-products of human waste.

**On-site Stormwater Detention (OSD):** A stormwater management practice which limits the rate of discharge from a site using outlet restriction devices. Stormwater flows in excess of the capacity of the outflow control device are temporarily stored either in tanks or surface depressions until the storm event recedes. Stormwater flows are released at a controlled rate into the public drainage system.

**On-site Stormwater Retention:** A stormwater management practice where on-site stormwater run off is actually captured and retained within the site for reUse or infiltration and is not released to the downstream drainage system.

**Orographic:** Pertaining to changes in relief, i.e. mountains.

**Orthophoto:** Aerial photograph with land contours, boundaries or reference grids added.

**Outbuilding:** A building which is ancillary to a principal residential building and includes sheds, detached garages, car ports and other buildings.

**Parapet Height:** The parapet level is the horizontal plane in which at least 2/3 of the length of the top of the façade of the building adjacent to the street is situated.

**Parking Space:** Means a space dedicated for the parking of a motor vehicle, including any manoeuvring space and access to it, but does not include a car park.

**Passive Solar Energy Systems:** Systems which combine the sun's energy with local climate characteristics, to achieve thermal comfort inside buildings without the use of mechanical devices.

**PCA:** Means principal certifying authority.

**Piezometer:** Means a borehole constructed with 100mm PVC perforated piping to a depth below the subsoil horizon or to the top of unweathered rock formation or below the water table, used to monitor groundwater quality.

**Place of Public Worship:** Means a building or place used for the purpose of religious worship by a congregation or religious group, whether or not the building or place is also used for counselling, social events, instruction or religious training.

**Pluviograph:** An instrument which records rainfall collected as a function of time.

**PMF:** Probable Maximum Flood: Flood calculated to be the maximum ever likely to occur.

**PMP:** Probable Maximum Precipitation: Rainfall calculated to be the maximum ever likely to occur.

**Pond-Based Aquaculture:** Means aquaculture undertaken in structures that are constructed by excavating and reshaping earth, which may be earthen or lined, and includes any part of the aquaculture undertaken in tanks, such as during the hatchery or pre-market conditioning phases, but does not include natural water-based aquaculture.

**Note.** Typical pond-based aquaculture is the pond culture of prawns, yabbies or silver perch.

**Private land:** Means any land in private ownership by individuals or companies but excludes land owned or in the care, control or management of Council, a Crown Authority, government department or statutory authority.

**Private Open Space:** Means an area external to a building (including an area of land, terrace, balcony or deck) that is used for private outdoor purposes ancillary to the use of the building.

**Preliminary investigation:** An investigation to identify any past or present potentially contaminated activities and the preliminary assessment of any contaminants within the soil strata or groundwater table.

**Principal Certifying Authority:** The certifying authority appointed by the applicant to oversee the construction process. Only the Principal Certifying Authority may issue an Occupation Certificate.

**Probable Maximum Flood (PMF):** The largest flood that has been calculated to occur at a particular location, usually estimated from the probable maximum precipitation.

**Probable Maximum Precipitation (PMP):** The greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year with no allowance made for long term climatic trends. PMP is the primary input to the estimation of the probable maximum flood (PMF).

**Prostitution:** Means the provision of a sexual act or sexual service in return for payment or reward.

**Primary Frontage:** Means:

- a) The single frontage where an allotment has a single frontage to a road;
- b) The shortest frontage where an allotment has two or more frontages to the public road;
- c) The two frontages where an allotment (not including a corner allotment) runs between two roads.

**Prominent Ridgeline or Hilltop:** Means a ridgeline, hilltop or slope which when viewed from a public place such as an arterial road, is a prominent feature of the natural landscape of a locality.

**Pruning:** Is defined as all other pruning which is not "crown maintenance pruning" and includes "crown modification" as defined in *Australian Standard AS 4373- 1996 "Pruning of Amenity Trees"*.

**Public Domain:** Land in public ownership which is utilised by the community at large for footpath, public open space or similar purposes.

**Public Land** has the same meaning as in the Local Government Act 1993 defined as any land (including a public reserve) vested in or under the control of the council, but does not include:

- a) A public road, or
- b) Land to which the Crown Lands Act 1989 applies, or
- c) A common, or
- d) Land subject to the Trustees of Schools of Arts Enabling Act 1902, or
- e) A regional park under the National Parks and Wildlife Act 1974.

**Public Reserve** has the same meaning as in the Local Government Act 1993.

**Public Road:** Has the same meaning as public road under the Roads Act 1993.

**RCP:** Reinforced Concrete Pipe.

**Receiving Waters:** A river, lake or the ocean.

**Recreation Area** means a place used for outdoor recreation that is normally open to the public, and includes:

- a) A children's playground, or
- b) An area used for community sporting activities, or
- c) A public park, reserve or garden or the like, and any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).

**Recreation Facility (Indoor)** means a building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facility, a recreation facility (major) or a registered club.

**Recreation Facility (Major)** means a building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes sports stadiums, showgrounds, racecourses and motor racing tracks.

**Recreation Facility (Outdoor)** means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

**Regular Shaped Allotment:** Means either:

- a) Allotment which is either square or rectangular in shape; or
- b) Allotment of another shape where a square or rectangular shape equivalent in area to the minimum lot size area for the allotment type could be contained within the boundaries of the allotment and includes a battle-axe shaped allotment and a corner allotment where the only deviation from the above requirements is the access handle (i.e. battle axe lot) or the play corner (ie corner lot).

**Related Land:** Means land including roads and thoroughfares that could affect or could be affected by any development proposed on a site.

**Reliable Access:** During a flood means the ability for people to safely evacuate an area subject to imminent flooding within effective warning time, having regard to the depth and velocity of flood waters, the suitability of the evacuation route, and without a need to travel through areas where water depths increase.

**Relocatable Home:** Means:

- a) A manufactured home, or
- b) Any other moveable dwelling (whether or not self-contained) that comprises one or more major sections, including any associated structure that forms part of the dwelling.

**Remedial Action Plan:** A plan which sets the remediation strategies and measures for the remediation of identified contaminated land.

**Remediation Order:** A Remediation Order is made by the NSW Department of Environment & Climate Change under Division 3 of Part 3 of the Contaminated Land Management Act 1997.

**Remnant Vegetation:** Is the natural vegetation which still exists or, if the natural vegetation has been altered, is still representative of the structure and floristic characteristics of the natural vegetation.

**REP:** Regional Environmental Plan

**Residential Accommodation:** Means a building or place used predominantly as a place of residence, but does not include tourist and visitor accommodation.

**Residential Care Facility:** Means accommodation for seniors (people aged 55 years or more) or people with a disability that includes:

- a) Meals and cleaning services, and
- b) Personal care or nursing care, or both, and
- c) Appropriate staffing, furniture, furnishings and equipment for the provision of that accommodation and care, not being a dwelling, hospital or psychiatric facility.

**Residential Flat Building:** Means a building containing 3 or more dwellings, but does not include an attached dwelling or multi dwelling housing.

**Restaurant:** Means a building or place the principal purpose of which is the provision of food or beverages to people for consumption on the premises and that may also provide takeaway meals and beverages.

**Restricted Premises:** Means business premises or retail premises that, due to their nature, restrict access to patrons or customers over 18 years of age, and includes sex shops and similar premises but does not include hotel or motel accommodation, a pub, home occupation (sex services) or sex services premises.

**Retail Premises:** Means a building or place used for the purpose of selling items by retail, or for hiring or displaying items for the purpose of selling them by retail or hiring them out, whether the items are goods or materials (or whether also sold by wholesale).

**Run-Off:** Stormwater running off a catchment during a storm on the catchment.

**Ridge Height:** Is the distance measured vertically from any point on the uppermost roof surface (not including a vent, chimney, flue, antennae or the like) to the natural ground level or finished ground level immediately below that point, whichever is lower.

**Riparian Corridor:** Means the area of the river or creek system that supports or has supported the unique ecosystem.

**Risk:** Means a measure of the probability and severity of an adverse effect to life and property.

**Road** means a public road or a private road within the meaning of the Roads Act 1993, and includes a classified road.

**Roadside Stall:** Means a place or temporary structure used for retail selling of agricultural produce or hand crafted goods (or both) produced from the property on which the stall is situated or from an adjacent property.

**Roof Terrace:** Means the flat roof over any portion of the building, which is both directly accessible for use from the dwelling/s it adjoins and also open to the sky, except for a pergola or similar sun control devices. A roof terrace may be designated for either private or communal open space purposes but does not include a balcony or basement podium defined elsewhere in this DCP.

**Roofwater Tank:** A water tank, whether aboveground or below ground, designed to store rainwater harvested from a roof area where the stored water is used to supply plumbing fixtures and appliances in order to reduce the harmful effects of stormwater on the environment and to supplement the water supply to the property.

**RPGeo:** Registered Professional Geologist.

**Rural Industry:** Means an industry that involves the handling, treating, production, processing or packing of animal or plant agricultural products, and includes:

- a) Agricultural produce industry, or
- b) Livestock processing industry, or
- c) Use of composting facilities and works (including to produce mushroom substrate), or
- d) Use of sawmill or log processing works, or
- e) Use of stock and sale yards, or
- f) The regular servicing or repairing of plant or equipment used for the purposes of a rural enterprise,
- g) Undertaken for commercial purposes.

**Rural Supplies:** Means a building or place used for the display, sale (whether by retail or wholesale) or hire of stockfeeds, grains, seed, fertilizers, veterinary supplies and other goods or materials used in farming and primary industry production.

**Rural Worker's Dwelling:** Means a dwelling, ancillary to a dwelling house on the same landholding, used as the principal place of residence by persons employed for the purpose of agriculture or a rural industry on that land.

**School:** Means a government school or non-government school within the meaning of the Education Act 1990.

**Scour:** Erosion of soil in the banks or bed of a creek, typically occurring in areas of high flow velocities and turbulence.

**Seaward Building Line:** Means the seaward alignment of existing dwellings adjacent to the foreshore, cliff top, beach or coastline. The seaward building line must not encroach upon the coastal building line defined elsewhere in this DCP.

**Secondary Building Lines:** Is the distance a structure is set back from the property boundary at the secondary street frontage in the case of a corner lot

**Secondary Dwelling:** Means a self-contained dwelling that:

- a) Is established in conjunction with another dwelling (the principal dwelling), and
- b) Is on the same lot of land (not being an individual lot in a strata plan or community title scheme) as the principal dwelling, and
- c) Is located within, or is attached to, or is separate from, the principal dwelling.

**Secondary frontage:** Means:

- The longer frontages where an allotment has two or more frontages to a road; or
- The frontage that adjoins a lane where an allotment (not including a corner allotment) runs between a road and a lane. A lane is generally a roadway that is 6 metres wide or less.

**Self-Storage Units:** Means storage premises that consist of individual enclosed compartments for storing goods or materials (other than hazardous or offensive goods or materials).

**Semi-Detached Dwelling:** Means a dwelling that is on its own lot of land (not being an individual lot in a strata plan or community title scheme) and is attached to only one other dwelling.

**Seniors Housing:** Means residential accommodation that consists of:

- a) A residential care facility, or
- b) A hostel, or
- c) A group of self-contained dwellings, or
- d) A combination of these, and that is, or is intended to be, used permanently for:
- e) Seniors or people who have a disability, or
- f) People who live in the same household with seniors or people who have a disability, or
- g) Staff employed to assist in the administration of the residential accommodation or in the provision of services to persons living in the accommodation,
- h) But does not include a hospital.

**Septic Tank:** Means a tank used for the storage or primary treatment of sewage comprising sedimentation of settleable solids, flotation of oils and fats, and anaerobic digestion of sludge.

**Serviced Apartment:** Means a building or part of a building providing self-contained tourist and visitor accommodation that is regularly serviced or cleaned by the owner or manager of the building or part of the building or the owner's or manager's agents.

**Setback:** The horizontal distance measured from an external enclosing wall (including an above ground deck, balcony and the like), a window or the eaves of a building to the:

- Allotment front boundary; or
- A window to a bedroom or living area of another dwelling.

**Sewage:** Means a combination of blackwater and greywater.

**Sex Services:** Means sexual acts or sexual services in exchange for payment.

**Sex Services Premises:** Means a brothel, but does not include home occupation (sex services).

**Shallow Sub-surface Drip/Trickle Irrigation:** Means the use of effluent applied directly to plants by drip or trickle to the soil below a 50-100mm layer of bark, wood chip or mulch.

**Shop:** Means retail premises that sell groceries, personal care products, clothing, music, homewares, stationery, electrical goods or other items of general merchandise, and may include a neighbourhood shop, but does not include food and drink premises or restricted premises.

**Shop Top Housing:** Means one or more dwellings located above (or otherwise attached to) ground floor retail premises or business premises.

**Short-Term Site:** Means a dwelling site within a caravan park which is designated as a short – term site for tourists for a period not exceeding 3 months.

**Signage:** Means any sign, notice, device, representation or advertisement that advertises or promotes any goods, services or events and any structure or vessel that is principally designed for, or that is used for, the display of signage, and includes:

- a) Building identification signs, and
- b) Business identification signs, and
- c) Advertisements,
- d) But does not include traffic signs or traffic control facilities.

**Siltation:** The filling or rising up of the bed of a watercourse or channel by deposited silt.

**Site:** Is the parcel of land, whether comprising one or more allotments, to which an application for consent relates.

**Site Area:** Means the area of any land on which development is or is to be carried out. The land may include the whole or part of one lot, or more than one lot if they are contiguous to each other, but does not include the area of any land on which development is not permitted to be carried out under this Plan.

**Site Audit:** An independent review of completed site contamination remediation works by an accredited site auditor under the Contaminated Land Management Act 1997.

**Site Audit Statement:** The written statement by the accredited site auditor (under the Contaminated Land Management Act 1997) that summarises the findings of the site audit and confirms what land uses may be undertaken on the site, taking into account the nature of the remediation works completed upon the subject site.

**Site Classification:** Means a classification of the site in accordance with the current version of Australian Standard AS 2870 - Residential Slabs and Footings.

**Site Width:** Means the width of the allotment measured perpendicular to the side boundary for the full length of the building envelope. For corner allotments the site width is measured parallel to the primary street frontage.

**Slope Instability:** Means a condition with the potential for causing the movement of soil, rock or debris.

**Spurs:** Secondary ridges typically occurring at right angles to a main ridge line, formed by stream erosion of the slopes of the main ridge.

**Storey:** Means a space within a building that is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but does not include:

- a) A space that contains only a lift shaft, stairway or meter room, or
- b) A mezzanine, or
- c) An attic.

**Stormwater:** Surface runoff generated from rainfall events.

**Stacked Parking Space:** Is a carparking space that relies on gaining access by passing through another carparking space.

**Standard Lot:** Is a lot which has a single frontage to a residential street.

**Social Housing:** Means the development of housing for or on behalf of government and/or community organisations such as the Department of Housing and Office of Community Housing, but does not include residential development to which State Environmental Planning Policy (Seniors Living) 2004 or State Environmental Planning Policy No. 9 – Group Homes applies.

**Solid Wall:** Is a wall which incorporates at least 75% non transparent materials.

**Stratigraphy:** The sequence of layers in which soils/rocks have been deposited.

**Streetscape:** Means the form, character and visual amenity of the street environment.

**Street Vending:** The setting up or use within the road reserve of any box, stall, stand, barrow or stationary vehicle, other than a roadside stall or mobile vending vehicle defined hereunder for the purpose of offering for sale any goods or for the pursuit of any business, calling or employment.

**Structural Design:** Means a design for any structure to be erected on the site (which may be in the form of drawings) having structural elements where the design makes recommendations in respect of the structural works and has been prepared by a structural engineer or civil engineer requiring certification in accordance with form M12 of this policy.

**Structural engineer:** Means a civil engineer or structural engineer who is a member of or eligible for membership of a professional engineering institution, is university degree qualified with a minimum of five years practice during the last ten years as a structural engineer, and is listed on the National Professional Engineers Register, and either has or is employed by a corporation which has professional indemnity insurance of not less than \$2 million, such insurance being evidenced to Council



to be in force, for the year in which any information is submitted to the Council in accordance with this policy. The professional indemnity insurance must have retroactive cover extending back to at least the engineer's first submission to Council.

**Structural Works:** Means the elements of any structure designed by a structural engineer or civil engineer.

**Spruikers:** Persons located on the public way, usually associated with or employed by a Sex Services Premises, who seek to entice customers to enter the premises.

**Sub – Critical Flow:** The state of flow where the water depth is above the critical depth. Here, the influence of gravity forces dominates the influences of inertial forces, and flow, having a low velocity, is often described as tranquil

**Sub-Surface (Micro-trench) Irrigation:** Means the disposal of effluent through microtrenches at a depth of between 100mm and 300mm below ground level.

**Suitably Qualified Civil Engineer:** A civil engineer who is included in the National Professional Engineers Register, administered by the Institution of Engineers Australia.

**SULE Rating:** SULE – Safe Useful Life Expectancy

The SULE rating system, based on Barrell 2001, rates existing trees on their safe useful life expectancy, and are determined in view of both the current state of health and age of the tree.

**Supercritical Flow:** The state of flow where the water depth is below the critical depth, inertial forces dominate the gravitational forces, and the flow is described as rapid or shooting.

**Surcharge Flow:** Unable to enter a culvert or exiting from a pit as a result of inadequate capacity

**Surface Irrigation:** Means the use of effluent applied to the ground from above ground level.

**Survey plan:** Is a plan prepared by a registered surveyor which shows the information required for the assessment of an application in accordance with the provisions of this Policy.

**Swimming Pool:** Has the same meaning as in the Swimming Pools Act 1992 as an excavation, structure or vessel that is capable of being filled with water to a depth of 300 millimetres or more, and (b) that is solely or principally used, or that is designed, manufactured or adapted to be solely or principally used, for the purpose of swimming, wading, paddling or any other human aquatic activity, and includes a spa pool, but does not include a spa bath, anything that is situated within a bathroom or anything declared by the regulations made under the Swimming Pools Act 1992 not to be a swimming pool for the purposes of that Act.

**Take Away Food and Drink Premises:** means food and drink premises that are predominantly used for the preparation and sale of food or drink (or both) for immediate consumption away from the premises.

**Tank-Based Aquaculture:** Means aquaculture utilising structures that are constructed from materials such as fibreglass, plastics, concrete, glass or metals, are usually situated either wholly or partly above ground, and may be contained within a purpose built farm or industrial style sheds or plastic covered hothouse to assist in controlling environmental factors.

**Telecommunications Facility:** Means:

- a) Any part of the infrastructure of a telecommunications network, or
- b) Any line, equipment, apparatus, tower, mast, antenna, tunnel, duct, hole, pit, pole or other structure or thing used, or to be used, in or in connection with a telecommunications network.

**Telecommunications Network:** Means a system, or series of systems, that carries, or is capable of carrying, communications by means of guided or unguided electromagnetic energy, or both.

**Temporary Structure:** Has the same meaning as in the Act defined as including a booth, tent or other temporary enclosure (whether or not part of the booth, tent or enclosure is permanent), and also includes a mobile structure.

**The Act:** Means the Environmental Planning and Assessment Act 1979.

**Thermal Mass:** The heat storage capacity of a given assembly or system. Generally, the heavier and denser the material is, the more heat it will store and the longer it will take to release the heat.

**Third Party Advertising:** The content of an advertisement which is not directly related to the actual land use or goods or services produced on the subject parcel of land to which the advertising is proposed.

**Topography:** The natural surface features of a region.

**Townhouse:** Means a two storey dwelling within a multi dwelling development, which may or may not be attached to other dwellings, with separate access from the ground floor level and direct access to private open space at natural ground level.

**Transpiration Pit:** An excavation which has been filled with material conducive to the drainage of stormwater and which is designed to drain sideways, into the atmosphere, via a retaining medium.

**Treatment plan:** Means a plan explaining how treatment options will be implemented to manage the risk.

**Treatment options:** Means methods to control and treat the risk including but not limited to:

- Alternative forms of development such that the revised risk would be acceptable or tolerable;
- Stabilisation measures to control the initiating circumstances such that the revised risk would be acceptable or tolerable after implementation;
- Defensive stabilisation measures, amelioration of the behaviour of the hazard or relocation of the development to a more favourable location to achieve an acceptable or tolerable risk.

**Tree:** Is a perennial plant with a self-supporting stem or trunk, when mature, and for the purpose of this DCP means any tree (other than an exempt tree) including the roots of that tree, if it is 3 metres or more in height, or has a trunk diameter of 200mm or more at a height of 1 metre from the ground, or has a branch spread of 3 metres or more. A significant tree also includes a tree identified as a Heritage Item in Wollongong Local Environmental Plan 2009.

**Tree Dripline or Zone:** Means the area defined under a tree by the outer edge of the tree canopy projected to ground level.

**Tree Protection Zone:** The tree protection zone defines the optimal distance from the trunk of a tree that should be maintained free of development and construction activity.

**Trunk Drainage:** A stormwater system serving catchments larger than 15 hectares.

**Tolerable risk:** Means the risk which has been assessed and may be accepted provided that a treatment plan is implemented to maintain or reduce the risks.

**Tourist and Visitor Accommodation:** Means a building or place that provides temporary or short-term accommodation on a commercial basis, and includes hotel or motel accommodation, serviced apartments, bed and breakfast accommodation and backpackers' accommodation.

**Urban Consolidation Area:** Land identified in the maps in Appendix 1, which have been identified as areas where higher densities are permitted, due to their proximity to railway stations and ability to satisfy urban consolidation objectives.

**Urbanisation:** The change in land use from natural to developed state.

**Urban Zone:** For the purposes of this DCP includes a residential, commercial /business, industrial or other similar zone which contains predominately urban land uses.

**Validation and Monitoring:** The process of determining whether the remediation strategies and measures have been achieved during the remediation of the site.

**Vehicular Ramp:** Refers to a vehicular circulation carriageway which connects a driveway crossing to an internal off-street car park on a different level, or which connects two levels in a multi-level car park.

**Verge:** Means the part of the road reserve between the road carriageway and the boundary of adjacent lots. This may include the footpath area and includes the portion of land which accommodates the utility installations and street lighting poles.

**Verifier:** Means a geotechnical engineer or engineering geologist, as defined by this policy, who verifies a geotechnical report.

**View Corridor:** Refers to a direct line of sight provided from the public space or a road to a significant object, place or feature.

**Villa:** Means a single storey dwelling within a multi dwelling development, which may or may not be attached to other dwellings, with separate access from the ground floor level and direct access to private open space at natural ground level.

**Virgin Excavated Material:** Inert waste (eg clay, gravel, sand, soil and rock) that is not mixed with any other waste and that:

- Has been excavated from areas that are not contaminated, as the result of industrial, commercial, mining or agricultural activities, with manufactured chemicals and that does not contain sulphidic ores or soils; and
- Consists of excavated natural materials that meet such criteria as may be approved by the Department of Environment and Climate Change.

**Visibility:** Is a measure of the extent to which the escarpment may be visible from surrounding locality taking into account the period of the view, view distance and context of the view. The underlying rationale for this aspect of the visual quality analysis is

to analyse the visibility of the escarpment by precinct and identify key viewpoints necessary for visual absorption capacity and Development Opportunity Envelope identification. Distance plays a strong influence on visibility as the preparation of the view frame occupied by the escarpment decreases with distance. In addition atmosphere influences tend to reduce the level of contrast between development disturbances and the escarpment landscape.

**Visual Absorption Capacity:** Is an estimation of the capacity of a particular locality of landscape to absorb development without creating a significant change in visual character or a reduction in scenic environmental quality of the locality. The capacity to visually absorb development is primarily dependent on landform, vegetation and existing development. A major factor influencing visual absorption capacity is the level of visual contrast between the proposed development and the existing elements of the landscape in which the proposal is occupied. For example, flat or gently sloping open forest has a higher capacity to visually absorb development than strongly undulating cleared escarpment ridges and escarpment slopes. Further, if visually prominent development already exists on the escarpment then the capacity of the locality to absorb an additional development is higher, than a similar section of the escarpment that has a natural undeveloped visual character.

**Warehouse or Distribution Centre:** Means a building or place used mainly or exclusively for storing or handling items (whether goods or materials) pending their sale, but from which no retail sales are made.

**Waste Disposal Facility:** Means a building or place used for the disposal of waste by landfill, incineration or other means, including such works or activities as recycling, resource recovery and other resource management activities, energy generation from gases, leachate management, odour control and the winning of extractive material to generate a void for disposal of waste or to cover waste after its disposal.

**Waste Management Facility:** Means a facility used for the storage, treatment, purifying or disposal of waste, whether or not it is also used for the sorting, processing, recycling, recovering, use or reuse of material from that waste, and whether or not any such operations are carried out on a commercial basis. It may include but is not limited to:

- a) An extractive industry ancillary to, required for or associated with the preparation or remediation of the site for such storage, treatment, purifying or disposal, and
- b) Eco-generating works ancillary to or associated with such storage, treatment, purifying or disposal.

**Waste Management Plan (WMP):** A waste management strategy / plan for the collection, recovery and / or disposal of waste material and the recycling of materials during the demolition, construction and post construction periods. The Waste Management Plan also includes estimates of volumes of waste produced and proposed recycling or reuse strategies to be implemented in order to minimise waste material being required to be taken to a registered land fill waste disposal site.

**Wastewater:** Means blackwater, greywater or a combination of blackwater and greywater arising from activities such as the use of toilets, bathrooms (basins, baths and showers), kitchens and laundries.

**Waterbody** means a waterbody (artificial) or waterbody (natural).

**Waterbody (Artificial) or Artificial Waterbody:** Means an artificial body of water, including any constructed waterway, canal, inlet, bay, channel, dam, pond, lake or artificial wetland, but does not include a dry detention basin or other stormwater management construction that is only intended to hold water intermittently.

**Waterbody (Natural) or Natural Waterbody:** Means a natural body of water, whether perennial or intermittent, fresh, brackish or saline, the course of which may have been artificially modified or diverted onto a new course, and includes a river, creek, stream, lake, lagoon, natural wetland, estuary, bay, inlet or tidal waters (including the sea).

**Watercourse:** Means any river, creek, stream or chain of ponds, whether artificially modified or not, in which water usually flows, either continuously or intermittently, in a defined bed or channel, but does not include a waterbody (artificial).

**Water Sensitive Urban Design (WSUD):** WSUD is a philosophy which aims to mitigate environmental impacts particularly on water quantity, water quality and receiving waterways, conventionally associated with urbanisation. WSUD incorporates holistic management measures that take into account urban planning and design, social and environmental amenity of the urban landscape and stormwater management which are integrated with stormwater conveyance by reducing peak flows, protection of natural systems and water quality, stormwater reuse and water conserving landscaping. This can be achieved through a design approach that strives to maintain or replicate the natural water cycle through an incremental "treatment train" approach, through the optimisation the use of rainwater on-site whilst minimising the amount of water transported from the catchment.

**Water Table:** Means the surface of groundwater below the ground surface.

**Waterway:** Means the whole or any part of a watercourse, wetland, waterbody (artificial) or waterbody (natural).

**Wetland:** means:

- a) Natural wetland, including marshes, mangroves, backwaters, billabongs, swamps, sedgelands, wet meadows or wet heathlands that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with fresh, brackish or salt water, and where the inundation determines the type and productivity of the soils and the plant and animal communities, or

- b) Artificial wetland, including marshes, swamps, wet meadows, sedgelands or wet heathlands that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with water, and are constructed and vegetated with wetland plant communities.

**Zero lot line:** Refers to the situation where the wall of the dwelling has no side boundary setback on one (1) side of the allotment and the allotment is benefited by a 1 metre wide restriction on the use of the land under Section 88B of the Conveyancing Act 1919 on the adjoining parcel of land, in order to enable on-going maintenance of the wall and / or roof of the subject dwelling







ACCESS TO  
MANGERTON  
PARK

05 02 2016





05 02 2016









Land Proposed to be Sold  
40 & 42 George Avenue, Bulli  
Lots 2 & 3 DP31838



g:\0295-02.mxd

This plan was prepared by a registered professional surveyor and is intended to be used for the purposes of the survey only. It is not to be used for any other purpose without the written consent of the Surveyor General.

# Draft COMMUNITY SAFETY PLAN 2016 – 2020



Prepared by Community Cultural and Economic Development  
Wollongong City Council

## Table of Contents

Acronym Table	1
Executive Summary	2
Summary of Community Safety Plan	3
SECTION 1	4
Background	4
Strategic Setting	7
Aim and Objectives	7
Engagement and Communications	8
What you told us	8
Partners	10
What have we been doing over the last four years?	11
SECTION 2	14
Moving Forward: the next four years	14
What do the LGA crime rankings mean?	15
Crime Prevention Action Plan	16
APPENDICES	28
Appendix 1: Crime Profile	28
Appendix 2: Demographic Profile	50
References	54

## Acronym Table

ABS	AUSTRALIAN BUREAU OF STATISTICS
ADF	AUSTRALIAN DRUG FOUNDATION
AFZ	ALCOHOL FREE ZONE
ASB	ANTI-SOCIAL BEHAVIOUR
BOCSAR	BUREAU OF CRIME STATISTICS AND RESEARCH
CBD	CENTRAL BUSINESS DISTRICT
CCTV	CLOSED CIRCUIT TELEVISION
CDAT	COMMUNITY DRUG ACTION TEAM
CPTED	CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN
DA	DEVELOPMENT APPLICATION
GLBTI	GAY, LESBIAN, BI-SEXUAL, TRANSEXUAL, INTERSEX
ICADV	ILLAWARRA COMMITTEE AGAINST DOMESTIC VIOLENCE
LAC	LOCAL AREA COMMAND
LGA	LOCAL GOVERNMENT AREA
LGSCPN	LOCAL GOVERNMENT COMMUNITY SAFETY CRIME PREVENTION NETWORK
NAIDOC	NATIONAL ABORIGINAL AND ISLANDER DAY OBSERVANCE COMMITTEE
PAL	POLICE ASSISTANCE LINE
RMS	ROADS AND MARITIME SERVICES
SEIFA	SOCIO-ECONOMIC INDEXES FOR AREAS

## Executive Summary

The Wollongong Community Safety Plan 2016-2020 is a key instrument to support the vision of the city outlined in Wollongong 2022. It contributes to creating and sustaining a healthy community in a liveable city, with the objective: "Community Safety is Improved" (Wollongong 2022: Community Strategic Plan).

The Community Safety Plan is developed using data from government sources as well as local crime intelligence and information from residents, in an effort to target the crimes and behaviours that have the biggest impact on the local community. Consultations have occurred with internal and external stakeholders and partners as well as the community at large.

Perceptions of safety is included in the data as fear of crime and perception of safety impacts how well Wollongong residents engage and feel connected to one another.

### HOW TO READ THIS PLAN

The Community Safety Plan 2016-2020 is divided into two distinct sections:

Section 1 contextualises the Plan, providing information on how Wollongong City Council approaches crime prevention and improves community safety. It describes our current and continuing partners and who and how we have engaged them, as well as the community, in defining crime and safety issues. It reviews the actions taken over the last four years and the results of those actions and strategies to improve safety and reduce targeted crimes.

Section 2 describes what crimes and behaviours will be targeted over the coming four years, from 2016 to 2020. The Crime Prevention Action Plan sits within this section and shows the strategies that will be implemented to address each crime as well as the rationale in choosing specific crimes and behaviours on which to focus.

Perceived and actual community safety is included within the Crime Prevention Action Plan because how safe the community feels has a significant effect on people's quality of life and wellbeing.

Demographic and crime profiles are included in this section showing who lives in our area, where the crime hotspots are located and provides a snapshot of what crimes are impacting the community the most.

## Summary of Community Safety Plan

The actions in the Community Safety Plan 2016-2020 aim to reduce crime and improve community safety. It takes a whole of Council approach and includes support from partners and the community.

The priority crimes that are the focus of the Community Safety Plan 2016-2020 have been chosen based on issues and concerns highlighted by the community as well as crime trends in the Wollongong Local Government Area reported by the NSW Bureau of Crime Statistics and Research.

The priority crime terms are in keeping with those reported by the NSW Bureau of Crime Statistics and Research.

Priority Crime	Project	Lead agency and partners	Expected outcome
1 Malicious damage including graffiti	Reduce damage to property including graffiti by reducing the opportunities for it to occur and making it less rewarding for offenders.	Wollongong City Council, NSW Police, NSW Department of Justice, Corrective Services of NSW, the business sector and residents	Improved perception of safety and pride in place due to a reduction in graffiti across the LGA and in graffiti hot spots
2 Assault domestic violence	Reporting of domestic violence assault increases due to campaigns that raise awareness and promote support services in Wollongong	Illawarra Committee against Domestic Violence (ICADV)  Wollongong Business Community	Reporting of domestic violence will increase  Figures for attendance at the annual White Ribbon Walk will continue to rise
3 Assault non-domestic violence (alcohol related)	Opportunities for alcohol related assault are reduced as a result of community education and community partnership strategies	NSW Police, Wollongong City Council, Wollongong Liquor Accord, Wollongong Transport Committee, Community Drug Action Team (CDAT)	Wollongong continues to show a decreasing trend regarding incidents of alcohol related assaults in the CBD and other hotspots  Travelling home from a late night out in Wollongong is safer
4 Anti-social behaviour (ABS) including harassment, threatening and offensive behaviour	Anti-social behaviour including harassment and threatening behaviour is reduced	Wollongong City Council, residents, community groups and the business sector	People feel safer across the LGA  Incidents of reported and actual ABS are reduced
5 Perceived and actual community safety	Feelings of safety by residents across the LGA are improved	Wollongong City Council	Residents feel safer



# SECTION 1

## Background

### WHAT IS COMMUNITY SAFETY?

Being and feeling safe is the focus of community safety. Being and feeling safe enables community participation, inclusiveness and feelings of belonging that makes using public space, public services and facilities an everyday occurrence. Being and feeling safe means we can move through our region, our city and our neighbourhoods by any means: driving, walking, cycling and using public transport. Council has a central leadership role to play in bringing together, identifying and driving the development of specific strategies to improve and enhance community safety.

### WHAT IS CRIME PREVENTION?

Crime prevention from Council's perspective is about creating an urban landscape that makes it harder to commit crime, activates public space and raises awareness in the community about crime prevention strategies. Community safety and crime prevention go hand in hand to improve safety, reduce crime and reduce the fear of crime that affects quality of life.

### HOW DO WE ADDRESS CRIME, FEAR OF CRIME AND COMMUNITY SAFETY?

Council uses primary and secondary crime prevention methodologies to address crime, fear of crime and community safety (see diagram 1).

**Situational Prevention:** This approach reduces the opportunities to commit crime and increases the risks of being caught to the offender. Situational crime prevention enhances the physical environment so people feel safer in public and private space and crime is more difficult to commit.

Examples of this approach include:

- Trimming trees and vegetation for clearer sightlines and to reduce the likelihood of hiding
- Removing graffiti so public space looks and feels inviting
- Providing additional lighting in appropriate locations
- Planting 'green screens' to prevent graffiti in the first place
- Incorporating public art into public places making a place look and feel more attractive
- Organising activities to encourage greater legitimate use of a place

**Social Prevention:** This approach focuses on the quality of life of residents. Social strategies aim to foster inclusiveness for all the community, giving people from all walks of life and across the region a sense of belonging. People who feel they are valued, with a strong sense of belonging to a community or place are less likely to commit crimes against their neighbours or neighbourhood. Social strategies try to reduce unemployment, improve health, education and affordable housing that provide positive experiences and connect community members.

**Activating Space:** This approach turns underused public space or space used for criminal or anti-social behaviour into places used by the wider community for legitimate purposes. Events like markets, regular outdoor activities like exercise groups and public art are examples of activating space. When public space is used by people for legitimate purposes, it is less likely criminal or anti-social behaviour will occur there.

***Community Development and Early Intervention:*** These approaches work with 'at risk' communities, target high risk neighbourhoods and engage communities to support themselves in developing crime prevention and safety solutions. They are usually longer term strategies using partners like government and non-government agencies and organisations to work with communities to improve their physical and social environments.

DRAFT



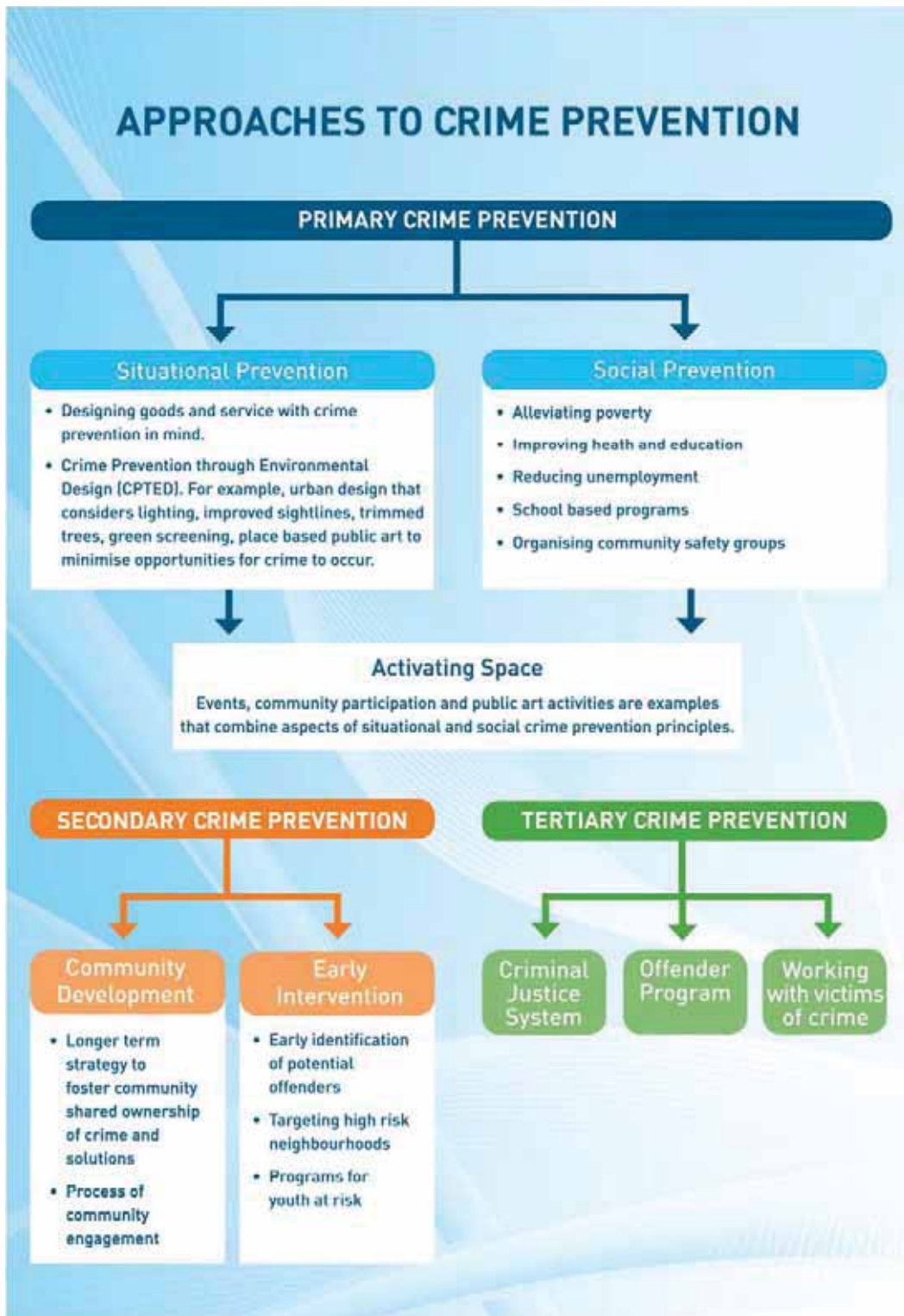


Diagram 1: Derived from information retained in the NSW Police Safer by Design Manual Version 2.0 January 2010

## Strategic Setting

### RELATIONSHIP TO COUNCIL'S STRATEGIC PLANNING

Wollongong City Council has had in place a Crime Prevention Policy since 2000. This Policy was reviewed and the amended Policy adopted in 2013. The Wollongong City Council Community Safety Plan 2016-2020 sits within the context of this policy as well as the Wollongong 2022: Community Strategic Plan.

Wollongong 2022: Community Strategic Plan outlines the Wollongong community's priorities and aspirations and how these will be achieved. It enables Council to collectively respond to emerging challenges and opportunities and provides direction for the provision of key projects and services which enable Council to meet the needs of our community.

### OUR COMMUNITY VISION

**From the mountains to the sea, we value and protect our natural environment and we will be leaders in building an educated, creative and connected community.**

### OUR COMMUNITY GOALS

1. We value and protect our environment
2. We have an innovative and sustainable economy
3. Wollongong is a creative, vibrant city
4. We are a connected and engaged community
5. We are a healthy community in a liveable city
6. We have sustainable, affordable and accessible transport

Community safety is supported within Wollongong 2022 under Goal 5.

#### **Goal 5- We are a healthy community in a liveable city**

##### **Objective 5.4 Community Safety is improved**

- 5.4.1 Partnerships continue to strengthen and achieve a safe and accessible community
- 5.4.2 Local crime continues to be prevented and levels of crime reduced
- 5.4.3 Safety is considered in the planning and design of any development

## Aim and Objectives

**AIM:** The Community Safety Plan 2016-2020 is a strategic plan of actions that enable Wollongong City Council, together with community stakeholders, other levels of government and the business sector, to strengthen communities and achieve inclusive places and spaces, where crime is prevented and people feel and are safer.

