



BUSINESS PAPER

ORDINARY MEETING OF COUNCIL

To be held at 6.00 pm on

Monday 31 July 2017

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 Meeting of Council 17/07/2017
- 7 Public Access Forum
- 8 Call of the Agenda
- 9 Lord Mayoral Minute
- 10 Urgent Items
- 11 Notice of Motions
- 12 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

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MINUTES

ORDINARY MEETING OF COUNCIL

at 6.00 pm

Monday 17 July 2017

Present

Lord Mayor – Councillor Bradbery OAM (in the Chair), Councillors Kershaw, Connor, Brown, Takacs, Martin, Merrin (until 10.46 pm), Blicavs, Dorahy (until 8.58 pm), Colacino, Crasnich (until 10.38 pm), Curran and Petty (from 6.15 pm)

In Attendance

General Manager – D Farmer, Director Infrastructure and Works – G Doyle, Director Planning and Environment – A Carfield, Director Corporate Services (Acting) – T Tyrpenou, Director Community Services (Acting) – K Hunt, Manager Governance and Information (Acting) – C Phelan, Manager Finance (Acting) – T Ramsden, Manager Property and Recreation (Acting) – J Towers, Manager Environmental Strategy and Planning (Acting) – V De Luca, Manager Project Delivery – G Whittaker, Manager Infrastructure Strategy and Planning – M Dowd and Manager Regulation and Enforcement (Acting) – K Cowgill

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DISCLOSURES OF INTERESTS

Councillor Martin declared non-significant, non-pecuniary conflicts of interest in Items E, 2 and 3, and potentially Item 1, as these Items involve the Department of Planning and Environment. Councillor Martin advised that she works at the Department, though not on Wollongong-based matters.

Councillor Curran declared a non-significant, non-pecuniary conflict of interest in Item 12 as a relative works for one of the companies that put in a tender. Councillor Curran advised that she would depart the meeting during debate and voting on the matter.

CONFIRMATION OF MINUTES OF ORDINARY MEETING OF COUNCIL HELD ON MONDAY, 26 JUNE 2017

77 COUNCIL'S RESOLUTION - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Blicavs that the Minutes of the Ordinary Meeting of Council held on Monday, 26 June 2017 (a copy having been circulated to Councillors) be taken as read and confirmed.

PUBLIC ACCESS FORUM - SUPPORT FOR NOTICE OF MOTION TO FINALISE THE MARSHALL MOUNT REZONING

Mr J Bisley was supportive of the motion to progress the Yallah-Marshall Mount Planning Scheme. He advised that in March 2015 Council approved the Land Use Plan for the precinct and there was no opposition from the community or from any government agency. However, Council decided not to progress the rezoning to the Department of Planning and Environment on the recommendation of a Council officer following an assessment that the cost of the infrastructure would be approximately \$60M in excess of the revenue from the Section 94 Contributions. He said that Council costings for the whole of West Dapto were reviewed by IPART in 2016 and as far as the Yallah-Marshall Mount Precinct was concerned, IPART determined that Council's costings were seriously wrong and IPART recommended that Yallah-Marshall Mount should be separated from West Dapto Stages 1 to 3.

Mr Bisley said that project builders are complaining about the shortage of land supply. The problem is serious and affecting their businesses and unless the shortage of land supply is addressed in Wollongong, the problem will start to seriously impact the building industry. In conclusion, Mr Bisley stated that before he purchased his property at Yallah in 2003, he had attended a meeting where he was informed by a Planning Officer that the land was suitable for redevelopment, however, he said that 14 years was a long time to wait for something to happen.

ATTENDANCE OF COUNCILLOR

Following Mr Hutchinson's presentation, Councillor Petty attended the meeting, the time being 6.15 pm.

PUBLIC ACCESS FORUM - DRAFT SOUTH WOLLONGONG FUTURE STRATEGY

On behalf of Warrigal, Mr P Hutchinson advised that Warrigal had welcomed this report and the fact that Council had reconsidered its views about rezoning. However, Warrigal believes that the Strategy has not gone far enough and would like to see in addition to development sites, a commitment to flooding solutions and mitigation. Warrigal also wants to work with Council to better integrate the needs of older people into the Strategy. He noted that Council had received a number of submissions and people had said that there was no flooding problem in the area until recently.

Mr Hutchinson advised that Warrigal has a large parcel of land suitable for older people in Glebe Street, but Council does not think it is a suitable location for seniors. However, he stated that the reality is that Warrigal has an existing aged care community adjacent to this land. In conclusion, Mr Hutchinson said that Warrigal maintains its position that it can be part of an impressive southern entry to the City and in this respect can plan for an integrated aged care seniors living. Warrigal recommends that Council cast a wide strategic vision for its south Wollongong / CBD vision.

PUBLIC ACCESS FORUM - DRAFT PLANNING PROPOSAL LOT 1 DP534849 STAFF ROAD CORDEAUX HEIGHTS - POST EXHIBITION

Mr D Laing from Cardno advised that this property was his first job at Forbes Rigby some 22-24 years ago and that it was good to see that the process is coming to an end. He said that it was important to get a resolution at tonight's Council meeting so that the Hickey family can get closure on the matter.

In conclusion, Mr Laing said that he was pleased to see that Council staff had accepted a balanced approach and all subject to a BioBanking endorsement from the Office of Environment and Heritage. This will hopefully see 90-plus families live in the area and also result in an important conservation outcome.

- 78 COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Blicavs that all speakers be thanked for their presentation and invited to table their notes.

CALL OF THE AGENDA

- 79 COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Kershaw that the staff recommendations for Items 5, 6, 8 to 11, 13, 14, and 16 to 20 inclusive, be adopted as a block.

DEPARTURE OF COUNCILLOR

During debate and prior to voting on Item F, Councillor Merrin departed and returned to the meeting, the time being from 6.27 pm to 6.29 pm.

ITEM F - LORD MAYORAL MINUTE - FUNDING FOR SYNTHETIC FOOTBALL PITCH - IAN MCLENNAN PARK

- 80 COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Bradbery that -
- 1 Councillors be provided with an urgent briefing on Monday 24 July which details –
 - a the shortfall in funding for a synthetic football pitch at Ian McLennan Park; and,
 - b the feasibility and budgetary implications of Council providing up to an extra \$700k to assist with the implementation of this project.
 - 2 A report with options be brought to the next Council meeting on 31 July 2017 and include -
 - a details of extra funding support from Football South Coast and the State Government to fund the completion of the project; and,
 - b information on the feasibility of staging the project and/or funding it over the present and the next budgetary period (2018-2019).

DEPARTURE OF COUNCILLOR

During debate and prior to voting on Item A, Councillor Kershaw departed and returned to the meeting, the time being from 7.07 pm to 7.11 pm.

ITEM A - NOTICE OF MOTION - COUNCILLOR BROWN - WORLD HERITAGE LISTING - ROYAL NATIONAL PARK

81 COUNCIL'S RESOLUTION - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Merrin that –

- 1 Council reiterates its support for World Heritage Listing as resolved on 27 May 2013.
- 2 Council's support for the listing be conveyed to relevant State and Federal Ministers.
- 3 Council make a submission to the Office of Environment and Heritage's Discussion Paper on a new Plan of Management for the Park, and two adjacent Parks (Heathcote and Garrawarra), consistent with resolutions of Council.

Variation The variation moved by Councillor Merrin to change the wording in Part 1 from 'Wollongong Council supports World Heritage Listing in the Royal National Park' to 'Council reiterates its support for World Heritage Listing as resolved on 27 May 2013' was accepted by the mover.

DEPARTURE OF COUNCILLOR

During debate and prior to voting on Item B, Councillor Dorahy departed and returned to the meeting, the time being from 7.49 pm to 7.52 pm.

ITEM B - NOTICE OF MOTION - COUNCILLORS PETTY AND CURRAN - CONTAMINATED LANDS REGISTER

A PROCEDURAL MOTION was MOVED by Councillor Curran seconded Councillor Martin that an additional four minutes be granted to Councillor Petty to address the meeting in relation to Item B. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

During debate, a PROCEDURAL MOTION was MOVED by Councillor Dorahy seconded Councillor Crasnich that the motion be put. The PROCEDURAL MOTION on being PUT to the VOTE was LOST.

82 COUNCIL'S RESOLUTION - RESOLVED on the motion of Councillor Petty seconded Councillor Curran that Council receive a briefing and a report come to Council with information about costs, risks and benefits of –

- 1 updating its website to include a Contaminated Lands Register of all properties identified within the Wollongong Local Government Area;
- 2 including all information published on the Environment Protection Authority website of such properties within the Wollongong Local Government Area;
- 3 conducting a search of the Property Register to identify all properties noted on the Section 149 Certificate as Contaminated Lands; and,
- 4 the feasibility of keeping the Register up-to-date in a timely and professional manner.

Variation The variation moved by Councillor Merrin (the addition of the words 'receive a briefing and a report come to Council with information about costs, risks and benefits of', and a change to the following wording 'update' to 'updating' in Part 1, 'include' to 'including' in Part 2, and 'conduct' to 'conducting' in Part 3, and the addition of the words 'the feasibility of' in Part 4, together with the removal of the previous Part 2 'The Register be published by 31 July 2017' were accepted by the mover and seconder.

In favour Councillors Kershaw, Connor, Brown, Martin, Takacs, Merrin, Blicavs, Curran, Petty and Bradbery

Against Councillors Dorahy, Colacino and Crasnich

SUSPENSION OF STANDING ORDERS

- 83 COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Crasnich seconded Councillor Dorahy that Items E, 1 and 3 be considered as the next items of business under Suspension of Standing Orders.

DEPARTURE OF COUNCILLOR

During debate and prior to voting on Item E, Councillor Blicavs departed and returned to the meeting, the time being from 8.21 pm to 8.23 pm.

ITEM E - NOTICE OF MOTION - COUNCILLOR MARTIN - FINALISE THE MARSHALL MOUNT REZONING

MOVED by Councillor Martin seconded Councillor Crasnich that in light of the recent announcement by the NSW State Government to remove the cap on S94 Funding for West Dapto and other areas, which greatly reduces the financial risk to Council in the funding of local infrastructure in West Dapto, as well as the continued pressure by the development industry, land owners and those seeking to increase the supply of housing across NSW, and in particular across the Illawarra -

- 1 Council request the Department of Planning and Environment to make the Marshall Mount Plan, which will finalise the planning proposal process and the rezoning of Marshall Mount.
- 2 The adopted Structure Plan for Marshall Mount be the basis of the Development Control Plan for Marshall Mount, and this be finalised as soon as possible.
- 3 Council pursue the finalisation of the draft State Infrastructure Contributions Plan for future State Government infrastructure in West Dapto, ensuring equity of the State funding allocation for current and future residents and home owners in West Dapto and the Wollongong Local Government Area.

Variation The variation moved by Councillor Blicavs to change the word 'Neighbourhood' to 'Structure' in Part 2 was accepted by the mover and seconder.

Councillor Martin's MOTION on being PUT to the VOTE was LOST.

In favour Councillors Connor, Martin, Blicavs, Dorahy, Colacino and Crasnich

Against Councillors Kershaw, Brown, Takacs, Merrin, Curran, Petty and Bradbery

DEPARTURE OF COUNCILLORS

During debate and prior to voting on Item 1 –

- Councillor Dorahy departed the meeting, the time being 8.58 pm; and,
- Councillors Martin and Crasnich departed and returned to the meeting, the times being 8.58 pm to 9.02 pm, and 9.01 to 9.03 pm, respectively.