### OBJECTIVES

- Improve actual and perceived community safety
- Embed community safety strategies across the whole of Council
- Reduce crimes that have the highest impact in our area

## Engagement and Communications

The Plan draws together crime intelligence from NSW Police Lake Illawarra and Wollongong Local Area Commands, Australian Bureau of Statistics (ABS) Crime Victimisation Survey 2013/2014 and the NSW Bureau of Crime Statistics and Research (BOCSAR).

We have asked the community their safety priorities, what crimes most affect them and how they perceive their own safety. We have spoken with particular communities like young people of the Gay, Lesbian, Bisexual and Transgender community, older carers of people who live with a disability and members of the multicultural community.

We've spoken with Council's Aboriginal and Community Safety Reference Groups. We've gone to each of Council's Neighbourhood Forums to speak with the community where they live.

We ran a survey across the whole LGA (Perception of Safety Survey) to ask people how safe they feel, in the day time, at night, where they live and where they work. We asked them if there are particular places they find problematic and what issues concern them the most.

The Plan was placed on public exhibition for four weeks for further comment. The final Plan incorporated data from all these sources to develop an action plan focusing on community safety and targeting specific localised crimes.

## What you told us

### NSW POLICE

Wollongong LGA has two Police Commands within its borders: Lake Illawarra and Wollongong Local Area Commands. They both have suburbs that are crime hotspots. Significant crime and crime targeting within the NSW Police Lake Illawarra Local Area Command (LAC) happens in two suburbs, both of whom have a low SEIFA figure and are suburbs of disadvantage. This LAC is rated within the top 10 of the State for domestic violence. Domestic violence takes up most of their time with almost half of their assault call outs in August 2015 related to this crime, resulting in 200 arrests for domestic violence assault (NSW Police, Lake Illawarra Local Area Command Community Safety Precinct meeting, 30 September 2015).

NSW Police Wollongong LAC also highlighted domestic violence as a crime that required significant resourcing. This LAC is targeting suburbs which are known crime hotspots as well as the City Centre for alcohol related crime (NSW Police, Wollongong Local Area Command Community Safety Precinct meeting, 3 March 2016).

Established Alcohol Free Zones (AFZ) in seven locales across the Wollongong LGA were renewed for another four years from October 2014 to September 2018. Both Local Area Commands requested the renewal of these AFZ's in an effort to reduce public drinking and associated anti-social behaviour. The AFZ's are located within Wollongong's CBD and beachside picnic areas, Thirroul CBD (a beachside suburb), Dapto, Corrimal, Berkeley and Warrawong CBD's (all areas of disadvantage and problematic public drinking historically) and Helensburgh CBD (isolated small shopping precinct).

### PERCEPTIONS OF SAFETY SURVEY

90% of residents who participated in the Perceptions of Safety Survey 2014 feel completely or mostly safe in their own neighbourhood. More than 70% feel satisfied or very satisfied with how safe they feel, generally. In the City Centre, people raised safety concerns about anti-social behaviour - 36%, drug related issues - 33%, alcohol related issues - 24.5% and violent behaviour 23.2%.

## COMMUNITY ENGAGEMENT

The issue of graffiti generated a mixed response. As an art form, not just 'tags', people of all ages thought it enhanced public space and made it look good. Tagging however, "could make a place look dirty, was a form of littering and sends the wrong message that damaging property was OK" (young woman's comments in GLBTI focus group). Older residents felt tagging increased their fear of crime thereby reducing their quality of life. They felt unable to safely walk around their neighbourhood, especially when tags were evident on private property like fences.

Some people are fearful of intoxicated strangers in public and residential estates. Consultations with older people revealed intoxicated and drug affected strangers in public prevented them from walking in their neighbourhoods and shopping centres. They also said they feared alcohol affected people could become violent. They told us they have witnessed shouting and abusive behaviour in public places by people they believed were alcohol or drug affected. The Australian Drug Foundation's 'Breaking the Ice' forum, held in Wollongong in March 2016, highlighted concerns from the general community about the impact and resources available for families affected by 'ice' addiction.

Unlit and isolated places with derelict buildings generated fear of crime and made people feel unsafe. Anti-social behaviour was an issue that concerned people who participated in the consultations. Types of anti-social behaviour include threatening and intimidating behaviour, often by people who others thought were alcohol or drug affected. Anti-social behaviour of this kind impacted on people's amenity.

People are still concerned with crimes like domestic and other violence and the impacts on the community of drug and alcohol abuse, in spite of the general downward trend of crime across NSW. Residents who hear shouts and screams from neighbours were severely affected by this and highlighted domestic violence as a crime they were most concerned about. More than one resident revealed they lived near families they thought were living with domestic violence.

## Partners

Crime prevention and community safety needs a whole of Council approach. Many Divisions within Council contribute significantly to reducing opportunities for crime and improving community safety.

### INTERNAL PARTNERS

<b>Council Division</b>	<b>Community safety activities</b>
Regulation and Enforcement	Animal control, illegal dumping, noise control, parking
Development Assessment and Certification	Assess development applications city wide using controls such as Crime Prevention through Environmental Design (CPTED), traffic management and pedestrian safety
Community, Cultural and Economic Development	<p>Specialist community development officers such as community safety, Aboriginal, multicultural, cultural, aged and disability, graffiti prevention, youth and place-based</p> <p>City wide events coordination such as Viva la Gong, NAIDOC, Refugee, Seniors and Youth Weeks, Australia Day and New Year's Eve</p> <p>Public art and creative spaces strategies</p> <p>Business development such as the building façade revitalisation program in the City Centre and the development of the Evening Economy Strategy</p> <p>Alcohol Free Zones</p>
Property and Recreation	Life guards and water safety education
Environmental Strategy and Planning	Bush fire and flood mitigation
City Works and Services	Graffiti removal and rubbish removal
Infrastructure Strategy and Planning	<p>Road safety</p> <p>CCTV operations and management</p>

## EXTERNAL PARTNERS

External organisations play a key role in supporting Council initiatives. Similarly, Council supports strategies and initiatives that are originated by other agencies and the business sector.

Partner	Activities
NSW Police, Lake Illawarra and Wollongong Local Area Commands	Community Safety Precinct meetings Community Safety Audits Representation on Council's Community Safety Reference Committee Joint projects including place-based projects
Illawarra Committee against Domestic Violence (ICADV)	White Ribbon and Reclaim the Night campaigns Domestic and family violence education and awareness raising
Community Drug Action Team (CDAT)	Community, government and non-government interagency meetings implementing projects such as Creating Synergy Conference and 'Breaking the ICE' Forum
Local Government Community Safety and Crime Prevention Network (LGCSCP)	Information sharing across NSW Councils Education and conferences
Wollongong Liquor Accord	Joint strategies and projects to promote responsible drinking behaviour that improves community safety and amenity

## What have we been doing over the last four years?

Council's Community Safety Reference Group meets quarterly and brings together partners from NSW Police, Government and non-Government agencies and community members to identify and drive the development of specific strategies to improve and enhance community safety in the Wollongong Local Government Area.

Council has been implementing the Community Safety Plan 2012-2016 which, after extensive consultation at the time, identified key areas including:

- **Assault- non-domestic (alcohol related) and domestic violence**
- **Malicious damage to property- graffiti and anti-social behaviour**
- **Steal from motor vehicle**
- **Increase real and perceived community safety**

### ASSAULT- NON-DOMESTIC (ALCOHOL RELATED)

In order to reduce the incidents of alcohol related assault, Council committed to a number of initiatives that encouraged responsible drinking behaviour, improved the community's understanding regarding alcohol related laws and strengthened partnerships with relevant Government and non-Government agencies including the business sector.

These strategies and projects included:



- In the Midnight Hour- a research project in partnership with Wollongong TAFE uncovering the reality of a Saturday night in the City Centre and the issues faced by people enjoying a night out, highlighting the lack of late night transport options as the biggest factor in people's safety.
- Hassle Free Night- a project attempting to address late night transport issues by disseminating information about transport options.
- City Centre Evening Economy Action Plan- a range of strategies to encourage responsible drinking behaviour through the establishment of small bars and licensed eateries. The Strategy supports a mix of public and private events and attractions in key areas of the City by simplifying the event application process for 10 events per area per annum. Activating key areas within the City, especially outside normal business hours, generates places that are people-friendly and non-threatening, reducing the opportunity for criminal activity.
- Alcohol Free Zones (AFZ) and Alcohol Prohibited Places - supporting Police and the community to reduce alcohol fueled incidents in public places across Wollongong. There are seven AFZ's across Wollongong and 18 parks that have Alcohol Prohibited Place status.
- Partnerships with the NSW and Local Liquor Accords- to continue working collaboratively in reducing incidents fueled by alcohol and continue to improve Wollongong's reputation as a destination for a safe night out.

**Results** from these combined strategies as well as support from Wollongong and Lake Illawarra Licensing Police shows a decrease of 10.6%\* in alcohol related assault over five years.

\* NSW Bureau of Crime Statistics and Research, July 2007-June 2014

## ASSAULT- DOMESTIC VIOLENCE

Council supports NSW Police and non-Government agencies working in the area of reducing family and domestic violence by partnering with the Illawarra Committee against Domestic Violence, Reclaim the Night and White Ribbon Campaigns.

**Results** from these National campaigns as well as the work done by NSW Police and the NSW Court Assistance Scheme show domestic violence is stable \* in the Wollongong LGA over the last five years. Breach of Apprehended Violence Orders is considered stable \* over five years, however there are spikes recorded during that time.

\* NSW Bureau of Crime Statistics and Research, July 2010-June 2015

## MALICIOUS DAMAGE TO PROPERTY FROM GRAFFITI AND ANTI-SOCIAL BEHAVIOUR

Graffiti and malicious damage to property from anti-social behaviour is a significant issue facing communities across Wollongong.

Strategies to reduce property damage and graffiti include:

- Rapid graffiti removal program on Council assets
- Graffiti Line promotion encouraging residents to report graffiti
- City Centre Special Rate Levy for community safety initiatives including rapid removal of graffiti in the City Centre
- Community development programs supporting artists and the community to deliver art on bus shelters and Roads and Maritime Services signal boxes as well as public art on buildings and promenades, thereby minimizing the risk of graffiti in hotspot areas throughout Wollongong
- Partnering with NSW Justice, Corrective Services and community organisations like Rotary and Essential Personnel to remove graffiti and work with offenders as well as people with a disability who receive training and are supported to become job ready

- Assessing new developments using Crime Prevention through Environmental Design (CPTED) criteria that makes it harder to graffiti buildings, riskier to offenders and less rewarding.

**Results** show an 8.1%\* decrease of incidents over five years.

\* NSW Bureau of Crime Statistics and Research, July 2010- Dec 2014

## STEAL FROM MOTOR VEHICLE

Steal from motor vehicle is a common crime on the coast during summer and at any time in commuter car parks. Beachgoers hide keys on cars and commuters leave valuables in plain sight resulting in theft of personal items as well as car stereos and other devices.

Private residence car ports and driveways are other hot spots targeted by opportunistic offenders looking for unlocked cars and easy access to valuables. Wollongong City Council's Community Safety Officer attends regular Community Safety Precinct meetings with NSW Police Lake Illawarra and Wollongong Local Area Commands that provide information on the most prevalent crimes committed in the area.

In 2012, Council partnered with NSW Police Wollongong Local Area Command in supporting free fittings of Anti-theft Screws for car license plates in one of Council's car parks to reduce the incidence of stolen plates that are often used on vehicles involved in crimes.

**Results** indicate this crime is stable over five years\*

\* NSW Bureau of Crime Statistics and Research, Jan 2011- Dec 2015

## INCREASED REAL AND PERCEIVED COMMUNITY SAFETY

How safe we feel is often directly related to the look of public space: where we live, work and recreate. Community Safety initiatives that improve public space and the built environment include:

- Community Safety Audits- these are conducted with and without NSW Police in response to issues and concerns raised by community, NSW Police or other stakeholders. Community Safety Audits provide on-site observations and recommendations that make facilities and public spaces feel and look safer and reduce opportunities for crime and anti-social behaviour to occur.
- Development Application safety assessments against Crime Prevention through Environmental Design (CPTED) principles for new developments across Wollongong. The assessments comment on lighting, sightlines, boundary reinforcement and access points as well as the use of appropriate landscape designs for green screening and other initiatives that minimize opportunities for crime.
- Community Development initiatives that activate spaces that may otherwise be isolated or underused. Place-based projects involve community and residents in improving the design and look of public places through the use of public art and engagement strategies.
- Developing and implementing community development programs in specific neighborhoods like the Bellambi 2518 Collective Impact Project coordinating the enthusiasm and strength of the local residents, businesses and other levels of government in creating community driven action plans to improve safety and reduce crime.

**Results** tabled in the Perceptions of Safety Survey, conducted in 2014, show a baseline figure of 90% of residents feel completely or mostly safe walking around their local area and workers/students felt 73.6% completely or mostly safe walking around their local area (77.9% live within the City Centre). 70% of residents and 72.9% of workers/students who live within the City Centre felt satisfied with how safe they felt generally.



## SECTION 2

### Moving forward: the next four years

The Community Safety Plan 2016-2020, based on BOCSAR statistics, consultations with NSW Police, Lake Illawarra and Wollongong Local Area Commands, the business sector and the community, focuses on specific crimes as well as improving how safe the community feels. It also includes information from the Australian Bureau of Statistics Crime Victimisation Survey 2013/14.

While the crimes targeted in this Community Safety Plan 2016-2020 have not shown an upward trend over the last five year period, it is important to note they all have a significant impact on the local community. Many crimes are under reported to NSW Police, making the statistics generated from crime reports unreflective of the real numbers of incidents and the real impact to the community.

The ABS Crime Victimisation Survey 2013/2014 (published Feb 2015) shows that:

"When it comes to household crime, malicious property damage continues to be the most common, with over half a million homes - about six per cent - experiencing it". Half the people who experienced property damage didn't report the incident to police, most commonly thinking it was too trivial to report. 12% of household victims believed that there was nothing the Police could do.

Regarding assault, the ABS Crime Victimisation Survey 2013/2014 states: "Being threatened with assault - in a face-to-face situation - is still the most common type of personal crime, with nearly half a million Australians experiencing this sort of threat," said William Milne from the ABS. "For men, the threat was most likely to come from a stranger, while for women it was more likely to come from someone they knew. Almost two-thirds of people who were threatened with assault didn't report the incident to police, often because they thought the incident was too trivial or unimportant. People also felt that alcohol or other drugs contributed to the incident in around half of all cases".

Similarly regarding threatening behaviour, ABS Crime Victimisation Survey 2013/2014 highlights that only just over a third (34%) of persons who experienced face-to-face threatened assault reported their most recent incident to police.

Many of the crimes targeted within the Community Safety Plan over the next four years are interrelated. Alcohol related assault can often go hand-in-hand with anti-social behaviours. Anti-social behaviours also include malicious damage and graffiti.

Priority crimes:

- **Malicious damage/graffiti**
- **Assault- domestic violence and non-domestic violence related (alcohol related)**
- **Anti-social behaviour including harassment and threatening behaviour**

Priority for community safety:

- **Increase actual and perceived community safety**

Wollongong's crime statistics and profile (Appendix 1, Crime Profile) highlight suburbs that are crime hotspots. Living and working in and around these hotspots generates fear for one's safety and reduces the community's amenity within these areas.

Developing strategies and implementing projects that reduce crime in these hotspots will improve the community's feelings of safety, reduce their fear of crime and positively impact on their quality of life. Reducing crime in these locales will also reduce the number of victims of crime in these suburb hotspots, regardless of whether or not they report the crime.

## What do the LGA crime rankings mean?

The NSW Bureau of Crime Statistics and Research (BOCSAR) rank Local Government Areas (LGA) in NSW that have populations greater than 3000. In 2014, BOCSAR reported there are 139 such Local Government Areas.

Rankings are statistical equations that factor in the number of incidents of reported crime against a rate per 100,000 population.

If an LGA is ranked #1 out of 139 (or close to the top) for any reported crime it indicates the highest incidents of that crime against the population rate within that LGA. Being #1 in this instance is to be avoided. Being closer to the bottom, or ranked last for a particular crime, is a better ranking indicating a community with fewer reported incidents of that crime per population.

DRAFT

## Crime Prevention Action Plan 2016-2020

### 1. PRIORITY OFFENCE: MALICIOUS DAMAGE INCLUDING GRAFFITI

**Project:** Reduce damage to property including graffiti by reducing the opportunities for it to occur and making it less rewarding for offenders.

Encourage reporting of malicious damage including graffiti.

**Rationale:** 12,146 incidents of graffiti were reported to Wollongong City Council's Graffiti Line over the last four years.

Wollongong LGA is ranked 60 out of 139 Local Government Areas in NSW\*

Hotspot suburbs recorded significantly higher numbers of incidents for malicious damage than the State average\*\*

**Objective:** To reduce graffiti and malicious damage.

To increase reporting of graffiti to the Graffiti Line.

**Lead Agency/partners:** Wollongong City Council, NSW Police, NSW Department of Justice, Corrective Services of NSW, Wollongong Business community.

**Expected outcome:** Improved perception of safety and pride in place due to a reduction in graffiti across the LGA and in graffiti hot spots.

\*NSW Bureau of Crime Statistics and Research (BOCSAR) 2015

\*\* Crime profile Appendix 1

Action	Performance measures	Time Frames	Funding	Partners	Milestones
1.1 Assess building development applications against CPTED controls to minimise graffiti opportunities	<ul style="list-style-type: none"> <li>Number of DA referrals with graffiti controls completed</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Development Assessment and Certification</li> </ul>	<ul style="list-style-type: none"> <li>All major building development applications are referred by Development Assessment and Certification for CPTED assessment</li> </ul>
1.2 Conduct rapid removal of graffiti on Council assets	<ul style="list-style-type: none"> <li>Graffiti is removed within a week in the City Centre and Special Rates Levy boundary</li> <li>100% of offensive graffiti on Council assets is removed within 24 hours of it being reported</li> </ul>	Ongoing	Special Rates Levy  Existing operational budget	<ul style="list-style-type: none"> <li>City Works and Services</li> <li>Community partners</li> </ul>	<ul style="list-style-type: none"> <li>The City Centre is free of graffiti every day</li> <li>(Proposed) Perception of Safety Survey indicates an improvement in how safe the community feels</li> </ul>
1.3 Support the removal of graffiti from non-Council assets	<ul style="list-style-type: none"> <li>Record the numbers of graffiti removal kits provided to asset owners to assist in removing graffiti</li> <li>All cases of graffiti given to partner agencies are removed by those agencies contracted for this purpose</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Community Partnerships and Safety</li> <li>Community and Government agencies</li> </ul>	<ul style="list-style-type: none"> <li>Asset owners contribute to the removal of graffiti on their own assets</li> <li>External agencies continue to partner with Council in removing graffiti on non-Council assets</li> </ul>
1.4 Conduct place-based graffiti prevention projects in graffiti hot spot areas	<ul style="list-style-type: none"> <li>Participate in and promote Graffiti Removal Day</li> <li>A number of graffiti reduction and prevention projects are conducted as appropriate</li> </ul>	Conducted annually	Existing operational budget  External funding, when secured	<ul style="list-style-type: none"> <li>Place-based community organisations</li> </ul>	<ul style="list-style-type: none"> <li>Community participates in removing graffiti in their own neighbourhoods</li> </ul>

1.5 Participate in arts-based graffiti prevention partnership projects	<ul style="list-style-type: none"> <li>• A minimum of 10 bus shelters are painted with murals to reduce graffiti</li> <li>• A minimum of 10 Roads and Maritime Services (RMS) signal boxes are painted to prevent graffiti</li> </ul>	Ongoing	Existing operational budget RMS funding	<ul style="list-style-type: none"> <li>• Cultural Services</li> <li>• Community Partnerships and Safety</li> <li>• Roads and Maritime Services</li> </ul>	<ul style="list-style-type: none"> <li>• RMS and Council readily support art on bus shelters and RMS signal boxes</li> <li>• Perception of safety survey indicates people feel safer when art replaces graffiti</li> </ul>
1.6 Promote Council's Graffiti Line to report incidents of graffiti and other malicious damage	<ul style="list-style-type: none"> <li>• Increase in the numbers of reports to Graffiti Line over 4 years</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>• Wollongong City Council Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>• Community report graffiti using Graffiti Line</li> <li>• There has been an increase in reporting graffiti to Council</li> </ul>
1.7 Retailers selling spray cans are audited for legislative compliance	<ul style="list-style-type: none"> <li>• Number of retailers' audits completed</li> </ul>	2016/2017	NSW Police operational budget	<ul style="list-style-type: none"> <li>• NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>• Retailers comply with legislation regarding sales of spray cans</li> </ul>
1.8 Conduct community safety audits	<ul style="list-style-type: none"> <li>• All customer service requests for community safety audits are investigated</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>• NSW Police</li> <li>• Community Partnerships and Safety</li> <li>• Place-based organisations and communities</li> </ul>	<ul style="list-style-type: none"> <li>• To reduce graffiti, place-based organisations and communities request community safety audits</li> </ul>

## 2. PRIORITY OFFENCE: ASSAULT DOMESTIC VIOLENCE

<b>Project:</b>	Reporting of assault domestic violence increases due to campaigns that raise awareness and promote support services in Wollongong.
<b>Rationale:</b>	<p>Domestic violence across NSW has increased by 2.7% over a five year trend. Breaches of apprehended violence orders have increased over a five year period by 3.2%. *</p> <p>Wollongong ranks 74 out of 139 LGAs with a steady increase in the number of reported incidents from 2010-2014, higher than previous years*.</p> <p>Figures for attendance at Wollongong's White Ribbon Walk 2015 reached approximately 600 people double the figures from the previous year.</p> <p>NSW Police, Lake Illawarra and Wollongong LACs both highlight domestic violence as a significant crime with NSW Police Lake Illawarra LAC ranking 6<sup>th</sup> in NSW**.</p> <p>Hotspot suburbs for this crime show significantly higher numbers of incidents than the State average***.</p>
<b>Objective:</b>	<p>Increase reporting of domestic violence assault in the Wollongong LGA</p> <p>Provide support for local networks and services in raising awareness about domestic and family violence in Wollongong</p>
<b>Lead agency/partners:</b>	Illawarra Committee Against Domestic Violence
<b>Expected outcome:</b>	<p>Reporting of domestic violence will increase</p> <p>Figures for attendance at the annual White Ribbon Walk will continue to rise</p>

\* NSW Bureau of Crime Statistics and Research, 2014

\*\* Lake Illawarra and Wollongong Local Area Command Community Safety Precinct meetings, 2015/2016

\*\*\* Crime Profile Appendix 1

Action	Performance measures	Time Frames	Funding required	Partners	Milestones
2.1 Work in partnership with lead agencies that provide support for victims of family and domestic violence to share information and raise awareness about the issue	<ul style="list-style-type: none"> <li>Regular attendance at meetings held by the Illawarra Committee against Domestic Violence (ICADV)</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>ICADV members</li> </ul>	<ul style="list-style-type: none"> <li>The production and distribution of an Illawarra Domestic Violence Services booklet showcasing all services available for families in the region</li> <li>ICADV organised forums and training are scheduled annually</li> </ul>
2.2 Support White Ribbon and Reclaim the Night campaigns	<ul style="list-style-type: none"> <li>Illawarra White Ribbon Walk held each year</li> <li>Reclaim the Night held each year</li> </ul>	Annually	Existing operational budget	<ul style="list-style-type: none"> <li>White Ribbon Illawarra Committee</li> <li>Reclaim the Night Committee</li> </ul>	<ul style="list-style-type: none"> <li>Both campaigns are included in Council's Annual Plan</li> </ul>

**3. PRIORITY OFFENCE:** ASSAULT NON-DOMESTIC VIOLENCE (ALCOHOL RELATED)

**Project:** Opportunities for alcohol related assault are reduced as a result of community education and partnership strategies with Wollongong Liquor Accord members, improving transport options for late night revellers.

**Rationale:** Wollongong is ranked 60 out of 139 LGAs for recorded incidents of non-domestic violence assault. This ranking shows Wollongong has the highest incidents per capita of all LGA's in the Illawarra\*.

Alcohol related assault non-domestic violence is decreasing by 10.6% over a five year trend, however, 36.1% of all non-domestic violence assault is linked to alcohol\*

According to the ABS\*\* 67.4% of men and 54.7% of women believed alcohol or other substances contributed to their assaults and 90.7% of people believed their assaults that occurred in a licensed venue had alcohol as a contributing factor.

Wollongong is a regional hub for night entertainment whose reputation is improving regarding safer night time revelling due in part to the implementation of the Wollongong Evening Economy Action Plan. The strategy encourages activation of public space and the growth of small late night venues that supports responsible drinking culture.

In the Midnight Hour, a research project from 2012 concluded that limited late night transport options from Wollongong CBD compromised people's safety travelling home.

**Objective:** Reduce incidents of alcohol related non-domestic violence assaults

Improve late night transport options from Wollongong CBD, especially during summer

**Lead agency/partners:** NSW Police, Wollongong City Council, Wollongong Liquor Accord, Community Drug Action Team (CDAT)

**Expected outcomes:** Wollongong continues to show a decreasing trend regarding incidents of alcohol related assaults in the CBD and other hotspots

Travelling home from a late night out in Wollongong is safer

\* NSW Bureau of Crime Statistics and Research, 2014

\*\* Australian Bureau of Statistics Crime Victimisation Survey 2013/2014



Action	Performance measures	Time frames	Funding required	Partners	Milestones
3.1 Comment against CPTED Principles regarding Development Applications for liquor licences	<ul style="list-style-type: none"> <li>100% of all new liquor licence applications are referred to community safety for comment</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Development Assessment and Compliance</li> </ul>	<ul style="list-style-type: none"> <li>The process for referring new liquor licences against community safety is a standard operating process</li> </ul>
3.2 Respond to requests from NSW Police and the community for alcohol free public places	<ul style="list-style-type: none"> <li>Alcohol Free Zones (AFZ) and Alcohol Prohibited Places are reviewed every four years</li> <li>All customer service requests relating to alcohol free public places are investigated</li> </ul>	2017/2018	Existing operational budget	<ul style="list-style-type: none"> <li>Public Relations and Communications</li> <li>Infrastructure Systems and Support</li> <li>NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>All AFZ and Alcohol Prohibited Places are mapped and available on Council's website for the community's information</li> <li>AFZ's and Alcohol Prohibited Places are re-established where and when appropriate</li> </ul>
3.3 Conduct safety audits focusing on consumption of alcohol in public spaces	<ul style="list-style-type: none"> <li>All customer service requests for safety audits are investigated</li> </ul>	As requested	Existing operational budget	<ul style="list-style-type: none"> <li>NSW Police</li> <li>Community</li> <li>Community groups</li> </ul>	<ul style="list-style-type: none"> <li>People acknowledge Council has a role to play in restricting the consumption of alcohol in public spaces</li> </ul>
3.4 Undertake partnerships with CDAT and youth based services to support and promote community development and	<ul style="list-style-type: none"> <li>Talking Tactics Together is conducted in public schools</li> <li>Community resources are produced</li> </ul>	Ongoing	External funding for CDAT programs if successful	<ul style="list-style-type: none"> <li>Community Drug Action Team (CDAT)</li> <li>Wollongong Liquor Accord</li> <li>NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>Community acknowledges its responsibility in reducing drinking habits of young people</li> </ul>

education programs that target unlawful consumption of alcohol	<ul style="list-style-type: none"> <li>Community forums are conducted</li> </ul>				
3.5 Promote and attend Wollongong Liquor Accord meetings	<ul style="list-style-type: none"> <li>Number of meetings attended</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Wollongong Liquor Accord</li> <li>NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>The partnership between Council, NSW Police and Wollongong Liquor Accord is strengthened</li> </ul>
3.6 Conduct a comparative study of incidents of assault and anti-social behaviours experienced by revellers late at night during peak times (12-5am) in the CBD	Data is compiled indicating the level of violence and anti-social behaviour experienced by revellers in Wollongong during peak times	2017	Subject to external funding	<ul style="list-style-type: none"> <li>Community Partnerships and Safety Team</li> <li>TAFE Wollongong</li> <li>Wollongong Liquor Accord</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to Council's partners to reduce alcohol related violence in the CBD</li> </ul>

**4 PRIORITY OFFENCE:** ANTI-SOCIAL BEHAVIOUR (ASB) INCLUDING HARASSMENT, THREATENING AND OFFENSIVE BEHAVIOUR

**Project:** Anti-social behaviours including harassment and threatening behaviour is reduced through the activation of Wollongong Crown St Mall and other public spaces that are otherwise underused or isolated from regular activity.

**Rationale:** Wollongong LGA is ranked 71 out of 139 LGAs with more than 800 incidents reported to police in 2014\*.

The Perceptions of Safety Survey conducted by Wollongong City Council in 2014 highlighted anti-social behaviour in the Wollongong Crown St Mall is of concern to 36% of those surveyed. 16.2% thought anti-social behaviour throughout the LGA was an issue Council needed to reduce.

Reported alcohol related offensive behaviour is considered trending downwards by 17.3%\* over the last five years. However, according to the ABS Crime Victimization Survey 2013/2014 only 34.3% of people who had been threatened with assault reported the last incident to police. 23.5% of people thought the incident too trivial to report and 9% thought there was nothing police could do.

Suburbs with high numbers of incidents for anti-social behaviour showed much higher numbers of incidents than the State average\*\*.

**Objective:** Reduce the incidents of ASB in the city centre as well as other public places throughout Wollongong LGA

**Lead agency/partners:** Wollongong City Council, NSW Police and City Centre Management

**Expected outcome:** People feel safer in the Crown St Mall and other public places

Incidents of reported and actual ASB are reduced

\* NSW Bureau of Crime Statistics and Research, 2014

\*\* Crime Profile Appendix 1

Action	Performance measures	Time frames	Funding required	Partners	Milestones
4.1 Work in partnership to develop localised place-based activation strategies to improve safety and amenity in hotspot areas	<ul style="list-style-type: none"> <li>Numbers of partnership projects and activation strategies</li> <li>ASB is reduced</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Place-based organisations</li> <li>Place-based Chambers of Commerce</li> <li>Community</li> </ul>	<ul style="list-style-type: none"> <li>Public places in hotspot locations are activated and used by residents</li> </ul>
4.2 Assess building development applications using CPTED Principles that encourage valid social activity	<ul style="list-style-type: none"> <li>Number of DA's assessed using CPTED principles</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Development Assessment and Compliance</li> <li>NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>All new building development applications are referred to Community Safety for CPTED assessments</li> </ul>
4.3 Conduct safety audits at facilities and public spaces in hotspot locations	<ul style="list-style-type: none"> <li>All customer service requests for community safety audits to reduce ASB are investigated</li> </ul>	Ongoing	Existing operational budget	<ul style="list-style-type: none"> <li>Branch Libraries and Community Facilities</li> <li>Sporting clubs and facilities</li> <li>Community</li> <li>NSW Police</li> </ul>	<ul style="list-style-type: none"> <li>Community and partners acknowledge Council's role in reducing ASB</li> </ul>

5. PRIORITY FOR COMMUNITY SAFETY:

PERCEIVED AND ACTUAL COMMUNITY SAFETY

**Project:**

Feelings of safety by residents across the LGA are improved.

**Rationale:**

Wollongong Council conducted a Perception of Safety Survey in 2014 that showed people have mixed feelings regarding how safe they feel. They highlighted areas they felt less safe within the City Centre as well as what contributed to these feelings and what Council needed to focus on, moving forward.

**Objective:**

To improve the actual and perceived feelings of safety for residents

**Lead agency/partners:**

Wollongong City Council

**Expected outcome:**

Residents feel safer

Action	Performance measures	Time frames	Funding required	Partners	Milestones
5.1 Conduct a comparative LGA wide Perceptions of Safety Survey with Wollongong residents	<ul style="list-style-type: none"> <li>Comparative Perceptions of Safety Survey findings are published</li> <li>Comparison findings show people feel safer where they live, recreate and shop</li> </ul>	2017	Additional funding	<ul style="list-style-type: none"> <li>Public Relations and Communications</li> <li>External consultant</li> </ul>	<ul style="list-style-type: none"> <li>Comparative Perceptions of Safety Survey is completed</li> <li>Comparative findings of the Perception of Safety Survey provides a benchmark about how the community feels in the public arena</li> </ul>
5.2 Develop and implement projects that reduce residents' concerns highlighted in the comparative Perceptions of Safety Survey	<ul style="list-style-type: none"> <li>Projects that activate public space are developed and implemented</li> </ul>	2018	Subject to funding	<ul style="list-style-type: none"> <li>Community Partnerships and Safety Team</li> </ul>	<ul style="list-style-type: none"> <li>Communities actively participate in the development and implementation of activation projects</li> </ul>

**Note: All previous actions in the priority crime action tables contribute and support improving the community's actual and perceived feelings of safety.**

## Appendices

### Appendix 1: Crime Profile

#### Wollongong LGA Crime Statistics

Information and tables below were created from data retrieved from the Bureau of Crime Statistics and Research using their online crime data tools and crime mapping tool in February 2016 ([www.bocsar.nsw.gov.au](http://www.bocsar.nsw.gov.au)). Data has been extracted and presented covering four prevalent offences in the LGA:

- Assault Non-Domestic Violence
- Assault Domestic Violence
- Malicious Damage to Property (incl. Graffiti)
- Harassment Threatening Behaviour & Private Nuisance

The methodology used to review each offence involved:

1. A general assessment of the offence, ranking it against other NSW LGAs and incident trends over a 36 month period (from Oct 12 to Sept 15), along with looking at the effect of alcohol on this offence
2. Identifying hotspots showing where the offence has most commonly occurred
3. Assessing when offences have been occurring i.e. weekends or weekdays; and
4. Numbers of Adult / Child Offenders; and numbers of Male and Female Victims.

# 1 ASSAULT NON-DOMESTIC VIOLENCE

General	LGA Hot Spots	Priority Incident times	Offenders & Victims
<ul style="list-style-type: none"> <li>• In 2014, Wollongong ranked 60th out of all NSW LGAs for this crime - an improvement from the previous year of 54th in 2013, but worse compared to 62nd in 2012.</li> <li>• The number of Assault Non-Domestic Violence incidents in the LGA declined 9.9% per year from Oct 12 to Sept 15.</li> <li>• Alcohol related Assault Non-Domestic incidents decreased 18.3% per year from Oct 12 to Sept 15.</li> </ul>	<ul style="list-style-type: none"> <li>• Assault Non-Domestic Violence incidents from Oct 12 to Sept 15 occurred in hotspot areas primarily situated in and around town centres namely Berkeley, Corrimal, Dapto, Fairy Meadow, Thirroul, Unanderra, Warrawong, Wollongong and Woonona with Bellambi being the exception.</li> <li>• Assault Non-Domestic Violence rates in all hotspot areas, except Wollongong, were stable over the 3 year period. Wollongong recorded a 9.9% downward trend per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Assault Non-Domestic Violence incidents during weekday nights from Oct 12 to Sept 15 reduced 14.4% per year across the LGA.</li> <li>• Assault Non-Domestic Violence showed 1221 (42.7%) occurred over the weekend whereas 1634 (57.3%) occurred during the weekday over the 3 year period.</li> <li>• Assault Non-Domestic Violence incidents during weekend nights decreased 18.4% per year across the LGA.</li> </ul>	<ul style="list-style-type: none"> <li>• Adult male offending decreased 18.5% per year whereas adult female offending was steady.</li> <li>• Adult offenders were 570 (79.8%) male and 144 (21.2%) female.</li> <li>• Male juvenile offenders were 99 (62.3%) male and 60 (37.7%) female.</li> <li>• Male victim trends decreased 10.5% per year over the LGA whereas adult female victim trends were steady.</li> <li>• A total of 1825 (70.9%) of adult victims were male compared to 749 (29.1%) female.</li> <li>• 255 (59.7%) of juvenile victims were male compared to 172 (41.3%) female.</li> </ul>

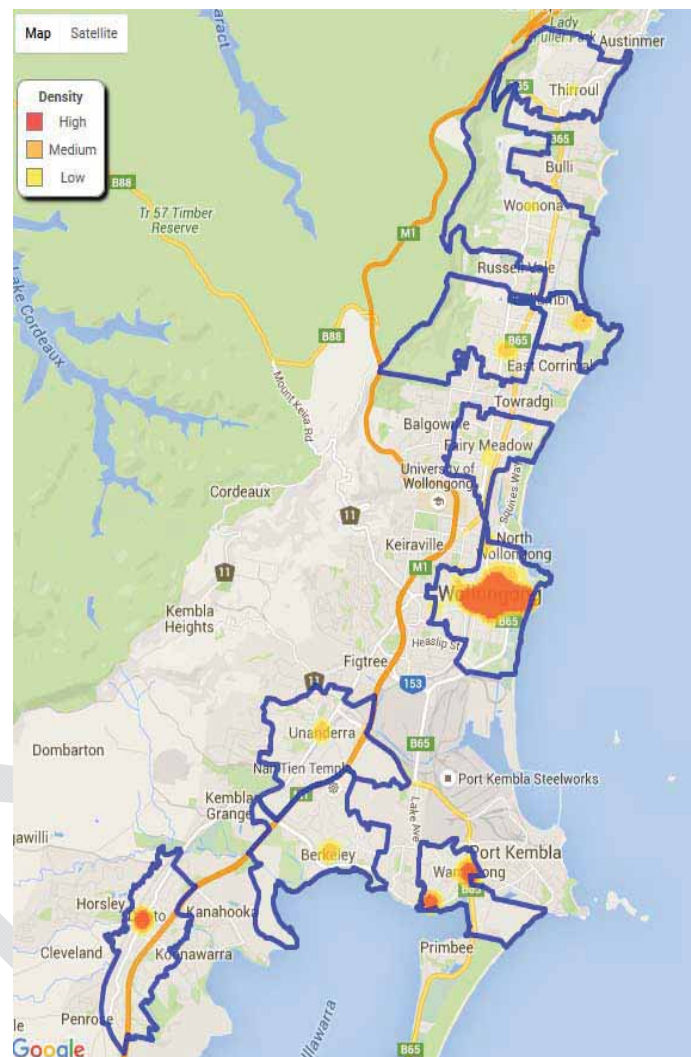


## General

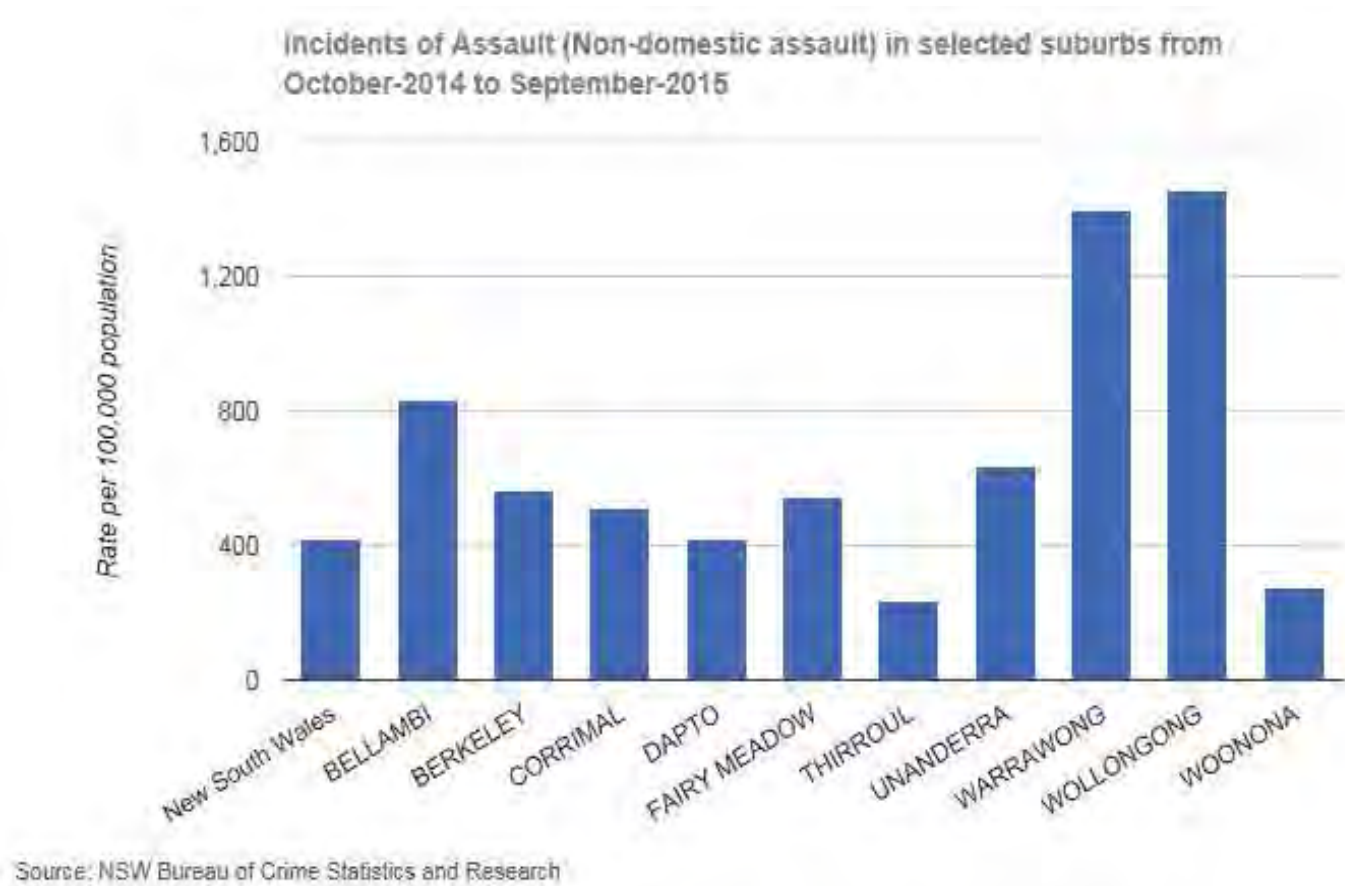
- From 139 Local Government Areas (that have populations greater than 3000), Wollongong LGA ranked 60<sup>th</sup> in 2014 for this offence. This was an improvement from the previous year where the LGA was ranked 54<sup>th</sup>, but worse than 2012, which ranked the LGA 62<sup>nd</sup>. (*LGA ranking tool - <http://bocd.lawlink.nsw.gov.au/bocd/cmd/ranking/Init>*)
- According to NSW Crime Statistics, the number of assault non-domestic violence incidents in the LGA declined 9.9% per year from Oct 12 to Sept 15. This is better compared to NSW state, with the number of incidents declining 5.6% per year.
- Alcohol related assault non-domestic violence across the LGA decreased 18.3% per year from Oct 12 to Sept 15.