ITEM 1 - DRAFT SOUTH WOLLONGONG FUTURE STRATEGY

MOVED by Councillor Blicavs seconded Councillor Colacino that -

- 1 Council endorse the updated South Wollongong Future Strategy Vision, incorporating the following changes from the community engagement:
 - a Delete the references to rezoning flood affected properties (pages 18 and 22);
 - b Delete the references to increased height limits for properties on the southern side of Ellen Street (pages 18 and 19);
 - c Amend the timing of the Phase 3 Implementation (page 4) be changed to mid-2019.

- 2 A Terms of Reference be drafted for the formation of a South Wollongong Precinct Reference Group. Terms of Reference should include this group giving consideration to the draft principles, vision document and engagement outcomes and how they might inform a review of planning controls for the South Wollongong precinct following the completion of the revised Wollongong City Floodplain Risk Management Study and Plan.
- 3 A report be provided to Council detailing:
 - a Action taken to reduce flooding impacts in the South Wollongong Precinct as a result of:
 - i The 2010 CBD Action Plan;
 - ii The 2013 Wollongong City Flood Study;
 - iii The 2015 Wollongong City Floodplain Risk Management Study and Plan.
 - b Actions planned for the 2018, 2019 and 2020 financial years to reduce flooding impacts.
- 4 The planning controls for the South Wollongong precinct be reviewed following the completion of the revised Wollongong City Floodplain Risk Management Study and Plan.

Variation The variation moved by Councillor Colacino to remove the two references to the 31 July Council meeting was accepted by the mover.

At this stage, Councillor Kershaw FORESHADOWED a MOTION should Councillor Blicavs' Motion be defeated.

Councillor Blicavs' MOTION on being PUT to the VOTE was LOST.

In favour Councillors Brown, Takacs, Blicavs, Colacino, Crasnich and Bradbery
Against Councillors Kershaw, Connor, Martin, Merrin, Curran and Petty

With votes being tied, the Lord Mayor used his Casting Vote to vote against the motion.

Following the defeat of Councillor Blicavs' Motion, Councillor Kershaw's FORESHADOWED MOTION became the MOTION.

At this stage, a PROCEDURAL MOTION was MOVED by Councillor Crasnich seconded Councillor Petty that the meeting be adjourned for five minutes. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

The meeting was adjourned at 9.36 pm.

The meeting resumed at 9.41 pm with all Councillors present, with the exception of Councillors Curran, Crasnich and Connor who all returned to the meeting at 9.42 pm, prior to the voting on the following motion.

84 COUNCIL'S RESOLUTION – RESOLVED UNANIMOUSLY on the motion of Kershaw seconded Councillor Brown that -

- 1 Council endorse the updated South Wollongong Future Strategy Vision, incorporating the following changes from the community engagement:
 - a Delete the references to rezoning flood affected properties (pages 18 and 22);
 - b Delete the references to increased height limits for properties on the southern side of Ellen Street (pages 18 and 19);
 - c Amend the timing of the Phase 3 Implementation (page 4) be changed to mid-2019.
- 2 The planning controls for the South Wollongong precinct be reviewed following the completion of the revised Wollongong City Flood Plain Risk Management Study and Plan.

ITEM 3 - DRAFT PLANNING PROPOSAL: LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS - POST EXHIBITION

85 COUNCIL'S RESOLUTION - RESOLVED UNANIMOUSLY on the motion of Councillor Blicavs seconded Councillor Curran that following the establishment of a BioBanking Agreement 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), then the draft Planning Proposal for Lot 1 DP 534849 Staff Road, Cordeaux Heights be progressed by:

- 1 Finalising the Planning Proposal that seeks to amend the Land Zoning Map by rezoning 7.3 hectares of the site from E3 Environmental Management to E4 Environmental Living with a Minimum Lot Size of 1,000m² and Floor Space Ratio of 0.3:1; retain 30.4 hectares of the site as E3 Environmental Management zoning, changing the Minimum Lot Size to 5,000m²; rezoning 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 updating the Riparian Land and Natural Resource Sensitivity – Biodiversity maps;
- 2 The final Planning Proposal being referred to the NSW Department of Planning and Environment for the making of arrangements for drafting to give effect to the final proposal; and
- 3 Noting that the General Manager will thereafter proceed to exercise his delegation issued by the NSW Department of Planning and Environment under Section 69 in relation to the final proposal.

Standing Orders were resumed.

EXTENSION OF MEETING TIME

A PROCEDURAL MOTION was MOVED by Councillor Merrin seconded Councillor Blicavs that the meeting time be extended to 10.30 pm. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

ITEM C - NOTICE OF MOTION - COUNCILLOR KERSHAW - 'POP-UP' CAR YARDS

86 COUNCIL'S RESOLUTION - RESOLVED on the motion of Councillor Kershaw seconded Councillor Takacs that Council officers investigate and implement appropriate solutions to stop registered motor vehicles, trailers and caravans which are 'For Sale', being parked en masse on sections of roadways and Council land.

Variation The variation moved by Councillor Bradbery (to delete the word 'our' before the word 'roadways' and to add the words 'and Council land' was accepted by the mover and seconder.

In favour Councillors Kershaw, Connor, Brown, Martin, Takacs, Merrin, Colacino, Crasnich, Curran, Petty and Bradbery

Against Councillor Blicavs

ITEM D - NOTICE OF MOTION - COUNCILLOR MERRIN - FIRE RISKS OF MULTI-STOREY BUILDINGS

87 COUNCIL'S RESOLUTION - RESOLVED on the motion of Councillor Merrin seconded Councillor Colacino that Council receive a report on the options for investigating fire safety in multi-storey buildings in Wollongong. The report to include:

- 1 All relevant buildings in Wollongong;
- 2 Consultation with Fire and Emergency Services and other relevant bodies in relation to fire safety requirements;
- 3 Fire safety measures in all relevant buildings, and their compliance with fire safety requirements;
- 4 Types of cladding material used and their level of fire risk;
- 5 Regulatory measures in operation for fire safety in all old and new multi-storey buildings in Wollongong;
- 6 Recommendations for improvement to regulatory measures to ensure that such buildings are safe and meet fire safety standards.

In favour Councillors Kershaw, Connor, Brown, Martin, Takacs, Merrin, Blicavs, Colacino, Crasnich and Bradbery

Against Councillors Curran and Petty

ITEM E - NOTICE OF MOTION - COUNCILLOR MARTIN - FINALISE THE MARSHALL MOUNT REZONING

This matter was considered under Suspension of Standing Orders (refer Minute number 83).

ITEM 1 - DRAFT SOUTH WOLLONGONG FUTURE STRATEGY

This matter was considered under Suspension of Standing Orders (refer Minute numbers 83 and 84).

ITEM 2 - OUR WOLLONGONG - HOUSING DISCUSSION PAPER

88 COUNCIL'S RESOLUTION - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Connor that -

- 1 The discussion paper "Our Wollongong – a discussion paper identifying issues for housing our community" and supporting documents be made available on Council's website for community information and to begin the discussion on the preparation of a new Housing Strategy for the City.
- 2 The discussion paper and community feedback inform the preparation of the Housing Strategy options paper.
- 3
 - a A draft Planning Proposal be prepared to introduce an Affordable Housing clause into the Wollongong Local Environmental Plan 2009, based on clause 6.8 of the Willoughby Local Environmental Plan 2012 or a similar provision recommended by the NSW Department of Planning and Environment.
 - b The report to Council concerning the proposed LEP amendment also include consideration of SEPP70 as the alternative or parallel mechanism to achieve affordable housing outcomes.
- 4 The draft Planning Proposal be forwarded to the NSW Department of Planning and Environment for Gateway determination, and if endorsed exhibited for a minimum period of 28 days.
- 5 Council advise the NSW Department of Planning and Environment that it is willing to accept Plan making delegation, should the NSW Department of Planning and Environment agree.

ITEM 3 - DRAFT PLANNING PROPOSAL: LOT 1 DP 534849 STAFF ROAD, CORDEAUX HEIGHTS - POST EXHIBITION

This matter was considered under Suspension of Standing Orders (refer Minute numbers 83 and 85).

EXTENSION OF MEETING TIME

A PROCEDURAL MOTION was MOVED by Councillor Brown seconded Councillor Blicavs that the meeting time be extended to 11.00 pm. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

DEPARTURE OF COUNCILLOR

During debate and prior to voting on Item 4, Councillor Crasnich departed the meeting, the time being 10.38 pm.

ITEM 4 - REVIEW OF COUNCIL'S ENFORCEMENT POLICY

MOVED by Councillor Bradbery seconded Councillor Curran that -

- 1 The Enforcement Policy be renamed 'Compliance and Enforcement' policy.
- 2 The following additional words be added within Section 7.1 of the Draft Compliance and Enforcement Policy:
"Also, in some circumstances the person(s) alleging unlawful activity may use a statutory declaration under the Oaths Act to confirm details of the reported unlawful activity."
- 3 The draft Compliance and Enforcement Policy be placed on exhibition for a period of 28 days seeking comment from the community.
- 4 Upon completion of the public exhibition period, an updated and amended draft Compliance and Enforcement Policy, inclusive of any feedback from the community, be presented to Council for adoption.

89 COUNCIL'S RESOLUTION - An AMENDMENT was MOVED by Councillor Merrin seconded Councillor Kershaw that –

- 1 The Enforcement policy be renamed 'Compliance and Enforcement' policy.
- 2 The draft Compliance and Enforcement Policy be placed on public exhibition for a period of 28 days seeking comment from the community.
- 3 Upon completion of the public exhibition period, an updated and amended draft Compliance and Enforcement Policy, inclusive of any feedback from the community, be presented to Council for adoption.

Councillor Merrin's AMENDMENT on being PUT to the VOTE was CARRIED.

In favour Councillors Kershaw, Connor, Martin, Takacs, Merrin, Blicavs and Colacino

Against Councillors Brown, Curran, Petty and Bradbery

Councillor Merrin's AMENDMENT then became the MOTION.

The MOTION on being PUT to the VOTE was CARRIED UNANIMOUSLY.

ITEM 5 - GLOBAL COVENANT OF MAYORS FOR CLIMATE AND ENERGY

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION – Council join the Global Covenant of Mayors.

ITEM 6 - WOLLONGONG SECTION 94A DEVELOPMENT CONTRIBUTIONS PLAN (2017) POST EXHIBITION

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 The Wollongong Section 94A Development Contributions Plan (2017) be adopted.
- 2 The adoption of the Plan be notified in the local newspapers in accordance with the requirements of the Environmental Planning and Assessment Regulation 2000.

DEPARTURE OF COUNCILLORS

During debate and prior to voting on Item 7 –

- Councillor Merrin departed the meeting, the time being 10.46 pm; and,
- Councillor Colacino departed and returned to the meeting, the time being from 10.46 pm to 10.48 pm.

EXTENSION OF MEETING TIME

A PROCEDURAL MOTION was MOVED by Councillor Petty seconded Councillor Blicavs that the meeting time be extended to 11.15 pm. The PROCEDURAL MOTION on being PUT to the VOTE was CARRIED.

ITEM 7 - BEATON PARK MASTER PLAN - EXPRESSION OF INTEREST

MOVED by Councillor Brown seconded Councillor Blicavs that –

- 1 A proposal be submitted to the Office of Local Government seeking approval to proceed to call for Expressions of Interest to enter into a Public Private Partnership for the master planning of Beaton Park.
- 2 Any proposed Public Private Partnership be referred to a meeting of Council for determination and the report for such determination include options for progressing the Master Plan via engaging consultants or Council staff.

Councillor Brown's MOTION on being PUT to the VOTE was LOST.

In favour Councillors Takacs, Blicavs and Colacino

Against Councillors Kershaw, Connor, Brown, Martin, Curran, Petty and Bradbery

ITEM 8 - BULLI MINERS COTTAGE FUTURE USE - CALL FOR PROPOSALS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 The proposal by Shopfront Arts Co Op Ltd for the use of the site as a Community Arts facility and Artist in Residence Program be noted as Council's preferred future use proposal for the Bulli Miner's Cottage.
- 2 The General Manager be delegated the authority to undertake and finalise negotiations with Shopfront Arts Co Op Ltd in relation to potential lease arrangements, approval requirements and establishment cost arrangements.
- 3 In the event that negotiations with Shopfront Arts Co Op Ltd fail, the General Manager be delegated the authority to undertake and finalise negotiations with the two other eligible proponents, in order of their assessment rank.

- 4 Council grant authority for the use of the Common seal of Council on the lease and any other documentation, should it be required, to give effect to this resolution.
- 5 The Bulli Miner's Cottage Museum Collection be de-accessioned in accordance with Museums and Galleries NSW de-accessioning and disposal policies and procedures.
- 6 The proposed removal of the mining skip(s) from the rear yard, for restoration and reinstatement at the Bulli Mine Disaster Memorial in Park Road, Bulli be supported.
- 7 The General Manager write, on behalf of Council, to the owner of the former Denmark Hotel, to advise that Council is not currently considering the sale of the Bulli Miner's Cottage and to encourage the urgent submission of a formal proposal for the re-development of 202 Princes Highway, Bulli.

ITEM 9 - WOLLONGONG CITY TOURIST PARKS MASTER PLANS

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 The Tourist Parks Improvement Strategy and Master Plans be adopted.
- 2 Council approach the Department of Industries for allocation of funding to support the implementation of the Master Plans through the Crown Lands Trust.
- 3 A Holiday Van Strategy be developed to dictate the future management of holiday vans on site.

ITEM 10 - POLICY REVIEW: CCTV AND CODE OF PRACTICE

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION – The revised CCTV Policy and Code of Practice be adopted.

ITEM 11 - LIBRARY AND COMMUNITY SERVICES DIVISION - REVIEW OF POLICIES

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 The titles of the following Council policies be amended:

Central Library Theatre	Central Library Theatre Hire
Local Studies Photographs	Local Studies Photograph Collection
Non-Resident and Visitor Membership of the Library	Non-Resident Membership of the Library
Replacement of Lost Library Items	Replacement of Lost or Damaged Library Items
- 2 The following revised Council policies be adopted:
 - *Allocation of Community Facilities to Community Groups*
 - *Management of Community Halls, Community Centres, Senior Citizen's Centres and Neighbourhood Centres*
 - *Reduction or Waiver of Hire Fees for Community Rooms and Halls Under the Direct Control of Council*

- Central Library Theatre Hire
 - Inter-Library Loans
 - Library Display Facilities
 - Local Studies Photograph Collection
 - Non-Resident Membership of the Library
 - Replacement of Lost or Damaged Library Items
- 3 The following policies be reclassified from 'Council Policies' to 'Management Policies':
- Central Library Theatre Hire
 - Inter-Library Loans
 - Library Display Facilities
 - Local Studies Photograph Collection
 - Non-Resident Membership of the Library
 - Replacement of Lost or Damaged Library Items
- 4 The new policy – Reduction or Waiver of Library Fees and Fines be adopted.

DEPARTURE OF COUNCILLOR

Due to a previous disclosure of interest, Councillor Curran departed the Chamber and was not present during debate and voting for Item 12.

ITEM 12 - TENDER T17/10 - NATURAL AREA RESTORATION AND BUSH FIRE MANAGEMENT

90 COUNCIL'S RESOLUTION – RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Connor that -

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tenders of Ecohort Pty Ltd, Good Bush Pty Ltd, Southern Habitat (NSW) Pty Ltd, Illawarra Local Aboriginal Land Council, Midgees Bushland Restoration, Toolijooa Pty Ltd, Illawarra Bushland Restoration, Commelina Bushworks, Bowantz Bushfire and Environmental Pty Ltd, for the amounts tendered in the respective Forms of Tender.
- 2 Council delegate to the General Manager the authority to finalise and execute the panel contracts 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 panel contracts and any other documentation, should it be required, to give effect to this resolution.

ITEM 13 - TENDER T17/12 - WINDANG TOURIST PARK AMENITIES REFURBISHMENT - SOUTHERN BLOCK

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Batmac Constructions Pty Ltd for refurbishment works at Windang Tourist Park, in the sum of \$625,343.41 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 14 - TENDER TT17/18 – KEIRAVILLE /GWYNNEVILLE ACCESS AND MOVEMENT STUDY

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Cardno (NSW/ACT) Pty Ltd to prepare an Access and Movement Study for Keiraville and Gwynneville, in the sum of \$126,376.00, 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.

ATTENDANCE OF COUNCILLOR

During debate and prior to voting on Item 15, Councillor Curran returned to the meeting, the time being 11.11 pm.

EXTENSION OF MEETING TIME

A PROCEDURAL MOTION was MOVED by Councillor Bradbery seconded Councillor Brown that the meeting time be extended to 11.30 pm.

ITEM 15 - TENDER T17/19 - FERNHILL SOCCER CLUB AMENITIES

91 COUNCIL'S RESOLUTION - RESOLVED UNANIMOUSLY on the motion of Councillor Brown seconded Councillor Connor that -

- 1 In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept the tender of Batmac Constructions Pty Ltd for the refurbishment works to Fernhill Soccer Club amenities building, in the sum of \$543,028.48 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 16 - PROPOSED COMPULSORY ACQUISITION OF SIX PROPERTIES FOR ROAD WIDENING, CAR PARK AND PUBLIC RECREATION

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 Pursuant to Section 186 of the Local Government Act 1993, Council make application to the Minister for Local Government and the Governor for the compulsory acquisition of the following properties:
 - Lot 1 DP 667974 Stonehaven Road, Stanwell Tops for public recreation.
 - Lot 113 DP 1142504 Towradgi Road, Towradgi for public recreation.
 - Lot 16 DP1133229 No 4 Railway Parade, Thirroul for car parking.
 - Lot 8 DP 1148429 Market Street, Wollongong for car parking.
- 2 Pursuant to Section 177 of the Roads Act 1993, Council make application to the Minister for Local Government and the Governor for the compulsory acquisition of the following properties:
 - Lot 632 DP 717941 Park Road, Bulli, for road widening.
 - Lot 1 DP 723726 Brompton Road, Bellambi for road widening.
- 3 Upon the acquisitions being finalised, the following action be taken:
 - Lot 1 DP 667974 Stonehaven Road, Stanwell Tops be classified as Community land in accordance with Section 31 of the Local Government Act 1993.
 - Lot 113 DP 1142504 Towradgi Road, Towradgi be classified as Community land in accordance with Section 31 of the Local Government Act 1993.
 - Lot 16 DP 1133229 No 4 Railway Parade, Thirroul be classified as Operational land in accordance with Section 31 of the Local Government Act 1993.
 - Lot 8 DP 1148429 Market Street, Wollongong be classified as Operational land in accordance with Section 31 of the Local Government Act 1993.
 - Lot 632 DP 717941 Park Road, Bulli be dedicated as public road in accordance with Section 10 of the Roads Act 1993. Pursuant to Section 31(1)(b) of the Local Government Act 1993 this property does not require classification.
 - Lot 1 DP 723726 Brompton Road, Bellambi be dedicated as public road in accordance with Section 10 of the Roads Act 1993. Pursuant to Section 31(1)(b) of the Local Government Act 1993 this property does not require classification.
- 4 An allocation of \$500,000 be made in the 2017-18 capital budget to fund the purchases.
- 5 The General Manager be authorised to sign any documentation necessary to complete the compulsory acquisitions.

ITEM 17 - PROPOSED GRANT OF EASEMENT TO DRAIN WATER OVER LOT 80 DP 12235 ROBERTSON ROAD, WOONONA

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 Council approve the grant of an easement to drain water 1.5m wide over Lot 80 DP 12235 Robertson Road, Woonona, as shown shaded grey on the attachment to the report.
- 2 Council accept payment in the amount of \$2,480.00 (GST inc) from the owner of Lots 68 and 69 DP 12235 Nos 42 and 44 Beach Drive, Woonona, as compensation for the grant of the easement.
- 3 Approval be granted to affix the Common Seal of Council to the survey plan and Section 88B Instrument and any other documentation required to give effect to this resolution.

ITEM 18 - LEASE OF TELECOMMUNICATIONS FACILITY TO TELSTRA AT LOT 2 DP716326 BOTT DRIVE, BELLAMBI

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION –

- 1 Authority be granted for a lease to be entered into for Part Lot 2 DP 716326 Bott Drive, Bellambi with Telstra Corporation Limited for three consecutive terms of five years each (totalling 15 years) in accordance with the terms set out in the report.
- 2 Telstra Corporation Limited be responsible for payment of Council's Legal costs for the preparation and completion of the Lease documentation up to an amount of \$2,500 (GST inclusive).
- 3 Authority be granted to affix the Common Seal of the Council to the Lease documents.

ITEM 19 - CITY OF WOLLONGONG TRAFFIC COMMITTEE - MINUTES OF MEETING HELD 21 JUNE 2017 AND THE ELECTRONIC MEETING OF 30 JUNE 2017

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

COUNCIL'S RESOLUTION – In accordance with the powers delegated to Council, the Minutes and recommendations of the City of Wollongong Traffic Committee Meetings held on 21 June and 30 June 2017 in relation to the Regulation of Traffic be adopted.

ITEM 20 - BI MONTHLY TABLING OF RETURNS OF DISCLOSURES OF INTERESTS AND OTHER MATTERS - JULY 2017

The following staff recommendation was adopted as part of the Block Adoption of Items (refer Minute Number 79).

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 11.20 PM

Confirmed as a correct record of proceedings at the Ordinary Meeting of the Council of the City of Wollongong held on 31 July 2017.

Chairperson

ITEM A LORD MAYORAL MINUTE - DEFINING WOLLONGONG AS REGIONAL

Wollongong is the third largest city in NSW, however, there is a lack of consistency in the NSW Government's definition of "regional" in regards to eligibility for programs and funding applications.

Confusion exists over which parts of the region are classified as regional and, therefore, eligible for funding for state and federal funding initiatives.

Wollongong (similar to Newcastle) is sometimes defined as regional, and other times not, leading to a lack of consistency in developing and delivering on NSW Government policies. For example, both Wollongong and Newcastle were defined as "regional" by the NSW Government under the proposal for local government mergers, however, are excluded from accessing funding under the Regional Jobs Now program and the \$1.3 billion Regional Growth Fund.

This is a longstanding issue and uncertainty remains in respect to revenue from the long term lease of electricity assets. Ultimately the NSW Government owes the people of both Wollongong and Newcastle clarity and a consistent set of criteria in delivering government policies.

Wollongong's focus is the south coast not the central coast of NSW with a sense of place clearly in the context of the Illawarra region. In November 2015, with the release of the Illawarra-Shoalhaven Regional Plan, the Department of Planning clearly articulated regionality and strategies for Wollongong in the context of a region not as an extension of the Sydney Metropolitan area.