## LGA Hot Spot

- Higher assault non-domestic violence rates from Oct 12 to Sept 15 have occurred in certain areas known as hotspots (see Map 1.0: LGA's Assault Non-Domestic Violence Hotspot Areas). Hotspots areas are situated in and around town centres for Berkeley, Corrimal, Dapto, Fairy Meadow, Thirroul, Unanderra, Warrawong, Wollongong and Woonona, with Bellambi being the exception.
- Assaults rates per 100,000 population in all hotspot areas (except Wollongong) have been stable over the 3 year period. Wollongong recorded a 9.9% downward trend per year.
- Graph 1.0: Top Ten Assault Non-Domestic Violence Hotspot Suburb Rates per 100,000 population from Oct 14 to Sept 15, shows **Wollongong, Warrawong and Bellambi as having the highest assault rates.**



Map 1: LGA's Assault Non-Domestic Violence Hotspot Areas



Graph 1: Top Ten Assault Non-Domestic Violence Hotspot Suburbs Rates per 100,000 Population from Oct 14 to Sept 15

## **Priority Incident Times**

- Assaults non-domestic violence incidents during weekday nights from Oct 12 to Sept 15 reduced 14.4% per year across the LGA. Non DV assaults during weekday days over the same time period were stable.
- 35% of non-domestic violence assaults occurred in the weekday days as oppose to 65% occurring during weekday nights.
- Total number of non-domestic violence assaults analysed showed 1221 (42.7%) occurred over the weekend whereas 1634 (57.3%) occurred over the weekday times.
- Assault non-domestic violence incidents during weekend nights decreased 18.4% per year across the LGA. However during weekend days the incident numbers were stable.
- 29% of non-domestic violence assaults occurred in the weekend day as oppose to 71% occurring during weekend nights.

## **Offenders**

- The trend of adult males offending decreased 18.5% per year over the Oct 12 to Sept 15 period whereas adult female offender trends were steady.
- The number of adult male committing this assault offence over the 3 year period totalled 570 (79.8%) – significantly more compared to adult female assault offenders of 144 (21.2%).
- The numbers of child / juvenile male and female offenders consisted of 99 (62.3%) male offenders and 60 (37.7%) female offenders.

## **Victims**

- Adult male victims decreased 10.5% per year from Oct 12 to Sept 15 whereas adult female victim trends were steady.
- The number of adult male victims totalled 1825 (70.9%) over the 3 year period – over double the number of adult female assault victims of 749 (29.1%).
- The numbers of child / juvenile male and female victims consisted of 255 (59.7%) male victims and 172 (41.3%) female victims.

## 2 ASSAULT DOMESTIC VIOLENCE RELATED

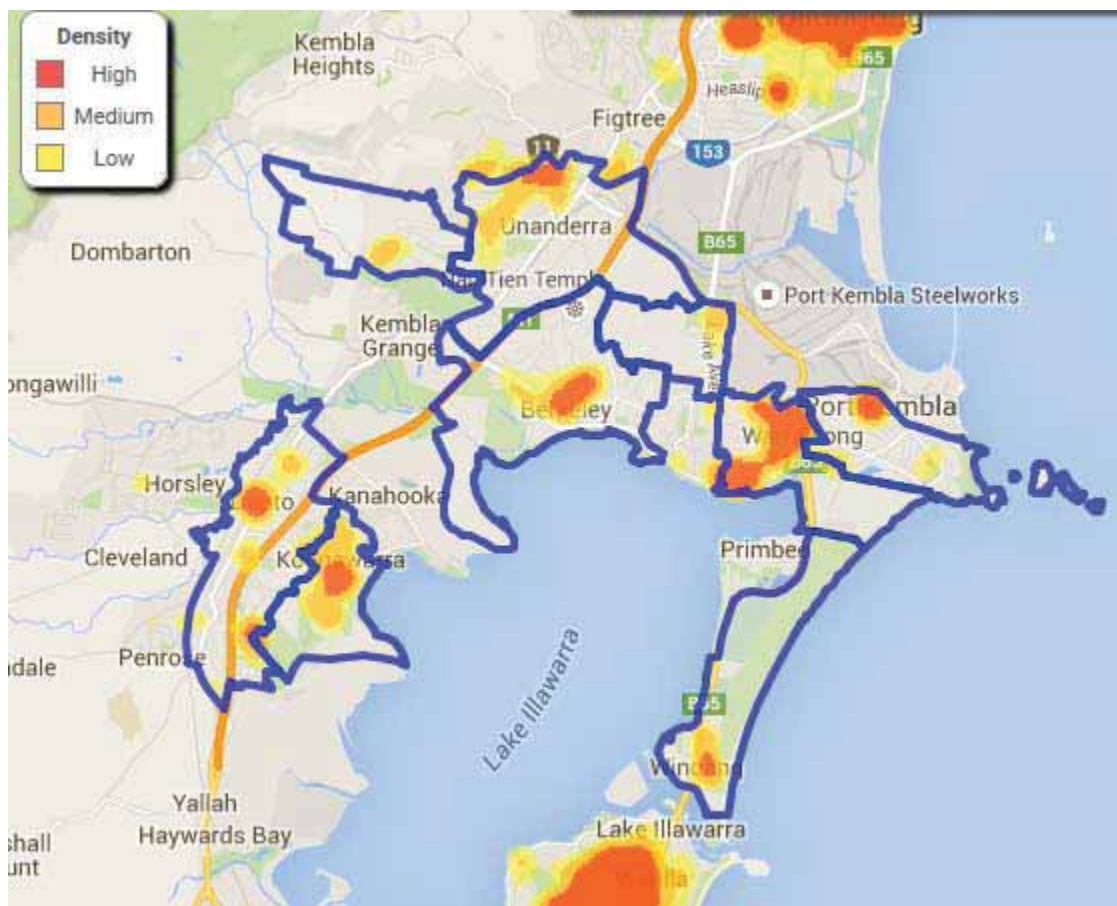
General	LGA Hot spots	Priority Incident times	Offenders and Victims
<ul style="list-style-type: none"> <li>• In 2014, Wollongong ranked 74th out of all NSW LGAs, compared to previous years of 78th in 2013 and 81st in 2012.</li> <li>• The number of Assault Domestic Violence incidents in the LGA was steady from Oct 12 to Sept 15</li> <li>• Alcohol related Assault Domestic Violence incidents decreased 9.4% per year from Oct 12 to Sept 15</li> </ul>	<ul style="list-style-type: none"> <li>• Assault Domestic Violence incidents from Oct 12 to Sept 15 occurred in a number of hotspot areas with incident counts being stable. However downward trends were recorded in Berkeley (down 21.1% per year) and Bellambi (down 22.8% per year).</li> <li>• Assault Domestic Violence rates were the highest in Warrawong, Bellambi and Unanderra from Oct 14 to Sept 15.</li> </ul>	<ul style="list-style-type: none"> <li>• Assault Domestic Violence incidents during weekdays and weekends (day and night) from Oct 12 to Sept 15 were all steady.</li> <li>• Assault Domestic Violence data showed 818 (41.2%) occurred over the weekend whereas 1311 (58.8%) occurred over the weekday times over the 3 year period.</li> </ul>	<ul style="list-style-type: none"> <li>• Adult and juvenile offender trends over the 3 year period for both males and females was steady</li> <li>• Adult offenders were 1063 (87%) male and 158 (13%) female.</li> <li>• Male juvenile offenders were 76 (63.3%) male and 44 (36.7%) female.</li> <li>• Adult male victim trends were steady per year whereas adult female victim trends were down 5.9% per year.</li> <li>• A total of 586 (27.3) of adult victims were male compared to 1567 (72.7%) female.</li> <li>• Juvenile victims were 95 (41.3%) male compared to 135 (58.7%) female.</li> </ul>

## General

- From 139 Local Government Areas (that have populations greater than 3000), Wollongong LGA ranked 74<sup>th</sup> in 2014 for this offence. This ranking compared to the previous two years was higher (worse), with the LGA ranking 78<sup>th</sup> in 2013 and 81<sup>st</sup> in 2012. (*LGA ranking tool* <http://bocd.lawlink.nsw.gov.au/bocd/cmd/ranking/Init>)
- The number of Assault Domestic Violence incidents in the Wollongong LGA was stable from Oct 2012 to Sept 15 - totalling 747 in 12/13, 752 in 13/14 and 730 in 14/15. Over this same period, the number of incidents across the state was stable.
- Alcohol related Domestic Violence Assault incidents across the LGA decreased 9.4% per year from Oct 12 to Sept 15 whereas the NSW state count numbers decreased 4.8% per year.

## LGA Hotspots

- Hotspot maps 2, 3 and 4 show suburbs across the LGA that have high number of Assault Domestic Violence incidents over the Oct 2012 to Sept 2015 period and include:
  - **Map 2:** (Southern Suburbs): Berkeley, Cringila, Dapto, Koonawarra, Port Kembla, Farmborough Hts., Unanderra, Warrawong and Windang
  - **Map 3:** (Central Suburbs): Balgownie, Fairy Meadow, Keiraville, North Wollongong, Tarrawanna and Wollongong
  - **Map 4:** (Northern Suburbs): Bellambi, Bulli, Corrimal, East Corrimal and Woonona
- Trends for domestic related assaults have been steady for most of these suburbs over the 3 year period to Sept 2015. However there are two suburbs that recorded decreases and include Berkeley down 21.1% per year and Bellambi 22.8% per year.
- Graph 2.0: Top Ten Assault Domestic Violence Hotspot Suburb rates (per 100,000 population) show **Warrawong, Bellambi and Unanderra recorded the highest rates over the Oct14 to Sept 15 period.**

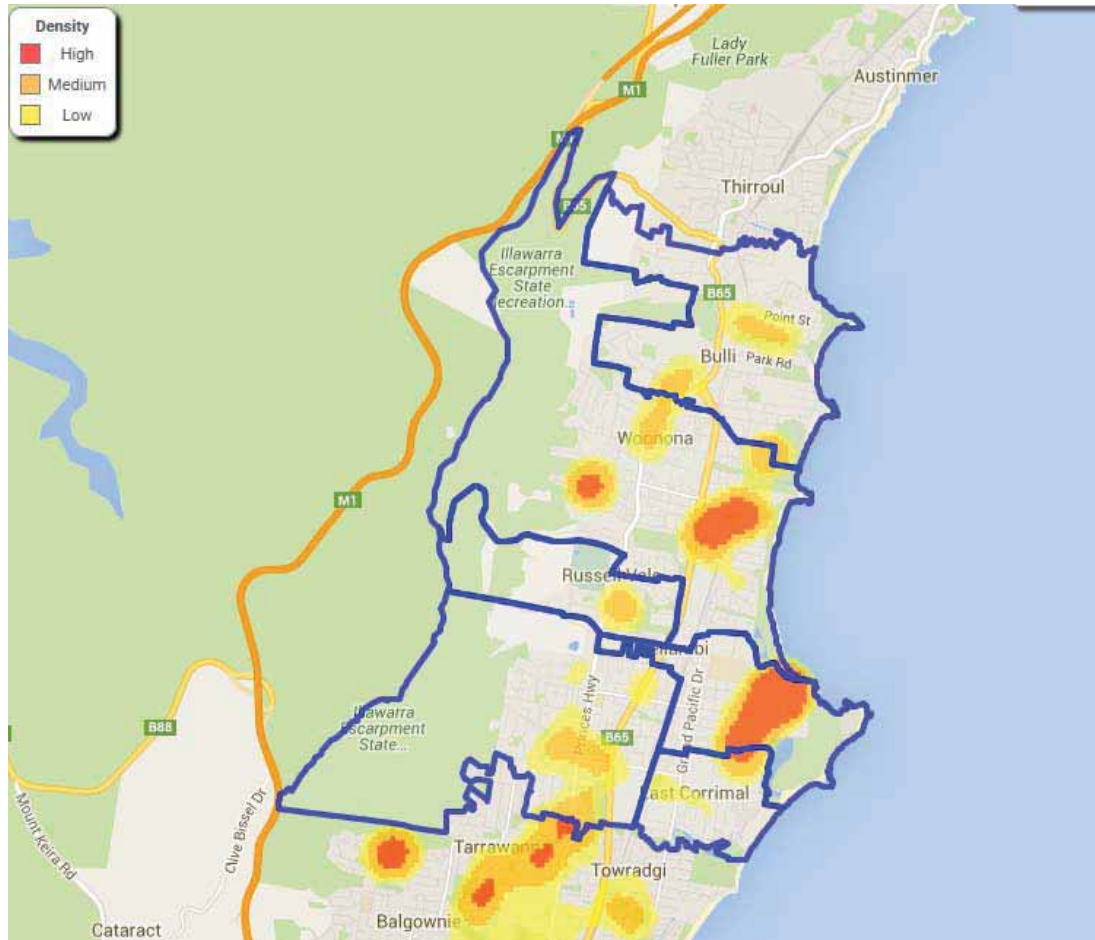


Map 2: LGA Southern Suburb Hotspots for Assault Domestic Violence Related Crime

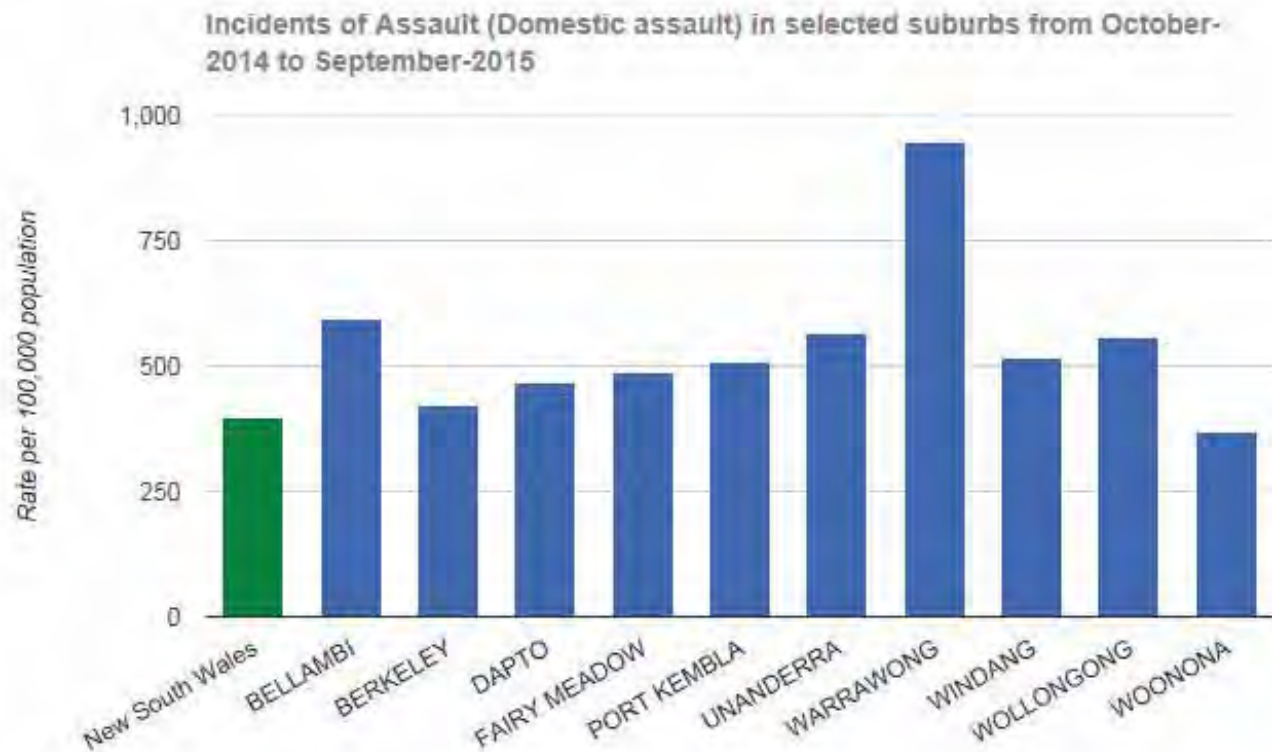








Map 4: LGA Northern Suburb Hotspots for Assault Domestic Violence Related Crime



Source: NSW Bureau of Crime Statistics and Research  
[Glossary](#)

Graph 2: Top Ten Assault Domestic Violence Hotspot Suburbs Rates (Per 100,000 Population) from Oct 14 to Sept 15

## Priority Incident Times

- Domestic Violence Assault incidents during **weekday** nights and days and **weekend** nights and days all recorded steady trends over the Oct 12 to Sept 15 period.
- 40% of Domestic Violence Assaults occurred in the weekend days as oppose to 60% occurring during weekend nights.
- Total number of Domestic Violence Assaults analysed showed 818 (41.2%) occurred over weekends whereas 1311 (58.8%) occurred over weekday times.

## Offenders

- The 3 year trend for adult and juvenile offenders for both male and female was steady.
- The number of adult males committing a Domestic Violence offence over the 3 year period totalled 1063 (87%) whereas adult female offenders tallied 158 (13%).
- The number of child / juvenile male and female offenders compared to adult, were significantly less over the same 3 year period was 76 (63.3%) male offenders and 44 (36.7%) female offenders

## Victims

- The 3 year trend of adult male victims was steady whereas adult female victim trends were down 5.9% per year.
- The number of adult male victims totalled 586 (27.3%) whilst adult female assault victims numbered 1567 (72.7%).
- The child / juvenile male victim 3 year trend was steady with female child victim trend down 20% per year.
- The numbers of child male victims was 95 (41.3%) and female victims 135 (58.7%).

### 3 MALICIOUS DAMAGE TO PROPERTY (INCLUDING. GRAFFITI)

General	LGA Hot spots	Priority Incident times	Offenders
<ul style="list-style-type: none"> <li>In 2014, Wollongong ranked 60<sup>th</sup> out of all NSW LGAs, compared to previous years of 71<sup>st</sup> in 2013 and 69<sup>th</sup> in 2012.</li> <li>The number of incidents in the LGA declined 10.8% per year from Oct 12 to Sept 15</li> <li>Wollongong was ranked 9<sup>th</sup> in the state for the number of graffiti incidents in 2013.</li> </ul>	<ul style="list-style-type: none"> <li>From Oct 12 to Sept 15 the number of incidents in most hotspot areas was steady.</li> <li>However downward trends were recorded in Wollongong (down 16.8% per year), Berkeley (down 12%), Dapto (down 17.5%), Port Kembla (down 23.2%) and Unanderra (down 22.1%).</li> <li>Malicious Damage to Property rates were the highest in Warrawong, Bellambi and Wollongong from Oct 14 to Sept 15</li> </ul>	<ul style="list-style-type: none"> <li>Incidents during weekdays and weekends (day and night) over the Oct 12 to Sept 15 period all recorded downward trends.</li> <li>Malicious Damage to Property data showed 3597 (58.1%) incidents occurred over the weekend whereas 2588 (41.9%) incidents occurred over the weekday times over the 3 year period.</li> </ul>	<ul style="list-style-type: none"> <li>Adult and juvenile offender trends over the 3 year period for both males and females was steady</li> <li>Adult offenders were 748 (87.5%) male and 122 (12.5%) female.</li> <li>Male juvenile offenders were 219 (71.3%) male and 88 (28.7%) female.</li> </ul>

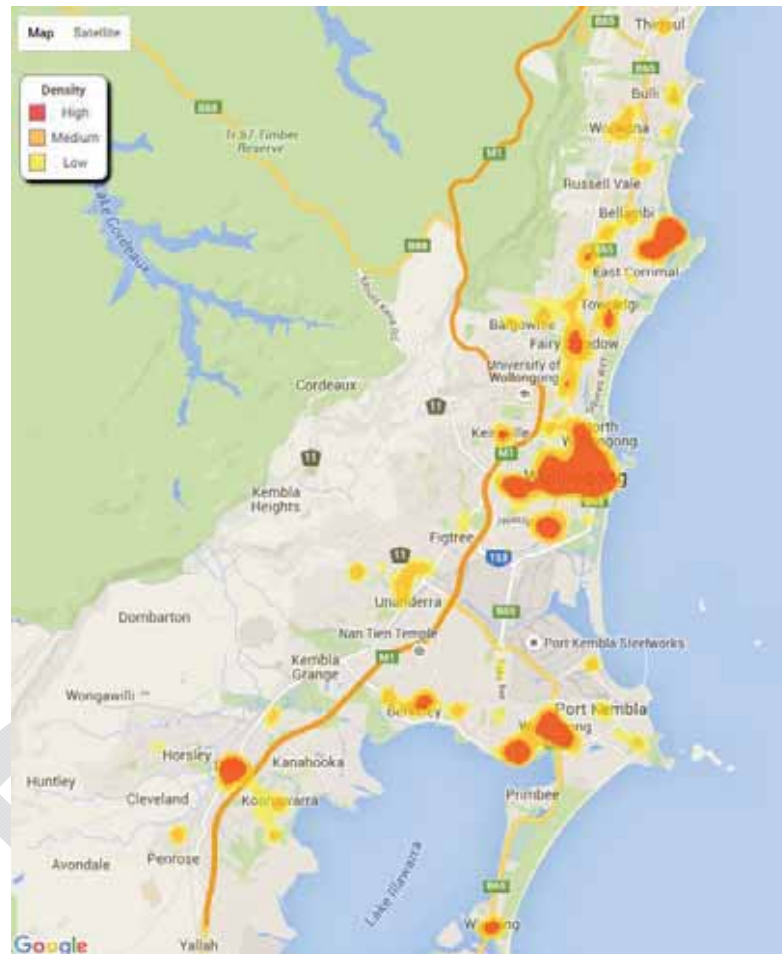
**Note: There are no crime statistics available on Victims for this offence.**

## General

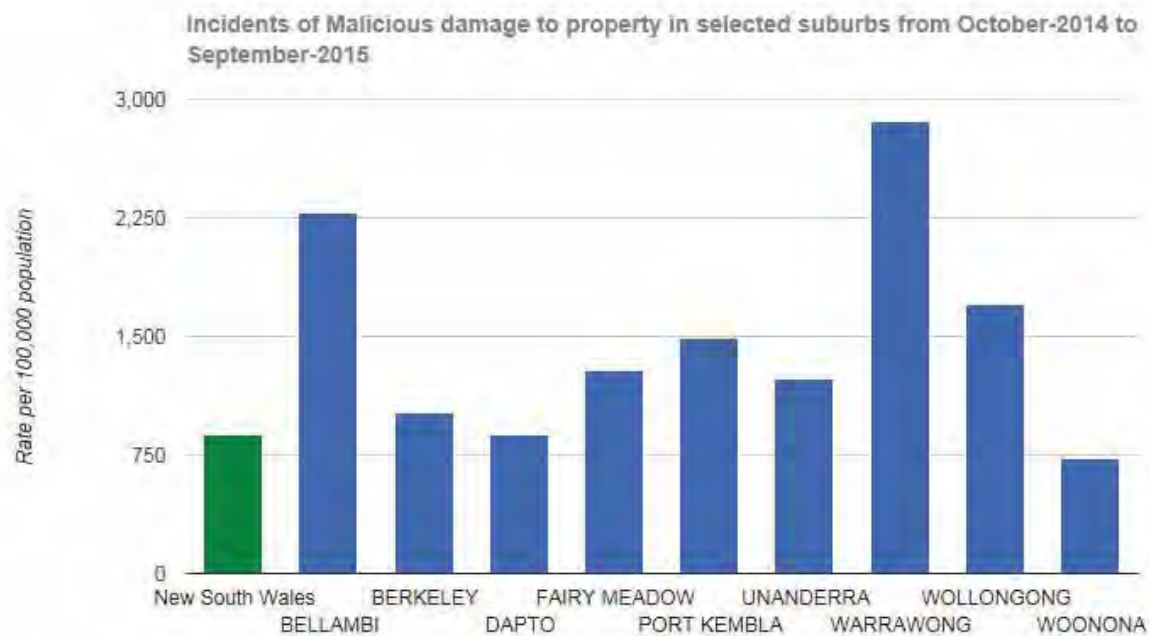
- From 139 Local Government Areas Wollongong LGA ranked 60<sup>th</sup> in 2014 for this crime - worse than the previous years of 71<sup>st</sup> in 2013 and 69<sup>th</sup> in 2012 (LGA ranking tool <http://bocd.lawlink.nsw.gov.au/bocd/cmd/ranking/init>)
- The number of malicious damage to property incidents in the Wollongong LGA declined 10.8% per year over the Oct 12 to Sept 15 period, with 2361 incidents in 2013, 1946 incidents in 2014 and 1878 incidents in 2015. NSW state incident counts declined 9.6% per year over the same period.
- In 2013, Wollongong LGA was ranked 9<sup>th</sup> out of the 139 Local Government Areas for the number of graffiti incidents (NSW Bureau of Crime Statistics and Research 2014).
- A total of 12,146 incidents of graffiti were reported to Council's Graffiti Line over the last four years.
- Across the state in the 13/14 financial year, the premise types most commonly targeted by graffiti were 1.residential dwellings (25.9 per cent), 2.public transport (18.4 per cent), 3.business/commercial (17.1 per cent) and 4.outdoor/public places (14.9 per cent).

## LGA Hot spots

- Map 5 shows suburbs across the LGA that have high malicious damage to property incidents known as hotspots. Areas which experienced high count numbers over the Oct 2012 to Sept 2015 period are Bellambi, Bulli, Corrimal, Thirroul, Woonona, Balgownie, Fairy Meadow, Figtree, Keiraville, Mangerton, Tarrawanna, Towradgi, Wollongong, Berkeley, Coniston, Dapto, Horsley, Koonawarra, Port Kembla, Unanderra, Warrawong and Windang.
- Trends for malicious property to damage have been steady for many of these hotspot suburbs over the 3 year period to Sept 2015. However there were decreases in several suburbs including Wollongong down 16.8% per year, Berkeley down 12% per year, Dapto down 17.5% per year, Port Kembla down 23.2% per year and Unanderra down 22.1% per year.
- Suburbs that recorded the highest incidents over this period included Berkley (260) Dapto (333), Port Kembla (305), Unanderra (282), Warrawong (446), Fairy Meadow (261), Wollongong (1098) and Bellambi (338) and Woonona (234).
- Graph 3.0 shows the top three suburbs with the highest rates per 100,000 population from Oct 14 to Sept 15 were **Warrawong, Bellambi and Wollongong**.



Map 5: Incidents of Malicious Damage to Property Hotspots Oct 12 – Sept 15



Source: NSW Bureau of Crime Statistics and Research  
[Glossary](#)

Graph 3: Top Ten Malicious Damage to Property Hotspot Suburb Rates Per 100,000 population over the Oct 14 to Sept 15 period

### **Priority Incident times**

- Malicious Damage to Property incident times all recorded downward trends per year over the Oct 12 to Sept 15 period as follows: weekday nights down 10.5%, weekday days down 7.2%, weekend nights down 14.1% and weekend days down 12.8%.
- 57.7% of damage to property incidents occurred in the weekend days as opposed to 42.3% occurring during weekend nights. Conversely, 31.4% of occurred during the weekday days and 68.6% during weekday nights.
- Total number of incidents showed 3597 (58.1%) occurred over weekends whereas 2588 (41.9%) occurred over weekday times.

### **Offenders**

- The 3 year trends for adults and juvenile for both males and females damaging property were all steady.
- The number of adult males damaging property over the 3 year period totalled 784 (87.5%) whilst adult female offender numbers were 112 (12.5%).
- The number of child / juvenile offenders numbered 219 (71.3%) for males and 88 (28.7%) for female.



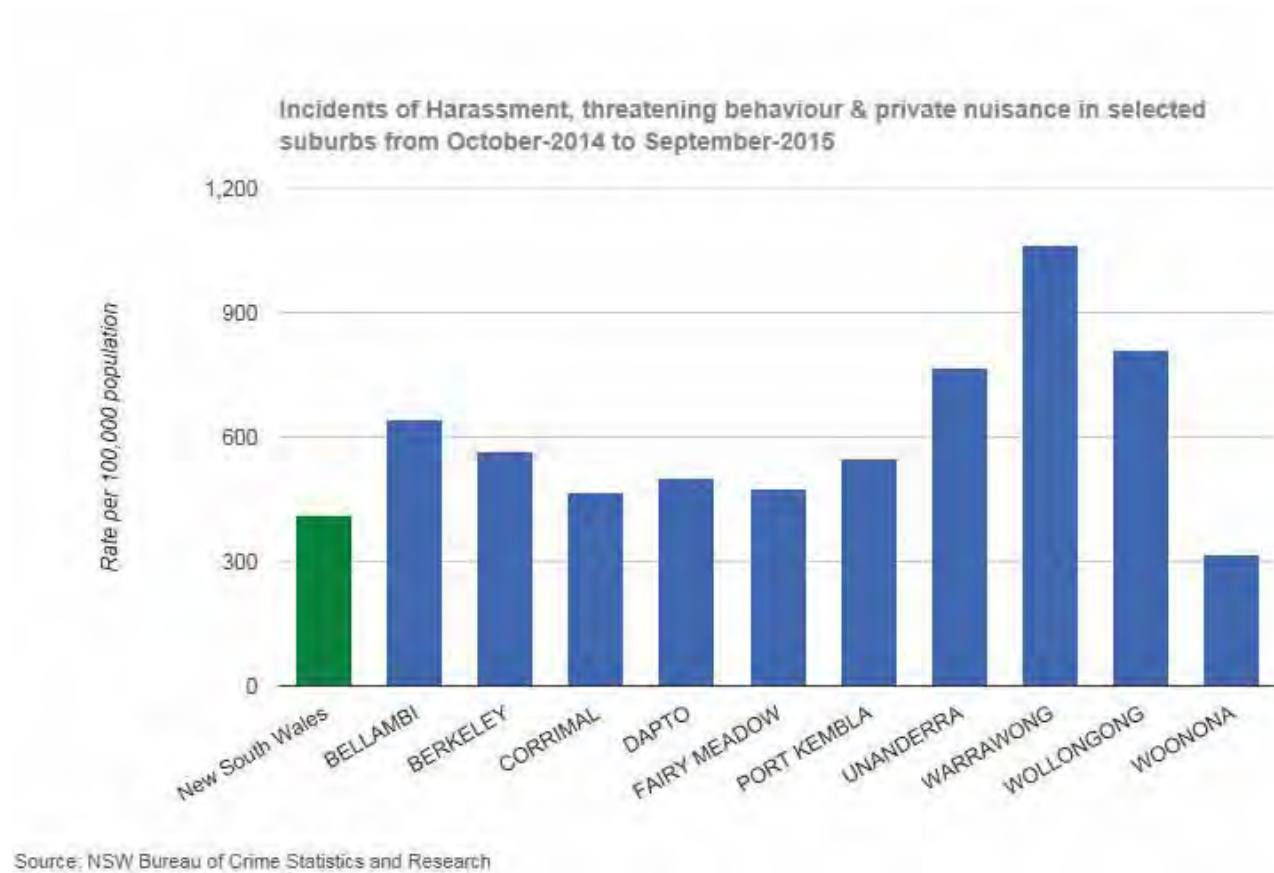
#### 4 ANTI-SOCIAL BEHAVIOUR INCLUDING HARASSMENT AND THREATENING BEHAVIOUR

General	Priority Incident times	Offenders and Victims
<ul style="list-style-type: none"> <li>In 2014, Wollongong ranked 71st out of all NSW LGAs, better than in 2013 where the LGA ranked 69th but worse than 2012 when Wollongong ranked 83rd.</li> <li>The number of anti-social incidents for the LGA from Oct 12 to Sept 15 was recorded as being steady.</li> <li>Alcohol related harassment incidents fell 11.1% per year from Oct 12 to Sept 15 across the LGA.</li> <li>Over Oct 14 to Sept 15, suburbs with the highest anti-social rates per 100,000 population were Wollongong followed by Unanderra.</li> </ul>	<ul style="list-style-type: none"> <li>Harassment incidents during weekend nights and days and weekday days were steady. Weekday night trends declined 8.5% per year from Oct 12 to Sept 15</li> <li>Crime data showed 889 (35.2%) occurred over the weekend whereas 1635 (64.8%) occurred over the weekday times over the 3 year period.</li> </ul>	<ul style="list-style-type: none"> <li>Adult and juvenile offender trends over the 3 year period for both males and females was steady</li> <li>Adult offenders were 816 (88.2%) male and 110 (11.8%) female.</li> <li>Male juvenile offenders were 58 (63%) male and 34 (36%) female.</li> <li>Male victim trends were steady per year whereas adult female victim trends were down 12% per year.</li> <li>A total of 864 (37.6%) of adult victims were male compared to 1430 (62.4%) female.</li> <li>Juvenile victims were 80 (35.23%) male compared to 147 (64.8%) female.</li> </ul>

*Note: There are no hotspot crime statistics for this offence.*

## General

- From 139 Local Government Areas, Wollongong ranked 71<sup>st</sup> in 2014 for this offence – two places better than the previous year (2013) where the LGA ranked 69<sup>th</sup>. However in 2012 Wollongong ranked 83<sup>rd</sup> place. (*LGA ranking tool* - <http://bocd.lawlink.nsw.gov.au/bocd/cmd/ranking/init>).
- According to NSW Crime Statistics the trend for anti-social incidents for the LGA was recorded as being steady over the period Oct 12 to Sept 15 - totalling 856 (yr. 12/13), 855 (yr. 13/14) and 813 (yr. 14/15). This marries with the trend for the NSW state of also being steady.
- The number of alcohol related harassment incidents fell 11.1% per year over Oct 12 to Sept 15 across the LGA. The NSW trend was steady over the same period.
- The top ten suburbs that recorded the highest number of incidents over the 3 year period included Wollongong (475), Dapto (187), Warrawong (150), Berkeley (131), Bellambi (113), Woonona (113), Unanderra (112), Fairy Meadow (103), Port Kembla (101) and Corrimal (86). The 3 year trend for all suburbs was steady. However the rates per 100,000 population shown in Graph 4.0 reveal Warrawong having the highest rate followed by Wollongong and Unanderra.



Graph 4: Top ten suburbs showing incidents of harassment rates per 100,000 population

## Priority Incident Times

- Harassment incident trends over the 3 year period during weekend nights and days and weekday days were steady. Weekday night trends declined 8.5% per year.
- 42.7% of harassment incidents occurred in the weekend days as oppose to 57.3% occurring during weekend nights. Conversely, 70.1% of incidents occurred during the weekday days and 29.9% during weekday nights.
- Total number of incidents showed 889 (35.2%) occurred over weekends whereas 1635 (64.8%) occurred over weekday times.

## Offenders

- The 3 year incident trends for adults and juvenile for both males and females committing anti-social behaviour was steady.
- The number of adult males charged for harassment over the 3 year period totalled 816 (88.2%) whilst adult female offenders numbered 110 (11.8%).
- The number of child / juvenile offenders over the same 3 year period was 58 (63%) for male offenders and 34 (36%) for female offenders.

## Victims

- The 3 year trend for adult female victims was steady whereas adult male victim trends decline 12% per year.
- The number of adult male harassment victims over the 3 year period totalled 864 (37.6%), whilst adult female harassment victims tallied 1430 (62.4%).
- The numbers of child male harassment victims was 80 (35.2%) and female victims 147 (64.8%).

## APPENDIX 2: DEMOGRAPHIC PROFILE FOR WOLLONGONG LGA

The table below (unless noted otherwise) provides data about people living in the Wollongong LGA, based on the Australian Bureau of Statistics Population and Housing 2011 Census. The information is delivered and maintained by the census data service .id.

<b>Who We Are?</b>	
<b>Number of People</b>	192,418 usual resident population (95,247 males and 97,171 females).
<b>Age Distribution</b>	<p>Median age 38 years.</p> <p>In 2011:</p> <ul style="list-style-type: none"> <li>• 25.3% of the population was aged between 0 and 19</li> <li>• 14% were aged 20-29 years</li> <li>• 26.3% were aged 30-49 years</li> <li>• 18.1% were aged 50-64 years</li> <li>• 16.3% were aged over 65 years; compared with the following respective figures for NSW 25.6%, 13.3%, 27.9%, 18.5%, and 14.7%.</li> </ul> <p>The largest changes in age structure in Wollongong between 2006 and 2011 were in the age groups:</p> <ul style="list-style-type: none"> <li>• 60 to 64 (+ 1,687 persons)</li> <li>• 50 to 54 (+ 1,666 persons)</li> <li>• 85 and over (+ 1,122 persons)</li> <li>• 25 to 29 (+ 1,107 persons)</li> </ul>
<b>Diversity: Cultural Identity, Place of Birth, Language Spoken at Home</b>	<p>A total of 4,237 people identified as either Aboriginal or Torres Strait Islander, representing 2.2% of the total population.</p> <p>21.8% of Wollongong's population were born overseas and 14.3% were born in a non-English speaking (NES) country with the dominant NES countries being FYR Macedonia, Italy, China and Germany.</p> <p>16.7% spoke a language other than English at home with the most common languages other than English spoken at home being:</p> <ul style="list-style-type: none"> <li>• Macedonian 2.7% (5,243 persons)</li> <li>• Italian 2.2% (4,170 persons)</li> <li>• Arabic 1.1% (2,169 persons)</li> <li>• Mandarin 1.1% (2,063 persons)</li> </ul>

	<ul style="list-style-type: none"> <li>• Greek 0.9% (1,818 persons)</li> <li>• Spanish 0.9% (1,645 persons)</li> <li>• Serbian 0.8% (1,511 persons).</li> </ul>
<b>Income Distribution</b>	<p>Household income is an important indicator of socio-economic status. The amount of income a family generates is linked to a number of factors: the number of workers in the household; the percentage of people unemployed or on other income support benefits, and the type of employment by the household members.</p> <p>The median household income was \$1,101 per week which was \$136 less than the NSW median, with 7% of Wollongong total households classed as low income (earning between \$0 and \$299), compared to 5.9% in NSW.</p> <p>Median household incomes ranged from a low of \$669 in the suburb of Warrawong to a high of \$2,029 in the suburbs of Cordeaux Heights, Mt Kembla and Kembla Heights.</p>
<b>Housing</b>	<p>In 2011:</p> <ul style="list-style-type: none"> <li>• 34.3% of the population fully owned their dwelling</li> <li>• 30.1% were purchasing i.e. have a mortgage</li> <li>• 29.3% were renting</li> <li>• 9.7% were experiencing mortgage stress</li> <li>• 31.5% were experiencing rental stress.</li> </ul>

<b>Family Structure and Household</b>	<p>In 2011:</p> <ul style="list-style-type: none"> <li>• 30.3% of families were couple families with child(ren)</li> <li>• 24.3% couples without children</li> <li>• 11.7% one parent families</li> <li>• 25% lone person households.</li> </ul> <p>Between 1996 and 2011 the largest changes of household types were:</p> <ul style="list-style-type: none"> <li>• lone person ↑ 3934</li> <li>• couples without children ↑</li> <li>• 2451 and one parent families ↑ 1722.</li> </ul>
<b>Employment and Workforce</b>	<p>In 2011, 7% of Wollongong's labour force was classed as unemployed compared to 5.9% in New South Wales. Wollongong's workforce is comprised of:</p> <ul style="list-style-type: none"> <li>• 56% full time workers</li> <li>• 35.1% part time workers</li> <li>• 22.5% main occupation areas were professionals</li> <li>• 15.3% technicians and trades workers</li> <li>• 14.2% clerical and administrative workers</li> <li>• A total percent of 15.8% of Wollongong's labour force aged 15-24 years were classed as unemployed.</li> </ul> <p>A quarter, (25.7%) of Wollongong's labour force lives outside the LGA and consequently have to commute from another LGA to Wollongong.</p>
<b>People with a Disability and Carers</b>	<p>5.8% of the population reported needing assistance with core activities whilst 12.8% of people provided unpaid care.</p>
<b>Access to Information Technology</b>	<p>In 2011, 71% (compared with 55.1% in 2006) of Wollongong's households had an internet connection compared to 73.3% in NSW. Broadband connection varied from a low of 44.5% in Warrawong to a high of 83.7% in Cordeaux Heights, Mt Kembla and Kembla Heights.</p>

<b>Educational Attainment and Qualifications</b>	<p>In Wollongong 25% of people were attending an educational institution. Of these, 7.8% were in primary school, 6.4% in secondary school and 8.6% in a tertiary or technical institution.</p> <p>45.5% of the population identified as having an educational qualification.</p>
<b>Homelessness</b>	<p>In 2011 it was estimated there were 524 homeless persons in the LGA.</p> <p><b>Source:</b> <i>ABS, Census of Population and Housing: Estimating Homelessness 2011, cat no. 2049</i></p>
<b>University</b>	<p>In 2016 there were 31,464 students enrolled at the University of Wollongong with 24,427 comprising of Australian nationals and 12,811 international students.</p> <p><b>Source:</b> <a href="http://www.uow.edu.au/about/keystatistics/index.html">www.uow.edu.au/about/keystatistics/index.html</a> viewed Jan 2016</p>
<b>Tourism</b>	<p>Four year annual average travel statistics for Wollongong until September 2013:</p> <ul style="list-style-type: none"> <li>• 2.4 million domestic daytrip travel</li> <li>• 42,300 international visitors</li> <li>• 1.28 million International visitor nights with an average stay of 30.3 nights.</li> </ul> <p><b>Source:</b> <i>Four year averages to 2013. Sources: ABS Population Estimates - Local Government Areas - Cat. No. 3235.0. ABS Count of Australian Businesses - Cat. No. 8165.0. International Visitor Survey and National Visitor Survey, Tourism Research Australia.</i></p>



## References

Australian Bureau of Statistics, 2015, *Victims of Crime Survey 2013-2014*, viewed 12 and 13 January 2016

<http://www.abs.gov.au/AUSSTATS/abs@.nsf>

NSW Bureau of Crime Statistics and Research, NSW Department of Justice, viewed 23 December 2015, 8 and 14 January 2016

[http://www.bocsar.nsw.gov.au/Pages/bocsar\\_crime\\_stats/bocsar\\_crime\\_stats.aspx](http://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_crime_stats.aspx)

NSW Bureau of Crime Statistics and Research, NSW Department of Justice, *Graffiti Facts and Figures*, viewed 12 January 2016

[http://www.crimeprevention.nsw.gov.au/Pages/cpd/protectcommunity/graffitivandalism/facts\\_and\\_figures.aspx](http://www.crimeprevention.nsw.gov.au/Pages/cpd/protectcommunity/graffitivandalism/facts_and_figures.aspx)

Wollongong City Council, November 2015, *Perceptions of Safety Survey Key Findings*, Wollongong City Council

Wollongong City Council, *Annual Plan 2015-16*, Wollongong City Council

NSW Police Force, January 2010, *Safer by Design Manual Version 2.0*, NSW Police Force Police Headquarters, Parramatta NSW

Wollongong City Council *Cultural Plan 2014-2018*, Wollongong City Council

Wollongong City Council *Community Safety Plan 2012-2016. a crime prevention strategy*, Wollongong City Council

Draft

# COMMUNITY SAFETY PLAN

Snapshot

2012 - 2016



This snapshot provides data demonstrating the impact of strategies in the community safety plan 2012-16.