We cannot continue in this schizoid policy framework that means Wollongong is easily overlooked and dismissed from funding opportunities.

A recent opinion piece from the Illawarra Business Chamber said it well:

"There is too much uncertainty and inconsistency on areas that are eligible for State and Federal funding initiatives. A new definition should be established - one which recognises the significance of regional centres in supporting business investment and the capacity to generate much needed employment opportunities for New South Wales.

It makes no sense to exclude Wollongong and Shellharbour from regional government funding initiatives but at the same time include Queanbeyan, just 10 minutes from Canberra. Regional economic centres offer a lower cost base and present productivity benefits compared to many businesses operating in high cost locations. The competitive advantages of these centres need to be harnessed to provide the next wave of investment and jobs growth.

The NSW Government must address this long running and frustrating issue as failing to fix it will see more lost opportunities for not only Wollongong and Shellharbour but NSW."

I commend the work the Illawarra Business Chamber has undertaken in advocating for clarity on this matter and hopefully with the support of Wollongong City Council our joint efforts will be successful.

RECOMMENDATION

I therefore recommend Wollongong City Council write to the NSW Premier The Hon. Gladys Berejiklian and The Hon. John Barilaro MP (Deputy Premier, Minister for Regional New South Wales, Minister for Skills, Minister for Small Business) asking that the State Government clearly identify Wollongong Local Government Area as "regional" and recognise the importance of Wollongong as a regional economic centre as outlined in the Regional Plan 2015.

ITEM B NOTICE OF MOTION - COUNCILLOR MERRIN - INFORMAL SHORT STAYS

Councillor Merrin has submitted the following Notice of Motion –

“I formally move that –

- 1 Council receive a report and briefing on short-term stay premises in Wollongong.
- 2 The report include –
 - a Information on their impact on local residential neighbourhoods and neighbouring residents;
 - b The State legislative and regulatory environment;
 - c Comparisons with requirements for formal short-term stay premises such as bed and breakfast businesses, motels and hotels, and serviced apartments;
 - d A survey of the policies of other coastal Councils pertaining to these types of rentals;
 - e A process for developing Council policy to ensure a level of regulation aimed at protecting neighbourhood amenity.”

Background provided by Councillor Merrin:

There has been an increase in the number of informal short-term stay premises in recent years. However, there is a lack of a regulatory environment compared to formal holiday premises, such as bed and breakfast businesses, serviced apartments, or motels.

Although it provides an income source for property owners, it can also have negative impacts on neighbours, such as additional noise, traffic, and intrusion onto neighbouring properties, because of the lack of recognition or regulation.

Councils are able to make policies in relation to these types of accommodation, for example Randwick and Byron Bay Councils.

Because of Wollongong's desirable beachside location and proximity to Sydney, it is very likely that such informal accommodation types are now in use in large numbers. However, because of the lack of regulation, there is no direct way of knowing the quantity, compared to the formal types of holiday premises.

ITEM C NOTICE OF MOTION - COUNCILLOR PETTY - FLOOD STUDY REPORTS

Councillor Petty has submitted the following Notice of Motion –

"I formally move that Council write to the Insurance Council of Australia, NSW Division, and provide a copy of -

- 1 The latest Flood Study Report for each study area in the Wollongong Local Government Area; and,
- 2 The WMAwater Report."

Background provided by Councillor Petty:

The following information was received from the Insurance Council of Australia and it indicates they use Flood Study information as far back as 1991 when subsequent studies may be available.

"Thank you for your email received overnight by our communications team.

Please excuse the brevity of this reply and any potential typos, I am on the road but did not want to delay a response to what is a refreshingly genuine approach to this challenge.

Without devolving this into a 'who said what' letter, I will simply summarise that I believe ICA last formally spoke with WCC in 2013 requesting GIS data for relevant flood studies. The data currently relied upon by industry varies in age with one of the older datasets carrying a vintage of 1991.

I am advised that in 2013 WCC offered access to updated flood data, for a fee. A very considerable fee. Insurers are quite willing to adopt new data produced by a council and to adjust premiums accordingly, to reflect a council's best understanding of the risks. However the industry does not pay for the flood data it uses as these costs would need to be passed on to the same policyholders that funded the studies in the first place with council.

Taking your points in turn...

- (1) *Council would argue publishing a flood study on Councils website following a resolution of Council to adapt a Flood Study provides the Insurance Industry with the latest data. Does the Insurance Industry accept these as formal evidence of a Flood Study or is the Insurance Council of Australia or individual member organisation demanding a formal letter of a revised Flood Plan before flood levels for insurance purposes are reset?*

Publishing a flood study on councils website does not provide the data required in order to set premiums. Whilst the PDF version of a flood study is of interest, what is required is the GIS data used to create the 1%,2%,5% and PMF defined flood events (or the closest council has to these). We would argue that publishing a Flood Study on your website does very little to inform constituents of the risks as they are technical documents produced to support council decision making on mitigation and flood control, rarely digestible by those visiting your website. Some councils have their own electronic flood mapping services on their websites, able to be used by residents to determine how flood impacts their address. These website are, likewise, not suitable for insurers who deal with tens of thousands of quotes every day and cannot visit a council website to extract data each time.

What is required is GIS data in a raster format (any will do) as a flood depth grid, or surface grid and the associated domain data. The same data that council holds and that has been used to create the information described in the published flood studies. This is then analysed by industry and converted to underwriting data (and provided back to local government for their own use and records). This underwriting data (and its source GIS as released by council) is absorbed by all insurers who underwrite flood into their own systems, so that when a constituent seeks a quote from an insurer, the insurer can quickly derive a premium based on data they hold and have already analysed.

- (2) *As you are probably aware Wollongong City Council will accept independent accredited reports on particular blocks for new DA purposes, especially as the MWAwater report has been released which*

generally provides for lower flood levels in many study areas. Where an independent accredited report specifies a lower flood level (RL) compared to the report held by the insurance provider, does the Insurance Council of Australia or individual member organisations have a policy to accept or reject that independent report for insurance purposes?

Presently, the ICA does not receive amended data for individual properties from any Council in Australia. When flood data is updated by council it is typically sent to ICA for incorporation into the national dataset, this normally occurs when mitigation has been completed or a new/updated flood study released.

It would be possible to engineer a process for manual adjustment of data for individual properties where council has accepted an independent report. This would not be ideal and would require the resolution of a number of challenges at our end, but it is something we would be willing to have a look at. It would need to be done on an exception basis and not become the standard way in which council communicates flood risk. The ability for insurers to make incremental changes to underwriting for individual properties where a letter has been provided is very limited. They are quick to adopt a new dataset that involves changes to a larger region, typically when a new or updated flood study GIS dataset is revved by ICA and incorporated.

(3) What RL is used for insurance purposes for flood insurance?

Insurers typically use the analysed depth of flooding for the 1%, 2%, 5% and PMF events at an address. This is not data that council routinely creates and industry does not expect council to do so. Insurers have a longstanding and funded program call the National Flood Information Database (NFID) that takes local government data and converts it to the required underwriting data. The data required from council to achieve this is that described at (1).

(4) If the answer is 16.0, would this change to 14.0 upon receipt of letter from WCC including the latest Flood Study report? What would the timeframe for implementation be?

As per (2) - timeframe for such data to be manually updated and distributed is 90 days from receipt (worst case). However, insurers (once they receive data) make their own decisions regarding how quickly it is adopted. Individual changes, to singular addresses, would be a poor option compared to simply releasing updated data for the WCC LGA.

(5) From (4) then, it follows that from (2) that the Insurance Council of Australia or individual member organisations could well be versed and updated by a briefing from WMAwater on the recent good work that reviewed all the data deemed originally to be evidence of blockage in WCC. Could ICA advise if this is of interest?

We would be happy to participate in a briefing - However it would be counter-productive if the intention is anything other than to have the industry leave the meeting in possession of the GIS data necessary to make changes to premiums.

(6) I am not familiar with a renewal that contains flood insurance. It would seem a significant improvement in communication for greater transparency between the insurance industry and policy holders would be to include the RL on each policy and show separately the premium for the total amount of flood insurance covered?

I think you will find that most in the industry agree very strongly with the intent of this. Why is it not currently done? What are the constraints? In the first instance we don't have reliable data for your area. In the second, it's your RL or depth data that insurers would be releasing to your own constituents, something that many councils specifically ask us not to do (for a variety of reasons some good, some bad). In the third, releasing the dollar cost of the flood cover would compromise commercially sensitive data, as each insurer calculates the monetary value of the risk in a different way, giving rise to quite surprising competition when looking at price alone.

There is still a need for your constituents, who are our policyholders, to have a fundamental understanding of the flood risks that they face. To assist this we encourage councils to include flood depth and exposure information on rate notices, this has been very successful in some jurisdictions. The ICA runs a service where constituents can receive feedback from us on pricing issues, we

describe the extent to which a flood risk may be contributing to an amplified price signal. The answers given to residents of your LGA typically focus on the outdated nature of the data used by industry and the unavailability of new data. We also run community seminars, usually with councils, for flood prone communities where one-to-one explanations and support is given.

Councillor, thank you again for your email and the refreshing approach you have taken. I would be very happy to come down and offer a more comprehensive briefing at any time that is convenient, perhaps answering these questions (and any others that you have) in greater detail."

ITEM D NOTICE OF MOTION - COUNCILLOR TAKACS - ELECTRIC VEHICLES

Councillor Takacs has submitted the following Notice of Motion –

“I formally move that –

- 1 A report come to Council, accompanied by a briefing, on measures available to Council to accelerate the uptake of electric vehicles in the Wollongong Local Government Area.
- 2 The report to include the feasibility of electric vehicles replacing some of Council's existing vehicle fleet.”

ITEM E

NOTICE OF MOTION - COUNCILLOR TAKACS - EXPANDING COUNCIL'S SOLAR PROGRAM

Councillor Takacs has submitted the following Notice of Motion –

“I formally move that Council staff revisit the assessment of sites where installation of solar provides a saving to ratepayers, taking into account –

- 1 The recent IPART recommendation to more than double the solar PV feed in tariff in NSW;
- 2 The continued decline in installed cost of PV installations; and,
- 3 The increases in retail electricity prices.”

ITEM F NOTICE OF MOTION - COUNCILLOR TAKACS - KEN AUSBURN TRACK

Councillor Takacs has submitted the following Notice of Motion –

“I formally move that Council write to the appropriate persons at the University of Wollongong and the Illawarra Office of the National Parks and Wildlife Service, expressing our desire to work with them in formulating a long-term management plan and agreement for the Ken Ausburn Track.”

Background provided by Councillor Takacs:

The Ken Ausburn Track was constructed by Wollongong City Council in 1996, with agreement from the then landowners, Wollongong University and BHP Billiton, to formalise public pedestrian access to the escarpment via the Mt Pleasant fire trail and the Mt Keira ring track; and to provide a link from the Botanic Gardens and the annexe it manages on top of Mt Keira. The construction was aided by a Commonwealth Government grant. Construction included paved sections, wooden staircases, interpretive signage, a lookout, a bridge, and track stabilisation using wooden logs.

Management of the track was initially done by staff from the Wollongong Botanic Gardens until the ownership of the top half of the track was transferred to NPWS. The track has stood the test of time and is extremely popular. Unfortunately some sections of the track were not stabilised and are now eroding badly. Last year the lookout was removed by NPWS without community consultation, and several of the interpretative signage plaques have been removed by vandals. The Botanic Gardens holds a replacement stock of these signage plaques in storage.

I envisage a joint management plan and agreement might comprise a shared vision as to the management principles, with the University and NPWS taking responsibility for routine maintenance on the sections on their respective lands, and Council taking on responsibility for replacing interpretative signage and coordinating grant applications for funds to construct those sections not originally constructed and to replace the lookout.

On a recent visit to the Blue Mountains, I read a report of Blue Mountains Council receiving a grant of \$810,000 to do work on pathways providing access to NPWS tracks at Leura and Katoomba, and to a private operated tourist facility at Scenic World in Katoomba, providing a precedent to this approach.

ITEM 1

CALDERWOOD SECTION 94 DEVELOPMENT CONTRIBUTIONS PLAN - POST EXHIBITION AND CALDERWOOD DRAFT PLANNING AGREEMENT OFFER

On 14 September 2015, Council resolved to prepare a draft Section 94 Development Contributions Plan for the Calderwood Urban Release. The draft Plan was initially exhibited from 1 June 2016 to 30 June 2016. One submission was received that questioned certain aspects of the draft Plan. As a consequence of the issues raised in the submission, additional information, updates to traffic modelling and the results of an external review by IPART of the draft West Dapto Section 94 Development Contributions Plan, it was decided to update and re-exhibit the draft Plan.

The updated draft Calderwood Section 94 Development Contributions Plan (2017) was exhibited from 21 April 2017 to 22 May 2017. Three submissions were received during this exhibition, including submissions from Shellharbour City Council and Lendlease objecting to the draft Plan. Following this, Lendlease has presented Council with a draft Planning Agreement offer to consider. A Planning Agreement would provide certainty for Council with a collection mechanism and reduced risk for Lendlease in terms of development timing, litigation and delays. Entering into a Planning Agreement with Wollongong and Shellharbour Councils to enable local infrastructure contributions, also formed part of Lendlease's Statement of Commitments which was submitted in conjunction with the Part 3A Major Project Application for the Calderwood Land Release in 2010.

It is recommended that Council resolve to endorse and refer the Calderwood Section 94 Development Contributions Plan (2017) to the NSW Department of Planning and Environment for determination of the cross-boundary issues. It is also recommended that Council resolve to exhibit the draft Calderwood Planning Agreement.

RECOMMENDATION

- 1 The submissions received during exhibition of the draft Calderwood Section 94 Development Contributions Plan (2017) be noted.
- 2 The draft Calderwood Section 94 Development Contributions Plan (2017) be endorsed and referred to the Secretary of the NSW Department of Planning and Environment for a determination of cross-boundary issues with Shellharbour City Council under Section 94C of the Environmental Planning and Assessment Act 1979.
- 3 Following the receipt of the advice from the Secretary, a further report on the Calderwood Section 94 Development Contributions Plan be submitted to Council.
- 4 The draft Planning Agreement based on the Letter of Offer dated 28 July 2017 from Lendlease Communities (Australia) Limited be endorsed for exhibition for a minimum period of 28 days.
- 5 If no significant issues are raised during the exhibition, the General Manager be delegated authority to consider the submissions and finalise the Planning Agreement with Lendlease Communities (Australia) Limited, including any minor changes required to clarify the intent and implementation of the provisions.

REPORT AUTHORISATIONS

Report of: Andrew Carfield, Director Planning and Environment - Future City and Neighbourhoods
Authorised by: David Farmer, General Manager

ATTACHMENTS

- 1 Location Map
- 2 Calderwood Masterplan
- 3 Calderwood Section 94 Development Contributions Plan (2017)
- 4 Letter of Offer to enter into a Voluntary Planning Agreement dated 28 July 2017

BACKGROUND

Calderwood Valley was identified as a future Urban Release Area in the 1980's (estimated 7,700 lots). Lendlease consolidated a large holding within Calderwood Valley, and in 2009 requested that the State Government declare part of Calderwood Valley as a State Significant Project under the State Environmental Planning Policy (SEPP) (Major Development) 2005.

On 8 December 2010, the (then) NSW Department of Planning and Infrastructure approved the Concept Plan (MP-2009/82), with amendments. Shellharbour City Council, with financial support from Wollongong City Council, lodged a Class 4 Action in the Land and Environment Court challenging this determination. In February 2012, the Court upheld the Concept Plan and it remains in place.

In January 2011, the Calderwood Urban Release Area was included as a State Significant Site in Schedule 3 – Part 28 of the SEPP. The Calderwood Urban Release Area spans across the Shellharbour City Local Government Area (593 hectares) and Wollongong City Local Government Area (107 hectares) and is approximately half of the Calderwood Valley, containing some 4,800 lots (Attachments 1 and 2). The SEPP rezoned the land to permit urban development and some conservation areas. The SEPP also removed the planning controls from both Councils' local planning instruments. At this point in time, rezoning of the precinct was not supported by either Wollongong City Council or Shellharbour City Council.

On 14 September 2011, the (then) NSW Department of Planning and Infrastructure submitted a report to the Planning Assessment Commission recommending that the Project Application for Stage 1 be approved (MP-2009/83). Council made representations to the Planning Assessment Commission at its public meeting on 27 October 2011 and in further submissions and meetings. On 17 April 2012, the Planning Assessment Commission refused the Project Application. On 31 May 2012, Lendlease lodged an appeal to the Land and Environment Court against the Planning Assessment Commission's refusal.

On 23 September 2013, Stage 1 of the development for 231 lots in Shellharbour was approved by the Land and Environment Court. These lots are required to pay a Section 94 contribution of \$2,891.10 per lot to Shellharbour City Council and \$1,320 per lot to Wollongong Council (a total of \$304,920). Lendlease is also constructing all roads (both local and collector), bridges, drainage, a community centre and recreation areas (including sporting fields). As a result, Shellharbour City Council does not have to provide these facilities.

This situation is different to the West Dapto Release Area where Council is responsible for providing the local infrastructure through the West Dapto Section 94 Development Contributions Plan. The Plan provides for the provision of collector roads, rail crossing, trunk drainage, open space, community centres and public transport facilities to the future communities.

On 15 September 2014, Lendlease entered into a whole of project Planning Agreement with Shellharbour City Council concerning the provision of local infrastructure within that Council area. It is noted that the Planning Agreement also covers land within the Wollongong LGA, although Council is not a party to the agreement. The draft Planning Agreement which is recommended to be endorsed for public exhibition within this report represents a similar situation.

On 14 November 2014, Lendlease submitted Development Application DA-2014/1480 for the consolidation and re-subdivision of five lots within the Wollongong LGA that also requested that Council enter into a Planning Agreement for the provision of local parks and a contribution towards the upgrading of Marshall Mount Road and Yallah Road at Yallah. The Development Application was refused on 10 July 2015. The draft Planning Agreement was progressed separately and was reported to Council on 14 September 2015. Council resolved not to accept the offer, and instead prepare a draft Section 94 Development Contributions Plan for the Calderwood Urban Release Area.

Development with Shellharbour City Council

As noted, on 23 September 2013 the Project Approval for Stage 1 (231 residential lots) within Shellharbour City Council LGA was approved by the Land and Environment Court. Subsequently:

- In 2015 Shellharbour City Council approved Stage 2A (DA-149/2015) comprising 234 lots.
- On 1 May 2016 Shellharbour City Council approved Stage 2B (DA-663/2015) for 279 lots. On 3 August 2016 Wollongong City Council commenced proceedings in the Land and Environment Court against the determination and on 27 October 2016 the consent was set aside due to a technicality.
- On 15 March 2017 Shellharbour City Council approved Stage 2B and 3A (DA-663/2015 and DA-205/2016) and notified the consent approval in the Advertiser Lake Times. On 9 June 2017 Wollongong City Council commenced proceedings in the Land and Environment Court against the determinations for Stages 2B and 3A. These proceedings are on-going.
- On 27 April 2017 Shellharbour City Council advised Council that the Development Application for Stage 3C (DA-167/2017) proposing a 411 lot subdivision is on exhibition. On 18 May 2017 Council lodged an objection, as there are no local infrastructure arrangements in place for Wollongong.

To date, Council has received the \$304,920 in development contributions from Lendlease relating to the Land and Environment Court approved Stage 1, and accumulated interest. In the subsequent development consents, Shellharbour City Council did not include a condition requiring a development contribution to Wollongong City Council. Council is unlikely to receive any contributions from Stage 2A, as the appeal rights have lapsed, unless by agreement with Lendlease through a Planning Agreement. Whether Council receives any contribution from Stages 2B, 3A, 3C or other stages will either be dependent upon Land and Environment Court determination(s) or a Planning Agreement with Lendlease.

Draft Calderwood Section 94 Plan

On 15 September 2015, Council resolved to prepare a draft Calderwood Section 94 Development Contributions Plan. The first draft Calderwood Section 94 Development Contributions Plan (2016) was exhibited from 1 June 2016 to 30 June 2016. The draft Plan proposed a contribution of \$8,233 per dwelling/lot across the release area (\$63.4 million for 7,700 lots), of which \$36.9 million is attributed to Lendlease's 4,800 lots.

Only one submission was received from Lendlease (with the submission supported by JBA and Addisons Lawyers). Lendlease objected to the draft Plan (2016). Council officers met with Lendlease representatives to discuss their submission. Some of the issues raised by Lendlease were valid, and Council officers reviewed and updated the draft Plan.

Additionally, in a further attempt to resolve the matter, a series of workshops were held (January 2017 - April 2017) with Lendlease and the NSW Department of Planning and Environment to discuss the draft Calderwood Section 94 Development Contributions Plan or draft Planning Agreement options. The main differences between the parties being explored were:

1. Whether Wollongong Council can have a Section 94 Plan that relates to land within the Shellharbour City Council area and to which a Planning Agreement applies;
2. The value of the contribution attributed to the Lendlease Calderwood Valley area, which is linked to:
 - a. The unit construction rates for roads and bridges;
 - b. The design cross section of roads and bridges;
 - c. The length of bridges and the accuracy of the Duck Creek Flood Study; and
 - d. The proportion of traffic from Calderwood Valley Release Area that will utilise the road network within the Wollongong LGA.

Other related matters that require resolution are:

- The draft West Dapto Section 94 Development Contributions Plan (2017) which was referred to the NSW Department of Planning and Environment on 6 April 2017, following Council's consideration of the IPART recommendations on 3 April 2017;
- The finalisation of the draft Special Infrastructure Contributions Plan (SIC) 2011 by the NSW Department of Planning and Environment for State and Regional infrastructure, and the West Dapto Biocertification levy; and
- The funding arrangements for the Yallah Road Bridge and interchange with the Princes Highway, as part of the M1 Albion Park Bypass.

The draft Calderwood Section 94 Development Contributions Plan (2016) was reviewed and updated by:

- Addressing technical matters identified in the submission;
- Incorporating traffic infrastructure recommendations and others made by IPART as part of the review of the draft West Dapto Section 94 Development Contributions Plan.

The revised draft Calderwood Section 94 Development Contributions Plan (2017) (Attachment 3) proposed a rate of \$6,996 per dwelling/lot across the Calderwood release area (7,700 lots) which represents approximately \$32 million from Lendlease for 4,569 lots (4,800 less 231 lots already approved with contributions in Stage 1).

The revised draft Calderwood Section 94 Development Contributions Plan (2017) was exhibited from 21 April 2017 to 22 May 2017. Discussions were held with key stakeholders during and following exhibition.

A Councillor briefing on the matter was held on 15 May 2017.

On 11 July 2017 Lendlease offered to enter into a Planning Agreement with Council for the funding of local infrastructure within the Wollongong LGA.