## CRIME TRENDS

NSW Bureau of Crime Statistics and Research (BOCSAR) tells us crime is heading down.

Malicious damage to property including graffiti

DOWN



Harassment, threatening behaviour, public nuisance

EVEN



ASSAULT - domestic violence related

EVEN



ASSAULT - non domestic violence (alcohol related)

DOWN



## LOCAL CRIME

Continues to be prevented and crime is reduced.

25 square metres of graffiti removed on Graffiti Removal Day with Dapto Rotary Club

12,146 Reports to the Graffiti Line

**GraffitiLine**

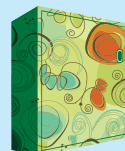
NEW MURALS

Pioneer Hall in MacCabe Park, Thirroul public toilet and Bellambi Surf Club

58 Bus shelter murals



City Centre Special Rate Levy includes rapid graffiti removal in the City Centre



40 Signal boxes with new murals

## PUBLIC SPACE

Safety is considered in planning and design of all developments.

94 Community safety audits

7 Alcohol Free Zones

803 Development Applications assessed using Crime Prevention through Environmental Design criteria

18 Parks and public places are now Alcohol Prohibited Places

335 Liquor licence applications and enquiries



# IMPROVEMENTS

Everyone in Council works to improve community safety.

We use public art, activate empty shops and buildings and hold community events like Viva la Gong and support live music venues to create people-friendly spaces.



Lifeguards hold water and surf safe sessions with overseas tertiary students and community members unfamiliar with our coast.



We also facilitate community development projects in places like Berkeley, Warrawong and Bellambi supporting community's strengths.

Revitalised building façades in the City Centre make for a lively and attractive city centre.



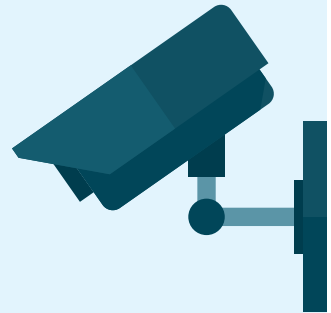
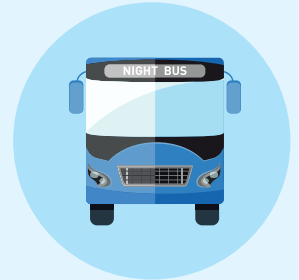
We encourage major events, such as festivals, markets, that improve how people feel in the City.



Ranger Services help the community with responses to animal control, illegal dumping of rubbish and noise complaints.

If you love events like Warrawong's South American Laneway Festival, NAIDOC week, Seniors Week, Youth Week, Refugee Week, Reconciliation Week, Twilight Markets, Australia Day, fEVER and Living Books, then you're celebrating our diversity.

Our Evening Economy Action Plan is key to a safe and inclusive Wollongong night life with CCTV coverage, better late night transport and a responsible drinking culture encouraged at all late night venues.



## FEEDBACK

We asked and you told us - from the Perceptions of Safety Survey 2015.

90%

OF RESIDENTS  
FEEL COMPLETELY  
OR MOSTLY SAFE  
IN THEIR OWN  
NEIGHBOURHOOD

70%

FEEL SATISFIED  
OR VERY  
SATISFIED  
WITH HOW  
SAFE THEY FEEL

36%

PEOPLE WERE  
CONCERNED  
ABOUT  
ANTI-SOCIAL  
BEHAVIOUR IN  
THE CITY CENTRE

23.2%

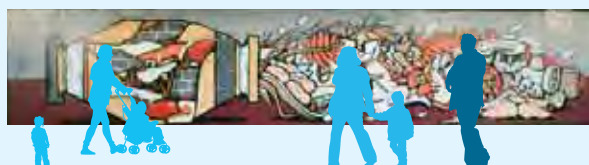
WERE  
CONCERNED  
ABOUT VIOLENT  
BEHAVIOUR

33%

WERE  
CONCERNED  
ABOUT DRUG  
RELATED ISSUES

24.5%

WERE  
CONCERNED  
ABOUT ALCOHOL  
RELATED ISSUES



PEOPLE OF ALL AGES THOUGHT  
PUBLIC ART LOOKED GREAT IN THE CITY



PEOPLE THOUGHT TAGGING –  
“made a place look dirty, was a form of littering and  
sent a message that damaging property was ok”

## PEOPLE FEAR

INTOXICATED  
STRANGERS  
IN PUBLIC AND  
RESIDENTIAL  
ESTATES

UNLIT AND  
ISOLATED PLACES  
WITH DERELICT  
BUILDINGS

GRAFFITI  
TAGGING

DOMESTIC AND  
OTHER VIOLENCE,  
DRUG DISTRIBUTION  
AND DRUG AND  
ALCOHOL ABUSE  
- although these  
crimes are going  
down

## What next !

We'll be working with the NSW Police commands in Lake Illawarra and Wollongong, using data and information from community groups, crime statistics from BOCSAR and the Australian Bureau of Statistics Crime Victimization Survey 2013/14 to develop a new Plan. We'll focus on:

- Assault- Domestic and non-domestic (alcohol related)
- Malicious damage including graffiti
- Anti-social behaviour including harassment and threatening behaviour
- Perceived and actual community safety

## BACKGROUND

This policy has been developed to recognize that Council plays an important role in ensuring the safety of visitors and a commitment to improving the natural environment and maintenance of Council property by deterring the use of glass bottles and glass containers to Wollongong Beaches, Rock Pools, Public Swimming Pools and Council sportsgrounds.

Currently, all licences issued over Council sportsgrounds prohibits the licensee from using glass containers for the storage or for the serving of food or beverages or for any other purposes in the licensed area.

## OBJECTIVE

The main objectives of this policy are to:

- 1 Maximise public safety at beaches, pools Council sportsgrounds.
- 2 Provide community leadership in taking measures to protect the health and social wellbeing of the community.
- 3 Improve the public amenity and maintenance of Council property.

## POLICY STATEMENT

This policy recognises that Council has:

- an obligation to reduce the hazards of providing glass bottles and glass containers at Beaches, Rock Pools, Public Swimming Pools and Council sportsgrounds and the potential public liability litigation in the event of a severe laceration to visitors.
- an obligation to promote public health outcomes where Council provides assets and services intended to be of a benefit to members of the community.
- a commitment to improve the natural environment and the amenity of the local area by reducing the hazards associated with broken glass to visitors.

## STATEMENT OF PROCEDURES

### 1 Signage

Wollongong Beaches, Rock Pools and Public Swimming Pools are currently signposted to advise the prohibition of the use of glass bottles and glass containers.

Signs will be installed in prominent places at Council sportsgrounds and will include the no glass bottle/container symbol.

### 2 Legislation

Under the NSW Local Government Act 1993 Council has the power to:

- erect suitably worded and strategically places notices in 'public places' (such places including but not limited to public reserves, Crown reserves, public bathing reserves, public baths, public swimming pools, public parks and public roads) within the local government area of prohibiting glass bottles and containers;
- serve, by means of an authorized person, a penalty notice upon any person who fails to comply with the terms of any such notice; and
- demand, by means of an authorised person, the name and address of any reasonably suspected of failing to comply with the terms of any such notice.

### 3 Implementation of Policy

Wollongong City Council's Enforcement Policy will guide the implementation of the Policy, with the view that this Policy will be supported by persuasion and self-policing in the first instance, and then punitive enforcement as required subject to resourcing.

SUMMARY SHEET	
Responsible Division	Property and Recreation
Date adopted by Council	[To be inserted by Corporate Governance]
Date of previous adoptions	8 April 2013, 6 July 2007
Date of next review	[List date - Not more than 4 years from adoption]
Responsible Manager	Recreation Services Manager
Authorised by	Manager Property and Recreation





**T15/41 - Refurbishment of  
Bulli Surf Lifesaving Club**



@10321-01.mxd

This report has been prepared by Jacobs for the client and is for the client's use only. It is not to be used for any other purpose without the written consent of Jacobs. The client is responsible for ensuring the accuracy of the information provided. The client is responsible for ensuring the accuracy of the information provided.





JACOBS



**T16/16 Debris Control Structure**  
adjacent to Cosgrove Avenue, Keiraville




@10400-01.mxd

This report (RPA) has been prepared by Jacobs for the client's use only. It is not to be used for any other purpose. The client is responsible for the accuracy and completeness of the information provided. Jacobs is not responsible for any errors or omissions in this report. The client is responsible for the accuracy and completeness of the information provided. Jacobs is not responsible for any errors or omissions in this report.



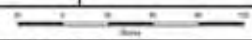
**JACOBS**



 **Leased Area Wollongong Golf Course**



GIS ref: g09867.01
Printed: 5/03/2015
Aerial Photography: 2014



This map is provided as a guide only and does not constitute a contract. It is subject to the terms and conditions of the relevant planning instrument. The map is not to be used for any purpose other than that for which it was prepared. The map is not to be used for any purpose other than that for which it was prepared. The map is not to be used for any purpose other than that for which it was prepared.

PARTNERS IN  
AN INNOVATIVE  
AND PROSPEROUS  
AUSTRALIA

# NGA16 PROGRAM & REGISTRATION

NATIONAL GENERAL ASSEMBLY  
CANBERRA 19-22 JUNE 2016

REGISTER ONLINE  
[WWW.ALGA.ASN.AU](http://WWW.ALGA.ASN.AU)



AUSTRALIAN LOCAL  
GOVERNMENT ASSOCIATION

# PRESIDENT'S WELCOME

Key drivers of success for the councils of the future will include the ability to innovate and adapt to change. Today's councillors must be open to new ideas, innovative ways of engaging citizens and making interactions with councils simpler, faster and easier.

Under the theme **Partners in an Innovative and Prosperous Australia**, delegates at this year's National General Assembly of Local Government (NGA) will look at the many ways local government is being innovative both here and overseas. As a responsive, pragmatic and dynamic level of government, councils innovate with technology, with their resources and in practical ways within their organisations and communities. Through the NGA, delegates will be able to learn from the ideas and experiences of other councils and gain valuable ideas for their own councils.

Our theme also underlines the contribution local government makes to national economic prosperity and productivity, a contribution which often goes unacknowledged. We have a significant role to play in fostering

and enhancing the prosperity of our communities. Nationally, local government:

- employs 189,000 Australians (around 10 per cent of the total public sector);
- owns and manages non-financial assets with a replacement value of \$437 million;
- raises around 3.4 per cent of Australia's total taxation revenue per annum; and
- has annual operational expenditure of around \$33 billion, or just under 6 per cent of total public sector spending.

Local government plays a significant role in the national economy and councils play critical roles in their local economies. I encourage you to attend the NGA, and to work with myself and the ALGA Board, as we explore opportunities to strengthen the contribution that local government makes.

With a Federal election due this year, the NGA offers an opportunity to elevate local government issues to the Federal level. In the lead up to this election, ALGA, in conjunction with State and Territory Associations, will undertake a significant

advocacy program to ensure that the promises made by the major political parties address the needs of our councils and our communities. The influence of local government is reflected in the ongoing high level political engagement the NGA receives, and this year will be no different. I have invited the Prime Minister, Leader of the Opposition, Leader of the Australian Greens, Minister for Local Government and Shadow Minister for Local Government to address the NGA and to give you the opportunity to hear directly from them in the lead up to the election.

The NGA program this year features a number of preeminent speakers who will share their views and encourage our thinking on the two key areas of our theme: innovation and prosperity. We have panel sessions that allow for interaction with these presenters and other thought leaders, as well as breakout sessions to give you the maximum opportunity to gain insights which you can take back to your council.

I invite you to join me and your colleagues at this year's NGA held from 19-22 June in Canberra.



**Mayor Troy Pickard**  
PRESIDENT

## CONTENTS

President's welcome .....	2	Regional Cooperation & Development Forum 2016....	8	Social functions.....	11
Provisional program.....	3	Key dates.....	9	Partner tours .....	12
Panel sessions.....	4	Motions for debate.....	9	Accommodation .....	12
Concurrent sessions.....	4	Voting procedures .....	9	Coach transfers.....	14
Associated events .....	5	Registration details .....	10	Car parking.....	14
Speaker profiles .....	6			Registration form .....	15



## PROVISIONAL PROGRAM

### PARTNERS IN AN INNOVATIVE AND PROSPEROUS AUSTRALIA

SUNDAY 19 JUNE	
5.00-7.00pm	Welcome Reception

MONDAY 20 JUNE	
9.00 am	Opening Ceremony
9.20 am	Prime Minister, <b>the Hon Malcolm Turnbull MP</b> (invited)
10.00 am	KEYNOTE SPEAKER <b>George Megalogenis</b>
10.30 am	MORNING TEA
11.00 am	PANEL SESSION The future of Local Government
12.30 pm	LUNCH
1.30 pm	PANEL SESSION Surfing the wave of disruption
2.30 pm	Leader of the Australian Greens, <b>Senator Dr Richard Di Natale</b>
3.00 pm	AFTERNOON TEA
3.30 pm	Debate on Motions
5.00 pm	CLOSE

TUESDAY 21 JUNE	
9.00 am	Minister for Major Projects, Territories and Local Government, <b>the Hon Paul Fletcher MP</b> (invited)
9.30 am	KEYNOTE SPEAKER <b>Pip Marlow</b> , Managing Director, Microsoft
10.00 am	Speaker Q&A
10.30 am	MORNING TEA
11.00 am	PANEL SESSION Digital transformation at the Local Government level
12.30 pm	LUNCH
1.30 pm	CONCURRENT SESSIONS <ul style="list-style-type: none"> <li>• New approaches to improve your business</li> <li>• The infrastructure challenge</li> <li>• Innovative approaches to the environment</li> <li>• Northern Australia</li> </ul>
3.00 pm	AFTERNOON TEA
3.30 pm	Leader of the Opposition, <b>the Hon Bill Shorten MP</b> (invited)
4.00 pm	Debate on Motions
5.00 pm	CLOSE

WEDNESDAY 22 JUNE	
9.00 am	Shadow Minister for Regional Development and Local Government, <b>the Hon Julie Collins MP</b> (invited)
9.30 am	Debate on Motions
10.30 am	MORNING TEA
11.00 am	PANEL SESSION Local Government's role in facilitating prosperity
12.30 pm	KEYNOTE SPEAKER <b>Robert de Castella AO MBE</b>
1.00 pm	LUNCH/CLOSE

## SPONSORS



Australian Government  
Department of Infrastructure  
and Regional Development

## PANEL SESSIONS

MONDAY 11.00-12.30PM

### **The future of Local Government**

As the role of local government continues to change, anticipating the challenges of the next 20 years and determining how councils are best placed to respond is critical. As the level of government closest to Australians, local government must continue to provide high quality services and respond to the myriad of challenges faced by local communities. External factors such as rate capping, amalgamation processes, reductions in grant funding and changing expectations of local government's role are placing increasing pressure on councils' ability to perform. However, it is often under these conditions that innovation thrives as councils look to deliver more with less. How are councils responding to these challenges?

MONDAY 1.30-2.30PM

### **Surfing the wave of Disruption**

Traditional service delivery and business models are changing – recently we've seen the rapid growth of AirBnB and Uber which are challenging how the hotel and the taxi industries operate. The capacity for organisations to accommodate change is increasingly becoming an important determinant of their success. As the pace of change increases and the length of time strategic planning activities can cover reduces, councils are being forced re-examine their planning processes, regulatory frameworks and their basic assumptions as well as their ability to respond to changes within the community.

TUESDAY 11.00-12.30PM

### **Digital transformation at the Local Government level**

Local government has a long history of being an early-adopter of new technologies and of using its own resources to drive innovation based on local knowledge and expertise. Technology can improve collaboration between the public, private and the not-for profit sectors to drive innovation, solve complex problems, and enhance community engagement. How can technology be used to transform council businesses and enable innovation in your community?

WEDNESDAY 11.00-12.30PM

### **Local Government's role in facilitating prosperity**

Strong leadership and the ability to access social and economic capital are crucial preconditions for prosperity. Local government strives, wherever possible, to assist communities to enhance their capacity to respond to challenges and identify opportunities to build resilience and increase overall prosperity. Being able to grow social capital, support entrepreneurs and attract investment are fundamental to the growth in local and regional productivity. What strategies can councils employ to foster prosperity in their community and region?

TUESDAY 1.30-3.00PM

## CONCURRENT SESSIONS

### **New approaches to improve your business**

Smart councils are required to use information and communication technologies to enhance quality services and infrastructure. The application of new information, data and knowledge generated through the application of new technologies will improve performance, interactivity with community and reduce costs. As our cities become smarter, councils need more careful consideration of three main areas: technologies; infrastructure and planning; and regulation and markets. In this session delegates will have the opportunity to explore the content covered in the Digital Transformation at the Local Government Level panel session and interact further with our highly experienced international colleagues from Boston.

### **The infrastructure challenge**

Local government community infrastructure underpins and binds many communities. For many Australians, council managed facilities are where their club meets, their kids play and their families learn to swim. In addition to this it is well recognised that every journey starts and ends on a local road. In February Infrastructure Australia published the Australian Infrastructure Plan which sets out a blueprint for infrastructure development and priorities for the next 15 years. This session will provide the opportunity for delegates to explore the role of community infrastructure in supporting productivity, community development and in enhancing social cohesion. It will also examine the challenge we face in maintaining infrastructure at the local and national level.



# NGA16

NATIONAL GENERAL ASSEMBLY  
CANBERRA 19-22 JUNE 2016

## Innovative approaches to the environment

Managing climate change and the environment are some of the most significant issues many councils are facing. Developing appropriate strategies to reduce emissions at a local government level will be critical if Australia is to meet the global commitments reached in Paris in 2015. Reduction of emissions from council and community activities, improved design of cities and towns, buildings and facilities, transport systems, and the management of water resources and municipal waste are important considerations in reducing carbon emissions. In this session delegates will have access to key leaders in the field to explore innovative approaches to addressing climate change and improving environmental management.

## Northern Australia

Advancing sustainable economic outcomes for communities in Northern Australia through existing programs and services, knowledge sharing and new business development opportunities is important not only for Northern Australia but for all of Australia. The session will address some of the many issues regarding economic development and opportunity in Northern Australia. It will also draw on the recent report of the Council of Australian Government's investigation into issues of importance to Indigenous communities, especially land administration. The report, among other things, addresses how the Indigenous land administration systems could effectively support Indigenous land owners and native title holders to leverage their land assets for economic development. This session will provide delegates with the opportunity to discuss and explore key issues facing Northern Australian and Indigenous communities.

## ASSOCIATED EVENTS



### Australian Local Government Women's Association Breakfast

MONDAY 20 JUNE 2016

7:30am-8:30am

The ALGWA National President is pleased to invite members, friends and colleagues to the 5th Annual Networking Breakfast as part of the National General Assembly.

The Breakfast will be held in the Murray Room on Monday 20 June from 7:30-8:30 am.

Seating is strictly limited, so book early. More details on [www.algwa.net.au](http://www.algwa.net.au)



### Regional Capitals Australia Networking Breakfast

WEDNESDAY 22 JUNE 2016

7:00 am-8:45 am

Regional Capitals Australia (RCA) is an alliance of local government associations and councils from around Australia. The alliance is working to create a strong network of regional capitals that are at the forefront of federal policy and the national identity.

RCA will be holding a networking breakfast on Wednesday 22 June at the National Convention Centre during the ALGA conference. RCA's annual networking breakfast is a chance for attendees to hear directly from government and engage with their regional capitals colleagues from across Australia.

To register for the event and for enquiries about RCA, please contact:  
Email [secretariat@regionalcapitalsaustralia.org](mailto:secretariat@regionalcapitalsaustralia.org)  
Phone (03) 9614 7302

Visit our website at [www.regionalcapitalsaustralia.org](http://www.regionalcapitalsaustralia.org)

## SPEAKER PROFILES



### George Megalogenis

George Megalogenis is an author and journalist with three decades' experience in the media. His books include *The Australian Moment*, which won the 2013 Prime Minister's Literary Award for Non-fiction and the 2012 Walkley Award for Non-fiction, and formed the basis for the ABC documentary series *Making Australia Great*.

Annabel Crabb said "George Megalogenis is Australia's best explainer", David Marr posits "this man is perhaps the sanest journalist in Australia. He believes in facts and figures. He has a unique grasp of politics in all its messy detail. The result is this splendid account of the great reforms of the last 40 years that have made Australia".

George is also the author of *Faultlines*, *The Longest Decade* and *Quarterly Essay 40: Trivial Pursuit – Leadership and the End of the Reform Era*. His most recent book *Australia's Second Chance* was launched by Prime Minister Malcolm Turnbull.

This year George will publish *Quarterly Essay 61: Balancing Act: Australia Between Recession and Renewal*.

### Pip Marlow

**Managing Director, Microsoft Australia**

As Managing Director, Pip Marlow is responsible for Microsoft's overall business in Australia. She ensures the company meets the needs of its customers and more than 11,000 partners and independent software vendors that sell or build on the Microsoft platform.

Pip began her 18-year career with Microsoft in 1995, working in the Australian Partner team on anti-piracy efforts, and the system builder channel and distribution strategy. She then moved

to Microsoft's head office in Seattle, US, where she held a succession of senior roles, including General Manager for US channel sales.

After eight years in the US, Pip returned to Microsoft Australia. She worked in various positions across the business, including as Director of Small and Medium Business Solutions, and Partners. Before being appointed Managing Director in January 2011, Pip held the joint role of Enterprise and Partner Group Director and Public Sector Director.

### Robert de Castella AO MBE

Robert de Castella is recognised as one of Australia's greatest athletes after dominating the world in the gruelling event of the marathon. He was the first person to win the Commonwealth Games marathon twice and set the course record at the Boston Marathon.

Robert started running aged eleven at Xavier College in Melbourne, where one of his teachers was 1962 Commonwealth Games athlete Pat Clohessy. Pat continued as his coach throughout his career. Robert won the Canberra Pan Pacific Conference Games in 1977 over 10,000m and the 1978 Australian Cross-Country title. He finished 10th at the Moscow Olympics in 1980, then won Gold at the 1982 Commonwealth Games in a tight battle with Juma Ikangaa from Tanzania. He soon won the Rotterdam marathon and the IAAF World Championships in Holland but finished in fifth place in the 1984 Olympics. In the 1988 Olympics he finished fourth, then at the 1992 Olympics finished in 26th place.

Robert became Director of the Australian Institute of Sport from 1990 to 1995, and has since continued his advocacy and support for athletics and marathon running in particular. He was awarded the Australian Sports Medal in 2000.

### The Hon Malcolm Turnbull MP Prime Minister

Malcolm Turnbull was sworn in as the 29th Prime Minister of Australia on 15 September 2015.

Malcolm was a Cabinet Minister in the Howard and Abbott Governments. He served as Minister for the Environment and Water Resources in the Howard Government and Minister for Communications in the Abbott Government.

Malcolm also served as Leader of the Opposition from 2008 to 2009.

Malcolm was educated at Vaucluse Public School and Sydney Grammar School. Malcolm's high school education at Sydney Grammar was assisted by a scholarship. In later life Malcolm arranged for an additional means-tested scholarship to be established at Sydney Grammar in memory of his late father. Malcolm graduated from Sydney University with a BA LLB. He won a Rhodes Scholarship and completed a further law degree at Oxford.

After a successful career in journalism Malcolm began practicing law in 1980. He quickly established a reputation as an effective advocate, most notably when he successfully defended former MI5 agent Peter Wright against the British Government in the "Spycatcher" trial.

Malcolm left law for business in 1987 where he has since been responsible for the establishment and success of many Australian businesses. In particular he has been a determined supporter of Australian technology. He co-founded OzEmail in 1994. His software companies have won many awards for exporting Australian technology.

# NGA16

NATIONAL GENERAL ASSEMBLY  
CANBERRA 19-22 JUNE 2016



## **The Hon Bill Shorten MP**

### **Leader of the Opposition**

Bill Shorten is the Federal Member for Maribyrnong and was elected leader of the Australian Labor Party and Leader of the Opposition on 13 October 2013.

Mr Shorten completed a Bachelors degree in Arts and Law from Monash University, as well as an MBA from the Melbourne Business School.

Bill has since worked as a union organiser, union secretary, as a member of the ACTU executive, as a Member of Parliament and as a Minister in a Labor Government.

As a senior member of the Rudd/Gillard Labor Governments, Bill played a key role in securing a number of historic reforms including establishing the National Disability Insurance Scheme and increasing universal superannuation to 12 per cent.

As Minister for Workplace Relations, Bill continued the Labor Government's ongoing commitment to a fair and productive workplace relations system and during his time as Minister for Education helped secure the Better Schools reforms.

Prior to entering Parliament, Bill worked at the Australian Workers Union, holding key leadership positions including State Secretary of the AWU Victoria Branch from 1998 to 2006 and the National Secretary from 2001 to 2007.

## **Senator Dr Richard Di Natale**

### **Leader of the Australian Greens**

Dr Richard Di Natale is the leader of the Australian Greens. He was elected to the Federal Parliament in 2010 and is the Greens' first Victorian senator. His portfolios include health, multiculturalism, youth, gambling and sport.

Prior to entering parliament, Richard was a general practitioner and public health specialist. He worked in Aboriginal health in the Northern Territory, on HIV prevention in India and in the drug and alcohol sector. His key health priorities include preventative health, public dental care and responding to the health impacts of climate change.

Richard's achievements in parliament so far include securing almost \$5 billion towards Medicare-funded dentistry, winning a campaign to divest \$250 million worth of tobacco stocks from the Future Fund, and spearheading senate inquiries into many issues of public significance such as dying with dignity, superbugs, hospital funding, budget cuts, medicinal cannabis, air pollution, pharmaceutical transparency, sports science and gambling reform.

## **The Hon Paul Fletcher MP**

### **Minister for Major Projects, Territories and Local Government**

Paul Fletcher is the Minister for Territories, Local Government and Major Projects.

He entered parliament in December 2009 as the Member for Bradfield, was appointed Parliamentary Secretary to the Minister for Communications in September 2013, and was appointed to his present role in September 2015.

Before entering parliament, Paul was Director, Corporate and Regulatory Affairs at Optus for eight years; established a consulting firm serving the communications sector; and in 2009 his book about broadband, *Wired Brown Land* was published by UNSW Press.

Earlier in his career Paul was Chief of Staff to the Minister for Communications in the Howard Government, Senator Richard Alston.

He has dual first class honours degrees in law and economics from The University of Sydney and an MBA from Columbia University in New York where he was a Fulbright Scholar.

## **The Hon Julie Collins MP**

### **Shadow Minister for Regional Development and Local Government**

Julie Collins was born in Hobart. She was State Secretary of the Tasmanian Labor Party between 2006 and 2007.

Ms Collins was first elected the Member for Franklin in 2007. She successfully held her seat in the 2010 federal election and was sworn in as Parliamentary Secretary for Community Services on 14 September 2010 in the first Gillard Ministry. In 2011, Ms Collins became Minister for Community Services, Minister for Indigenous Employment and Economic Development, and Minister for the Status of Women in the second Gillard Ministry. In 2013, she gained additional responsibilities as the Minister for Housing and Homelessness and promoted to the Cabinet in the second Rudd Ministry.

Ms Collins now serves as Shadow Minister for Regional Development and Local Government and Shadow Minister for Employment Services.





## REGIONAL COOPERATION & DEVELOPMENT FORUM 2016

### Supporting a prosperous visitor economy

The 2016 Regional Forum is a vital opportunity for mayors, councillors and other decision-makers from regional councils to share their ideas, knowledge and experience and to work to further develop the capacity of regional Australia to adapt to the pressures of a rapidly changing global economy.

This year's State of the Regions Report investigates two critical yet interrelated issues relevant to all local governments around the country. One is the importance of ongoing financial commitment to local government through the Commonwealth Financial Assistance Grants and how the diverse investments by local government support the growing and increasingly important visitor economy.

The Forum will see the launch of the 2016-17 State of the Regions Report. The State of the Regions Report is commissioned by ALGA, prepared by National Economics and published with the support of Jardine Lloyd Thompson.

# RCDF16

### RCDF Program • SUNDAY 19 JUNE 2016

- 9:30 AM Welcome and Introduction: ALGA President, **Mayor Troy Pickard**
- 9:45 AM Keynote Address
- 10:15 AM Launch of the State of the Regions Report
- 10:45 AM **MORNING TEA**
- 11:15 AM Department of Infrastructure and Regional Australia - Policy and Programme Update
- 11:45 AM **The Hon Julie Collins MP** Shadow Minister for Regional Development and Local Government (invited)
- 12:15 PM Capacity Building Insights Project - Regional Australia Institute
- 12:45 PM **LUNCH**
- 1:30 PM Importance of Local Government - Australian Regional Tourism Network
- 2:00 PM Workshop Discussion: Leveraging the Visitor Economy - Challenges and Opportunities
- 2:45 PM **AFTERNOON TEA**
- 3:15 PM Panel Session: Tourism in my region
- 4:00 PM **The Hon Barnaby Joyce MP** Deputy Prime Minister and Minister for Agriculture and Water Resources (invited)
- 4:30 PM **CLOSE**

# NGA16

NATIONAL GENERAL ASSEMBLY  
CANBERRA 19-22 JUNE 2016

## KEY DATES

- **Submission of Motions for Debate 22 April 2016**
- **Early bird registration on or before 6 May 2016**
- **Standard registration on or before 3 June 2016**
- **Late registration after 3 June 2016**

## MOTIONS FOR DEBATE

The NGA is your opportunity to contribute to the development of national local government policy.

The ALGA Board is calling for motions for the 2016 NGA under the theme Partners in an Innovative and Prosperous Australia. To assist Councils in preparing motions a Discussion Paper has been prepared and is available via [www.alga.asn.au](http://www.alga.asn.au).

To be eligible for inclusion in the NGA Business Papers motions must follow the principles:

1. be relevant to the work of local government nationally;
2. be consistent with the themes of the Assembly;
3. complement or build on the policy objectives of your state and territory local government association;
4. propose a clear action and outcome; and
5. not be advanced on behalf of external third parties which may seek to use the NGA to apply pressure to Board members, to gain national political exposure for positions that are not directly relevant to the work of, or in the national interests of, local government.

Motions should be submitted electronically through the online form via [www.alga.asn.au](http://www.alga.asn.au) and should be received by ALGA no later than 11:59pm AEST, Friday 22 April 2016.

Motions submitted will be reviewed by a committee of the ALGA Board as well as by State and Territory Local Government Associations, to determine their eligibility for inclusion in the NGA Business Papers. When reviewing motions, the Committee considers the importance and relevance of the issue to local government.

Please note that motions should not be prescriptive in directing how the matter should be pursued. Any motion deemed to be primarily concerned with local or state issues will be referred to the relevant state/territory local government association, and will not be included in the Business Papers.

Motions that are agreed to at the National General Assembly become Resolutions. These Resolutions are then considered by the ALGA Board when setting national local government policy and when the Board is making representations to the Federal Government at Ministerial Councils, during meetings and in ALGA publications. The ALGA Board is not bound by any resolutions passed at the NGA.

## VOTING PROCEDURES

Each council is entitled to one voting delegate in the debating session. Councils will need to determine who their voting delegate will be. Voting cards can be collected at the Assembly. Councils do not need to advise ALGA of the name of the voting delegate prior to collecting voting cards.

# Local Government Remuneration Tribunal

## Annual Report and Determination

*Annual report and determination under sections 239  
and 241 of the Local Government Act 1993*

**29 March  
2016**

## Local Government Remuneration Tribunal

# Contents

---

Contents	1
Section 1 Background	2
Section 2 Local Government Reform	2
Background	2
Progress since the last determination	3
Section 3 2016 Review	5
LGNSW Submission	5
Tribunal's Findings	5
Section 4 Determinations	8
Determination No. 1- Determination Pursuant to Section 239 of Categories of Councils and County Councils Effective From 1 July 2016	8
Table 1: General Purpose Councils	8
Table 2: County Councils	10
Determination No. 2- Determination Pursuant to Section 241 of Fees for Councillors and Mayors	11
Table 3: Fees for General Purpose and County Councils	11

## Section 1 Background

---

1. Pursuant to section 239 of the *Local Government Act 1993* (the LG Act) the Tribunal determines the categories of councils and mayoral offices and the allocation of each council and mayoral office into one of those categories.
2. Pursuant to section 241 of the LG Act the Tribunal determines in each category of council, the maximum and minimum amount of fees to be paid to mayors and councillors of councils, as well as chairpersons and members of county councils.
3. In determining the maximum and minimum fees payable to office holders in each of the categories, the Tribunal is required, pursuant to section 242A of the LG Act, to give effect to the same policies on increases in remuneration as those that the Industrial Relations Commission is required to give effect to under section 146C of the *Industrial Relations Act 1996* (IR Act), when making or varying awards or orders relating to the conditions of employment of public sector employees.
4. The current policy on wages pursuant to section 146(1)(a) of the IR Act is articulated in the *Industrial Relations (Public Sector Conditions of Employment) Regulation 2014* (the Regulation). The effect of the Regulation is that public sector wages cannot increase by more than 2.5 per cent, and this includes the maximum and minimum fees payable to councillors and mayors and chairpersons and members of county councils.
5. The Tribunal's Report and Determination of 2015 (the 2015 Determination) provided a general increase of 2.5 per cent which was consistent with the Government's policy on wages.

## Section 2 Local Government Reform

---

### Background

6. The NSW Government has been working with councils since 2011 to help strengthen local communities. The Tribunal's 2015 Determination outlined the Government's significant reforms, beginning with the *Destination 2036* summit in 2011 up to the



## Local Government Remuneration Tribunal

release of the Fit for the Future initiative in 2014. At the date of the making of the 2015 Determination the status of the reforms was noted by the Tribunal as follows:

*"Councils have been asked to assess their current position and submit a Fit for the Future proposal by 30 June 2015. The proposals will be assessed by an independent expert panel which will make recommendations to the Minister for Local Government. It is expected that from October 2015 Fit for the Future councils will commence the implementation of their proposals.*

*The Tribunal also notes that a new local government act is expected to be introduced following the local government elections in September 2016."*

### Progress since the last determination

7. On 28 April 2015 the Minister for Local Government (the Minister) announced that the Independent Pricing and Regulatory Tribunal (IPART) would undertake the role of the Expert Panel in assessing councils' Fit for the Future proposals. The Minister noted that the Terms of Reference for the Expert Panel were developed in consultation with Local Government NSW, Local Government Professionals Australia and the United Services Union.
8. The NSW Government released IPART's *Assessment of Council Fit for the Future Proposals* report on 16 October 2015. The IPART report found that nearly two-thirds of NSW councils are not fit for the future and found that savings of up to \$2 billion could be achieved through council mergers. Funding will be available for council mergers that are supported by merging partners and supported by the Government through a Stronger Communities Fund.
9. On 6 January 2016, the Minister for Local Government announced 35 proposals for council mergers. If approved, those proposals would reduce the number of councils in Greater Sydney from 43 to 25 and the number of regional councils from 109 to 87. The Minister referred those proposals to the Chief Executive of the Office of Local Government for examination and report under the LG Act. The Chief Executive delegated this function to a number of people (Delegates). The Delegates are required to report on the proposals against the factors in section 263(3) of the LG Act, having

## Local Government Remuneration Tribunal

regard to written submissions and comments raised in public meetings. The Minister will consider the Delegates' reports and the comments of the Local Government Boundaries Commission on the Delegates' reports before determining the outcome of merger proposals. It is expected that the outcomes of the proposal examination and reporting processes will be known by around mid-2016.

10. In respect to the amendments to the LG Act, on 8 January 2016 the NSW Government announced the commencement of the first phase :

*"...Consultation on phase 1 amendments to the Local Government Act 1993 has commenced. The proposed amendments will:*

- clarify roles and responsibilities of councillors, mayors, administrators and general managers;*
- introduce new guiding principles for local government;*
- improve governance of councils and professional development for councillors;*
- expand on the framework for strategic business planning and reporting;*
- prioritise community engagement and financial accountability; and streamline council administrative processes, including in relation to delegations and community grants.*

*While the fundamentals of the Local Government Act 1993 remain sound, both the Independent Local Government Review Panel and Local Government Acts Taskforce recommended changes to modernise the legislation and to ensure it meets the future needs of councils and communities.*

*Phase 1 of the reform program focuses mainly on changes to the governance and strategic business planning processes of councils. Phase 2 will focus on the way in which councils raise revenue and exercise their regulatory functions."* (Source: Circular to Councils - No 16-01)

## Section 3      2016 Review

---

11. It is not expected that a decision on, or implementation of structural or legislative reforms to local government will be finalised prior to the Tribunal making its determination on or before 30 April 2016.
12. On that basis, and given the limitations placed on the Tribunal in respect of determining increases in fees, mayors were advised on 20 January 2016 that general submissions from individual councils were not required for the 2016 review.
13. The Tribunal did however seek a submission from Local Government NSW (LGNSW) and subsequently met with the President and Chief Executive of LGNSW. The Tribunal wishes to place on record its appreciation to the President and Chief Executive for meeting with the Tribunal.

### LGNSW Submission

14. The association's submission highlighted the areas of reform in local government in NSW and is of the view that the anticipated changes flowing from the reforms warrant, and provide the opportunity to introduce, a new remuneration structure that properly reflects the diverse and evolving roles of mayors and councillors. The association would like to commence a review of the remuneration structure as soon as possible.
15. Given the statutory limitations in place LGNSW has also requested that councillor and mayoral fees be increased by the full 2.5 percent for 2016/17. LGNSW continues to assert that councillor and mayoral fees should increase on the basis of a number of factors, including cost of living pressures, ongoing increase in workload and responsibilities and additional tasks relating to implementing the Government's reform process.

### Tribunal's Findings

16. The Tribunal notes that the Government's significant program of local government reform, including proposed changes to the LG Act, is aimed at creating stronger councils and improving performance and governance of local councils. The Tribunal continues to

## Local Government Remuneration Tribunal

support initiatives which will bring about improvements in the local government sector, in that those reforms should result in greater structural efficiencies and should contribute to the long term viability of local government in NSW.