PROPOSAL

Draft Calderwood Section 94 Development Contributions Plan

The draft Calderwood Section 94 Development Contributions Plan (the draft Plan) is to establish a mechanism under the Environmental Planning and Assessment Act 1979 to enable Council to seek contribution from development of the area. The contributions will go towards the costs of enhancing community infrastructure including open space, roads, bridges and administration costs.

The draft Plan provides a list of all the projects that will be funded through the Plan. These projects are centred on the transport infrastructure needs for the increase in population as a result of residential development. The draft Plan would replace Council's current means of contributions under the Section 94A Development Contributions Plan applying to other areas within the Local Government Area.

The draft Calderwood Section 94 Development Contributions Plan (2017) was exhibited with the following material included:

- Draft Calderwood Section 94 Plan (2017);
- Draft Calderwood Section 94 Plan – Infrastructure Plan Map;
- Council resolution from 14 September 2015;
- Supporting material 1. Transport modelling summary;
- Supporting material 2. Link to IPART Assessment; and
- Supporting material 3. SMEC: Concept Design, Concept Design Report and Concept Design Cost Estimate.

Using the Wollongong Shellharbour (WOLSH) TRACKS model, Council has established a contribution amount based on traffic movement and volumes generated proportionally by the urban development of both Yallah-Marshall Mount and Calderwood Release Area to determine the split on costs. The draft West Dapto Section 94 Development Contributions Plan (2017) and the draft Calderwood Release Area Section 94 Contributions Plan (2017) include the relevant share of the total costs. The TRACKS modelling is used by Roads and Maritime Services and regional councils for significant transport infrastructure planning.

The draft Plan only includes transport and traffic infrastructure through Stage 5 – Yallah-Marshall Mount area of the West Dapto Urban Release Area. The draft Plan proposes a contribution of \$6,996 per dwelling/lot applied across the Calderwood Valley Area (with a potential for 7,700 lots). The total cost of the draft Plan is approximately \$53.9 million.

As noted, the draft Plan has been exhibited twice with submissions only being received from Shellharbour City Council and on behalf of Lendlease.

The draft Plan has been amended to address and clarify a number of technical issues that were identified during the exhibition.

Council has the following options concerning the draft Plan:

1. Resolve to finalise the Calderwood Section 94 Development Contributions Plan (2017) (Attachment 3), and refer the Plan to the Secretary of the NSW Department of Planning and Environment to resolve the difference in positions between Shellharbour City Council and Wollongong City Council. Council would then be required to comply with any direction given by the Secretary in accordance with Part 4, section 94C of the Environmental Planning and Assessment Act 1979, on the matter.

If the Secretary of the NSW Department of Planning and Environment directs that the draft Plan can proceed, the draft Calderwood Section 94 Development Contributions Plan can be adopted and notified in local papers (repealing at the same time the application of Section 94A for the urban release area).

2. Resolve not to finalise the Calderwood Section 94 Development Contributions Plan. The current Wollongong Section 94A Development Contributions Plan (2017) would continue to apply to the land. Based on the stated value of development in the Major Project application of \$410 million, on a pro-rata basis, the estimated Wollongong proportion is some \$68.3 million. A 1% contribution would equate to \$0.683 million.

The Calderwood lots within the Wollongong LGA are also within the area covered by the West Dapto Section 94 Development Contributions Plan (2015). However, the Plan does not currently apply to the lots. A key difference between the Calderwood Release Area and the West Dapto Release Area is that the local infrastructure within the Calderwood Area is being directly funded by the developer. As such it is difficult to compare the Calderwood Project against the West Dapto Section 94 Development Contributions Plan. Any changes to the West Dapto Section 94 Development Contributions Plan (such as including the Calderwood lots) would need to be reviewed by IPART and approved by the Minister for Planning.

Option 1 is recommended as it clearly articulates Council's position that development contributions are required from the Calderwood Urban Release to fund local infrastructure within the Wollongong LGA. It should also be noted that only part of the Calderwood Valley has been rezoned, and Lendlease does not control all the land within the zoned area.

Draft Planning Agreement for Calderwood Project Area

On 11 July 2017, following exhibition of the draft Section 94 Plan and numerous technical discussions regarding infrastructure costs, Lendlease offered to enter into a Planning Agreement with Council to cover a portion of the costs associated with providing supporting infrastructure for the incoming populations introduced by the development of the Calderwood Valley area (Attachment 4). As noted, Lendlease only controls part of the Calderwood Valley Release Area. The draft Planning Agreement

offer includes monetary contributions towards the upgrade of Yallah and Marshall Mount Roads and the construction of a new road (NR1 to NR3, formerly known as Road 8).

The draft Planning Agreement offer provides for:

- \$4,400 / lot (up to and including the 4,800th lot / dwelling)
- \$1,000 / lot (for lots between 4,801 and 6,000)
- No contribution for lots in excess of 6,000

Based on the 4,800 lots approved within the Concept Plan, the draft Planning Agreement offer represents a total of approximately \$20.1 million (4,800 lots less the 231 lots already approved with contributions in Stage 1). Should the land release ultimately yield more than 4,800 lots, then a further contribution of \$1,000 / lot (up to 6,000 lots) would be applied, which could potentially generate a further \$1.2 million.

As discussed in Background and above, there are risks to Council in adopting a Section 94 Plan particularly in implementation and likely court challenge, as well as the need for Council to seek direction from the NSW Department of Planning & Environment Secretary to resolve difference of position between Councils to allow for a cross boundary plan to be made and actioned.

A Planning Agreement would provide certainty for all parties. While the inclusions of the Planning Agreement and clause around SIC inclusions are important in managing future risks and costs to Lendlease and Council, the Planning Agreement itself provides a fixed agreement that will deliver contributions without a third party to administer it such as would be the situation for a cross boundary Section 94 Plan.

The following options are available to Council:

- 1 Resolve to endorse the draft Planning Agreement offer from Lendlease for exhibition.
- 2 Resolve to not accept the Planning Agreement offer from Lendlease.

Option 1 is recommended. It is noted that a Planning Agreement offer will not take effect until:

- a written draft Planning Agreement and an accompanying explanatory note as outlined in Council's Planning Agreements Policy (includes templates) and EP&A Regulations 2000 has been submitted;
- draft Planning Agreement and Explanatory Note has been placed on public exhibition, available for public inspection for a period of a minimum 28 days;
- any issues raised in submissions are considered;
- it has been signed by all parties to the agreement; and
- copies of Planning Agreement and explanatory note sent to Shellharbour City Council and Minister for Planning within 14 days after the agreement is entered into.

If a Planning Agreement with Lendlease is finalised, it would "turn-off" the Calderwood Section 94 Development Contributions Plan (2017) from that part of the Calderwood Valley Release Area.

Lendlease would be responsible for providing all infrastructure to serve the future population within its boundaries including roads, community facilities, recreation facilities and drainage. The community and recreation facilities being predominately located within the Shellharbour LGA.

CONSULTATION AND COMMUNICATION

The draft Calderwood Section 94 Development Contributions Plan (2016) was initially exhibited from 1 June 2016 to 30 June 2016. One submission was received on behalf of Lendlease. As a result of the submission the draft Plan was revised and re-exhibited.

Between January and April 2017 a series of workshops, correspondence and phone calls with Lendlease and the NSW Department of Planning and Environment were held. The supporting reference material

such as modelling (flooding and transport) and methodologies, cost estimates for design, nexus and other technical aspects were shared and discussed.

The revised draft Calderwood Section 94 Development Contributions Plan (2017) was exhibited from 21 April to 22 May 2017, a period of 30 days. Key stakeholders were notified with a correspondence letter and copy of draft Plan sent to:

- NSW Department of Planning and Environment
- Shellharbour City Council
- Lendlease

Copies of the documents were made available on Council's Have Your Say Wollongong website. Hard copies were also made available at Council's Administration Building, 41 Burelli Street, Wollongong, weekdays between 9am and 5pm and Wollongong Central Library during library hours.

On 10 May 2017, Council officers briefed Neighbourhood Forum 8 on the exhibition material and submission process.

Two submissions were received during exhibition and with an extension requested and granted, a third submission was made. The following table outlines the submissions received during exhibition and Council's response to the issues raised.

Name	Submission Summary	Council Comments
Lendlease with attachment submission from JBA and Addisons Lawyers (22/5/2017)	Lendlease acknowledged significant progress made in meetings held in good faith between Council, NSW Department of Planning and Lendlease and that parties are close to reaching a final agreement with respect to contributions. Lendlease consider the draft plan in its current form will: <ul style="list-style-type: none"> - Result in uncertainty and increase risk to delay and potential litigation - Impact timing, delivery and affordability of Calderwood housing. 	The draft Plan is intended to establish recognition to the cost of infrastructure needed to cater for the change in land use and new residential uses. The Plan outlines the infrastructure costs and attempts to establish a development contribution mechanism associated with the costs as such reducing Council's risk in ability to deliver required upgrades to infrastructure. Council is aware that litigation may cause delay to delivery. The draft Planning Agreement (if finalised) provides a mechanism that will allow the land release project to continue with certainty and without delay.
	JBA raise that the draft Plan purports to operate as a 'cross boundary' plan but not a joint contributions plan as Shellharbour City Council (SCC) has not been involved in the preparation of the plan...practice notes for cross boundary contributions plans outline that there must be particular emphasis on the agreement between two (or more) councils.	Council considers that given the history to Calderwood, the existing VPA adopted by SCC, and the circumstances around Council's ability to come to agreement by making 'particular emphasis' is unlikely to change the outcome. The practice notes were considered in drafting of the Plan. SCC have been consulted during this process, notified and invited to make submission.
	Implementation of WCC draft Plan by SCC would arguably be in breach of the SCC Planning Agreement.	Council is not a party to the SCC Planning Agreement.

Name	Submission Summary	Council Comments
	<p>The draft Plan does not meet EP&A Act and the EP&A Regulation and is unreasonable for the following reasons:</p> <ul style="list-style-type: none"> - Fails to demonstrate nexus for bypass road included in draft Plan. 	<p>Council has done considerable work establishing nexus for the road network, also considered during the IPART assessment of the West Dapto Section 94 Development Contributions Plan concerning the same assets. The enquiry by design process and other planning and consultation processes followed were considered to provide sufficient nexus.</p>
	<ul style="list-style-type: none"> - Fails to adopt options presented for potential VPA by Council. - Cost inclusions appear inflated. - Inconsistent with West Dapto Section 94 Plan. - Plan likely to create uncertainty given cross boundary plan relies on Shellharbour City Council that has not been involved in preparation of the plan and future role in implementation. 	<p>On 14 September 2015 Council considered a draft Planning Agreement offered by Lendlease.</p> <p>This report also presents the more recent July 2017 draft Planning Agreement offer by Lendlease.</p> <p>Costs have been heavily scrutinised and are based on adopting IPARTs recommendations regarding cost of infrastructure during their review of same items included in the West Dapto Section 94 Plan.</p> <p>Noted. Similarly Wollongong Council is not a party to the Shellharbour City Council – Lendlease Planning Agreement.</p>
	<p>Believe that the fair and justifiable mechanism to resolve the issue of local contributions would be negotiating a VPA.</p>	<p>Lendlease has subsequently offered a draft Planning Agreement to be considered by Council in this report also.</p>
	<p>Addisons Lawyers question the availability of a mechanism that would permit Shellharbour City Council to impose a condition to levy for Section 94 contribution given their VPA with Lendlease.</p>	<p>Noted. The legality question will be resolved by either the NSW Department of Planning & Environment or the NSW Land and Environment Court.</p>
	<p>Consider the most appropriate and legally certain way of collecting development contributions from Lendlease for the Calderwood project, is</p>	<p>Noted and agreed.</p>

Name	Submission Summary	Council Comments
	to enter into a VPA.	
	The decision to adopt the 2017 draft Plan is unreasonable based on deficiencies identified by JBA, and specifically Clause 27 of the EP&A Regulation for what a contributions plan should contain, to which the draft Plan 2017 fails to include which amounts to a breach of statutory requirements.	Council has considered the requirements of Clause 27 and has made inclusions in the draft Plan accordingly as well as following Division 2 Public Participation, Clause 28 and 29.
Shellharbour City Council (SCC) – First submission (18/5/17)	It appears that the draft Plan is a cross-boundary Plan under Section 94C, but makes no reference to these requirements. Requests further consultation and an extension to make a further submission till mid-July.	There are no specifics around how a Plan is written that differs for a Section 94 Contributions Plan. Council agreed and met with SCC on 24 May 2017 as well as allowed extension of time for an additional submission to be made.
Shellharbour City Council (SCC) – Second Submission (26/5/17)	Wollongong Council has no power to make a Section 94 Plan to apply to Shellharbour LGA. There is no power in the EP&A Act or Local Government Act for Wollongong to require Shellharbour to determine applications in a particular way impose a condition of consent requiring payment of a contribution to Wollongong.	This has been considered. SCC also has no power to adopt a Planning Agreement that applies to Wollongong LGA to preclude application of a Section 94 Plan.
	Shellharbour does not agree to the making of a joint contributions plan, or for Wollongong to make one that applies to Shellharbour. Shellharbour has a Planning Agreement with Lendlease that excludes the operation of a Section 94 Plan.	Noted. An option for Council would be to refer the draft Section 94 Plan to the Secretary as stipulated in EP&A Act, Section 94C – Cross-boundary issues, (3). To be resolved in accordance with any direction given.
	Recommends that Council give further consideration to entering into a Planning Agreement.	Council understands that a draft Planning Agreement would be the most practical approach to enable local contributions and would minimise risk for all parties.

PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal “We have an innovative and sustainable community” and “We have sustainable, affordable and accessible transport”. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
2.1.6 Major new urban growth areas such as West Dapto are managed effectively to balance employment and population growth	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	Continue to implement the Infrastructure Delivery Program to support the West Dapto Urban Release Area
6.2.2 Integrated communities close to major transport links and major commercial centres and planned for and encouraged	6.2.2.1 In collaboration with agencies deliver the infrastructure required to support the first stage of the West Dapto Release Area	Actively participate in the interagency Project Control Group (PCG) to oversee the delivery of infrastructure in the West Dapto Urban Release Area

RISK ASSESSMENT

When the State Government approved the Calderwood Valley Urban Release in 2010, the extent and cost of infrastructure required to meet the urban development needs were not yet known. The draft Calderwood Section 94 Development Contributions Plan (2017) was developed to establish the infrastructure planning and financial implications for the provision of upgraded transport infrastructure to service the development of Stage 5 West Dapto and Calderwood Valley developments. However, there are some risks to Council administering a Plan which applies to the development areas in both Shellharbour LGA and Wollongong LGA. Nevertheless, it is important for Council to establish a mechanism to fund the local infrastructure required to support the future Calderwood and Yallah-Marshall Mount communities.

Until there is either a Calderwood Section 94 Development Contributions Plan in place or a Planning Agreement, Council is at risk of missing any opportunity to collect development contributions from development of the Calderwood Release Area. Traffic modelling demonstrates that the Calderwood Release Area will have a significant impact and adds to the requirement for the transport upgrade works. Council and the Wollongong community face considerable financial risk without a mechanism to collect development contributions from the Calderwood Release Area.

Council is challenging the granting of development consents by Shellharbour City Council on the basis that, any consent granted must be consistent with the Concept Plan Approval, which envisaged contributions to Wollongong City Council. Additionally, a consent condition ought to have been imposed consistent with Lendlease’s Statement of Commitments to enter into a Planning Agreement with Council.

The draft Planning Agreement offer submitted by Lendlease removes the risk to Council of being unable to collect local contributions towards transport infrastructure required to support the new communities.

FINANCIAL IMPLICATIONS

The financial implications of each option are discussed in the report.

CONCLUSION

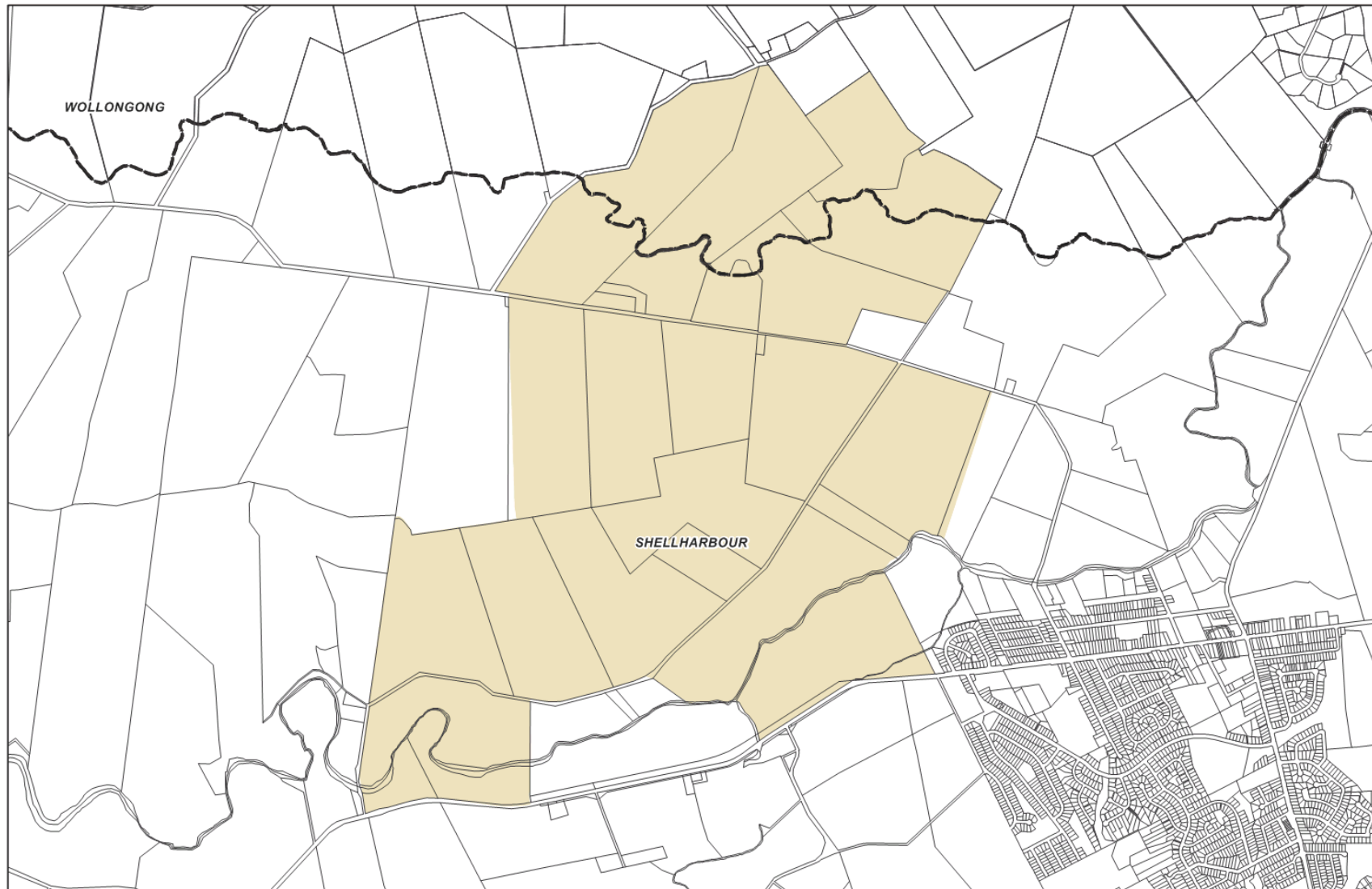
The revised draft Calderwood Section 94 Development Contributions Plan was initially exhibited from 1 June to 30 June 2016 and re-exhibited from 21 April 2017 to 22 May 2017. The draft Plan is intended to apply to the Calderwood Valley area, requiring a contribution of \$6,996 per dwelling/lot to support transport infrastructure provision. Three submissions were received during this exhibition. The submissions accurately reflect the complicated circumstances in which Council has arrived at preparation of a Section 94 Plan under the Environmental Planning & Assessment Act 1979.

It is recommended that Council resolve to continue to progress the Calderwood Section 94 Development Contributions Plan (2017) as it details the financial implications of the entire Calderwood Valley Release

Area on the Wollongong LGA. It is recommended that the Plan be referred to the Secretary of the NSW Department of Planning and Environment for direction on the cross-boundary issues.

Subsequent to exhibition and submissions, Lendlease has recently submitted a draft Planning Agreement offer for Council's consideration for their landholdings.

It is recommended that Council consider and endorse the draft Planning Agreement for exhibition for a minimum of 28 days. Once exhibited, and pending no significant issues raised during exhibition, it is recommended that the General Manager be delegated authority to enter into the Planning Agreement for Calderwood (Lendlease), forward copies to Shellharbour City Council and the Minister as required within 14 days, and provide a notice in local papers.



Calderwood Valley Masterplan



Legend

- Village centre
- Proposed Sports fields
- Open space
- Golf Course
- Conservation Land
- Proposed Education
- Future Sales and Information Centre
- Residential





WOLLONGONG CITY COUNCIL

DRAFT CALDERWOOD SECTION 94 DEVELOPMENT CONTRIBUTIONS PLAN 2017



CALDERWOOD RELEASE AREA
SECTION 94 DEVELOPMENT CONTRIBUTIONS PLAN (2017)
WOLLONGONG CITY COUNCIL

Document Control						
Document ID: Calderwood Section 94 Plan						
Rev No	Date	Revision Details	Typist	Author	Verifier	Approver
1	1/6/2016	Draft S94 plan for Council consideration and exhibition				
2	20/1/2017	Draft S94 Plan incorporating changes following exhibition submissions and further review.				

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DRAFT

Part 1 – Summary Schedules

This Plan is the Calderwood Section 94 Development Contributions Plan (2017).

The contributions received from this Plan will provide funding for roads and bridges connecting the Calderwood Valley Area and administration costs of the Plan.

The infrastructure to be provided will contribute towards providing an adequate transport network that meets the travel needs of the incoming population of the Calderwood Valley Area. The network also reflects the future use for urban development in West Dapto Release Area.

This Plan identifies the infrastructure and establishes means to collect funds for the nominated infrastructure. The costs are split between this plan and the West Dapto Section 94 Development Contributions Plan. The apportionment between plans has been established according to projected traffic volumes generated by incoming development. The Calderwood Valley Area (see Figure 1) is expected to provide approximately 7700 dwellings. Calderwood Project Approval Area (see Figure 1) comprises of 700ha, 593ha in Shellharbour Local Government Area (LGA) and 107ha in Wollongong LGA and forms part of the ultimate Calderwood Valley Area. The total number of dwellings for the Calderwood Project Approval Area is estimated at 4,800 homes for approximately 12,500 residents. This Plan collects funds from Calderwood Project Approval Area.