### Categorisation

17. The Tribunal notes that the process for determining merger proposals and creation of new councils, if any, is expected to be finalised in mid-2016, with consequent implications for categorisation of councils for the purposes of determining fees. If required the Minister may direct the Tribunal to make special determination(s) in accordance with s. 242 of the LG Act.
18. The Tribunal is still of the view that significant changes to the structure of councils should prompt a revision of the criteria for determining categories and fees as noted in the 2015 Determination:

*“Any new categorisation model may need to have regard to a broader or different set of criteria than those currently provided for in section 240 of the LG Act.*

*In reviewing the LG Act the Government may wish to consider the range of factors any future Tribunal should have regard to in determining categories. As one example, the Government has released “A Plan for Growing Sydney” that will guide land use planning decisions in Metropolitan Sydney for the next 20 years. The Greater Sydney Commission will work with local councils to implement growth and infrastructure plans. The expertise and work load expected of councillors and mayors with responsibilities associated with “A Plan for Growing Sydney” may be factors which the Tribunal should have regard to in determining categorisation and remuneration. The Tribunal expects that similar pressures will be placed on rural and regional councils to drive economic and social growth throughout NSW.*

*The Tribunal also notes that any revision to the fees as a result of any new categorisation model would need to balance the need to attract and retain experienced and capable elected representatives with the ability of councils to afford any potential increases. While money is not the primary motivator for*

## **Local Government Remuneration Tribunal**

*undertaking public office, fees should adequately recognise the roles and responsibilities of councillors and mayors and assist in attracting suitably qualified and experienced candidates."*

### **2016 Increase**

19. The Tribunal is required to have regard to the Government's wages policy when determining the increase to apply to the maximum and minimum fees that apply to the councillors and mayors. The public sector wages policy currently provides for a cap on increases of 2.5 per cent.
20. The Tribunal has reviewed the key economic indicators, including the Consumer Price Index and Wage Price Index, and finds that the full increase of 2.5 per cent available to it is warranted. On that basis, and after taking the views of the Assessors into account, the Tribunal considers that an increase of 2.5 per cent in the maximum and minimum fee for each category of councillor and mayoral office, including county councils, is appropriate and so determines.
21. The Tribunal notes that in the Fit for the Future *Progress Report – Stronger Councils, Stronger Communities* the Government has identified a number of strategies to strengthen local leadership. These include a review of councillor remuneration during 2016. In undertaking this review the Government may wish to consider the impact of the Government's wages policy on increases in mayoral and councillor fees and the limitations this may impose on any future remuneration model.

### **The Local Government Remuneration Tribunal**

*Signed*

**Dr Robert Lang**

**Dated:** 29 March 2016

## Section 4 Determinations

---

### Determination No. 1- Determination Pursuant to Section 239 of Categories of Councils and County Councils Effective From 1 July 2016

**Table 1: General Purpose Councils**

Table 1: General Purpose Councils (152)		
Category	Council	
Principal City (1)	Sydney	
Major City (3)	Newcastle Parramatta Wollongong	
Metropolitan Major (2)	Blacktown Penrith	
Metropolitan Centre (16)	Bankstown Campbelltown Fairfield Gosford The Hills Hornsby Hurstville Lake Macquarie	Liverpool North Sydney Randwick Ryde Sutherland Warringah Willoughby Wyong
Metropolitan (21)	Ashfield Auburn Botany Burwood Camden Canada Bay Canterbury Holroyd Hunters Hill Kogarah Ku-ring-gai	Lane Cove Leichhardt Manly Marrickville Mosman Pittwater Rockdale Strathfield Waverley Woollahra

## Local Government Remuneration Tribunal

Table 1: General Purpose Councils (152)			
Category	Council		
<b>Regional Rural (32)</b>	Albury Armidale Dumaresq Ballina Bathurst Bega Valley Blue Mountains Broken Hill Byron Cessnock Clarence Valley Coffs Harbour Dubbo Eurobodalla Great Lakes Goulburn Mulwaree Queanbeyan	Greater Taree Griffith Hawkesbury Kempsey Lismore Maitland Orange Port Macquarie-Hastings Port Stephens Shellharbour Shoalhaven Tamworth Tweed Wagga Wagga Wingecarribee Wollondilly	
<b>Rural (77)</b>	Balranald Bellingen Berrigan Bland Blayney Bogan Bombala Boorowa Bourke Brewarrina Cabonne Carrathool Central Darling Cobar Conargo Coolamon Cooma-Monaro Coonamble Cootamundra Corowa Cowra Deniliquin Dungog Forbes Gilgandra Glen Innes Severn	Gloucester Greater Hume Gundagai Gunnedah Guyra Gwydir Harden Hay Inverell Jerilderie Junee Kiama Kyogle Lachlan Leeton Lithgow Liverpool Plains Lockhart Mid-Western Moree Plains Murray Murrumbidgee Muswellbrook Nambucca Narrabri Narrandera	Narromine Palerang Parkes Oberon Richmond Valley Singleton Snowy River Temora Tenterfield Tumbarumba Tumut Upper Hunter Upper Lachlan Uralla Urana Wakool Walcha Walgett Warren Warrumbungle Weddin Wellington Wentworth Yass Valley Young

## Local Government Remuneration Tribunal

**Table 2: County Councils**

Table 2: County Councils (14)	
Category	Council
Water (5)	Central Tablelands Goldenfields Water MidCoast Riverina Water Rous
Other (9)	Castlereagh – Macquarie Central Murray Far North Coast Hawkesbury River New England Tablelands Richmond River Southern Slopes Upper Hunter Upper Macquarie



## Local Government Remuneration Tribunal

### Determination No. 2- Determination Pursuant to Section 241 of Fees for Councillors and Mayors

Pursuant to s.241 of the Local Government Act 1993, the annual fees to be paid in each of the categories to Councillors, Mayors, Members and Chairpersons of County Councils effective on and from 1 July 2016 are determined as follows:

**Table 3: Fees for General Purpose and County Councils**

Table 3: Fees for General Purpose and County Councils				
Category	Councillor/Member Annual Fee		Mayor/Chairperson Additional Fee	
	Minimum	Maximum	Minimum	Maximum
<b>General Purpose Councils</b>				
Principal City	25,670	37,640	157,030	206,620
Major City	17,110	28,240	36,360	82,270
Metropolitan Major	17,110	28,240	36,360	82,270
Metropolitan Centre	12,830	23,950	27,260	63,640
Metropolitan	8,540	18,840	18,180	41,090
Regional Rural	8,540	18,840	18,180	41,090
Rural	8,540	11,290	9,080	24,630
<b>County Councils</b>				
Water	1,700	9,410	3,640	15,460
Other	1,700	5,630	3,640	10,270

\*This fee must be paid in addition to the fee paid to the Mayor/Chairperson as a Councillor/Member (s.249(2)).

**The Local Government Remuneration Tribunal**

*Signed*

**Dr Robert Lang**

**Dated:** 29 March 2016

# WOLLONGONG CITY COUNCIL

1 July 2015 to 29 April 2016

	2015/16 Original Budget \$'000	2015/16 Current Budget \$'000	2015/16 YTD Budget \$'000	2015/16 Actual YTD \$'000
<b>Income Statement</b>				
<b>Income From Continuing Operations</b>				
<b>Revenue:</b>				
Rates and Annual Charges	173,253	174,237	144,721	144,696
User Charges and Fees	33,194	31,062	25,966	26,108
Interest and Investment Revenues	4,772	5,347	4,488	4,657
Other Revenues	9,454	10,676	8,790	8,670
Grants & Contributions provided for Operating Purposes	28,846	30,259	25,381	25,471
Grants & Contributions provided for Capital Purposes	14,520	24,134	22,072	22,914
Profit/Loss on Disposal of Assets	0	0	(159)	(104)
<b>Total Income from Continuing Operations</b>	<b>264,040</b>	<b>275,715</b>	<b>231,259</b>	<b>232,412</b>
<b>Expenses From Continuing Operations</b>				
Employee Costs	113,797	114,445	95,267	94,225
Borrowing Costs	4,206	4,206	3,499	3,541
Materials, Contracts & Other Expenses	89,130	85,494	67,136	64,370
Depreciation, Amortisation + Impairment	62,074	61,955	51,629	51,714
Internal Charges (labour)	(11,876)	(11,852)	(9,841)	(9,444)
Internal Charges (not labour)	(1,400)	(1,500)	(1,246)	(967)
<b>Total Expenses From Continuing Operations</b>	<b>255,932</b>	<b>252,747</b>	<b>206,443</b>	<b>203,439</b>
<b>Operating Results From Continuing Operations</b>	<b>8,108</b>	<b>22,967</b>	<b>24,816</b>	<b>28,973</b>
<b>Net Operating Result for the Year</b>	<b>8,108</b>	<b>22,967</b>	<b>24,816</b>	<b>28,973</b>
<b>Net Operating Result for the Year before Grants &amp; Contributions provided for Capital Purposes</b>				
	<b>(6,412)</b>	<b>(1,166)</b>	<b>2,744</b>	<b>6,059</b>
<b>NET SURPLUS (DEFICIT) [Pre capital] %</b>	<b>3.1%</b>	<b>8.3%</b>	<b>10.7%</b>	<b>12.5%</b>
<b>Funding Statement</b>				
<b>Net Operating Result for the Year</b>	<b>8,108</b>	<b>22,967</b>	<b>24,816</b>	<b>28,973</b>
Add back :				
- Non-cash Operating Transactions	77,378	77,528	64,913	64,812
- Restricted cash used for operations	15,464	16,784	14,260	13,096
- Income transferred to Restricted Cash	(34,812)	(51,984)	(47,168)	(48,165)
- Payment of Accrued Leave Entitlements	(11,550)	(11,713)	(10,273)	(10,278)
- Payment of Carbon Contributions	0	0	0	0
<b>Funds Available from Operations</b>	<b>54,588</b>	<b>53,581</b>	<b>46,548</b>	<b>48,438</b>
Advances (made by) / repaid to Council	0	0	0	0
Borrowings repaid	(6,371)	(6,371)	(5,449)	(5,447)
<b>Operational Funds Available for Capital Budget</b>	<b>48,217</b>	<b>47,210</b>	<b>41,100</b>	<b>42,991</b>
<b>CAPITAL BUDGET</b>				
Assets Acquired	(86,256)	(84,100)	(57,325)	(53,836)
Contributed Assets	0	(4,153)	(4,153)	(4,153)
Transfers to Restricted Cash	0	(7,100)	(7,100)	(7,100)
Funded From :-				
- Operational Funds	48,217	47,210	41,100	42,991
- Sale of Assets	2,008	1,486	967	605
- Internally Restricted Cash	5,136	6,708	2,949	2,177
- Borrowings	0	0	0	0
- Capital Grants	9,439	11,691	9,925	10,647
- Developer Contributions (Section 94)	6,510	6,213	5,013	4,930
- Other Externally Restricted Cash	9,460	5,716	5,325	5,923
- Other Capital Contributions	2,365	6,089	4,936	6,390
<b>TOTAL FUNDS SURPLUS / (DEFICIT)</b>	<b>(3,122)</b>	<b>(10,241)</b>	<b>1,636</b>	<b>8,574</b>

## Manager Project Delivery Division

### Commentary on April 2016 Capital Budget Report

As at 29 April 2016, year to date expenditure was \$53.8M of the approved capital budget of \$84.10M. This value is \$3.5M behind the initial forecast expenditure of \$57.3M for this period.

The following table summarises the proposed changes to the total Capital budget by transfer of budget between programs and reduction or introduction of various types of external or loan funding. These changes result in a net reduction of \$0.1M in the overall capital budget to \$84.0M.

Program	Major Points of change to Capital Budget
Traffic Facilities	Reallocate additional RMS funding to existing project
Road Works	Rephase RMS & Roads to Recovery (R2R) funding from existing projects
Bridges, Boardwalks & Jetties	Rephase Sect 94 funding from existing projects Reallocate budget from Bridges, Boardwalks & Jetties to Cycle/Shared paths
Footpaths	Rephase Local Infrastructure Renewal (LIRS) 1 funding from existing projects to future year Reallocate budget from Cycle/Shared paths to Footpaths
Cycle/Shared Paths	Rephase and reallocate RMS funding from existing projects to Traffic Facilities Reallocate budget from Bridges, Boardwalks & Jetties and Emergency Services programs and Contingency to Cycle/Shared paths
Carpark Constructing/Formalising	Reallocate funding from Carpark Constructing/Formalising to Car Park Reconstruction or Upgrading
Car Park Reconstruction or Upgrading	Reallocate funding from Carpark Constructing/Formalising to Car Park Reconstruction or Upgrading
Floodplain Management	Rephase Stormwater Levy and Office of Environment and Heritage Funding from existing projects. Reallocate Budget from Floodplain Management to Stormwater Management Program
Stormwater Management	Rephase Stormwater Levy Funding from existing projects. Reallocate Budget from Floodplain Management and Stormwater Treatment Devices to Stormwater Management Program
Stormwater Treatment Devices	Rephase Stormwater Levy Funding from existing projects. Reallocate Budget from Stormwater Treatment Devices to Stormwater Management Program
Cultural Centres (IPAC, Gallery & Town Hall)	Reallocate budget to Community Buildings Program and Public Facilities (Shelters, Toilets etc) Program.
Administration Buildings	Reallocate budget to Community Buildings Program and Public Facilities (Shelters, Toilets etc) Program.
Community Buildings	Reallocate budget to Operational Budget – Buildings Maintenance Rephase funding for existing community buildings project
Public Facilities (Shelters, Toilets etc)	Reallocate budget from Cultural Centres (IPAC, Gallery & Town Hall) and Administration Buildings and Recreation Facilities and Rock/Tidal Pools Programs to Public Facilities (Shelters, Toilets etc) Program.
Leisure Centres and RVGC	Reallocate budget from Leisure Centres and RVGC to Sporting Facilities Program for existing project
Play Facilities	Reallocate budget from Recreation Facilities Program to Play Facilities Program
Recreation Facilities	Reallocate budget from Recreation Facilities to Natural Area Management and Rehabilitation Program, Sporting Facilities Program and Public Facilities (Shelters, Toilets etc) Program.
Sporting Facilities	Reallocate budget from Leisure Centres and RVGC Program and Recreation Facilities Program to Sporting Facilities Program for existing project.
Beach Facilities	Reallocate budget from Rock/Tidal Pools to Beach Facilities Program.
Rock/Tidal Pools	Reallocate budget from Rock/Tidal Pools to Public Facilities (Shelters, Toilets etc) Program
Natural Area Management and Rehabilitation	Reallocate budget from Recreation Facilities to Natural Area Management and Rehabilitation Program.
Whytes Gully New Cells	Rephase Waste Reserve Funding from existing projects
Whytes Gully Renewal Works	Rephase Waste Reserve Funding from existing projects
Helensburgh Rehabilitation	Rephase Waste Reserve Funding from existing projects
Art Gallery Acquisitions	Introduce funding for Art Gallery Acquisitions

Program	Major Points of change to Capital Budget
Emergency Services Plant and Equipment	Reallocate budget to Cycle/Shared Paths Program
Capital Project Contingency	Reallocate budget to Cycle/Shared Paths Program

# CAPITAL PROJECT REPORT

as at the period ended 29 April 2016

ASSET CLASS PROGRAMME	\$'000		\$'000		YTD EXPENDITURE	\$'000	
	CURRENT BUDGET		WORKING BUDGET			VARIATION	
	EXPENDITURE	OTHER FUNDING	EXPENDITURE	OTHER FUNDING		EXPENDITURE	OTHER FUNDING
Roads And Related Assets							
Traffic Facilities	3,622	(2,277)	3,557	(2,267)	2,912	(65)	10
Public Transport Facilities	441	(172)	441	(172)	234	(0)	(0)
Roadworks	13,816	(3,555)	16,953	(3,568)	9,377	3,137	(14)
Bridges, Boardwalks and Jetties	1,576	(176)	1,281	(164)	764	(295)	12
TOTAL Roads And Related Assets	19,455	(6,180)	22,232	(6,171)	13,286	2,777	9
West Dapto							
West Dapto Infrastructure Expansion	4,902	(4,013)	4,340	(4,013)	4,076	(562)	(0)
TOTAL West Dapto	4,902	(4,013)	4,340	(4,013)	4,076	(562)	(0)
Footpaths And Cycleways							
Footpaths	8,528	(3,572)	8,194	(3,560)	6,380	(334)	12
Cycle/Shared Paths	6,788	(4,268)	6,682	(4,203)	5,130	(106)	65
Commercial Centre Upgrades - Footpaths and Cycleways	2,435	(300)	2,197	(300)	1,395	(238)	0
TOTAL Footpaths And Cycleways	17,751	(8,141)	17,074	(8,063)	12,904	(678)	77
Carparks							
Carpark Construction/Formalising	890	(500)	725	(500)	709	(165)	0
Carpark Reconstruction or Upgrading	1,166	0	1,115	0	411	(51)	0
TOTAL Carparks	2,056	(500)	1,840	(500)	1,120	(216)	0
Stormwater And Floodplain Management							
Floodplain Management	722	(44)	462	(44)	365	(260)	(0)
Stormwater Management	1,937	(95)	1,655	(95)	940	(282)	0
Stormwater Treatment Devices	70	0	50	0	39	(20)	0
TOTAL Stormwater And Floodplain Management	2,729	(139)	2,167	(139)	1,344	(562)	(0)
Buildings							
Cultural Centres (IPAC, Gallery, Townhall)	1,001	0	900	0	446	(100)	0
Administration Buildings	520	0	545	0	411	25	0
Community Buildings	11,459	(2,856)	12,082	(2,854)	8,772	622	2
Public Facilities (Shelters, Toilets etc.)	865	0	490	0	318	(375)	0
TOTAL Buildings	13,845	(2,856)	14,017	(2,854)	9,947	172	2
Commercial Operations							
Tourist Park - Upgrades and Renewal	750	0	788	0	467	38	0
Crematorium/Cemetery - Upgrades and Renewal	190	0	190	0	78	0	0
Leisure Centres & RVGC	151	0	151	0	84	0	0
TOTAL Commercial Operations	1,091	0	1,128	0	629	38	0
Parks Gardens And Sportfields							
Play Facilities	1,131	(73)	1,141	(83)	855	10	(10)
Recreation Facilities	3,078	(1,917)	2,426	(1,917)	1,495	(652)	(0)
Sporting Facilities	1,114	(239)	1,119	(239)	660	5	0
Lake Illawarra Foreshore	0	0	0	0	0	(0)	0
TOTAL Parks Gardens And Sportfields	5,323	(2,229)	4,686	(2,239)	3,011	(638)	(10)
Beaches And Pools							
Beach Facilities	356	0	359	0	176	3	0
Rock/Tidal Pools	1,499	0	1,368	0	936	(131)	0
Treated Water Pools	1,474	0	1,423	0	620	(51)	0
TOTAL Beaches And Pools	3,329	0	3,150	0	1,733	(179)	0

# CAPITAL PROJECT REPORT

as at the period ended 29 April 2016

ASSET CLASS PROGRAMME	\$'000		\$'000		YTD EXPENDITURE	\$'000	
	CURRENT BUDGET		WORKING BUDGET			VARIATION	
	EXPENDITURE	OTHER FUNDING	EXPENDITURE	OTHER FUNDING		EXPENDITURE	OTHER FUNDING
Natural Areas							
Environmental Management Program	0	0	0	0	0	0	0
Natural Area Management and Rehabilitation	230	(25)	210	(25)	82	(20)	0
TOTAL Natural Areas	230	(25)	210	(25)	82	(20)	0
Waste Facilities							
Whytes Gully New Cells	2,292	(2,292)	2,292	(2,292)	1,549	0	0
Whytes Gully Renewal Works	160	(160)	160	(160)	48	(0)	0
Helensburgh Rehabilitation	89	(89)	89	(89)	78	0	0
TOTAL Waste Facilities	2,541	(2,541)	2,541	(2,541)	1,674	0	0
Fleet							
Motor Vehicles	1,531	(990)	1,531	(990)	983	(0)	0
TOTAL Fleet	1,531	(990)	1,531	(990)	983	(0)	0
Plant And Equipment							
Portable Equipment (Mowers etc.)	100	(10)	100	(10)	61	0	0
Mobile Plant (trucks, backhoes etc.)	2,701	(507)	2,701	(507)	566	(0)	0
Fixed Equipment	0	0	0	0	0	0	0
TOTAL Plant And Equipment	2,801	(517)	2,801	(517)	627	(0)	0
Information Technology							
Information Technology	895	0	895	0	261	(0)	0
TOTAL Information Technology	895	0	895	0	261	(0)	0
Library Books							
Library Books	1,150	0	1,150	0	1,094	0	0
TOTAL Library Books	1,150	0	1,150	0	1,094	0	0
Public Art							
Public Art Works	145	0	207	0	106	62	0
Art Gallery Acquisitions	199	(34)	137	(34)	107	(62)	0
TOTAL Public Art	344	(34)	344	(34)	213	0	0
Emergency Services							
Emergency Services Plant and Equipment	299	0	289	0	113	(10)	0
TOTAL Emergency Services	299	0	289	0	113	(10)	0
Land Acquisitions							
Land Acquisitions	3,320	(2,825)	3,304	(2,825)	453	(16)	0
TOTAL Land Acquisitions	3,320	(2,825)	3,304	(2,825)	453	(16)	0
Non-Project Allocations							
Capital Project Contingency	28	0	0	0	0	(28)	0
Capital Project Plan	480	0	325	0	297	(155)	0
TOTAL Non-Project Allocations	508	0	325	0	297	(183)	0
Loans							
West Dapto Loan	0	(2,760)	0	(2,760)	0	0	0
TOTAL Loans	0	(2,760)	0	(2,760)	0	0	0
GRAND TOTAL	84,100	(33,749)	84,022	(33,671)	53,836	(79)	78

# WOLLONGONG CITY COUNCIL

	Actual 2015/16 \$'000	Actual 2014/15 \$'000
BALANCE SHEET		
	29/04/2016	as at 30/06/15
<b>CURRENT ASSETS</b>		
Cash Assets	121,139	124,611
Investment Securities	25,600	11,046
Receivables	22,205	22,108
Inventories	6,030	6,040
Other	6,278	4,313
<b>Total Current Assets</b>	<b>181,252</b>	<b>168,118</b>
<b>NON-CURRENT ASSETS</b>		
Non Current Cash Assets	9,000	9,000
Property, Plant and Equipment	2,293,012	2,251,345
Investment Properties	2,750	2,750
Westpool Equity Contribution	1,159	1,159
Intangible Assets	775	1,219
<b>Total Non-Current Assets</b>	<b>2,306,696</b>	<b>2,265,474</b>
<b>TOTAL ASSETS</b>	<b>2,487,947</b>	<b>2,433,592</b>
<b>CURRENT LIABILITIES</b>		
Current Payables	22,164	29,868
Current Provisions payable < 12 months	17,276	16,790
Current Provisions payable > 12 months	34,871	34,871
Current Interest Bearing Liabilities	6,369	6,369
<b>Total Current Liabilities</b>	<b>80,680</b>	<b>87,899</b>
<b>NON-CURRENT LIABILITIES</b>		
Non Current Interest Bearing Liabilities	35,038	39,758
Non Current Provisions	44,057	42,554
<b>Total Non-Current Liabilities</b>	<b>79,095</b>	<b>82,312</b>
<b>TOTAL LIABILITIES</b>	<b>159,775</b>	<b>170,210</b>
<b>NET ASSETS</b>	<b>2,328,172</b>	<b>2,263,381</b>
<b>EQUITY</b>		
Accumulated Surplus	1,185,382	1,132,670
Asset Revaluation Reserve	1,011,041	1,011,064
Restricted Assets	131,749	119,648
<b>TOTAL EQUITY</b>	<b>2,328,172</b>	<b>2,263,381</b>

WOLLONGONG CITY COUNCIL		
CASH FLOW STATEMENT		
as at 29 April 2016		
	YTD Actual 2015/16 \$ '000	Actual 2014/15 \$ '000
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
<b>Receipts:</b>		
Rates & Annual Charges	144,193	166,562
User Charges & Fees	26,722	33,505
Interest & Interest Received	4,886	5,789
Grants & Contributions	48,513	54,189
Other	9,252	23,908
<b>Payments:</b>		
Employee Benefits & On-costs	(82,320)	(92,705)
Materials & Contracts	(35,593)	(58,052)
Borrowing Costs	(1,271)	(1,311)
Other	(35,630)	(42,795)
<b>Net Cash provided (or used in) Operating Activities</b>	<b>78,752</b>	<b>89,090</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
<b>Receipts:</b>		
Sale of Infrastructure, Property, Plant & Equipment	605	12,570
Deferred Debtors Receipts	-	10
<b>Payments:</b>		
Purchase of Investments	-	-
Purchase of Investment Property	-	-
Purchase of Infrastructure, Property, Plant & Equipment	(62,714)	(85,072)
Purchase of Interests in Joint Ventures & Associates	-	-
<b>Net Cash provided (or used in) Investing Activities</b>	<b>(62,109)</b>	<b>(72,492)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
<b>Receipts:</b>		
Proceeds from Borrowings & Advances	-	15,000
<b>Payments:</b>		
Repayment of Borrowings & Advances	(5,560)	(5,244)
Repayment of Finance Lease Liabilities	-	-
<b>Net Cash Flow provided (used in) Financing Activities</b>	<b>(5,560)</b>	<b>9,756</b>
<b>Net Increase/(Decrease) in Cash &amp; Cash Equivalents</b>	<b>11,083</b>	<b>281</b>
plus: Cash & Cash Equivalents and Investments - beginning of year	144,656	144,375
<b>Cash &amp; Cash Equivalents and Investments - year to date</b>	<b>155,739</b>	<b>144,656</b>

WOLLONGONG CITY COUNCIL		
CASH FLOW STATEMENT		
as at 29 April 2016		
	YTD Actual 2015/16 \$ '000	Actual 2014/15 \$ '000
<b>Total Cash &amp; Cash Equivalents and Investments - year to date</b>	<b>155,739</b>	<b>144,656</b>
<b>Adjustable to:</b>		
External Restrictions (refer below)	76,065	86,137
Internal Restrictions (refer below)	55,692	22,208
Unrestricted	155,739	144,656
<b>External Restrictions</b>		
Developer Contributions	15,175	11,758
RMS Contributions	243	238
Specific Purpose Unexpended Grants	5,070	16,846
Special Rates Land Wollongong Centre Improvement Fund	-	-
Special Rates Land Wollongong Mall	116	291
Special Rates Land Wollongong City Centre	38	11
Local Infrastructure Renewal Scheme	18,668	16,791
Unexpended Loans	7,165	12,877
Domestic Waste Management	9,754	6,468
Private Subsidies	4,264	1,883
West Dapto Home Deposit Assistance Program	9,733	-
Stormwater Management Service Charge	1,345	834
West Dapto Home Deposit Award	86	-
Carbin Price	4,378	3,178
<b>Total External Restrictions</b>	<b>76,065</b>	<b>86,137</b>
<b>Internal Restrictions</b>		
Property Development	4,132	(252)
Property Investment Fund	9,987	-
Strategic Projects	23,283	-
Future Projects	6,425	-
Sports Priority Program	643	856
Car Parking Strategy	763	489
MacCabe Park Development	816	391
Darcy Wentworth Park	193	86
Garbage Disposal Facility	10,144	20,281
Telecommunications Revenue	147	278
West Dapto Development Additional Rates	452	77
Southern Phone Natural Areas	588	-
Lake Willaura Estuary Management Fund	112	-
<b>Total Internal Restrictions</b>	<b>55,692</b>	<b>22,208</b>



**WOLLONGONG CITY COUNCIL**  
**STATEMENT OF INVESTMENTS**  
29 April 2016

**On Call & Term Deposits**

**DIRECT INVESTMENTS**

Investment Body	Rating	Purchase Price \$	Fair Value of Holding \$	Security	Purchase Date	Maturity Date	Interest / Coupon Rate
NAB Professional Maximiser	A-1+	-	13,358,272	11am	29/04/2016	29/04/2016	2.50%
NAB General Fund	A-1+	2,500,000	2,707,321	11am	29/04/2016	29/04/2016	
NAB	A-1+	1,000,000	1,000,000	T/Deposit	29/02/2016	2/05/2016	2.78%
CBA	A-1+	3,000,000	3,000,000	T/Deposit	9/10/2015	6/05/2016	2.84%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	10/11/2015	9/05/2016	2.89%
ME	A-2	2,000,000	2,000,000	T/Deposit	18/03/2016	17/05/2016	2.70%
NAB	A-1+	2,000,000	2,000,000	T/Deposit	24/09/2015	24/05/2016	2.97%
SUN Corp	A-1+	1,500,000	1,500,000	T/Deposit	24/09/2015	24/05/2016	2.85%
BEN	A-2	3,000,000	3,000,000	T/Deposit	4/01/2016	1/06/2016	2.75%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	11/09/2015	7/06/2016	2.86%
IMB	A-2	2,000,000	2,000,000	T/Deposit	11/09/2015	10/06/2016	2.80%
Bank of Queensland	A-2	3,000,000	3,000,000	T/Deposit	16/09/2015	16/06/2016	2.80%
Bank of Queensland	A-2	3,000,000	3,000,000	T/Deposit	23/09/2015	23/06/2016	2.93%
IMB	A-2	1,000,000	1,000,000	T/Deposit	28/08/2015	1/07/2016	2.80%
SUN	A-1+	2,000,000	2,000,000	T/Deposit	15/03/2016	13/07/2016	2.91%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	27/11/2015	25/07/2016	2.95%
BankWest	A-1+	2,000,000	2,000,000	T/Deposit	31/07/2015	29/07/2016	2.90%
B/West	A-1+	1,000,000	1,000,000	T/Deposit	4/04/2016	2/08/2016	3.00%
ANZ	A-1+	2,500,000	2,500,000	T/Deposit	6/08/2015	6/08/2016	3.06%
NAB	A-1+	2,500,000	2,500,000	T/Deposit	6/08/2014	8/08/2016	3.74%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	11/09/2015	9/08/2016	2.85%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	27/02/2015	22/08/2016	3.05%
ME Bank	A-2	2,500,000	2,500,000	T/Deposit	27/02/2015	22/08/2016	2.90%
Bank of Queensland	A-2	2,000,000	2,000,000	T/Deposit	10/03/2016	9/09/2016	3.10%
IMB	A-2	2,000,000	2,000,000	T/Deposit	11/09/2015	12/09/2016	2.80%
ME	A-2	3,000,000	3,000,000	T/Deposit	18/01/2016	18/09/2016	3.10%
ME	A-2	2,000,000	2,000,000	T/Deposit	18/01/2016	18/09/2016	3.10%
CBA	A-1+	1,000,000	1,000,000	T/Deposit	23/12/2015	19/09/2016	2.97%
STG	A-1+	1,000,000	1,000,000	T/Deposit	23/12/2015	19/09/2016	2.87%
NAB	A-1+	1,000,000	1,000,000	T/Deposit	29/02/2016	30/09/2016	3.02%
WBC	A-1+	2,000,000	2,000,000	T/Deposit	24/04/2015	19/10/2016	2.90%
Bendigo Bank	A-2	1,500,000	1,500,000	T/Deposit	26/10/2015	25/10/2016	2.90%
Bendigo Bank	A-2	2,000,000	2,000,000	T/Deposit	29/09/2015	28/10/2016	3.00%
B/West	A-1+	1,000,000	1,000,000	T/Deposit	3/02/2016	3/11/2016	2.85%
CBA	A-1+	2,000,000	2,000,000	T/Deposit	23/12/2015	17/11/2016	2.97%
NAB	A-1+	2,000,000	2,000,000	T/Deposit	18/01/2016	18/11/2016	3.01%
ME	A-2	1,000,000	1,000,000	T/Deposit	25/02/2016	21/11/2016	3.00%
NAB	A-1+	1,000,000	1,000,000	T/Deposit	29/02/2016	30/11/2016	3.00%
BWest	A-1+	1,000,000	1,000,000	T/Deposit	7/12/2015	6/12/2016	2.90%
NAB	A-1+	1,030,000	1,030,000	T/Deposit	17/12/2015	19/12/2016	3.03%
Bendigo Bank	A-2	2,000,000	2,000,000	T/Deposit	29/09/2015	22/12/2016	3.05%
B/West	A-1+	2,000,000	2,000,000	T/Deposit	23/12/2015	22/12/2016	3.00%
BWest	A-1+	1,000,000	1,000,000	T/Deposit	4/01/2016	3/01/2017	3.00%
ME	A-2	2,000,000	2,000,000	T/Deposit	17/12/2015	16/01/2017	3.05%
SUN	A-1+	2,000,000	2,000,000	T/Deposit	23/12/2015	23/01/2017	3.00%
WBC	A-1+	3,000,000	3,000,000	T/Deposit	31/07/2015	31/01/2017	2.74%
BOQ	A-2	2,000,000	2,000,000	T/Deposit	4/01/2016	3/02/2017	2.95%
IMB	A-2	2,000,000	2,000,000	T/Deposit	28/08/2015	28/02/2017	2.80%
NAB	A-1+	1,500,000	1,500,000	T/Deposit	31/08/2015	28/02/2017	2.78%
Bendigo Bank	A-2	1,000,000	1,000,000	T/Deposit	11/09/2015	13/03/2017	2.90%
Bank of Queensland	A-2	2,000,000	2,000,000	T/Deposit	26/02/2016	29/03/2017	3.00%
NAB	A-1+	1,000,000	1,000,000	T/Deposit	29/02/2016	30/03/2017	2.95%
CBA	A-1+	1,000,000	1,000,000	T/Deposit	23/03/2016	20/04/2017	2.88%
BWest	A-1+	1,000,000	1,000,000	T/Deposit	23/03/2016	21/04/2017	2.85%
STG	A-1+	2,000,000	2,000,000	T/Deposit	23/03/2016	24/04/2017	2.87%
SUN	A-1+	1,000,000	1,000,000	T/Deposit	23/03/2016	26/04/2017	2.85%
ME	A-2	2,500,000	2,500,000	T/Deposit	18/02/2016	15/05/2017	3.13%
St George	A-1+	1,500,000	1,500,000	T/Deposit	27/11/2015	25/05/2017	2.81%
SUN Corp	A-1+	1,500,000	1,500,000	T/Deposit	27/11/2015	26/05/2017	2.81%
ME	A-2	1,000,000	1,000,000	T/Deposit	23/12/2015	15/06/2017	3.15%
Bendigo Bank	A-2	2,000,000	2,000,000	T/Deposit	31/07/2015	31/07/2017	3.00%
IMB	A-2	5,000,000	5,000,000	T/Deposit	30/07/2015	31/07/2017	2.80%
Bank of Queensland	A-2	3,000,000	3,000,000	T/Deposit	28/08/2015	28/08/2017	2.80%
Bendigo Bank	A-2	1,000,000	1,000,000	T/Deposit	11/09/2015	11/09/2017	2.95%
<b>Total</b>			<b>130,595,593</b>				

WOLLONGONG CITY COUNCIL  
STATEMENT OF INVESTMENTS  
29 April 2016 continued

## Bond and Floating Rate Note Securities

DIRECT INVESTMENTS								
Investment Body	Rating	Purchase Price \$	Fair Value of Holding \$	Security	Purchase Date	Maturity Date	Interest / Coupon Rate	
Westpac	A-1+	1,000,000	1,007,790	FRN	30/01/2012	9/05/2016	3.41%	
Commonwealth Bank Australia zero coupon bond with a \$4M face value	A-1+	2,000,000	3,729,200	BOND	21/01/2008	22/01/2018		
CBA	A-1+	1,000,000	1,001,890	FRN	19/10/2015	19/10/2018	3.07%	
CUA	A-3	3,000,000	3,009,810	FRN	1/04/2016	1/04/2019	3.88%	
Westpac	A-1+	3,000,000	3,021,030	FRN	11/03/2016	10/05/2019	3.33%	
Bendigo Bank	A-2	1,000,000	993,960	FRN	16/09/2015	17/09/2019	3.25%	
NAB	A-1+	3,000,000	2,995,830	FRN	24/06/2015	3/06/2020	3.37%	
Bendigo Bank	A-2	2,000,000	1,995,180	FRN	18/11/2015	18/08/2020	3.39%	
SUN Corp	A-1+	1,500,000	1,501,770	FRN	20/10/2015	20/10/2020	3.52%	
NAB	A-1+	1,000,000	1,010,710	FRN	5/11/2015	5/11/2020	3.36%	
SUN	A-1+	2,000,000	2,006,640	FRN	12/04/2016	12/04/2021	3.64%	
EMERALD A Mortgage Backed Security *	AAA	691,627	542,934	M/Bac	17/07/2006	22/08/2022	2.73%	
EMERALD B Mortgage Backed Security *	AA	2,000,000	1,341,120	M/Bac	17/07/2006	23/08/2027	3.03%	
<b>Total</b>			<b>24,157,864</b>					

## Managed Funds & Other

MANAGED FUNDS								
Investment Body	Rating	Purchase Price \$	Fair Value of Holding \$	Purchase Date	Monthly Return (Actual)	Annualised % p.a.	FYTD (Actual)	
Tcorp Long Term Growth Facility Trust	N/A	1,131,841	1,712,997	13/06/2007	1.44%	15.05%	-0.61%	

Investment Body	Face Value		Security
Southern Phone Company		2	shares

TOTAL INVESTMENTS                      \$ 156,466,455

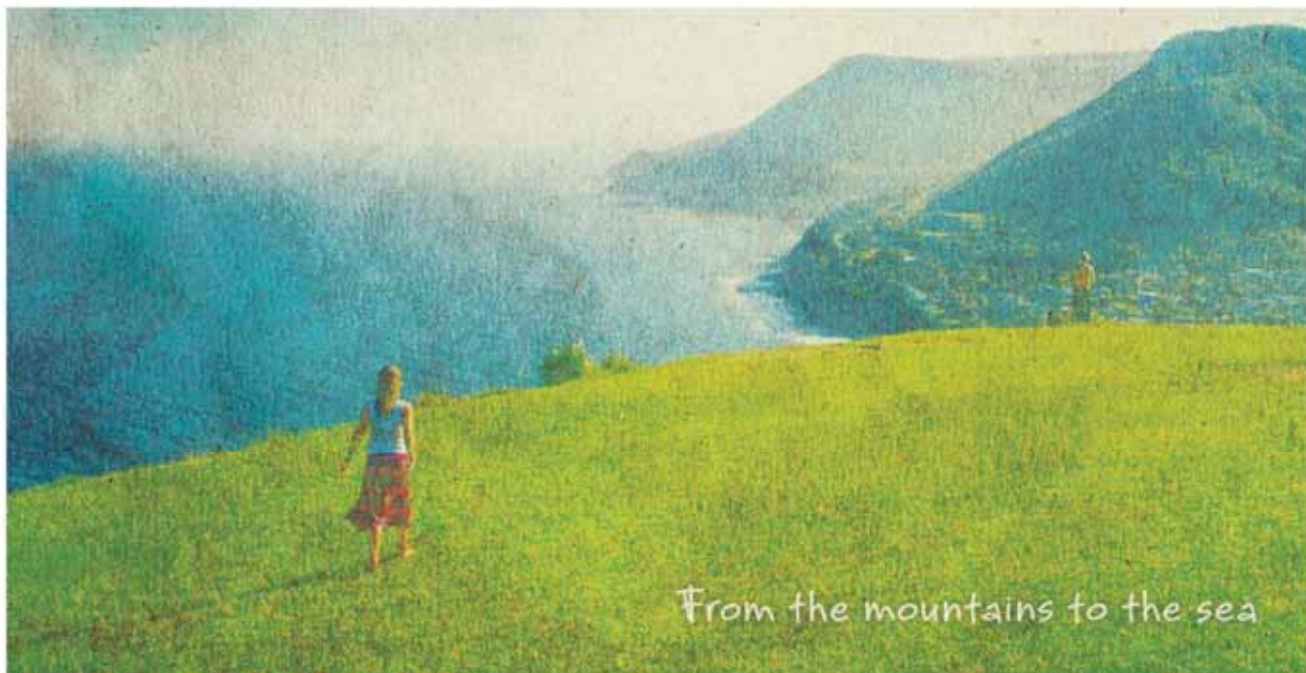
\* The maturity date provided is the weighted-average life of the security. This is the average amount of time that will elapse from the date of security's issuance until each dollar is repaid based on an actuarial assessment. Assessments are carried out on a regular basis which can potentially extend the life of the investment. Current assessments anticipate an extension of

This is to certify that all of the above investments have been placed in accordance with the Act, the regulations and Council's Investment

Brian Jenkins  
RESPONSIBLE ACCOUNTING OFFICER

### Investment Income Compared to Budget 2015-2016





WOLLONGONG CITY COUNCIL

WOLLONGONG 2022

# DRAFT QUARTERLY REVIEW STATEMENT

March 2016



## Table of Contents

MESSAGE FROM THE GENERAL MANAGER .....	3
STRATEGIC PROGRAMS PROGRESS REPORT .....	4
ANNUAL PLAN 2015-16 PROGRESS SUMMARY .....	11
GOAL 1: WE VALUE AND PROTECT OUR NATURAL ENVIRONMENT .....	17
GOAL 2: WE HAVE AN INNOVATIVE AND SUSTAINABLE ECONOMY .....	20
GOAL 3: WOLLONGONG IS A CREATIVE, VIBRANT CITY .....	24
GOAL 4: WE ARE A CONNECTED AND ENGAGED COMMUNITY .....	27
GOAL 5: WE ARE A HEALTHY COMMUNITY IN A LIVEABLE CITY .....	30
GOAL 6: WE HAVE SUSTAINABLE, AFFORDABLE AND ACCESSIBLE TRANSPORT .....	33
HOW WE PERFORMED AGAINST OUR BUDGETS .....	36
BUDGET REVIEW STATEMENT .....	37
REPORT OF MANAGER FINANCE .....	37
APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17 .....	38

# MESSAGE FROM THE GENERAL MANAGER

## WOLLONGONG CITY COUNCIL

This draft Quarterly Review Statement reports the period from January – March 2016 and reports on progress towards achieving the five Councillor Strategic Programs from the Delivery Program 2012-17 and the Annual Deliverables from the Annual Plan 2015-16. Highlights and significant progress with key projects from the Annual Plan 2015-2016 are reported by the six Community Goals from the Wollongong 2022 Community Strategic Plan.

Highlights from this quarter include:

- 1 Official reopening of the newly refurbished Berkeley Community Centre.
- 2 Successful Australia Day Event with over 35,000 attendees.
- 3 Clean up Australia Day activities were held across the Local Government Area.
- 4 Wollongong Sculpture in the Garden exhibition and Design Award were launched.

The organisational performance is also reported by the inclusion of the performance indicators which monitor the status and progress of our Council programs, activities, projects, finances, people and processes.

This report also includes an overview of how Council is tracking against its budgets and expenditure. It is a concise visual summary of Council's financial situation for the quarter including budget, capital budget and expenditure. The Budget Review Statement is also included in this report.

I would like to thank all staff and the community for their contributions to the achievements identified in this draft Quarterly Review and Budget Review Statement. This review will inform the Annual Report due in November 2016.

David Farmer  
General Manager



# STRATEGIC PROGRAMS PROGRESS REPORT

## WOLLONGONG CITY COUNCIL

Our Councillors have made a commitment to support our organisation and the community in making Wollongong a better place to live, work, visit and play. To focus Council's attention to achieve this, Councillors have agreed to five Strategic Programs, outlined in the Delivery Program 2012-17. Progress made in the March 2016 quarter is outlined below:

### 1 Financial Sustainability

**Our Council is committed to improving the standards of community assets over the five-year Council term. This will be achieved by directing 85% of all capital investment into asset renewal, and a strong emphasis of cost effectiveness in service provision.**

**Project Sponsor:** General Manager

**Project Manager:** Executive Strategy Manager

### Strategic Program Progress



On Track



Moderate risk in achieving the Strategic Program and/or impact on delivery timeframe



Significant risk in achieving the Strategic Program

### Program Achievements

Council at its meeting 23 June 2014 adopted a revised budget and annual plan that included a special rate variation, efficiency target, minor service adjustments and planned increases in fees and charges. This three year strategy commenced in July and increased income is reflected in the expansion of the capital works program to address asset renewal across the city.

Annual efficiency targets were built into the budget and across Council's service portfolio with the intent that specific improvement opportunities and initiatives would be identified through the year. Specific programs to achieve these savings were confirmed through the September, December, March Quarters with \$1.2M being achieved leaving a remaining target of \$149K for 2015-2016.

### Program Risks

With the approval of a special rate variation by the Independent Pricing and Regulatory Tribunal (IPART) in June 2014, and the adoption of a multi-faceted strategy, the risk rating for the Financial Sustainability Program has decreased. The focus is now to ensure ongoing business improvements resulting in efficiencies and the delivery of a significant capital works program focusing on renewal.

## 2 West Dapto Urban Release

Council will work in collaboration with key agencies to provide the infrastructure needed to support growth within the West Dapto Urban Release Area. This will include improving access, infrastructure and local services which are needed to support the additional 17,000 future housing lots within the release area

**Project Sponsor:** Director Planning + Environment | *Future City and Neighbourhoods*

**Project Manager:** Manager Project Delivery

### Strategic Program Progress

- ✓ On Track
- ✗ Moderate risk in achieving the Strategic Program and/or impact on delivery timeframe
- ✗ Significant risk in achieving the Strategic Program

### Program Achievements

Fowlers Road to Fairwater Drive - Council acquired the last parcel of privately owned land fronting Marshall Street and Council has continued to undertake investigations into the preferred concept design.

Wongawilli Road / West Dapto Road - The design of road upgrade works along Wongawilli Road and part of West Dapto Road has been continuing. The design of Stage 1 works between Smiths Lane and Shone Avenue intersection has progressed to detailed design and negotiations are also continuing with affected property owners where property acquisitions are required.

Overall Access Strategy - Council has commenced investigations into the next stages of the overall access strategy with planning commencing on the future road network along West Dapto Road, Darkes Road and Sheaffes Road.

### Program Risks

Both access projects (Fowlers to Fairwater and Wongawilli Roads/West Dapto Road) have risk registers which identify a number of significant risks. Reviews of the project risk assessments are being undertaken at regular milestones to manage these risks.



### 3 Waste Management

During Council's term we will work to reduce the environmental impact of waste by improving waste management across the city. We will finalise and deploy Council's Waste Strategy, assess the impacts of the carbon tax, and work toward the development of a new landfill cell at Whyte's Gully to increase landfill capacity for the region.

**Project Sponsor:** Director Infrastructure + Works | *Connectivity Assets + Liveable City*

**Project Manager:** Manager City Works and Services

### Strategic Program Progress



On Track



Moderate risk in achieving the Strategic Program and/or impact on delivery timeframe



Significant risk in achieving the Strategic Program

### Program Achievements

The following progress has been made in key waste management strategic programs:

#### Helensburgh Waste Landfill Rehabilitation Project

- Detailed design has been completed.
- Finalising contract details in preparation of tender.
- Development modification to incorporate a landfill gas flaring unit has been approved.
- Tender documentation is currently being finalised.
- Approved exemption to work with contractor in regards to providing capping material.

#### Whytes Gully New Landfill Cell

- Stage 1A waste filling continues.
- Stage 1B is in place and ready to receive waste.
- Landfill gas infrastructure is in place and is currently investigating the quality and quantity of landfill gas presenting at Whytes Gully.
- Haul road 80% detailed design completed.

#### Community Recycling Centre

- Site identification and conceptual design completed.
- EPA approval of concept design achieved.
- Detailed design of Small Vehicle Transfer Station (SVTS) is about to start.

### Program Risks

There are a number of risks associated with Helensburgh Waste Landfill Rehabilitation Project and the Whytes Gully New Landfill Cell. The major risks are:

- New landfill cell does not function as designed.
- Excessive delay to obtain operational approval from EPA for Whytes Gully new landfill cells, thereby impacting on Council's continued ability to landfill Wollongong's waste materials.
- Future landfill cells not being constructed in time for Council to continue with the uninterrupted disposal of Wollongong's waste materials at Whytes Gully.
- The landfill liner at Whytes Gully installed incorrectly.
- Capital cost of either or both projects exceeding initial expectations.
- The supply of fill material required for the Helensburgh Rehabilitation project is relatively large, with the potential to cause delays and disruption to the local community if not managed correctly.

The Helensburgh site has been non-operational for an extended period of time. Returning to the site for rehabilitation construction may adversely affect the local residents relative to the quiet conditions that they have been experiencing since the site's closure as a landfill.

## STRATEGIC PROGRAMS PROGRESS REPORT

### 4 City Centre Revitalisation

Council's fourth aspiration in the Delivery Program, is to improve the attractiveness of the Wollongong City Centre to work and visit, reinforcing its role as the region's major hub for investment and jobs growth.

**Project Sponsor:** Director Corporate + Community Services | *Creative, Engaged and Innovative City*

**Project Manager:** Manager Project Delivery

### Strategic Program Progress

- ✓ On Track
- ✗ Moderate risk in achieving the Strategic Program and/or impact on delivery timeframe
- ✗ Significant risk in achieving the Strategic Program

### Program Achievements

During this quarter the draft Mall Activity Policy was finalised. The draft Policy is designed to welcome and encourage activity in the Mall to create a vibrant and revitalised public domain and a strong sense of place for the community and other stakeholders. The draft Policy was endorsed by Council on 4 April 2016 for public exhibition.

A number of key events were delivered during this quarter including Easter on Crown, Honk OZ Activations and Festival, and the pop-Up Botanic garden extending into January 2016. Planning for a variety of 'Quick Win' activations within the Mall progressed. One of these is the Tree Guard artwork by Kane Horsewell in the lower half of the Mall opposite the Wesley Church. Other 'Quick Win' activations will continue to roll out over the next quarter. The Friday Markets and Thursday night Eat Street Market continued to contribute to the City Centre Evening Economy. Nocturnal Arts provided the backdrop to an innovative after hours arts program within the Mall, Arts Precinct, and Globe Lane between 17 February and 5 March. As part of Nocturnal Arts local digital designers, street theatre artists, dancers and musicians took over the City Centre for a series of pop-up performances. Destination Wollongong continued to deliver on the marketing and promotion of the Crown Street Mall with a strong focus on Easter celebrations.

Improvements to the amenity of western Crown Street commenced. The works which will improve footpaths, replace service pit lids and provide kerb and gutter replacements along western Crown Street from the western corner of Atchison and Crown Streets on the southern side through to the Jubilee Bridge at the train station has commenced.

Feedback on 'A City for People' received during the public exhibition period has been reviewed. This will inform the final strategy for the revitalisation of the City Centre.

### Program Risks

Management of utilities and service pits, and of wet weather during construction, will continue to be a risk potentially impacting on the delivery program.

### 5 Connectivity / Walkability

Council's fifth aspiration is to improve the connectivity of the Local Government Area (LGA) through the upgrade of our network of footpaths and cycleways. This focus on our path and cycle network will ensure that necessary works are carried out to achieve an accessible and connected city.

**Project Sponsor:** Director Infrastructure + Works | *Connectivity Assets + Liveable City*

**Project Manager:** Manager Infrastructure Strategy and Planning

### Strategic Program Progress



On Track



Moderate risk in achieving the Strategic Program and/or impact on delivery timeframe



Significant risk in achieving the Strategic Program

### Program Achievements

The Wollongong Bike Plan was adopted in May 2014. Actions identified within the bike plan will and are being incorporated into the capital works and operational programs for progressive implementation. The Wollongong Pedestrian Plan has commenced and is being scoped and is expected to be completed in 2016.

The RMS is currently changing the configuration of the Windang Bridge and will be widening the existing footpaths to make provision for cyclists in a shared path arrangement.

Scoping, traffic modelling and design work including the on-road bicycle lane and Smith Street railway shared path underpass are continuing on the Smith and Kembla Street on road cycleway which will provide access for cyclists into the city centre.

The following designs have commenced:

- Chellow Dene Avenue; new footpath Sheridan Crescent to end, Stanwell Park
- Mulda Street; shared path Byamee Street and Barellan Avenue, Dapto
- Maidstone Street; new footpath The Ridge to The Crescent, Helensburgh
- Flagstaff Road; new footpath Lake Avenue to pedestrian signals (north side), Lake Heights
- Heining Street; new footpath existing to Fowlers Road west side, Dapto
- School Childrens's Crossing; Pram ramps – Park Road, Bulli; Kendall Street, Tarrawanna; Vickery Street, Gwynneville
- Mowbray Lane; kerb blisters and raised threshold (IFC Drawings), Warrawong
- Northcliffe Drive; Wilkinson to George Streets, Berkeley
- Foothills Road and Dumfries Road; pedestrian refuge, pram ramps and footpath, Mt. Ousley
- Florence Street; new footpath Princes Highway to end, Towradgi
- Brompton Road; new footpath between Rothery Road and Bellambi Lane, Bellambi
- Caldwell Avenue; new footpath from just east of Meadow to Charles Streets, Tarrawanna
- Chennalls Street, new footpath Stanhope to Gray Streets, Woonona.
- Foothills Road; new footpath Farrell Road to Johns Street (west side), Balgownie
- Gallipoli Street; new footpath Quarry Street, Suvla Street, Anzac Way ( Stage 1 from the Port Kembla School to Suvla street), Port Kembla.

## STRATEGIC PROGRAMS PROGRESS REPORT

The following designs have been completed:

- Northcliffe Drive Shared Path - King to Parkes Streets, Warrawong
- Farmborough Road shops footpath, Unanderra
- Grey Street footpath - Memorial Drive to Liddle Street, Woonona
- Illawarra Street footpath - #126 to #128, Port Kembla
- Railway Street footpath - #1 to #5, Corrimal
- Smith Street footpath - from Corrimal to Church Streets, Wollongong
- Market; Corrimal to Queens Streets, Wollongong
- Foothills and Dumfries Roads; pedestrian refuge, pram ramps and footpath, Mt. Ousley
- Maidstone Street; new footpath The Ridge to The Crescent, Helensburgh

The following construction projects have commenced:

- Galvin Park; new footpath, North Wollongong
- John Street, Murphys Avenue to Gipps Road, Gwynneville
- Byamee Street footpath (north side) - from Wallabah Way to Bangaroo Avenue, Dapto
- Leeder Park footpath to rock pool, Coalcliff
- Slade Park Slope Stability, Austinmer
- Crown Street West – Stage 1, Wollongong

The following construction projects have been completed:

- Grey Street; new footpath Rose Street to Gipps Road, Gwynneville
- Edward Street; new footpath – no.15 to no.19, Wollongong
- George Street; new footpath school crossing to pre-school (west side), Berkeley
- Raymond Road; new footpath Station Street to existing, Thirroul
- Lilyvale Street; new footpath Stuart to Walker Streets, Helensburgh
- Jerematta Street; new footpath Mulda Street to #17, Dapto
- Monie Street; new footpath John to Chenhalls Streets, Woonona
- Rowland Avenue; new footpath corner of Gladstone Avenue, Wollongong
- Roxburgh Road; new footpath nth side; No. 3 to Phillip Street, Thirroul
- Berkeley East footpath renewal program, Berkeley
- Church Street footpath - from Smith to Market Streets, Wollongong
- Smith Street footpath - from Harbour to Corrimal Streets, Wollongong
- Oakland Avenue, - School Crossing Upgrade, Windang
- Northcliffe Drive - School Crossing Upgrade, Lake Heights
- Nolan & Gallop Streets - Pedestrian refuge, Kerb Blisters Line & Pavement Markings, Berkeley

## Program Risks

There are a number of sites on the network expansion program with significant geographical, technical, agency approval and community concerns that may impact on the design phase and hence construction time frames. To minimise the impact from this risk, designs for projects further down the delivery program are also being progressed such that construction programs can be re-phased to ensure continued delivery of the improvement program.

# ANNUAL PLAN 2015-16

## PROGRESS SUMMARY

### WOLLONGONG CITY COUNCIL

The following section provides an overview of Council's progress with delivering Wollongong 2022. It provides a summary of progress for 2015-16 annual deliverables [Council's programs, projects and activities] and highlights significant progress with annual projects as outlined in the Wollongong 2022 community goals. This exception based reporting provides an overview of achievements for the March 2016 quarter. The organisations performance is also reported by the key performance indicators, budget summary information and Budget Review Statement.

The Annual Plan 2015-16 contains 311 annual deliverables across the 6 community goals. Table 1 below outlines how Council is tracking in the March quarter to achieve the annual deliverables for each community goal.

**Table 1: Annual Deliverable Progress by Community Goal**

Goal	On track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
1 We value and protect our natural environment	92.31%	0%	6.15%	1.54%	0%
2 We have an innovative and sustainable economy	94%	0%	2%	0%	4%
3 Wollongong is a creative, vibrant city	93.1%	0%	0%	0%	6.9%
4 We are a connected and engaged community	89.39%	0%	3.03%	1.52%	6.06%
5 We are a healthy community in a liveable city	95%	0%	3.75%	1.25%	0%
6 We have sustainable, affordable and accessible transport	85.71%	0%	9.52%	0%	4.76%
<b>Total Annual Deliverable Progress</b>	92.28%	0.00%	3.86%	0.96%	2.89%

\*Note: Each Goal does not have equal number of Annual Deliverables; therefore the Annual Deliverable progress totals do not necessarily add together.

## ANNUAL PLAN 2015-16 PROGRESS SUMMARY

Overall 3.86% of annual deliverables were reported to be delayed, while 0.96% were deferred. Table 2 below outlines all annual deliverables that were reported as delayed or deferred at the end of March 2016.

Community Goal	Annual Deliverable	Delayed	Deferred	Comment
1 We value and protect our natural environment	Continue to pursue biodiversity certification of the West Dapto Urban Release Area including offsetting provisions.	Y		A letter has been sent to NSW Planning and Environment seeking their support for the proposed levy to provide the additional funding that will be required for the Biocertification process to proceed. A response is yet to be received.
	Investigate and respond to complaints relating to existing development.	Y		The Environment & Development Compliance Section continued to undertake a risk based approach to the allocation of resources. High risk and complex development compliance matters were given investigative priority.
	Investigate and implement flaring, energy generation and other options.		Y	<p>Following continuous gas quality and quantity assessment, a market appraisal was completed to ascertain the options available to Council to beneficially treat landfill gas presenting at Whytes Gully.</p> <p>The market appraisal compared the following gas infrastructure procurement options:</p> <ul style="list-style-type: none"> <li>- Council own and operate</li> <li>- Council own and contractor operate</li> <li>- Contractor build, own and operate (royalty arrangement) and transfer selected infrastructure</li> <li>- Joint venture</li> </ul> <p>Investigation into the benefit and risk of each option to Council and the community has resulted in recommending a contractor build, own, operate and transfer business model.</p> <p>However, in the instance of a new merged Council the landfill gas system at Whytes Gully would be optimally considered in conjunction with the landfill gas system at Dunmore (Shellharbour City Council's waste disposal facility). Therefore the project is placed on hold whilst data gathering continues.</p>

## ANNUAL PLAN 2015-16 PROGRESS SUMMARY

Community Goal	Annual Deliverable	Delayed	Deferred	Comment
	Deliver Urban Greening strategy	Y		Work continued on the development of an Urban Greening Strategy. A third workshop was held with 17 staff from across several divisions to work through draft visions, objectives and actions for the Strategy and discuss the approach for community engagement. A workshop was also held for the Environment and Sustainability Reference Group, their invited guests and other key stakeholders. This workshop had 30 participants and focused on: outlining council's work to date including project scope, timeline, data, barriers; identifying the participant's top priorities; and identifying actions under four focus areas for the strategy. The on-line tool, i-Tree Canopy was used to calculate percentage land cover (tree, shrub, hard surface or bare ground/grass) for Wollongong's urban suburbs. A consultant was engaged to prepare a tree canopy spatial layer of the Wollongong LGA using LiDAR and aerial photography. This will allow quantification of tree cover across different land categories and will help inform actions and priorities. Work is continuing on preparation of the Strategy, which may need to be updated depending on the outcome of the Merger Proposal currently under consideration by the NSW Government.
2 We have an innovative and sustainable economy	Resolve options for key services including power and water supply to the Mt Keira summit	Y		Resolving outstanding issues with National Parks & Wildlife (NPWS) has been taking considerable time. A final submission has been made to NPWS and Council is awaiting approval. Endeavour Energy is satisfied with Council's efforts to date and will review and re certify plans once NPWS approvals have been obtained.



## ANNUAL PLAN 2015-16 PROGRESS SUMMARY

Community Goal	Annual Deliverable	Delayed	Deferred	Comment
Continue the "Council Connect" project to enhance Councils on-line services and increase opportunities to conduct business with Council online		Y	Council continues to deploy the new customer service system which will consolidate Customer Interactions into one system. This will enable accurate case management and effective reporting. The project has made considerable progress with the release of new channels of contact.	
	Facilitate an integrated business improvement approach to work practices and spread of hours	Y		Progress in this area has been delayed due to the demands of other projects.
	Continue review of subsidy levels on fees and charges (excluding community services)	Y		A review of Regulatory Control is currently under way. Finalisation of this review has been delayed but results are expected to be presented to Executive in the next quarter.

## ANNUAL PLAN 2015-16 PROGRESS SUMMARY

Community Goal	Annual Deliverable	Delayed	Deferred	Comment
3 We are a healthy community in a liveable city	Manage the west Dapto Home Deposit Assistance Program	Y		<p>Since the launch on 24 October 2014, there have been eleven applications under the Program with ten of these approved. The first property purchase has been completed which is pleasing. While many people are interested in the program, there is currently a mismatch between income limits, purchase limits and the entry level of new housing stock in the area.</p> <p>The Department of Social Services has been updated regularly on issues relating to the implementation of the Program. A letter written to the Department emphasised Council's view that the success of the Program had been adversely impacted by a particularly strong property market which has created such a strong demand in the area that there was no need for developers to tailor the product to meet niche demand such as smaller dwellings for lower income earners. The letter to the Department of Social Services served as an opportunity to outline some options to be considered as interim measures that may provide some success in the short term. These were rejected by the Department.</p> <p>The Department is reviewing the future application of these funds, the outcome of which Council is uncertain. It is expected that a formal advice for the finalisation of the Program and/or future operating requirements will be issued to participating councils in the near future. A more definitive action will be required to respond to that formal advice when it is received.</p>
	Finalise the Housing Study Review and commence implementation		Y	The Housing Study project has been put on hold due to the merger proposal.
	Develop Wollongong City Libraries Supporting Document: 2015-2020	Y		The draft Wollongong City Libraries Strategy 2016 - 2022 is on hold as a result of possible merger with Shellharbour City Council.
	Reinstate Waterfall (Garrawarra) Cemetery	Y		Council is continuing to work with Crown Lands to gain access to the site whilst at the same time progressing the approvals process so work may commence as soon as access rights are provided.

## ANNUAL PLAN 2015-16 PROGRESS SUMMARY

Community Goal	Annual Deliverable	Delayed	Deferred	Comment
4 We have sustainable, affordable and accessible transport	Continue construction of the Cordeaux Road Shareway	Y		The final segment of the Cordeaux Rd shared way works between Boorea Blvd and William James Dr has been progressing. These works have included the construction of retaining walls, shareways, service reconfigurations and road resurfacing.
	Continue to construct Stage 1 of the Grand Pacific Walk	Y		A number of factors have affected the completion of the detailed design documentation for Stage 1 Section 2 of the proposed works, however, the documentation is now being finalised. The remaining sections, Section 3 and 4 are also proceeding in the design process. Prior to completing the tender documentation advice will be required from the Roads and Maritime Services on the timing and conditions of a Road Occupancy Licence.
5 We have sustainable, affordable and accessible transport	NO DELAYED OR DEFERRED ITEMS			
6 We have sustainable, affordable and accessible transport	Use funds obtained from Restart NSW Illawarra to design and construct the Grand Pacific Walk – Stage One	Y		A number of factors have affected the completion of the detailed design documentation for Stage 1 Section 2 of the proposed works, however, the documentation is now being finalised. The remaining sections, Section 3 and 4 are also proceeding in the design process. Prior to completing the tender documentation advice will be required from the Roads and Maritime Services on the timing and conditions of a Road Occupancy Licence.

# GOAL 1: WE VALUE AND PROTECT OUR NATURAL ENVIRONMENT

## WOLLONGONG CITY COUNCIL

### Continue implementation of priority actions from the Dune Management Strategy

Work has progressed on the implementation of the Dune Management Strategy as follows:

- Bush restoration contractors continued to work in the dune areas at Bulli, Woonona, Bellambi, Corrimal, Towradgi, Fairy Meadow and Wollongong City beaches. On ground work has included weed control and installation of appropriate plants.
- A consultant prepared preliminary options reports, coastal hazard assessment and draft designs to reshape areas of dunes at Corrimal and Fairy Meadow beaches in front of the Surf Life Saving Clubs (SLSCs). Consultation was undertaken with Council's Estuary and Coastal Zone Management Committee and the SLSCs on proposed options. Work commenced on the draft Review of Environmental Factors for the projects.
- Following the public exhibition of the draft Whartons Creek (Bulli Beach) entrance management study and plan, Submissions in Reply Report and amendments to the draft plan were prepared.
- The Beach and Dune monitoring program continued, with monthly transects surveyed and photo monitoring conducted.

### Develop and deliver diverse local studies projects that contribute to the preservation and continued relevance of local history and community stories

Wollongong City Libraries' Local Studies team contributed to the planning and display of Local Studies materials as part of the Spirit of ANZAC Centenary Experience, which opened at University of Wollongong in January 2016. The team is making good progress cataloguing the Illawarra Mercury Photographic Collection, and continues to work on a number of projects that contribute to the preservation and continued relevance of local history, the collection and community stories - for example - Illawarra Remembers, local identity oral history recordings and transcripts from Austinmer and Dapto, and digitisation of historic maps.

## GOAL 1: WE VALUE AND PROTECT OUR NATURAL ENVIRONMENT

Coordinate community environmental programs, including Rise and Shine program, Clean Up, Australia Day, World Environment Day, National Recycling Week, International Composting Week and other waste education activities.

The Ban the Bag promotion at a local shopping centre observed 1,010 shoppers over three days using an estimated 8,700 single use plastic bags representing 91% of bags used. An engagement and education activity was then conducted with a total of 584 shoppers who received a supply of Onja produce bags, 5 large reusable cloth bags as well as committing to a pledge to stop using plastic bags when shopping.

Clean Up Australia Day was held on Sunday 6 March across the Local Government Area involving 44 groups, 6 businesses, 43 schools at 39 sites. A total of 10,750 school students and 780 volunteers collected 5.66 tonnes of litter and rubbish from parks, beaches, streets and natural areas.



*IMAGE: Kirsten Hort from the Australia Seabird Rescue organisation joins with Wollongong City Council Lord Mayor Cr Gordon Bradbery OAM with members of the rescue association at Berkeley Boat Harbour.*

In partnership with the Regional Illegal Dumping (RID) Squad Program develop and implement an illegal dumping regulatory and educational program

During this period Council's RID Ranger continued to pursue illegal dumping complaints and patrol hotspot areas. This quarter 249 action requests were investigated. A joint interagency enforcement weekend was held on 5 and 6 March 2016 with 53 dump sites identified with approximately 100 cubic metres of waste.

## GOAL 1: WE VALUE AND PROTECT OUR NATURAL ENVIRONMENT

### Deliver new carbon abatement projects funded as a result of the carbon tax repeal

To comply with the provisions of the previous Clean Energy Act, Council, as the owner of a significantly large landfill site at Whytes Gully, was obliged to charge customers for future greenhouse gas emission liabilities as waste was received. These liabilities were then removed when the "carbon tax" repeal legislation was implemented in July 2014, leaving Council holding funds without any mechanism to refund supply chain customers.

In the first quarter of 2015-16, the Federal Government released the voluntary Waste Industry Protocol. The Waste Industry Protocol offers a mechanism for Council to return "carbon tax" for consumer benefit. At its meeting of 09 November 2015, Wollongong City Council resolved to participate in the voluntary Waste Industry Protocol. By agreeing to join the Protocol, Council is officially able to invest early collected carbon tax revenue into complying carbon abatement projects. An independent audit of the money collected indicated that approximately \$1.8M was available for investment.

Various projects have now been scoped to utilise this funding and reduce greenhouse gas emissions. The projects currently considered for implementation include solar power installations, increased efficiency lighting and heating projects.

### PERFORMANCE MEASURES

- Participation rate in environmental programs | 3,935 (Q2=7,286)
- Number of volunteers for Environmental Programs - Greenhouse Park | 76 (Q2=95)
- Plants propagated | 9,715 (Q2=10,000)
- Plants distributed | 9,527 (Q2=18,247)
- Tonnes of rubbish collected from clean-up activities | 12 (Q2=14)
- Number of volunteers worked at Bushcare and FIReady sites | 259 (Q2=235)

# GOAL 2: WE HAVE AN INNOVATIVE AND SUSTAINABLE ECONOMY

## WOLLONGONG CITY COUNCIL

### Deliver the Economic Development Strategy

In collaboration with the Economic Development Advisory Board, the following key activities from the Economic Development Strategy were implemented during the quarter:

- The Economic Development Team assisted 100 businesses/investors in Wollongong, ranging from support for small businesses to a number of large scale enquiries.
- The 2016 Economic Gardening Program commenced in March 2016, with 23 businesses participating in the program.
- Council lodged submissions to the Federal Government on the proposed Western Sydney Airport and the Inquiry into the future of Australia's steel industry.
- Council lobbied the NSW Government to choose Stadler Australia Pty Ltd as the preferred tenderer for the \$2.8B Intercity Fleet Program. At its peak, Stadler will employ around 600 people.
- Royal Caribbean announced at least two more cruise ships will dock in the Illawarra, including Radiance of the Seas on 29 January 2018 and the larger Explorer of the Seas on 13 March 2018.
- The SES announced they have signed a 25 year lease to retain their headquarters in the Wollongong CBD (at the old ATO building).
- Council continued to lobby both the Federal and NSW Governments in regards to infrastructure spend, location of government jobs and other tourism related activities.
- Council appeared before the Senate Economics References Committee "The Future of Australia's Steel Industry".
- The Economic Development Manager made a presentation to the GPT Fund Board as part of future deliberations for investment in the Wollongong City Centre.

### Work with local high schools, TAFE and the University of Wollongong to promote Council 's Youth Development Program and attract students into the program

Council finalised its 2015-16 Cadet, Apprentice & Trainee and School Based Trainees recruitment during December 2015 and January 2016 with 15 Cadets, Apprentices and Trainees commencing on 2 February 2016. Six School-based trainees commenced in December 2015, with one trainee being from an Indigenous background and employed under the Elisa Dixon Program.

## GOAL 2: WE HAVE AN INNOVATIVE AND SUSTAINABLE ECONOMY

### Promote Wollongong City Council as an employer of choice for women in Local Government

During the third quarter Council received acknowledgement that it had been successful with its application for Silver Accreditation with the Australian Local Government Women's Association towards 50:50 Gender Equity Award. Council is still awaiting the formal recognition of this Award.

The My Mentor Program, for female staff only, is scheduled to be launched in May 2016 with nine participants registered.

### Deliver City Centre Evening Economy Strategy

During this quarter the focus continued on building an activated evening economy in our City Centre. A key event was Nocturnal Nights held in the Crown Street Mall, Globe Lane and Arts Precinct between 17 February and 5 March. Local digital designers, street theatre artists, dancers and musicians performed a series of pop-up performances. One of the groups involved in Nocturnal Arts was Static of the Radio Theatre. The troupe of untrained dancers busted their moves to a playlist the audience could change. Other artists involved include digital designers Zender Bender, Four4 and Rise and Shine, and Laughter House Productions and The Seagull street theatre.



*IMAGE: Nocturnal Arts evening program held in City Centre.*



## GOAL 2: WE HAVE AN INNOVATIVE AND SUSTAINABLE ECONOMY

### Seek funding for key iconic tourism infrastructure

Council was recently advised that it was successful with a funding application of \$900,000 for reconstruction of "The Tramway" Sea wall and shared path under the second round of the Federal Government's National Stronger Regions Fund (NSRF).

This is in addition to the soon-to-be-completed Cordeaux Road shared path, Grand Pacific Walk and Bald Hill Reserve upgrade, all of which have been partly funded from the NSW State Government and others.

### Implement the Bald Hill Masterplan

Construction works are progressing well to achieve the Masterplan. Council has recently completed the roundabout and road shoulder reconstruction and is currently undertaking site landscaping works. The amenity building has been designed and construction commenced.



*IMAGE: Works progress at Bald Hill Stanwell Park.*

## GOAL 2: WE HAVE AN INNOVATIVE AND SUSTAINABLE ECONOMY

### Provide database sessions to Year 11 & 12 students, and information sessions for customers, across a range of Library sites

Wollongong City Libraries continue to provide database training sessions for senior high school students to assist in developing research skills to support preparation for HSC, and special sessions for HSC students, including guest speakers on particular areas of curriculum, and HSC lock-in workshops.

The demand for more "Tech Savvy" training sessions for customers lacking the skills to use PCs, tablets, smart phones, and social media platforms continues to grow. Recently, sessions have been provided in Italian to meet the needs of our Italian community.

### PERFORMANCE MEASURES

- Number of visitations to the tourism information centres | 22,327 (Q2=16,020)
- Tourist Park occupancy rate of cabins | 61 % (Q2=55%)
- Occupancy rates of paid on street parking | 71 % (Q2=60%)
- Tourist parks occupancy rate of unpowered sites | 47 %(Q2=25% )
- Tourist parks occupancy rate of powered sites | 65 % (Q2=51%)

# GOAL 3: WOLLONGONG IS A CREATIVE, VIBRANT CITY

## WOLLONGONG CITY COUNCIL

### Deliver the key recommendations from the Cultural Plan and Live Music Task Force Action Plans

Lunch in the Precinct program commenced on 2 March and will continue until 25 May. This program provides employment opportunities for local performers and emerging musicians. To date approximately 64 performers have showcased their skills including 3 different performances from students at Smiths Hill. Audience number for this quarter is estimated at 1,425.

The cultural newsletter continues to promote live music venues, art exhibitions, theatre performances, workshops and events.

### Deliver a range of community development programs

On 17 March the Living Books Program was delivered at Dapto High School with 87 Year 11 students, as part of the Crossroads program. In the program 7 books shared their stories with young people and positive feedback was received in relation to the program and the connections it helps to build. On 31 March, a smaller event was held with young women at the Bellambi Links to Learning program.

Planning continues on 2 key projects with Refugee Communities. The Illawarra Refugee Challenge is planned for August 2016 and builds on the 2015 pilot project. Council is also supporting the screening of Freedom Stories in early June. As part of the project Q & A's will be held with the film maker and local refugee community members. Council is supporting the planning and promotion of Refugee Week 2016.

Council has continued to be an active member of the 2518 Bellambi Collective Initiative through participation in both the Bellambi Steering Group and the Action Plan Working Group. As part of the Bellambi Action Plan development Council has contributed to the themes of Safety and Environment and Connections, Support and Inclusive Communities.

The Berkeley Safer By Design project is progressing and Council continues to liaise with shop owners in Berkeley about the location of the graffiti prevention murals and issues around malicious damage. Artists chosen to produce the graffiti prevention murals will be consulting with community members on the themes for the murals. Community groups have been engaged to develop and maintain one community garden. As part of the Berkeley Safer By Design project, Council is currently investigating a possible community activation initiative with the installation of an outdoor table tennis table being located near the Berkeley Community Centre.

## GOAL 3: WOLLONGONG IS A CREATIVE, VIBRANT CITY

### Deliver a program of events to be held in commemoration of 200 years of European settlement in Wollongong

Council's Australia Day event introduced a number of elements to mark Illawarra 200 including increased Indigenous performances on main stage and street theatre performers dressed as Charles Throsby and another as a coal miner in recognition of the area's European history.

Council's Financial Assistance Policy was advertised including a call for local events to apply to be badged as Illawarra 200 events.

### Deliver Council's annual community event program

Council's annual Australia Day event was a great success drawing crowds in excess of 35,000. Our summer Twilight Markets were held in January and March, with the February market cancelled due to inclement weather.



*IMAGE: Australia Day Celebrations at Wollongong Harbour*

### Collaborate with Culturally and Linguistically Diverse (CALD) community to support community events and celebrations

To strengthen networks in the local Chinese community, raise awareness of Chinese culture and foster a sense of belonging, the Community Development team supported theming the March Twilight Markets to reflect the traditions of the Lantern Festival. Council worked with a newly formed Chinese group to hold this public Chinese cultural event, the first in collective memory. Feedback was extremely positive and included "this makes Chinese culture come alive for my Australian born daughter " and " it's amazing to have this here in Wollongong and not have to go to Sydney".

## GOAL 3: WOLLONGONG IS A CREATIVE, VIBRANT CITY

### Refurbish Berkeley Community Centre and Relocate Berkeley Neighbourhood Centre to the new facility

The official opening of the Centre was jointly organised by the licensee of this facility, Berkeley Neighbourhood Centre Inc. and Council. The collaborative planning of this celebration led to a very well attended fun, family day on 27 February 2016. Council continues to work with Berkeley Neighbourhood Centre Inc. as they settle into the Centre.



*IMAGE: The official opening of the refurbishment of Berkeley Neighbourhood Centre.*

## PERFORMANCE MEASURES

- Library visitations | 232,922 (Q2 = 228,899 )
- Library – total number of loans | 354,449 (Q2 =312,432 )
- Library programs: number of programs | 332 (Q2 =414 )
- Library programs: number of participants | 6,355 (Q2 = 5,996)
- Attendance at Australia Day event 35,000
- Attendance at Sunset Cinema season 14,000

# GOAL 4: WE ARE A CONNECTED AND ENGAGED COMMUNITY

## WOLLONGONG CITY COUNCIL

### Continue to work in collaboration with the local Aboriginal community on a range of projects

Council staff attended relevant Aboriginal community meetings including: What's Happening In Your Space (WHIYS) Committee, NAIDOC Week Awards Dinner 2016 Steering Committee, NAIDOC Family Fun Day and the Wollongong Northern District Aboriginal Community group,

Work continued with Illawarra Performing Arts Centre (IPAC) and in partnership with the Aboriginal community to develop a relevant program for Reconciliation Week 2016. A program of 13 Aboriginal Stories called "sharing stories growing relationships" has been developed and will be performed at IPAC for all members of the community during Reconciliation week in June 2016.

Also worked in partnership with Noogaleek Children's Centre Berkeley to develop a series of painted snakes drawn by 3 to 6 year olds which are to be included on decals in the City Centre Mall.

Our Aboriginal Community Development Worker assisted in the successful recruitment processes for an Aboriginal Civil Engineer Cadetship which was filled by a local Aboriginal person and in the Expression of Interest (EOI) process to select suitable Aboriginal artist/s to complete the Aboriginal Public Art project for the Bald Hill reconstruction works.

### Develop and implement programs and projects that support intergenerational interaction and integration (eg Grandad's Story Time; Grandparent's Story Time in Seniors Week)

Dapto Library and Dapto Ribbonwood Centre hosted the annual "Kids Day Out", in partnership with the Illawarra branch of the Children's Book Council, in January 2016, which attracted a cross-section of generations. A special "Grandparents' Story Time" was hosted at Thirroul Library in March 2016, as part of the Seniors Week program, while activities such as "Stories on Saturday" (also at Dapto) attract a range of parents and grandparents to spend time developing early literacy with their children.



## GOAL 4: WE ARE A CONNECTED AND ENGAGED COMMUNITY

### Participate in planning activities for the community services sector, to provide input, assist in identifying gaps in service provision and advocate for improved services

During the quarter, Council participated in the following activities:

- Families NSW Child and Family Network.
- The Collective 2518 Project at Bellambi.
- Council also convened Wollongong Home and Community Support Network, Community Care Collective, the Wollongong Parenting Interagency and hosted the Illawarra Refugee Issues Forum and participated in the Domestic Violence subcommittee.
- Council is working with services to conduct a session focusing on the new Australian Early Development Census (AEDC) data to improve current practices and develop future initiatives.

### Continue to seek external funding to support delivery of core community infrastructure projects

Council has submitted grant applications to both State and Federal Governments for major infrastructure projects of the West Dapto Access Strategy and the Blue Mile.

The most recent examples of this were the:

- \$2.4M application under the NSW Government's "Resources for Regions" program for the Wongawilli Road Access Project; and
- Resubmission of the \$10M 'Fowlers Road to Fairwater Drive' road link grant application under the latest round (Round 3) of the Federal Government's National Stronger Regions (NSRF) fund.

Results of these applications are not expected until early in the 2016-17 financial year.

### Delivery of civic activities

In March a Recognition Reception was held recognising volunteers, recent recipients of Order of Australia medals and other individuals and organisations who have contributed to the local community. We also hosted a visit by 4 representatives of the Kawasaki Teachers Federation from our sister city in Kawasaki, Japan. Staff also supported two school tours during this period.



*IMAGE: Robyn Hampton with the Lord Mayor Cr Bradbery at the March Recognition Reception*

## GOAL 4: WE ARE A CONNECTED AND ENGAGED COMMUNITY

### Continue to deliver friendly, courteous and efficient Customer Service through the Customer Service Centre

Over the quarter the Customer Service Team have provided a face to face service to 13,046 customers and a phone service to 33,839 customers. Additionally, in the last 3 months Customer Service has interacted with our community via web chat, video call and through on-line services.

#### PERFORMANCE MEASURES

- Sick Leave | 8.60 Days (Q2 = 7.87 Days)
- Number of Twitter followers for Council | 3,958 (Q2 = 3,733)
- Carers Leave | 0.63 Days (Q2 = .59 Days )
- Lost Time Injury Frequency Rate | 22.43 (Q2 = 22.74)
- Number of media releases issued | 50 (Q2 = 50 )
- Number of Council Facebook page 'likes' | 12,625 (Q2 = 11,269 )
- Workers compensation costs as a percentage of payroll | 1.20 %(Q2 = 1.20% )
- Telephone calls are answered within 30 seconds | 75 %(Q2 = 69% )
- Enquiries made in person are welcomed and attended to within 5 minutes | 91% (Q2 = 93% )



# GOAL 5: WE ARE A HEALTHY COMMUNITY IN A LIVEABLE CITY

## WOLLONGONG CITY COUNCIL

### Implement the Positive Ageing Strategy

The Plan continues to be implemented with a focus on the Seniors Festival throughout the quarter. The As I Age Chalkboard project (an initiative of Feros Care) invited the community to write a comment about ageing. These comments have been collected and will provide a range of information that could inform future plans and projects for older people. As part of the Senior's Festival a survey has been conducted at several events to provide information that can also assist with future planning.

Council continues to support the Council of the Ageing to promote participation in their Consumer Reference Group.

### Implement key strategies from the Community Safety Plan

A number of key projects and actions have been progressed during the quarter including:

- The Berkeley Safer By Design project where Council continues to liaise with shop owners in Berkeley as to the location of the graffiti prevention murals. Artists have been chosen to produce the murals and will be consulting with community members as to the themes for the art works. Community groups have been engaged to develop and maintain one community garden. The project is also investigating a possible community activation project with the installation of an outdoor table tennis table being located near the Berkeley Community Centre.
- Three graffiti safety audits were conducted, including Port Kembla King George Park, with a report written suggesting actions to reduce the issues of concern and to increase community safety. Audits were undertaken of Alcohol Free Zones (AFZs) and Alcohol Prohibited Places in Wollongong Mall/Central Business District and Blue Mile. The audits review the adequacy and appropriateness of locations for signage to designate the AFZ or Alcohol Prohibited Place.
- Continued to support and participate in the Illawarra Committee Against Domestic Violence which aims to raise awareness of domestic violence.
- Participated in the 2518 Bellambi Collective Impact Initiative which included supporting the Bellambi Neighbourhood Centre in writing a funding submission for the Community Safety Grants from NSW Government. Graffiti prevention and management through the implementation of graffiti prevention strategies as outlined in the Bellambi Action Plan 2016-2018 were also undertaken.
- Continued to participate in the Wollongong Liquor Accord to raise awareness of alcohol related issues and participate in the Community Drug Action Team (CDAT) including the 'Breaking the ICE' Forum in Wollongong in March with 80 participants.
- The development of the Draft Community Safety Plan 2016-2020 is progressing, including further consultations with residents of Wollongong and other key stakeholders.

## GOAL 5: WE ARE A HEALTHY COMMUNITY IN A LIVEABLE CITY

### Enhance Botanic Garden visitor experience via programs, interpretation, education and events

The Wollongong Bicentennial Acquisitive Sculpture Design Award was launched and a public program of events held. The Public Program included artist talks, sculpture tours, art exhibition at Towrie Centre, Twilight Community Events and sculpture workshops. The Award recipient Louis Pratt will have his sculpture, King Coal, permanently placed in the Botanic Garden. This program was very well received and extended until 10 April.

Normal visitation averages for this period would be 36,000, however during the exhibition visitation tracked at 47,000 visits, an increase of 11,000 on average.

Sunset Cinema also ran through the reporting period with approx. 30,000 patrons attending the 27 screenings.



*IMAGE: Winner of the 2016 Wollongong Bicentennial Acquisitive Sculpture award 'King Coal' by Louis Pratt.*

### Deliver 85% of Council's capital investment into our asset renewal program

Delivery of the 2015-16 Capital Works Program is forecast to expend \$60 Million of renewal expenditure with revenue made available to capital of \$51.3 Million (equivalent to a forecast of 118% relative to the target).

This significant investment in asset renewal and replacement reflects the outcomes from Council's Securing Our Future program, utilising additional funds sourced from operational savings, efficiency gains, relevant grant funding and the Special Rate Variation on asset renewal. Council's Fit For The Future review project highlighted a continuing distribution of increasing capital funds to renewal into the future.

## GOAL 5: WE ARE A HEALTHY COMMUNITY IN A LIVEABLE CITY

### Progress design work for the Unanderra CBD upgrade and continue to seek additional funding to implement priority actions from the Unanderra Town Centre Studies

Footpath reconstruction including new kerb and gutter, landscaping and paving on both sides of Princes Highway south of Tannery Street has been completed. Design and consultation for the reconstruction of the western side of Princes Highway between Tannery Street and Central Road is in progress with construction planned to occur during winter of 2016.

Community engagement for the Unanderra Access & Movement Strategy is underway. Following the completion of the community engagement the Unanderra Access & Movement Strategy will be reported to Council. New Traffic signals to replace the channelised intersection at Central Road, Nudjia Street and Blackman Parade have commenced.

### Accelerate delivery of building renewal and maintenance programs through allocation of additional funds

The additional revenue from the Special Rate Variation and savings programs have been fully allocated in the 2015-16 capital budget (\$12M in 2015-16) for the delivery of an accelerated asset renewal program, including increased allocations to building renewal projects.

Capital 2015-16 budget allocation for community buildings - Major buildings renewal = \$8.24M and Building renewal a further \$2.52M. The application of this revenue is on track for 2015-16. Highlights include completion of the Berkeley Community Centre, advanced works at Bald Hill Reserve and Thirroul beach kiosk.

Building Maintenance budgets have been increased by \$500,000 in 2015-16 and are forecast to be fully expended. A further \$900,000 has been transferred from unallocated Building programs Capital budgets to accelerate scheduled building maintenance programs.

## PERFORMANCE MEASURES

- Community Transport trips | 31,289 (Q2 = 33,384)
- Direct-Run District Level Community Facilities visitation | 47,976 (Q2 = 54,379)
- Utilisation of Direct-Run District Level Community Facilities | 9,026 Hours (Q2 = 8,617 Hours)
- Social Support hours of service | 10,164 Hours (Q2 = 14,980 Hours)
- Total visits commercial heated pools: Corrimal | 12,276 (Q2 = 7,201)
- Utilisation/visitation at pools | 138,483 (Q2 = 168,232)
- Utilisation/visitation at beaches | 132,588 (Q2 = 231,146)
- Total visits commercial heated pools: Dapto | 8,668 (Q2 = 7,201)

# GOAL 6: WE HAVE SUSTAINABLE, AFFORDABLE AND ACCESSIBLE TRANSPORT

## WOLLONGONG CITY COUNCIL

### Accelerate capital program for footpath renewal

During the third quarter of 2015-2016 three (3) footpaths have been upgraded or reconstructed:

- Berkeley East footpath renewal program, Berkeley
- Church Street footpath - from Smith to Market Streets, Wollongong
- Smith Street footpath - from Harbour to Corrimal Streets, Wollongong.

A further six (6) renewal footpath projects are at various stages of design as follows:

- Farmborough Road shops footpath, Unanderra
- Grey Street footpath - Memorial Drive to Liddle Street, Woonona
- Illawarra Street footpath - #126 to #128, Port Kembla
- Railway Street footpath - #1 to #5, Corrimal
- Smith Street footpath - from Corrimal to Church Streets, Wollongong
- Market Street; Corrimal to Queens Streets, Wollongong.

### Deliver the Wollongong Pedestrian Plan

Work has commenced on the Wollongong Pedestrian Plan with the expected completion date of June 2016.

This quarter Council installed 'LOOK' stencils at intersections in Wollongong, Corrimal, Dapto, Warrawong and Fairy Meadow. This is a pedestrian safety initiative as a reminder for pedestrians look in the direction of the oncoming traffic before crossing the road and encouraging pedestrians to think twice before they cross.



*IMAGE: 'Look' stencils installed at intersections in Wollongong, Corrimal, Dapto, Warrawong and Fairy Meadow*

## GOAL 6: WE HAVE SUSTAINABLE, AFFORDABLE AND ACCESSIBLE TRANSPORT

### Council to work with key agencies and partners to progress the provision of an effective and integrated regional transport network

Council is liaising with a number of key State Government agencies on an ongoing basis in relation to significant transport projects. These include City Centre projects, Albion Park Rail Bypass, the upgrade of the Mount Ousley Road/Old Mount Ousley Road intersection, Princes Highway Corridor Strategy and Keiraville/Gwynneville Access & Movement Strategy.

We are also scoping prioritisation of actions for bus stop / bus zone to ensure compliance with the Disability Discrimination Act requirements for accessibility to public transport.

Council launched the 'Share the Track' brochure for shared pathways. The Share the Track initiative provides simple guides or etiquette for all people who are using our shared pathways. The Share the Track flyer is a joint initiative between Wollongong City Council, Shellharbour City Council, Kiama Municipal Council, the Illawarra Bicycle User Group and Healthy Cities Illawarra.



*IMAGE: The Share the Track brochure was launched to provide a guide for people when using shared paths.*

### Deliver the road resurfacing & reconstruction program

Delivery of Council's road resurfacing and reconstruction continues to be progressed ahead of schedule. A summary of road renewal works and design is outlined below.

Road reconstruction program:

Nineteen (19) roads are at various stages of upgrade or reconstruction at the following locations:

- Burke Way and Gura Street pavement, Berkeley
- Culgoa Crescent - Caloola Avenue to Wallabah Way, Koonawarra
- Dalton Street - from Towradgi Road to end, Towradgi
- Frost Parade - Tucker Avenue to Brokers Road, Balgownie
- Jenkins Street - Robert Street to Farmborough Road, Unanderra
- Parkes Street from Old Farm Road to Tunnel Road, Helensburgh
- Spring Street - Mt Keira Road to Ambleside Ave, Mount Keira
- Ziems Avenue - Towradgi Road to end, Towradgi

## GOAL 6: WE HAVE SUSTAINABLE, AFFORDABLE AND ACCESSIBLE TRANSPORT

- Cordeaux Road - Boorea Boulevard to Village, Mount Kembla
- Tarrawanna Road; Meadow Street to Princes Highway, Tarrawanna
- Adams Avenue - from Cummins Street to Blackman Parade, Unanderra
- Suffolk Street - from Nolan Street to end, Berkeley
- Avonlea Street - Princes Highway to Brook Street, Dapto
- McPhail Street - Central Road to Cook Street, Unanderra
- Caroon Street - from Flagstaff Road to Northcliffe Drive, Berkeley
- Bellambi Lane - from Brompton Road to Watts Lane, Bellambi
- Lower Coast Road - Stanwell Avenue to Beach Road, Stanwell Park
- Northcliffe Drive; Wilkinson Street to Wollamia Cres, Berkeley
- Carr Parade - from Central Road to Cook Street, Unanderra.

In addition, a further seven (7) road upgrade/reconstruction projects are at various stages of design as follows:

- Gladstone Avenue; Marceau Street to Moran Parade, Mount Saint Thomas
- Kurruba Road - Kialoa Road to #24, Woonona
- Karbo Street; Wallawa Street to Millbrook Road, Figtree
- Achilles Street - Exeter Avenue to Flinders Street, North Wollongong
- Exeter Avenue - Flinders to Achilles Streets, North Wollongong
- Mary Anne Street - from Ziems Avenue to end, Towradgi
- Tucker Avenue - from Cole to Duncan Streets, Balgownie.

Road resurfacing program:

Eight (8) roads are at various stages of resurfacing and associated work at the following locations:

- Murphys Avenue; Irvine Street to Rosedale Avenue, Gwynneville
- Church Street; Edward to Campbell Streets, Wollongong
- Mount Keira Road; #189 to Demonstration School, Mount Keira
- Northcliffe Drive; Wilkinson Street to Wollamia Crescent, Berkeley
- Princes Hwy; Baan Baan Street to Bong Bong Road, Dapto
- Foleys Lane; University Avenue to end, North Wollongong
- The Avenue; from Ocean Street to Taronga Avenue, Mount Saint Thomas
- Northcliffe Drive; King Street to First Avenue, Warrawong.

A further three (3) road resurfacing projects are at various stages of design as follows:

- Mt Keira Road; Princes Highway to Abercrombie Street, West Wollongong
- Military Road; Marne Street to Olympic Boulevard, Port Kembla
- Urunga Street; from Rosemont Street to west end, West Wollongong.

## PERFORMANCE MEASURES

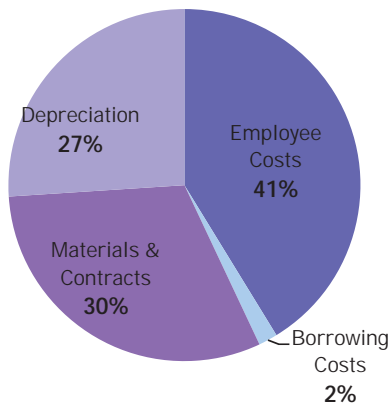
- Delivery of Council's Capital Program | 54.2%

# HOW WE PERFORMED AGAINST OUR BUDGETS

## WOLLONGONG CITY COUNCIL

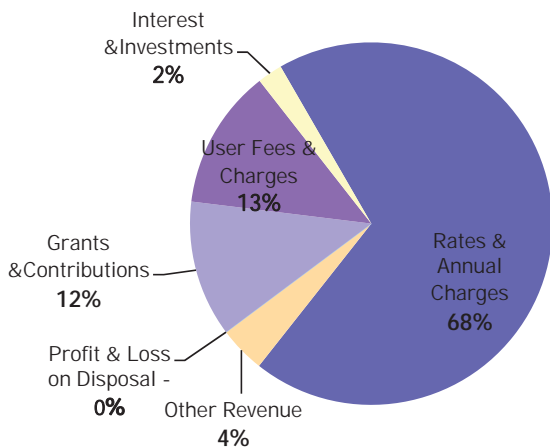
### Budget 2015-16

The graph below shows Council's expenses from ordinary activities by expense type for the quarter:



Expense Type (\$'M)	YTD Actual	Proposed budget
Employee Costs less Internal Charges	75.2	102.6
Borrowing Costs	3.2	4.2
Materials & Contracts	56.5	84.0
Depreciation	47.5	62.0
Loss on Disposal of Assets	0.1	0.0
<b>Total</b>	<b>182.4</b>	<b>252.7</b>

The graph below shows Council's revenue from ordinary activities by revenue type for the quarter



Income Type (\$M)	YTD Actual	Proposed budget
Rates & Annual Charges	128.0	174.2
Other Revenue	7.7	10.7
Profit on disposal of Assets	0.0	0.0
Grants & Contributions	22.6	30.3
User Fees & Charges	23.2	31.1
Interest & Investments	4.1	5.3
<b>Total</b>	<b>185.6</b>	<b>251.6</b>



# BUDGET REVIEW STATEMENT REPORT OF MANAGER FINANCE

## WOLLONGONG CITY COUNCIL

The following table provides a summary view of the organisation's overall financial forecast and proposed variations for the full year 2015-16 based on year to date and anticipated performance to March 2016.

FORECAST POSITION		Original Budget	Current Budget	Proposed Budget	YTD Actual	Variation
KEY MOVEMENTS		1-Jul	25-Dec	25-Mar	25-Mar	Q3
Operating Revenue	\$M	249.5	250.5	251.6	185.5	1.1
Operating Costs	\$M	(255.9)	(253.2)	(252.7)	(182.3)	0.5
<b>Operating Result [Pre Capital]</b>	<b>\$M</b>	<b>(6.4)</b>	<b>(2.7)</b>	<b>(1.2)</b>	<b>3.2</b>	<b>1.6</b>
Capital Grants & Contributions	\$M	14.5	19.7	24.1	22.4	4.4
<b>Operating Result</b>	<b>\$M</b>	<b>8.1</b>	<b>17.0</b>	<b>23.0</b>	<b>25.6</b>	<b>6.0</b>
<b>Funds Available from Operations</b>	<b>\$M</b>	<b>54.6</b>	<b>54.6</b>	<b>53.9</b>	<b>44.1</b>	<b>(0.7)</b>
<b>Capital Works</b>		<b>86.3</b>	<b>87.9</b>	<b>84.1</b>	<b>47.7</b>	<b>(3.8)</b>
Transfer to Restricted Cash		-	7.1	12.6	7.1	(5.5)
Contributed Assets		-	-	4.2	4.2	4.2
Borrowing Repaid		6.4	6.4	6.4	5.4	-
Funded from:						
- Operational Funds	\$M	54.6	54.6	53.9	44.1	(0.7)
- Other Funding	\$M	34.9	36.6	43.4	28.8	6.8
<b>Total Funds Surplus/(Deficit)</b>	<b>\$M</b>	<b>(3.1)</b>	<b>(10.2)</b>	<b>(10.2)</b>	<b>8.5</b>	<b>-</b>

The revised projections at the March Quarterly Review for the year ending 30 June 2016 indicate an improvement of \$1.6M in the Operating Result [pre capital]. The most significant adjustments and offsets are outlined below and are discussed in more detail through this report with favourable changes identified as (F) and unfavourable (U):

- **Whytes Gully net operating result \$1.6M (F).** The current projections include an increase in income (\$0.9M) and decrease in operating expenses, predominantly for EPA levy on cover materials, (\$0.7M).
- **Operational grant income \$0.3M (F).** This adjustment is largely due to timing of grant income.
- **Interest on investments \$0.2M (F).**
- **Easement and closed road sale proceeds \$0.2M [F].**
- **Domestic Waste collection contracts \$0.3M (F).**
- **Projects proposed to be deferred to 2016/17 \$0.3M (F).** There are a number of projects, generally for studies and supporting documents that are in progress but are not expected to be completed until next year.



- **Introduction of funded projects \$0.5M (U).** This is mainly due to finalisation of social services structural changes.
- **Natural disaster funding \$0.5M (U).** The funding body is currently reviewing Council's claim for reimbursement of costs associated with a prior year storm event and has advised that it is unlikely that this will be finalised in this financial year. This income budget has been deferred to 2016-17 but the quantum may also need to be adjusted once a final response is received.
- **Public liability claims \$0.2M (U).**
- **Decrease in Parking Infringement revenue \$0.1M (U).**

The Operating Result (inclusive of capital grants and contributions) indicates an improvement of \$6.0M compared to current budget. In addition to the changes discussed above, this includes proposed increases to contributed assets (\$4.2M), developer contributions (\$0.7M) and a net decrease in capital grants of \$0.4M.

The Fund Result forecast remains unchanged as it is proposed that the net operational improvements of \$2.3M be transferred to restricted cash for Strategic Projects. Adjustments that relate to grant and contributions income or funded project expenditure do not impact on the Fund Result forecast as these are offset by transfers to restricted cash.

The primary variations and issues are discussed below. A more comprehensive list is provided in Table 6.

## 1 Income & Expense

- **Rates Income \$0.1M (F).** This adjustment relates to additional rates due to a business subdivision.
- **User Charges and Fees \$0.9M (F).** The key improvements include an adjustment to Commercial Tipping Fees (\$780K), improvements in Household Drop off income (\$125K) and Tourist Park income (\$77K). The improved result at the waste facility is attributed to an overly conservative downward budget adjustment for commercial tipping at the December Quarterly Review.
- **Interest and Investment Income \$0.2M (F).** Increase in projected income is due to higher cash holdings that reflect expenditure timing trends to date.
- **Other Revenue \$0.6M (U).** This decrease in income is due to removal of a reimbursement for a natural disaster claim that is yet to be determined (\$515K), lower parking infringement revenue (\$100K) and Thirroul Kiosk being offline during redevelopment (\$80K). This is offset by easement and closed road sales and other more minor items.
- **Grants & Contributions Operating – \$0.4M (F).** This increase is the result of the introduction of additional grant income for projects (\$686K) and an adjustment to the pensioner rate subsidy (\$104K). This has been offset by an adjustment to flood mitigation studies (\$237K) and the removal of a duplication of a component of the direct RFS operational grant.
- **Grants & Contributions – Capital \$4.4M (F).** This variation is due to recognition of contributed assets (\$4.2M), additional Developer Contributions (\$663M) and a library technology grant (\$165K). This is offset by a reduction in grant funding associated with the purchase of flood affected properties (\$667K).
- **Employee Costs \$0.3M (U).** Employee cost projections have increased due to the introduction of community service funded projects (\$487K) that is partially offset by vacancy savings. The introduction of funded projects does not affect the funds result as these are offset by transfers from restricted cash.
- **Materials, Contracts & Other Expenses \$0.7M (F).** The material proposed budget adjustments include reductions in Whytes Gully operations and EPA levy (\$683K), domestic waste contracts (\$281K), postponed projects (\$235K), Lake Illawarra Works scope reduction (\$200K), street lighting (\$200K) and reduction in grant funded flood mitigation studies (\$203K). These have been partially offset by the increase in building maintenance (\$987K), merger proposal preparation (\$307K) and the below excess portion of Public Liability settlements (\$240K).
- **Depreciation \$0.1M (U).** Overall there has been an increase of \$119K in expected depreciation expense, however this includes the reduction in building depreciation (\$950K) due to the extension of asset lives that was associated with the planned increase in operational maintenance. Effectively, this means that there has been an increase of approximately \$800K

that is attributed to a range of variables including discovery of additional assets (\$260K) that were not previously in the asset register, contributed assets (\$150K) and various other changes that include change in the nature of assets built, reassessment of asset lives and unit rates as part of the end of year process at June 2015. Asset managers are about to embark on a review of expected asset lives in preparation for the 2015-16 end of year process and this may potentially impact on this forecast. Any adjustments that may arise will impact the operating result but will not impact Funds Result.

### **2 Capital Budget**

The capital projections that have been approved by Council through the Monthly Financial reporting process show a decrease to the program from \$87.9M to \$84.1M. The current program includes the reduction in the overall capital expenditure program of \$3.8M, which relates to the re-phasing of the delivery of some funded projects (\$2.9M) and the reclassification of some building renewal works from capital to operational (\$987K).

### **3 Merger Proposal Period Considerations**

The proposed adjustments to forecasts are considered to be in compliance with Section 23A of the Act in the context of the merger proposal.

### **4 Cash & Investments**

The increase in projected cash and investments of \$9.4M at March is due to the proposed drawdown of a further \$5.5M of loan funds in June 2016 and the revised timing of capital works program. The additional loan funds have been accessed as part of Round 3 of the LIRS Program and will be used to support the West Dapto Access – Fowler's Road to Fairwater project in future years.

Available Funds excludes movement in externally and internally restricted cash such as timing of special purpose grants and progress of funded projects. There is a projected decrease in Available Funds at March of \$2.7M that is mainly due to the approved transfer of \$2.3M to Strategic Projects restricted cash at the March Quarterly Review, reflecting the improvement in the 2015-16 projected result and the increase in income that has been transferred to restricted cash.

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

Table 2

CASH, INVESTMENTS & AVAILABLE FUNDS						
	Actual 2014/15	Original Budget 2015/16	September QR 2015/16	December QR 2015/16	March QR 2015/16	Actual Ytd 25 March 2016
	\$M	\$M	\$M	\$M	\$M	\$M
Total Cash and Investments	144.7	109.6	123.1	129.8	139.2	163.3
Attributed to:						
External Restrictions						
Developer Contributions	15.1	8.2	10.4	12.9	13.8	15.3
Specific Purpose Unexpended Grants	5.0	3.5	(1)	2.6	4.7	5.3
Special Rates Levy City Centre	0.2	0.2	0.2	0.1	0.1	0.2
Unexpended Loans	31.3	27.0	24.6	24.6	31.2	26.1
Domestic Waste Management	10.7	8.2	9.2	10.1	11.1	9.8
Private Subsidies	4.8	3.7	4.6	3.7	3.6	4.4
West Dapto Home Assistance	5.8	9.7	9.7	9.7	9.7	9.7
Stormwater Management Charge	0.4	0.5	0.6	0.6	1.3	1.2
Carbon Pricing	4.4	4.6	4.4	4.4	4.4	4.4
Total External Restrictions	77.7	65.5	62.8	68.6	79.9	76.4
Internal Restrictions						
Property Investment Fund	7.8	7.8	7.8	8.1	8.1	8.1
Future Programs	6.9	4.8	4.9	5.0	5.4	6.5
Property	4.1	4.2	4.1	4.1	4.1	4.1
Strategic Projects	11.2	11.1	11.2	18.8	20.9	20.9
Sports Priority program	0.5	0.5	0.6	0.6	0.5	0.6
Car Parking strategy	0.3	0.2	0.2	0.3	0.6	0.7
MacCabe Park Development	0.7	0.8	0.8	0.8	0.8	0.8
Darcy Wentworth Park	0.2	0.2	0.2	0.2	0.2	0.2
Waste Disposal Facility	9.5	11.5	10.1	10.1	9.9	10.1
Telecommunications Revenue	0.1	0.1	0.2	0.2	0.2	0.1
West Dapto additional rates	0.1	0.1	0.1	0.1	(0.0)	0.4
Natural Areas	0.5	0.5	0.5	0.5	0.5	0.6
Lake Illawarra Management Fund				0.1	0.1	0.1
Total Internal Restrictions	42.0	41.9	40.8	48.9	51.2	53.4
Available Cash	25.0	2.3	19.5	12.3	8.2	33.5
Net Payable & Receivables	(3.4)	4.7	2.2	1.7	3.2	(3.3)
Current payables	(29.9)	(23.0)	(23.1)	(25.5)	(22.7)	(29.2)
Receivables	22.1	26.0	20.9	22.8	21.5	22.9
Other	4.3	1.7	4.4	4.4	4.4	3.0
Available Funds	21.6	6.9	21.7	14.0	11.3	30.1

## 5 Securing Our Future Outcomes

An efficiency target was developed as part of the 'Securing Our Future' program that was endorsed by Council through the adoption of the 2014-15 Annual Plan along with the special rate variation, revenue increases and service adjustment targets.

Securing Our Future Adopted Outcomes	EFFICIENCY		SERVICES	REVENUE		TOTAL
	Lower Impact	High Impact		Rates *	Other	
	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
2014/15	1,000		1,000	4,950	120	7,070
2015/16	1,000		200	4,560	250	6,010
2016/17	1,500	500	200	4,990	130	7,320
2017/18		500	100			600
2018/19						-
<b>TOTAL</b>	<b>3,500</b>	<b>1,000</b>	<b>1,500</b>	<b>14,500</b>	<b>500</b>	<b>21,000</b>

The long term financial projections include efficiency targets of \$1.0M for 2014-15, \$1.0M for 2015-16, \$2M for 2016-17 and \$0.5M for 2017-18 that are indexed thereafter. The lower impact targets for improvements have been proportionally allocated to individual services based on the level of discretionary expenditure in each. Progress is reported through the Quarterly Review. Where improvements in income or non-discretionary cost are achieved ahead of schedule, it is intended that the additional funds may be used to initiate further actions required to achieve future improvement targets, offset against individual targets that may not be achieved in the planned timeframe, or flow through to improvements in the bottom line.

As at the March Review, \$1.95M or 98% of the cumulative 2015-16 planned efficiency target improvements have been identified. In line with the strategic intent, the efficiency targets are not intended to impact on service delivery. The following table shows where efficiency improvements have been identified to date. It should be noted that the planned revenue improvements of \$370K for 2015-16 and Service Adjustments of \$1.0M (that were achieved through an extension of footpath useful lives), in the above table were identified prior to the final adoption of the 2014-15 Annual Plan and are included in the following table for information purposes.

Where improvements have exceeded the Efficiency Targets in a particular year, these have been applied to offset unexpected adverse impacts or have been used to improve the financial projections. At the September Quarterly Review, net improvements of \$3.3M were identified in excess of the Efficiency Targets for 2015-16. This improvement, along with the positive 2014-15 result compared to budget of \$7.1M, provided Council with the opportunity to transfer \$10.4M to restricted cash for Strategic Projects. Further net operational improvements of \$2.3M have been identified during this review and it is proposed that these also be transferred to restricted cash for Strategic Projects. Reduced street lighting costs and improved performance at the Tourist Parks identified at the December and March Reviews have contributed \$190K and \$170K respectively towards the early achievement of the 2016-17 High Impact Efficiency Targets that are held at an organisational level.

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

Securing Our Future Improvement Targets											
2014-15				2015-16				2016-17			
Service	Adopted Budget \$000's	Achieved \$000's	Balance \$000's	Adopted Budget \$000's	Achieved 2014/15 \$000's	Achieved 2015/16 \$000's	Balance \$000's	Adopted Budget \$000's	Achieved 2014/15 \$000's	Achieved 2015/16 \$000's	Balance \$000's
<b>Allocated Efficiency Targets - Lower Impact</b>											
Aquatic Services	(65)	65	0	(129)	68	62	0	(233)	75	158	0
Botanic Garden and Nursery	(23)	23	0	(46)	23	22	(1)	(82)	24	47	(10)
Community Facilities	(20)	20	0	(39)	39	0	0	(71)	71	0	0
Community Programs	(11)	11	0	(22)	22	1	0	(40)	39	1	0
Corporate Strategy	(8)	8	0	(17)	10	7	0	(30)	18	12	0
Crematorium and Cemeteries	(18)	18	0	(36)	18	17	0	(64)	17	47	0
City Centre Management	(6)	6	0	(12)	10	2	0	(22)	17	5	0
Cultural Services	(19)	19	0	(39)	31	8	0	(70)	14	56	0
Integrated Customer Service	(33)	33	0	(66)	0	66	0	(119)	0	119	0
Development Assessment/Certification	(49)	49	0	(98)	0	98	0	(177)	0	129	(48)
Stormwater Services	(20)	20	0	(39)	17	22	0	(71)	31	40	0
Economic Development	(6)	6	(0)	(13)	4	8	0	(23)	0	23	0
Emergency Management	(7)	7	0	(14)	8	6	0	(25)	9	16	0
Environmental Services	(16)	16	0	(32)	16	15	0	(57)	17	0	(40)
Financial Services	(40)	40	0	(79)	79	0	0	(143)	143	0	0
Governance and Administration	(42)	39	(3)	(84)	28	53	(3)	(151)	42	101	(8)
Public Health	(7)	7	0	(15)	0	15	0	(27)	0	27	0
Human Resources	(42)	0	(42)	(84)	(0)	55	(29)	(151)	0	57	(94)
Information/Communications Technology	(19)	19	0	(38)	0	38	0	(69)	0	69	0
Infrastructure Planning & Support	(94)	43	(51)	(189)	53	136	0	(340)	76	96	(168)
Internal Charges Service	(2)	2	0	(4)	2	2	0	(8)	2	6	0
Leisure Services	(29)	29	0	(57)	33	24	0	(103)	36	67	0
Libraries	(58)	57	(1)	(115)	114	1	(0)	(208)	206	2	0
Natural Area Management	(13)	10	(3)	(26)	16	9	(1)	(47)	21	1	(25)
Land Use Planning	(17)	17	0	(33)	17	0	(16)	(60)	18	0	(42)
Property Services	(10)	10	0	(21)	11	10	(0)	(37)	11	26	0
Public Relations	(20)	20	0	(41)	2	38	0	(73)	4	69	0
Parks and Sportsfields	(87)	30	(57)	(174)	21	153	0	(314)	22	292	0
Regulatory Control	(22)	22	0	(44)	0	44	0	(80)	0	80	0
Tourist Parks	(30)	30	0	(61)	31	29	0	(109)	32	77	0
Transport Services	(98)	87	(11)	(195)	40	156	0	(352)	36	316	0
Waste Management	(61)	61	0	(122)	53	69	0	(219)	19	200	0
Youth Services	(7)	7	0	(15)	0	15	0	(27)	0	27	0
	(1,000)	832	(168)	(2,000)	769	1,182	(49)	(3,602)	999	2,167	(437)
<b>High Impact Efficiency Target, Income &amp; Service Adjustments</b>											
Efficiency Improvements				0	0	0	0	(500)	215	285	0
Service Adjustments	(1,000)	1,000	0	(1,200)	1,000	100	(100)	(1,400)	1,000	0	(400)
Additional Revenues	(120)	170	50	(370)	370	0	0	(500)	470	30	0
	(1,120)	1,170	50	(1,570)	1,370	100	(100)	(2,400)	1,685	315	(400)
	(2,120)	2,002	(118)	(3,570)	2,139	1,282	(149)	(6,002)	2,684	2,482	(836)

## 6 Long Term Financial Projections

Key Performance Information shown below is based on the financial forecasts that are contained in the Revised Delivery Program 2012-17 and Resourcing Strategy 2012-22 that were adopted by Council on 17 February 2014 and updated through the Adoption of the 2015-16 Annual Plan. Council has a continuous budget process that revises the long term forecasts in line with quarterly changes and resets assumptions and indices annually or where new information leads to an immediate requirement to change the indices. The underlying indices supporting the long term forecasts were revised at the commencement of the 2016-17 Annual Planning process to reflect most recent economic indicators. Long term projections have also been revised to reflect the impact of adjustments made during the September and December 2015 Quarterly Reviews that had a recurrent impact.

The revised long term projections are indicative at this stage and will continue to be reviewed through the annual planning process and to reflect more recent information from both external sources and internal analysis, feedback from the exhibition period of the Draft Annual Plan 2016-17 and as programs develop or become more defined.

### Long Term Operating Surplus/(Deficit) [pre capital]

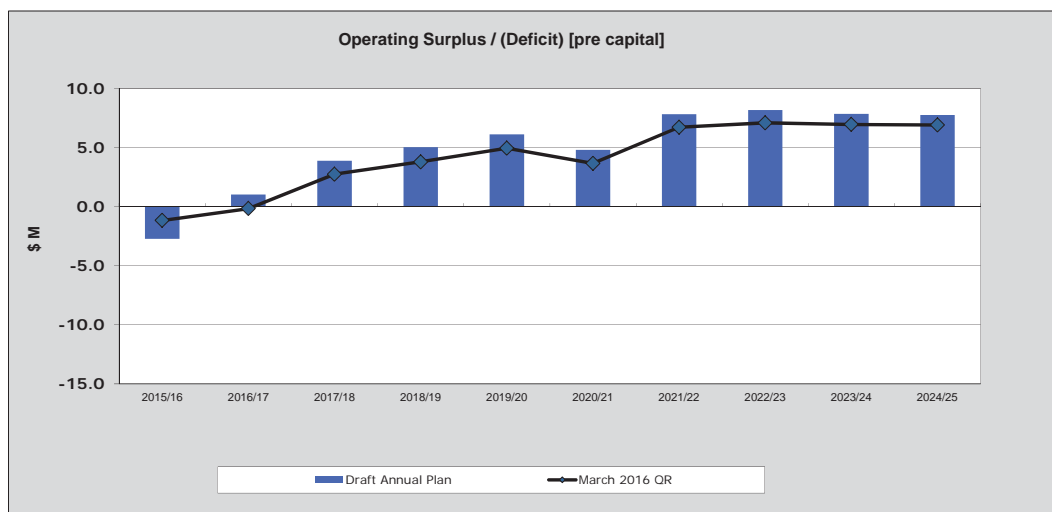
The Operating Result [pre capital] provides an indication of the long term viability of Council. In broad terms, a deficit from operations indicates that Council is not earning sufficient revenue to fund its ongoing operations (services) and continue to renew existing assets.

The deterioration in the long term forecasts is largely due to a recurrent increase in depreciation expenditure that is the result of recognition of current asset holdings and attributes. Asset data will be further reviewed during preparation for the 2015-16 end of year process and this may potentially impact on this forecast. Any adjustments that may arise will impact the operating result but will not impact Funds Result.

The 2016-17 revised result is also impacted by the timing of a number of projects that were in progress during 2015-16 but are not expected to be completed during this year. This is largely offset by reintroduction of funding associated with a prior year natural disaster claim and additional interest income from higher cash holdings from unspent loan funds.

These projections are preliminary and are subject to review through the 2016-17 planning process.

Table 3



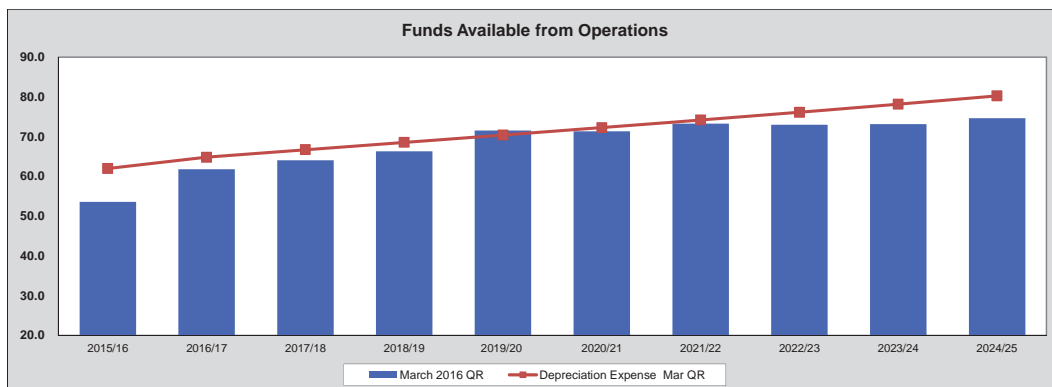
### Funds Available from Operations

Previously, Council has reported the Operational Funds Available for Capital as a key indicator. This indicator is very similar to the Funds Available from Operations except that it reflected the result after the annual repayment of loans was deducted. In accordance with Council's Financial Strategy,

## BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

Council will only use debt to fund capital expenditure. This means that loans are part of the funding for capital, and they are repaid from operational funds generated. These repayments reflect the changed timing of capital expenditure over a period. The Funds Available from Operations is a primary objective of Council over time to provide for effective renewal of assets and growth in assets. The following graph also shows forecast depreciation expenses compared to Funds available from Operations. This is an important indicator as it demonstrates the capacity to generate sufficient funds from operations to meet asset renewal requirements.

**Table 4**

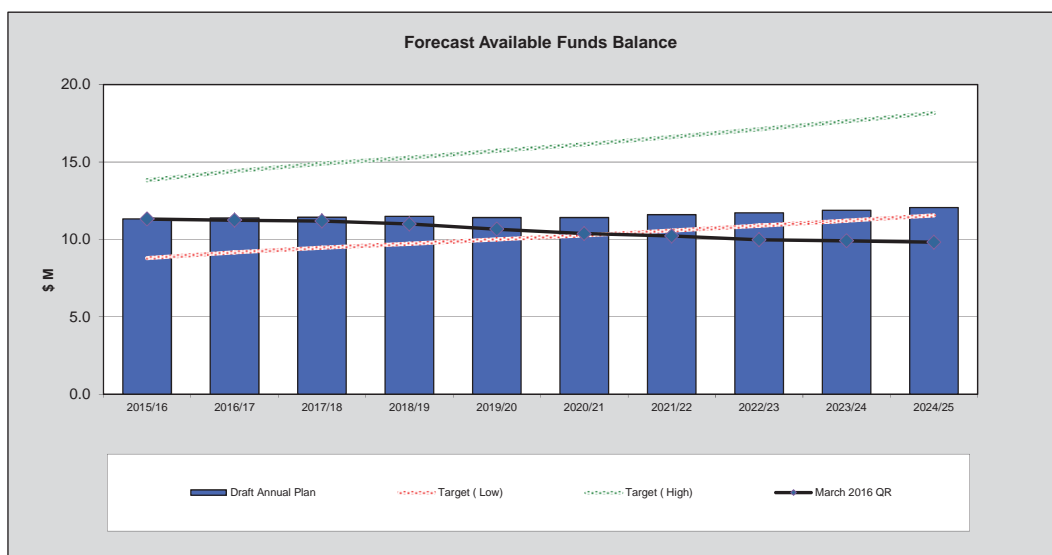


### Available Funds

Available Funds are the uncommitted funds of an organisation that assist in meeting the short term cash requirements, provide contingency for unexpected costs or loss of revenue, and provide flexibility to take advantage of opportunities that may arise from time to time. Council's Financial Strategy has a target to achieve and maintain an Available Funds position between 3.5% and 5.5% of operational revenue [pre capital].

The Available Funds remain largely above Council's Financial Strategy target of 3.5% to 5.5% of operational revenue [pre capital]. Based on the 2015-16 Adopted Annual Plan (revised for March Quarterly Review and indices) the target range for Available Funds is between \$8.8M and \$11.7M (lower range) and between \$13.8M and \$18.3M (upper range) over the life of the Long Term Financial Plan. The revised projections that include the updated indices and proposed March Quarterly Review adjustments indicate that Council is within the above parameters for the first three years.

**Table 5**



# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

## WOLLONGONG CITY COUNCIL

March 2016 Quarterly Review

	Original Budget \$'000	Current Budget \$'000	YTD Actual YTD \$'000	Proposed Variation \$'000	Proposed Budget \$'000
<b>Income Statement</b>					
<b>Income From Continuing Operations</b>					
<b>Revenue:</b>					
Rates and Annual Charges	173,253	174,086	127,991	151	174,237
User Charges and Fees	33,194	30,115	23,177	947	31,062
Interest and Investment Revenues	4,772	5,147	4,141	200	5,347
Other Revenues	9,454	11,239	7,714	(563)	10,676
Grants & Contributions provided for Operating Purposes	28,846	29,928	22,563	331	30,259
Grants & Contributions provided for Capital Purposes	14,520	19,696	22,431	4,437	24,134
Profit/Loss on Disposal of Assets	0	0	(123)	0	0
<b>Total Income from Continuing Operations</b>	<b>264,040</b>	<b>270,212</b>	<b>207,893</b>	<b>5,503</b>	<b>275,715</b>
<b>Expenses From Continuing Operations</b>					
Employee Costs	113,797	114,122	83,441	323	114,445
Borrowing Costs	4,206	4,206	3,188	0	4,206
Materials, Contracts & Other Expenses	89,130	86,199	57,336	(705)	85,494
Depreciation, Amortisation + Impairment	62,074	62,074	47,450	(119)	61,955
Internal Charges (labour)	(11,876)	(11,828)	(8,262)	(25)	(11,852)
Internal Charges (not labour)	(1,400)	(1,540)	(873)	39	(1,500)
<b>Total Expenses From Continuing Operations</b>	<b>255,932</b>	<b>253,234</b>	<b>182,279</b>	<b>(487)</b>	<b>252,747</b>
<b>Operating Results From Continuing Operations</b>	<b>8,108</b>	<b>16,978</b>	<b>25,614</b>	<b>5,990</b>	<b>22,967</b>
<b>Net Operating Result for the Year</b>	<b>8,108</b>	<b>16,978</b>	<b>25,614</b>	<b>5,990</b>	<b>22,967</b>
<b>Net Operating Result for the Year before Grants &amp; Contributions provided for Capital Purposes</b>					
	<b>(6,412)</b>	<b>(2,719)</b>	<b>3,183</b>	<b>1,552</b>	<b>(1,166)</b>
<b>NET SURPLUS (DEFICIT) [Pre capital] %</b>	<b>(2.4%)</b>	<b>(1.0%)</b>	<b>1.5%</b>	<b>28.2%</b>	<b>(0.4%)</b>
<b>Funding Statement</b>					
<b>Net Operating Result for the Year</b>	<b>8,108</b>	<b>16,978</b>	<b>25,614</b>	<b>5,990</b>	<b>22,967</b>
<b>Add back :</b>					
- Non-cash Operating Transactions	77,378	77,446	59,097	82	77,528
- Restricted cash used for operations	15,464	16,532	12,236	251	16,784
- Income transferred to Restricted Cash	(34,812)	(44,875)	(43,770)	(7,109)	(51,984)
- Payment of Accrued Leave Entitlements	(11,550)	(11,512)	(9,093)	(201)	(11,713)
- Payment of Carbon Contributions	0	0	0	0	0
<b>Funds Available from Operations</b>	<b>54,588</b>	<b>54,569</b>	<b>44,084</b>	<b>(987)</b>	<b>53,581</b>
Advances (made by) / repaid to Council	0	0	0	0	0
Borrowings repaid	(6,371)	(6,371)	(5,447)	0	(6,371)
<b>Operational Funds Available for Capital Budget</b>	<b>48,217</b>	<b>48,197</b>	<b>38,638</b>	<b>(987)</b>	<b>47,210</b>
<b>CAPITAL BUDGET</b>					
Assets Acquired	(86,256)	(87,926)	(47,704)	3,826	(84,100)
Contributed Assets	0	0	(4,153)	(4,153)	(4,153)
Transfers to Restricted Cash	0	(7,100)	(7,100)	(5,500)	(12,600)
<b>Funded From :-</b>					
- Operational Funds	48,217	48,197	38,638	(987)	47,210
- Sale of Assets	2,008	1,486	380	(0)	1,486
- Internally Restricted Cash	5,136	7,296	1,888	(588)	6,708
- Borrowings	0	0	0	5,500	5,500
- Capital Grants	9,439	12,147	9,909	(457)	11,691
- Developer Contributions (Section 94)	6,510	6,397	4,831	(184)	6,213
- Other Externally Restricted Cash	9,460	7,240	5,683	(1,524)	5,716
- Other Capital Contributions	2,365	2,022	6,157	4,067	6,089
<b>TOTAL FUNDS SURPLUS / (DEFICIT)</b>	<b>(3,122)</b>	<b>(10,241)</b>	<b>8,529</b>	<b>(0)</b>	<b>(10,241)</b>



# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

Surplus

Table 6

MAJOR VARIATIONS				
Compared to Budget	\$'000s	Offsetting Items for Fund	Surplus	Deficit
Net by type				
<b>Rates &amp; Annual Charges</b>				
Business & Commercial Rates			110	
Other	30		11	
				151
<b>User Charges &amp; Fees</b>				
Waste Facility income			905	
Other	(95)		137	
				947
<b>Interest and Investment Income</b>				
Increased cash holdings	25		175	
				200
<b>Other Revenue</b>				
Easement & Closed Road Sales			157	
Natural Disaster Claim income deferred to 2016/17				(515)
Parking Infringement Revenue				(100)
Other	(70)			(35)
				(563)
<b>EXPENSES FROM ORDINARY ACTIVITIES</b>				
<b>Employee Costs</b>				
Development Assessment Employee Costs	110		156	
Financial Sustainability Employee Resources	20		97	
Reallocation of budget from materials & contracts	(60)			
Introduction of externally funded projects				
Aged Staff Care Movements	(487)			
Projects in progress to be reintroduced in future years	(26)		74	
Other	(119)			(88)
				(323)
<b>Materials, Contracts &amp; Other Expenses</b>				
Building Maintenance	(987)			
Domestic Waste Contracts	284			
EPA Levy Landfill			466	
Whytes Gully Operations			217	
Street Lighting	200			
Lake Illawarra Works			200	
Road Reseals Operational			200	
IT Initiatives	140			
Projects in progress to be reintroduced in future years	80		170	
Public Liability Below Excess Settlements				(240)
Floodplain Management Consulting - Blockage Policy				(129)
Adjustments to externally funded projects	(74)			
Merger Proposal	(307)			
Various other adjustments	131		354	
				705
<b>Depreciation</b>				
Community Transport assets transferred to Council	(138)			
Extension of building lives as a result of additional maintenance	950			
Discoveries & subdivision contributions	(275)			
Other	(418)			
				119
<b>Internal Charges</b>				
Adjustment of externally funded projects				
West Dapto Review	115			
IT Labour Recovery from Capital	(80)			
Other Internal Charges	(50)			
				(15)

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

Table 6 (cont'd)

MAJOR VARIATIONS				
Compared to Budget	\$'000s	Offsetting Items for Fund	Surplus	Deficit
Net by type				
<b>strateg</b>				
<b>Grants &amp; contribution - Operating</b>				
Additional grants advised transferred to reserve	514			
Overstatement of RFS contribution			(150)	
Pensioner Rates Subsidy		104		
Other	(137)			331
<b>Operating Variation [pre capital]</b>	<b>(724)</b>	<b>3,533</b>	<b>(1,257)</b>	<b>1,552</b>
<b>Capital Grants &amp; Contributions</b>				
Contributed Assets	4,153			
Developer Contributions	560			
Calderwood Developer Contributions	103			
Grants & contributions	(379)			4,437
<b>Operating Variation [post capital]</b>	<b>3,713</b>	<b>3,533</b>	<b>(1,257)</b>	<b>5,990</b>
<b>FUNDING STATEMENT</b>				
<b>Non Cash Expenses</b>				
Leave Liability			(37)	
Depreciation	119			82
<b>Restricted Cash Used for Operations</b>				
Externally funded project adjustments	675			
Domestic Waste Reserve	(181)		(122)	
Other	(120)			251
<b>Income Transferred to Restricted Cash</b>				
Contributed Assets	(4,153)			
March 2016 Quarterly Review Strategic Projects			(2,275)	
Developer Contributions	(560)			
Developer Contributions - Calderwood	(103)			
Grants & contributions - capital	379			
Grants & contributions - operational	(401)			
West Dapto Rates		163		
Investment Income applicable to restricted assets		129		
Paid Parking transfer to restricted cash correction			(134)	
Other	(154)			(7,109)
<b>Payment of accrued leave entitlements</b>	<b>(201)</b>			<b>(201)</b>
<b>OPERATIONAL FUNDS AVAILABLE FOR CAPITAL</b>	<b>(987)</b>	<b>3,825</b>	<b>(3,825)</b>	<b>(987)</b>
<b>CAPITAL BUDGET</b>				
Contributed Assets	(4,153)			
Contributed Assets funding	4,153			
Subsidised loan LIRS3 West Dapto Access Fowlers to Fairwater	5,500			
Transfer of Loan funds to restricted cash	(5,500)			
Decrease in capital program	2,839			
Decrease in associated funding	(2,839)			
Decrease in capital program to offset Building Maintenance	987			987
<b>TOTAL FUNDS SURPLUS/(DEFICIT)</b>	<b>-</b>	<b>3,825</b>	<b>(3,825)</b>	<b>(0)</b>

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

## CAPITAL PROJECT REPORT

as at the period ended 25th March 2016

Program	\$'000		\$'000		YTD Expenditure	\$'000	
	Current Budget		Proposed Budget			variation	
	Expenditure	Other Funding	Expenditure	Other Funding		Expenditure	Other Funding
Asset Class:Roads And Related Assets							
Traffic Facilities	3,682	(2,262)	3,622	(2,277)	2,701	(60)	(15)
Public Transport Facilities	441	(172)	441	(172)	214	0	0
Roadworks	13,369	(3,452)	13,816	(3,555)	8,780	447	(102)
Bridges, Boardwalks and Jetties	1,850	(350)	1,576	(176)	561	(274)	174
Total Roads And Related Assets	19,342	(6,237)	19,455	(6,180)	12,256	113	57
Asset Class:West Dapto							
West Dapto Infrastructure Expansion	5,954	(4,865)	4,902	(4,013)	4,009	(1,052)	852
Total West Dapto	5,954	(4,865)	4,902	(4,013)	4,009	(1,052)	852
Asset Class:Footpaths And Cycleways							
Footpaths	8,588	(4,648)	8,528	(3,572)	5,771	(60)	1,076
Cycle/Shared Paths	8,090	(5,560)	6,788	(4,268)	4,545	(1,302)	1,292
Commercial Centre Upgrades - Footpa	3,040	(435)	2,435	(300)	831	(605)	135
Total Footpaths And Cycleways	19,718	(10,643)	17,751	(8,141)	11,148	(1,967)	2,503
Asset Class:Carparks							
Carpark Construction/Formalising	775	(500)	890	(500)	681	115	0
Carpark Reconstruction or Upgrading	1,001	0	1,166	0	274	165	0
Total Carparks	1,776	(500)	2,056	(500)	955	280	0
Asset Class:Stormwater And Floodplain Management							
Floodplain Management	1,660	(667)	722	(44)	341	(938)	623
Stormwater Management	2,290	(443)	1,937	(95)	851	(353)	348
Stormwater Treatment Devices	250	(150)	70	0	26	(180)	150
Total Stormwater And Floodplain Ma	4,200	(1,260)	2,729	(139)	1,219	(1,471)	1,121
Asset Class:Buildings							
Cultural Centres (IPAC, Gallery, Townh	1,131	0	1,001	0	442	(130)	0
Administration Buildings	1,280	0	520	0	283	(760)	0
Community Buildings	12,840	(3,375)	11,459	(2,856)	7,515	(1,381)	519
Public Facilities (Shelters, Toilets etc.)	617	0	865	0	298	248	0
Total Buildings	15,868	(3,375)	13,845	(2,856)	8,538	(2,023)	519
Asset Class:Commercial Operations							
Tourist Park - Upgrades and Renewal	750	0	750	0	462	(0)	0
Crematorium/Cemetery - Upgrades and	190	0	190	0	75	0	0
Leisure Centres & RVGC	195	0	151	0	72	(44)	0
Total Commercial Operations	1,135	0	1,091	0	609	(44)	0
Asset Class:Parks Gardens And Sportfields							
Play Facilities	1,145	(50)	1,131	(73)	611	(14)	(23)
Recreation Facilities	3,440	(1,892)	3,078	(1,917)	1,146	(362)	(25)
Sporting Facilities	834	(151)	1,114	(239)	575	280	(88)
Lake Illawarra Foreshore	0	0	0	0	0	0	0
Total Parks Gardens And Sportfields	5,419	(2,093)	5,323	(2,229)	2,332	(96)	(136)
Asset Class:Beaches And Pools							
Beach Facilities	449	0	356	0	137	(93)	0
Rock/Tidal Pools	1,186	0	1,499	0	924	313	0
Treated Water Pools	956	0	1,474	0	580	518	0
Total Beaches And Pools	2,591	0	3,329	0	1,641	738	0

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

CAPITAL PROJECT REPORT							
as at the period ended 25th March 2016							
Program	\$'000		\$'000		YTD Expenditure	\$'000	
	Current Budget		Proposed Budget			variation	
	Expenditure	Other Funding	Expenditure	Other Funding		Expenditure	Other Funding
Asset Class:Natural Areas							
Environmental Management Program	0	0	0	0	0	0	0
Natural Area Management and Rehabil	175	(25)	230	(25)	66	55	(0)
Total Natural Areas	175	(25)	230	(25)	66	55	(0)
Asset Class:Waste Facilities							
Whytes Gully New Cells	2,112	(2,112)	2,292	(2,292)	1,288	179	(179)
Whytes Gully Renewal Works	300	(300)	160	(160)	48	(140)	140
Helensburgh Rehabilitation	547	(547)	89	(89)	76	(458)	458
Total Waste Facilities	2,959	(2,959)	2,541	(2,541)	1,411	(418)	418
Asset Class:Fleet							
Motor Vehicles	1,748	(1,130)	1,531	(990)	838	(217)	140
Total Fleet	1,748	(1,130)	1,531	(990)	838	(217)	140
Asset Class:Plant And Equipment							
Portable Equipment (Mowers etc.)	480	(296)	100	(10)	44	(380)	286
Mobile Plant (trucks, backhoes etc.)	2,021	(221)	2,701	(507)	349	680	(286)
Fixed Equipment	300	0	0	0	0	(300)	0
Total Plant And Equipment	2,801	(517)	2,801	(517)	393	0	(0)
Asset Class:Information Technology							
Information Technology	895	0	895	0	191	(0)	0
Total Information Technology	895	0	895	0	191	(0)	0
Asset Class:Library Books							
Library Books	1,150	0	1,150	0	1,075	(0)	0
Total Library Books	1,150	0	1,150	0	1,075	(0)	0
Asset Class:Public Art							
Public Art Works	200	0	145	0	90	(55)	0
Art Gallery Acquisitions	110	0	199	(34)	106	89	(34)
Total Public Art	310	0	344	(34)	196	34	(34)
Asset Class:Emergency Services							
Emergency Services Plant and Equipm	635	0	299	0	111	(336)	0
Total Emergency Services	635	0	299	0	111	(336)	0
Asset Class:Land Acquisitions							
Land Acquisitions	3,270	(2,825)	3,320	(2,825)	447	50	0
Total Land Acquisitions	3,270	(2,825)	3,320	(2,825)	447	50	0
Asset Class:Non-Project Allocations							
Capital Project Contingency	51	0	28	0	0	(23)	0
Capital Project Plan	530	0	480	0	268	(50)	0
Total Non-Project Allocations	581	0	508	0	268	(73)	0
Asset Class:Loans							
West Dapto Loan	0	(2,760)	0	(2,760)	0	0	0
Total Loans	0	(2,760)	0	(2,760)	0	0	0
GRAND TOTAL	90,528	(39,189)	84,100	(33,749)	47,704	(6,427)	5,440

WOLLONGONG CITY COUNCIL		
	Actual 2015/16 \$'000	Actual 2014/15 \$'000
BALANCE SHEET		
	as at 25/3/16	as at 30/06/15
<b>CURRENT ASSETS</b>		
Cash Assets	133,764	124,611
Investment Securities	20,515	11,046
Receivables	22,910	22,108
Inventories	6,030	6,040
Other	2,958	4,313
Assets classified as held for sale	0	0
<b>Total Current Assets</b>	<b>186,177</b>	<b>168,118</b>
<b>NON-CURRENT ASSETS</b>		
Non Current Cash Assets	9,000	9,000
Non-Current Receivables	0	0
	0	0
Property, Plant and Equipment	2,271,482	2,251,345
Investment Properties	2,750	2,750
Westpool Equity Contribution	1,159	1,159
Intangible Assets	818	1,219
<b>Total Non-Current Assets</b>	<b>2,285,210</b>	<b>2,265,474</b>
<b>TOTAL ASSETS</b>	<b>2,471,387</b>	<b>2,433,592</b>
<b>CURRENT LIABILITIES</b>		
Current Payables	29,216	29,868
Current Provisions payable < 12 months	17,214	16,790
Current Provisions payable > 12 months	34,871	34,871
Current Interest Bearing Liabilities	6,369	6,369
<b>Total Current Liabilities</b>	<b>87,671</b>	<b>87,899</b>
<b>NON-CURRENT LIABILITIES</b>		
Non Current Interest Bearing Liabilities	34,965	39,758
Non Current Provisions	43,907	42,554
<b>Total Non-Current Liabilities</b>	<b>78,872</b>	<b>82,312</b>
<b>TOTAL LIABILITIES</b>	<b>166,543</b>	<b>170,210</b>
<b>NET ASSETS</b>	<b>2,304,844</b>	<b>2,263,381</b>
<b>EQUITY</b>		
Accumulated Surplus	1,163,965	1,132,670
Asset Revaluation Reserve	1,011,065	1,011,064
Restricted Assets	129,814	119,648
<b>TOTAL EQUITY</b>	<b>2,304,844</b>	<b>2,263,381</b>

# BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

WOLLONGONG CITY COUNCIL		
CASH FLOW STATEMENT		
as at 25 March 2016		
	YTD Actual 2015/16 \$ '000	Actual 2014/15 \$ '000
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
<b>Receipts:</b>		
Rates & Annual Charges	126,675	166,562
User Charges & Fees	36,617	33,505
Interest & Interest Received	4,456	5,789
Grants & Contributions	43,929	54,189
Other	7,684	23,908
<b>Payments:</b>		
Employee Benefits & On-costs	(72,046)	(92,705)
Materials & Contracts	(32,326)	(58,052)
Borrowing Costs	(1,145)	(1,311)
Other	(31,019)	(42,795)
<b>Net Cash provided (or used in) Operating Activities</b>	<b>82,825</b>	<b>89,090</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
<b>Receipts:</b>		
Sale of Infrastructure, Property, Plant & Equipment	380	12,570
Deferred Debtors Receipts	-	10
<b>Payments:</b>		
Purchase of Investments	-	-
Purchase of Investment Property	-	-
Purchase of Infrastructure, Property, Plant & Equipment	(59,032)	(85,072)
Purchase of Interests in Joint Ventures & Associates	-	-
<b>Net Cash provided (or used in) Investing Activities</b>	<b>(58,652)</b>	<b>(72,492)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
<b>Receipts:</b>		
Proceeds from Borrowings & Advances	-	15,000
<b>Payments:</b>		
Repayment of Borrowings & Advances	(5,549)	(5,244)
Repayment of Finance Lease Liabilities	-	-
<b>Net Cash Flow provided (used in) Financing Activities</b>	<b>(5,549)</b>	<b>9,756</b>
<b>Net Increase/(Decrease) in Cash &amp; Cash Equivalents</b>	<b>18,624</b>	<b>281</b>
plus: Cash & Cash Equivalents and Investments - beginning of year	144,656	144,375
<b>Cash &amp; Cash Equivalents and Investments - year to date</b>	<b>163,280</b>	<b>144,656</b>

WOLLONGONG CITY COUNCIL		
CASH FLOW STATEMENT		
as at 25 March 2016		
	YTD Actual 2015/16 \$ '000	Actual 2014/15 \$ '000
<b>Total Cash &amp; Cash Equivalents and Investments - year to date</b>	<b>163,280</b>	<b>144,656</b>
<b>Attributable to:</b>		
External Restrictions (refer below)	76,458	66,137
Internal Restrictions (refer below)	53,358	22,208
Unrestricted	33,464	56,311
	<b>163,280</b>	<b>144,656</b>
<b>External Restrictions</b>		
Developer Contributions	15,300	11,758
RMS Contributions	269	238
Specific Purpose Unexpended Grants	5,054	10,910
Special Rates Levy Wollongong Centre Improvement Fund	-	-
Special Rates Levy Wollongong Mall	140	251
Special Rates Levy Wollongong City Centre	13	11
Local Infrastructure Renewal Scheme	18,980	18,791
Unexpended Loans	7,144	12,877
Domestic Waste Management	9,788	6,408
Private Subsidies	4,439	1,883
West Dapto Home Deposit Assistance Program	9,705	-
Stormwater Management Service Charge	1,162	834
West Dapto Home Deposits Issued	85	-
Carbon Price	4,379	2,176
<b>Total External Restrictions</b>	<b>76,458</b>	<b>66,137</b>
<b>Internal Restrictions</b>		
Property Development	4,122	(252)
Property Investment Fund	8,064	-
Strategic Projects	20,928	-
Future Projects	6,516	-
Sports Priority Program	624	850
Car Parking Strategy	749	489
MacCabe Park Development	803	391
Darcy Wentworth Park	190	99
Garbage Disposal Facility	10,099	20,281
Telecommunications Revenue	144	279
West Dapto Development Additional Rates	415	71
Southern Phone Natural Areas	588	-
Lake Illawarra Estuary Management Fund	116	-
<b>Total Internal Restrictions</b>	<b>53,358</b>	<b>22,208</b>

## BUDGET REVIEW STATEMENT - REPORT OF MANAGER FINANCE

The Quarterly Budget Review Statement (QBRs) requirements issued by the Department of Local Government in December 2010 require Council to provide additional information that is included in the following schedules and this report should be read in conjunction with these.

The QBRs guidelines require councils to provide a listing of contracts that have been entered into during the Quarter that have yet to be fully performed. Details of contracts, other than contractors that are on a council's preferred supplier list, that have a value equivalent of 1% of estimated income from continuing operations or \$50K, whichever is the lesser, are required to be provided.

Contract Listing					
Budget Review for Quarter ended March 2016					
Contractor	Contract Detail & Purpose	Contract Value \$000's	Commencement Date	Duration of Contract	Budgeted Y/N
Various	Commercial Fitness Training Activities on Public Open Space	198	1/01/2016	FY 2020/21	YES
Local Government Training Institute	Provision of Overhead Powerlines Training	70	1/01/2016	FY 2015/16	YES
Dwyers Truck Centre & City Hino	Purchase of 3 Trucks	427	22/01/2016	FY 2015/16	YES
United Stone	Crown Street Wollongong - Reconstruction of Footpath from Gladstone Avenue to "The Landmark"	193	1/02/2016	FY 2015/16	YES
OneSteel Recycling Pty Ltd	Collection & Disposal of Scrap Metal at Councils Waste Depots	105	1/02/2016	FY 2015/19	YES
Oztech	Security Surveillance, Guards, Patrols and Monitoring	1,598	1/02/2016	FY 2015/19	YES
Malsave Pty Ltd	Kembla Heights Community Hall Amenities Refurbishment	149	1/02/2016	FY 2015/16	YES
Traffic Lights NSW	Installation of Traffic Lights at the Intersection Blackman Parade & Central Road, Unanderra	162	1/02/2016	FY 2015/16	YES
Zauner Construction Pty Ltd	Proposed Bald Hill Amenities & Coffee Spot (Stage 3 Works)	1,749	8/02/2016	FY 2015/17	YES
Programmed Facilities Management	Art Gallery Scheduled Maintenance Project	189	1/03/2016	FY 2015/16	YES
Optimal Stormwater	Elliots Road Water Quality Device and Maintenance Facilities	187	1/03/2016	FY 2015/16	YES
Life Fitness	Strength Training Equipment for Beaton Park	67	7/03/2016	FY 2015/16	YES
Water Well Sales & Service Pty Ltd	Thomas Dalton Park Irrigation Upgrade	65	9/03/2016	FY 2015/16	YES
Orimatech	Supply of six Olympic Pool Cleaners	115	10/03/2016	FY 2015/16	YES
Metrocorp Technologies (Metropolitan Restorations Pty Ltd)	Cordeaux Road Culvert Upgrade - North of Booreea Boulevard	53	14/03/2016	FY 2015/16	YES

The QBRs guidelines also require councils to identify the amount expended on consultancies and legal fees for the financial year. Consultants are defined as a person or organisation that is engaged under contract on a temporary basis to provide recommendations or high level specialist or professional advice to assist decision making by management. Generally, it is the advisory nature of the work that differentiates a consultant from other contractors.

Consultancy and Legal Expenses		
Budget Review for Quarter ended March 2016		
Expense	Expenditure YTD \$000's	Budgeted (Y/N)
Consultancies	1,071	YES
Legal Fees	1,235	YES

### Statement of responsible accounting officer

All investments held at 31 March 2016 were invested in accordance with Council's Investment Policy. Bank reconciliations have been completed as at 31 March 2016.

Year to date cash and investments are reconciled with funds invested and cash at bank.

### Budget Review Statement - Revision To Full Year Estimates

The following statement is made in accordance with Clause 203(2) of the Local Government (General) Regulation 2005.

It is my opinion that the financial statements and schedules contained within the Quarterly Review Statement for Wollongong City Council for the quarter ended 31 March 2016 indicate that Council's projected financial position at 30 June 2016 will be satisfactory having regard to the projected estimates of income and expenditure and the original budgeted income and expenditure.

The overall year to date position is within expectations of the adopted budget across the broad range of indicators and on a budget outcome basis is acceptable.

**BRIAN JENKINS**  
RESPONSIBLE ACCOUNTING OFFICER

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
1.1.1.1 Implement programs and events which facilitate community participation	100%	0%	0%	0%	0%
1.1.2.1 Impacts from development on the environment are assessed, monitored and mitigated	86%	0%	14%	0%	0%
1.1.2.1 Establish effective urban stormwater management programs	100%	0%	0%	0%	0%
1.1.3.1 Manage vegetation to reduce bushfire risk in Asset Protection Zones on natural areas under Council care and control	100%	0%	0%	0%	0%
1.1.3.2 Implement a coordinated approach to floodplain and stormwater management	100%	0%	0%	0%	0%
1.1.4.1 Implement priority actions from the Illawarra Biodiversity Strategy	67%	0%	33%	0%	0%
1.1.4.2 Implement priority actions from the Illawarra Escarpment Strategic Management Plan	100%	0%	0%	0%	0%
1.2.1.1 Finalise and implement the Coastal Zone Management Plan	100%	0%	0%	0%	0%
1.2.2.1 Assess the impact of day visitors on service levels	100%	0%	0%	0%	0%
1.2.2.2 Coordinate a range of Water Safety Education programs to enhance safe community access to our beaches	100%	0%	0%	0%	0%



## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
1.3.1.1 Develop and implement programs that encourage community participation in reducing Wollongong's ecological footprint	67%	0%	33%	0%	0%
1.3.2.1 Finalise and deploy Council's Waste and Resource Recovery Strategy in consultation with industry leaders	100%	0%	0%	0%	0%
1.3.2.2 Implement water and energy saving strategies	100%	0%	0%	0%	0%
1.3.2.3 Emissions are monitored and reduction methods are investigated and utilised	100%	0%	0%	0%	0%
1.3.2.4 Investigate a landfill gas management system for Whytes Gully	0%	0%	0%	100%	0%
1.3.3.1 Develop and implement an Environmental Sustainability Policy and Strategy	75%	0%	25%	0%	0%
1.3.3.2 Seek external funds to support programs for Lake Illawarra, following the closure of the Lake Illawarra Authority	100%	0%	0%	0%	0%
1.3.3.3 Establish and maintain an Estuary Management Committee to protect the health of Lake Illawarra	100%	0%	0%	0%	0%
1.4.1.1 Work in partnership with others to promote a diverse range of heritage education and promotion programs	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
1.4.1.2 Implement priority actions of the Heritage Strategy	100%	0%	0%	0%	0%
1.4.1.3 Implement community and cultural promotions program	100%	0%	0%	0%	0%
1.4.2.1 Work with the local Aboriginal community in the management of Indigenous heritage	100%	0%	0%	0%	0%
1.5.1.1 Facilitate a range of programs and activities which improve food security and local food production	100%	0%	0%	0%	0%
1.6.1.1 Review planning controls for environmentally sensitive locations	100%	0%	0%	0%	0%
1.6.2.1 Implement the West Dapto Release Area Masterplan	100%	0%	0%	0%	0%
1.6.3.1 Provide high quality development assessment and certification based on QBL principles (note: QBL or the Quadruple bottom Line takes consideration of environmental, economic, social and governance factors)	100%	0%	0%	0%	0%
1.6.3.2 Maximise sustainability principles in the design and construction of Wollongong's built form	100%	0%	0%	0%	0%
1.6.3.3 Prepare for the introduction and implementation of the NSW State Government Planning Reforms	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
2.1.1.1 Support regional activities and partnerships that result in increased business investment and jobs growth	100%	0%	0%	0%	0%
2.1.2.1 Ensure that Wollongong is attractive to diverse companies for business expansion, establishment and relocation	100%	0%	0%	0%	0%
2.1.2.2 Progress implementation of the CBD Action Plan	100%	0%	0%	0%	0%
2.1.3.1 Build on partnerships which enable the retention of local talent	100%	0%	0%	0%	0%
2.1.3.2 Establish Wollongong City Council as an employer of choice	80%	0%	0%	0%	20%
2.1.4.1 Develop and maintain partnerships with the business sector to fund and contribute to a broader range of community projects and activities	100%	0%	0%	0%	0%
2.1.5.1 Work with community, government and business partners to support development of local employment opportunity for people who are disadvantaged within the labour market	100%	0%	0%	0%	0%
2.1.6.1 In collaboration with key agencies, facilitate the West Dapto Taskforce to deliver the first stages of the West Dapto Urban Release area	100%	0%	0%	0%	0%
2.2.1.1 Facilitate the delivery of business and tourism information services	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
2.2.2.1 Support projects that investigate opportunities for the provision of tourism infrastructure	75%	0%	25%	0%	0%
2.2.2.2 Use funds obtained from Restart NSW Illawarra to commence concept designs and planning for the Bald Hill Improvement Program	100%	0%	0%	0%	0%
2.2.3.1 Review the current investments to deliver a more efficient and targeted destination marketing program	100%	0%	0%	0%	0%
2.3.1.1 Undertake major refurbishment works in the City Centre	100%	0%	0%	0%	0%
2.3.1.2 Manage and deliver improved marketing and promotion of the City Centre	100%	0%	0%	0%	0%
2.3.1.3 Provide a diverse range of activities in the City Centre that target and engage a broad community	100%	0%	0%	0%	0%
2.3.1.4 Improve policies and systems to support the revitalisation of the City Centre	100%	0%	0%	0%	0%
2.3.1.5 Deliver the Access and Movement Strategy for the City Centre	100%	0%	0%	0%	0%
2.3.2.1 Review the current investment to deliver a more efficient and targeted destination marketing program	100%	0%	0%	0%	0%
2.3.2.2 Deliver Visitor Information Services to the city and our visitors	100%	0%	0%	0%	0%
2.3.2.3 Pursue initiatives that promote the region as place to holiday to both the domestic and international markets	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
2.4.1.1 Support the creation and expansion of green industries	100%	0%	0%	0%	0%
2.4.2.1 Ensure that Wollongong is attractive to research and development based companies and organisations	100%	0%	0%	0%	0%
2.5.1.1 Implement a range of programs that incorporates learning and development	80%	0%	0%	0%	20%
3.1.1.1 Promote Made in Wollongong through a variety of locally produced events, productions and programs	100%	0%	0%	0%	0%
3.1.2.1 Provide support to existing and emerging arts workers and their networks	100%	0%	0%	0%	0%
3.1.2.2 Provide opportunities for local artists and performers to exhibit, promote and perform at Council venues and events	100%	0%	0%	0%	0%
3.1.3.1 Successful collaborations with other organisations and agencies are established	100%	0%	0%	0%	0%
3.2.1.1 Seek funding for the promotion of heritage sites and museums to the community and visitors	100%	0%	0%	0%	0%
3.2.2.1 Encourage the integration of urban design and public art	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
3.2.3.1 Deliver and support a range of projects and programs which build harmony and understanding	100%				
3.3.1.1 Implement a coordinated approach to event acquisition and provision in Wollongong via the delivery of the Events Strategy	100%				
3.3.1.2 encourage Sports Associations to conduct regional, State and National events in the city	100%				
3.3.1.3 Implement a sustainable program of local events via the Events Strategy	100%				
3.3.1.4 Plan for, and host, culturally sensitive events and programs celebrating the Bicentenary of European Settlement in Wollongong across 2015-16	100%				
3.3.1.5 Coordinate Council's support and investment in events and festivals	100%				
3.3.2.1 Coordinate an integrated approach to infrastructure improvement and service delivery in the Civic Plaza and through the re-establishment of an Arts Precinct in the city	100%				
3.4.1.1 Support the coordination of an externally funded delivered calendar of activities across the city	100%				
3.4.2.1 Develop a new Cultural Plan	100%				

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
3.4.3.1 Deliver a program of activities in local communities	50%	0%	0%	0%	50%
4.1.1.1 Ensure an effective community engagement framework connects the community to Council decision making	100%	0%	0%	0%	0%
4.1.2.1 Expand Council's use of social media and online options for communication and engagement	67%	0%	0%	33%	0%
4.1.3.1 A coordinated approach to communication is developed and implemented	100%	0%	0%	0%	0%
4.1.3.2 Re-establish Council's commitment to partnering with our local Aboriginal community	100%	0%	0%	0%	0%
4.1.3.4 Continue to provide regular information updates to the community about Council's Financial Sustainability Review	100%	0%	0%	0%	0%
4.2.1.1 Increase opportunities for the community to connect with volunteering organisations	100%	0%	0%	0%	0%
4.2.1.2 Support community participation in non-profit activities	100%	0%	0%	0%	0%
4.2.1.3 Build the capability of community based organisations in managing, developing and sustaining their volunteers	100%	0%	0%	0%	0%
4.2.2.1 Support a range of projects and programs in the city	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
4.2.3.1 Contribute to activities and programs that enhance civic pride in Wollongong	100%	0%	0%	0%	0%
4.3.1.1 Lobby for the expansion of NBN to all suburbs within the LGA within the next five years	100%	0%	0%	0%	0%
4.3.2.1 Review community facilities and consider rationalisation, replacement or refurbishment to achieve facilities that are strategically located, good quality and meet identified community need	100%	0%	0%	0%	0%
4.3.2.2 Investigate the provision of a district level community and library centre for the southern suburbs	100%	0%	0%	0%	0%
4.3.2.3 Review and implement a revised library service model for Unanderra and surrounding suburbs	0%	0%	0%	0%	100%
4.3.3.1 Continue to participate and contribute to an integrated community service network	100%	0%	0%	0%	0%
4.4.1.1 Improve community understanding and awareness of Council decisions	100%	0%	0%	0%	0%
4.4.1.2 Ensure appropriate strategies and systems are in place, monitored and reviewed	80%	0%	0%	0%	20%
4.4.1.3 Continue to build a professional, customer focussed quality organisation	100%	0%	0%	0%	0%
4.4.1.4 Lead continuous improvement in Council's health and safety culture and behaviour	100%	0%	0%	0%	0%



## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
4.4.2.1 Coordinate a service review program with a focus on business development and improvement	100%	0%	0%	0%	0%
4.4.2.2 Deliver the Asset Management Strategy and Improvement Plan 2012-17	100%	0%	0%	0%	0%
4.4.2.3 Investigate provision of cremation services across the region and determine Council's role in the market	100%	0%	0%	0%	0%
4.4.3.1 Improve systems for recording community and staff ideas	100%	0%	0%	0%	0%
4.4.4.1 Ensure policies and procedures are regularly reviewed, updated and promoted	100%	0%	0%	0%	0%
4.4.4.2 Streamline reporting across the organisation and provide user friendly, plain English reports	100%	0%	0%	0%	0%
4.4.5.1 Effective and transparent financial management systems are in place	100%	0%	0%	0%	0%
4.4.5.2 Achieve an operational savings as a part of Council's financial sustainability review with savings to be directed to asset renewal	100%	0%	0%	0%	0%
4.4.5.3 Reduce Council's discretionary spend (excluding assets) by 2.75% with savings to be directed to asset renewal	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
4.4.5.4 Undertake a review of Council's employment conditions including the consideration of more flexible employment conditions and Enterprise Agreement	0%	0%	100%	0%	0%
4.4.5.5 Continue to pursue alternative funding option to deliver financially sustainable services and facilities	100%	0%	0%	0%	0%
4.4.5.6 Apply for a special rate variation of 6.13% in 2014-15, 6.23% in 2015-16 and 6.24% in 2016-17 with additional funds to be directed to asset renewal.	0%	0%	0%	0%	100%
4.4.5.7 Review and increase fees and charges to achieve a minimum of \$500,000 to ensure the financial sustainability of service provision	100%	0%	0%	0%	0%
4.4.5.8 Investigate removing the pensioner and charitable waste exemptions	0%	0%	100%	0%	0%
4.4.5.9 Continue to actively seek grants and contributions to deliver core community infrastructure and services	100%	0%	0%	0%	0%
4.4.5.10 Explore innovative options to increase revenue at Council facilities	100%	0%	0%	0%	0%
4.4.5.11 Improve the efficiency of supply management in order to achieve operational efficiencies	100%	0%	0%	0%	0%
4.4.5.12 Pursue alternative funding options to deliver Council services and facilities	0%	0%	0%	0%	100%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
4.4.6.1 Deliver a consistent and effective integrated frontline customer service centre	100%	0%	0%	0%	0%
5.1.1.1 Partner with community based organisations in the provision of services	100%	0%	0%	0%	0%
5.1.2.1 Actively engage children and young people in planning and design processes	100%	0%	0%	0%	0%
5.1.3.1 Partner with agencies and health authorities to support improvements to the region's medical services	100%	0%	0%	0%	0%
5.1.4.1 Assess the changing profile of the community and reprioritise services appropriately	100%	0%	0%	0%	0%
5.1.4.2 Investigate provision of Leisure Services in the greater Dapto area, taking into account expansion of West Dapto, and determine Council's role in the market	100%	0%	0%	0%	0%
5.1.4.3 Investigate the future provision of Aquatic Services across the local government area and implement improvements	100%	0%	0%	0%	0%
5.1.5.1 Continue to undertake social, land use and environmental planning activities that assists in service planning	100%	0%	0%	0%	0%
5.1.5.2 Carry out commercial business management of Council's operational lands	75%	0%	25%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
5.1.5.3 Develop a sustainable financial model and strategy for the maintenance and management in perpetuity for Council cemeteries, in response to the Cemeteries Act and establishment of 'Cemeteries NSW'	100%	0%	0%	0%	0%
5.1.6.1 Review planning controls for priority locations	100%	0%	0%	0%	0%
5.1.6.2 Provide an appropriate and sustainable range of quality passive and active open spaces and facilities	100%	0%	0%	0%	0%
5.1.6.3 Policies and plans are developed, reviewed and implemented to encourage physical activity	100%				
5.2.1.1 Prepare a Housing Study and Strategy incorporating Affordable Housing Issues			50%	50%	
5.2.2.1 Integrated services are provided to residents in need of urgent shelter	100%				
5.3.1.1 Promote and enforce compliance with litter reduction	100%				
5.3.2.1 Manage and maintain public facilities	100%				
5.3.2.3 Use additional funds achieved through the financial sustainability review for renewal of major building projects as per capital program	100%				
5.3.3.1 Manage and maintain community infrastructure portfolio with a focus on asset renewal	100%				

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
5.4.1.1 Facilitate a range of partnerships and networks to develop community safety initiatives	100%	0%	0%	0%	0%
5.4.1.2 Provide lifeguarding services at beaches (in partnership with Surf Life Saving Illawarra) and Council pools	100%	0%	0%	0%	0%
5.4.2.1 Continue to liaise with Local Area Commands on key initiatives and crime reduction strategies	100%	0%	0%	0%	0%
5.4.2.2 Deliver projects and programs to reduce crime in the Wollongong Local Government Area	100%	0%	0%	0%	0%
5.4.3.1 Safety is considered in the planning and design of any development	100%	0%	0%	0%	0%
5.5.1.1 Maintain and establish corridors and parks that strengthen open space connections and people movement	100%	0%	0%	0%	0%
5.5.1.2 Coordinate an access improvement program through pre-planning and renewal activities	100%	0%	0%	0%	0%
5.5.2.1 Use data to assess the current community infrastructure available, community demand and develop a strategic framework and policies to either rationalise, enhance or expand to meet hanging community needs	75%	0%	25%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
5.5.2.2 Implement Council's Planning, People, Places Strategy	100%	0%	0%	0%	0%
5.5.2.3 Develop a Regional Botanic Garden of Excellence	100%	0%	0%	0%	0%
5.5.2.4 Provide statutory services to appropriately manage and maintain our public spaces	100%	0%	0%	0%	0%
5.5.2.5 Develop a play strategy to support the planning of high quality centralised and integrated park facilities	100%	0%	0%	0%	0%
5.5.2.6 use additional achieved through the Financial Sustainability Review to replace below standard playground facilities informed by the Play Strategy	100%	0%	0%	0%	0%
5.5.3.1 Deliver a range of programs for older people	100%	0%	0%	0%	0%
5.5.3.2 Deliver a range of recreational pursuits for older people	100%	0%	0%	0%	0%
5.6.1.1 Deliver a diverse suite of projects to the community that foster and enhance community strengths	100%	0%	0%	0%	0%
6.1.1.1 Establish a strategic framework and a plan for cycleways and bicycle facilities within Wollongong	100%	0%	0%	0%	0%
6.1.2.1 Assess the feasibility to expand the Gong Shuttle service to outer suburbs	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
6.1.3.1 Improve the connectivity of the local government area through the upgrade in our network of footpaths and cycleway	60%	0%	20%	0%	20%
6.1.3.2 Use additional funds achieved through the Financial Sustainability Review to accelerate the footpath renewal program by about \$4M	100%	0%	0%	0%	0%
6.1.3.3 Extend the average lives of footpaths to 80 years to create about \$1M saving in depreciation annually	100%	0%	0%	0%	0%
6.1.3.4 Use funds obtained from Restart NSW Illawarra to design and construct the Grand Pacific Walk – Stage One	0%	0%	100%	0%	0%
6.1.4.1 Work in partnership with key stakeholders to consider the establishment of a 'Park n Ride' commuter bus network	100%	0%	0%	0%	0%
6.2.1.1 Develop an Integrated Transport Strategy	100%	0%	0%	0%	0%
6.2.1.2 Deliver sustainable transport asset renewal programs	100%	0%	0%	0%	0%
6.2.1.3 Allocate approximately \$6M of additional funds achieved through the Financial Sustainability Review to road resurfacing and reconstruction	100%	0%	0%	0%	0%

## APPENDIX 1: ANNUAL DELIVERABLE PROGRESS BY 5 YEAR ACTION – DELIVERY PROGRAM 2012-17

5 Year Action	On Track (Projects / Ongoing)	Not Scheduled to Commence	Delayed	Deferred	Complete (Projects Only)
6.2.2.1 In collaboration with agencies deliver the infrastructure required to support the first stage of the West Dapto Release Area	100%	0%	0%	0%	0%
6.2.2.2 Use funds obtained from Restart NSW Illawarra and funds contributed by council to construct the road link between Fowlers Road, Dapto to Fairwater Drive, Horsley	100%	0%	0%	0%	0%
6.2.3.1 Work with State and Government agencies and lobby to improve rail services and stations across the Local Government Area	100%	0%	0%	0%	0%
6.2.4.1 Work with State and Government agencies to lobby and promote opportunities for transport to reduce travel time between Sydney and Wollongong	100%	0%	0%	0%	0%
6.2.5.1 Work with key agencies and partners to continue and improve late night transport options	100%	0%	0%	0%	0%
<b>TOTAL ANNUAL DELIVERABLE PROGRESS</b>	<b>92%</b>	<b>0%</b>	<b>4%</b>	<b>1%</b>	<b>3%</b>