The cost of required road works and administration tasks are summarised below.

Table: 1.1 Work Schedule: Cost Per Category (base cost)

Transport and Traffic	Amount
Land	\$5,199,000
Works	\$47,874,111
Sub Total	\$53,073,111

Administration	Amount
1.5% of Total Contributions	\$796,097
Sub Total	\$796,097

Contributions for Calderwood Valley will be levied at the time of subdivision of the land zoned for residential purposes (General and Large Lot Residential). The contribution is based on a per dwelling rate as shown in Table 1.2, and equates to \$6996.00 per dwelling when considered across the entire Calderwood Valley Area and its expected dwelling capacity. The contribution is based upon modelling of traffic (car trips) generated by the proposed development and future road network to support the increases, per dwelling.

Table 1.2 - Contribution Per Dwelling – Wollongong LGA

Zoning	Contribution Per Dwelling
Residential	\$6996.00

Development Timetable:

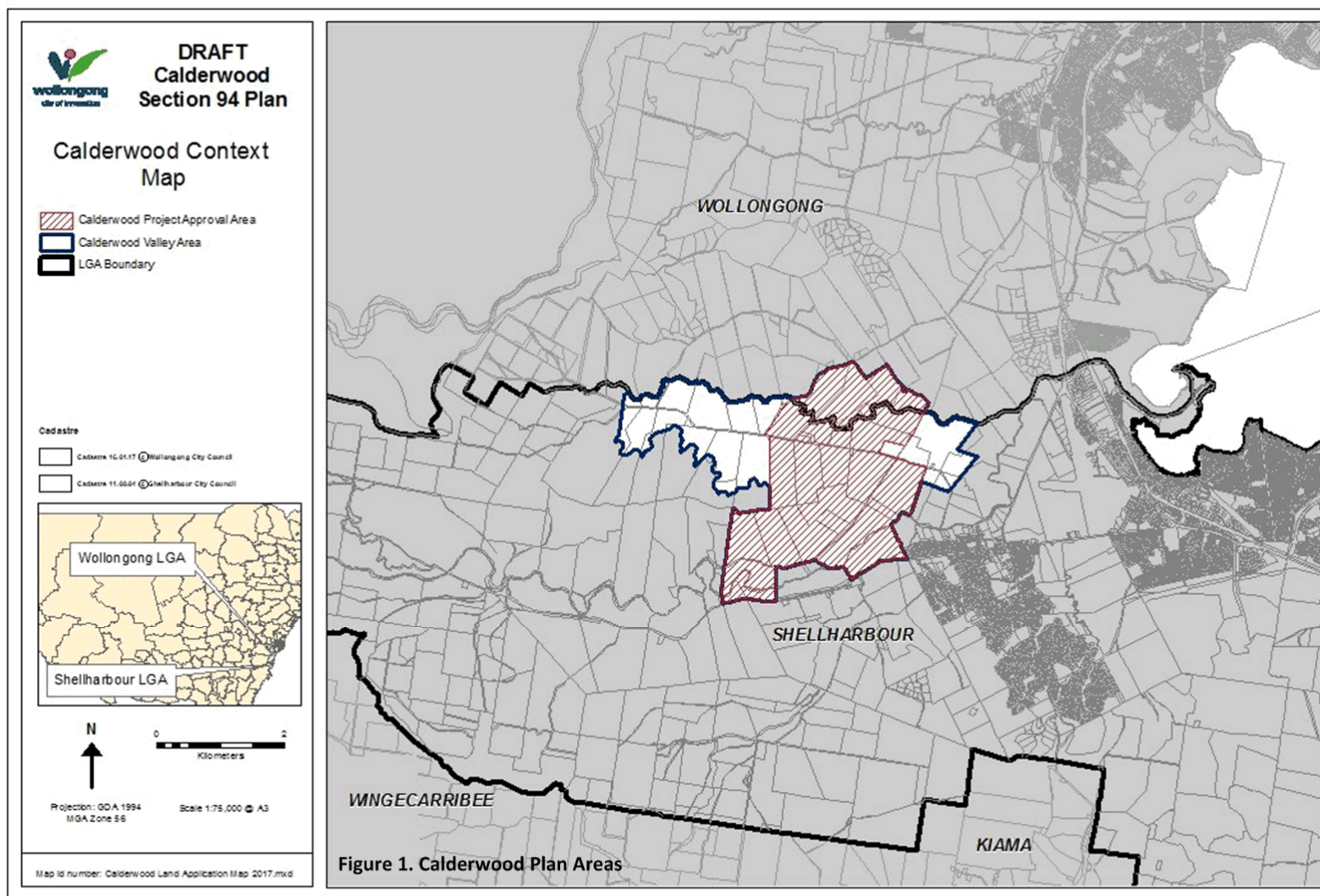
It is anticipated that the expenditure will occur on a pro-rata basis over the life of the development for the Calderwood Project Approval Area.

Yallah Road and Marshall Mount Road, existing roads to be upgraded, are expected to be delivered to align with Stage 8 of Calderwood Valley as shown in Table 1.3 below.

Table 1.3 Development Timetable

Stage	Completion year (Revised)	No. dwellings	Cumulative total
1 (Court Approved)	2016	231	231
2	2018	550	781
3-4	2020	1450	2231
5-6	2026	1300	3531
7	2033	600	4131
8	2037	550	4681
Un staged inside project area	Unknown	119	4800
Outside project area	Unknown	2900	7700

(Source: Delfin Lend Lease Staging Plan, 2013, <https://www.caselaw.nsw.gov.au/decision/54a63b143004de94513daf8c>)



Part 2 – Administration and Operation of the Plan

2. INTRODUCTION

2.1. What is a Section 94 Development Contribution?

Development contributions are contributions made for the purpose of public amenities and services required because of development and are paid by those undertaking development.

Section 94 of the Environmental Planning and Assessment (EP&A) Act 1979 enables councils to seek contributions from developers where development is likely to increase the demand for public facilities. These are levied at the time of development consent.

The EP&A Act establishes that a council can only require a Section 94 contribution if:

- The development will or is likely to require the provision or increase the demand for public amenities and services within the area;
- There is an adopted contributions plan; and
- The contribution is reasonable.

The contribution can either be:

- Land dedication;
- Monetary contribution for the cost of works or facilities to be provided in the future;
- Monetary contribution for the cost of works or facilities already provided in anticipation of development;
- Material public benefit (works in kind); or
- A combination of the above.

The ability to levy and recoup costs for the provision of roads is critical in the Calderwood Project Approval Area (see Figure 1) as the land is being transitioned from rural to residential. Calderwood Valley (see Figure 1) is connected to the West Dapto Release Area in proximity and via a road network that facilitates movement of north-south bound traffic. The additional traffic generated by Calderwood Valley Area has significant impacts on the roads within the West Dapto Release Area which provide accessible and efficient links to the State Road network including the M1 and the Princes Highway. Calderwood Project Approval Area will eventually support a population of approximately 12,500 people and the levy system will significantly reduce the financial burden on Council and existing residents.

It is therefore important that the contributions levied are reasonable and are a direct consequence of the development. These contributions are therefore limited to the essential works and facilities considered necessary by Council. This Plan includes connecting road

infrastructure, accepting that the Calderwood Project Approval Area is providing open space, stormwater facilities and the internal road network within the project area. This Plan also includes an administration component.

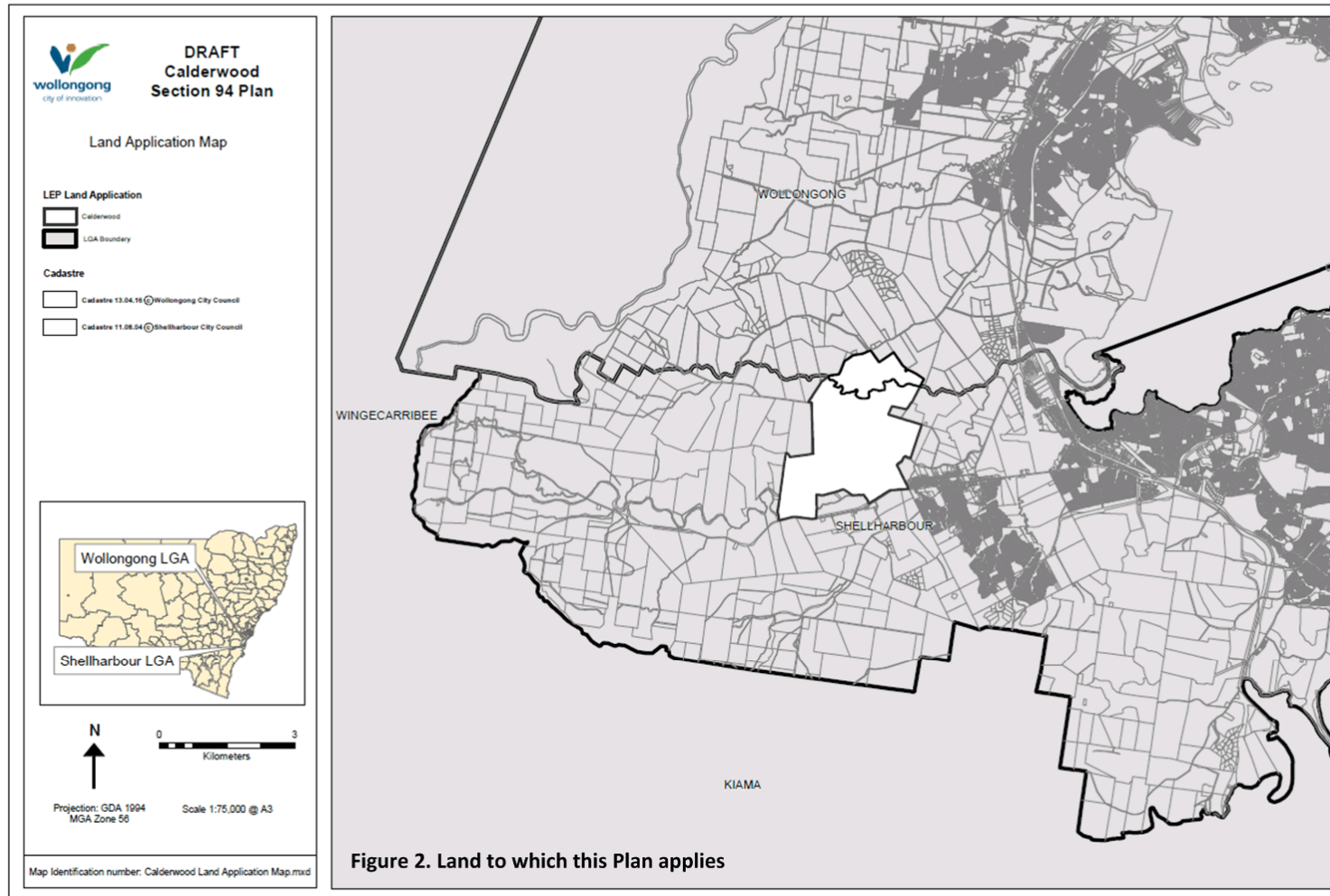
2.2. What is the Name of this Plan?

This Contribution Plan is called Calderwood Section 94 Development Contribution Plan 2017.

2.3. Where does this Plan Apply

The land to which this Plan applies forms part of the Calderwood Valley Area as identified on the context map in Figure 1. The land was rezoned by the NSW Department of Planning on 14 January 2011 with the Major Development SEPP now part of the *State Environmental Planning Policy (State Significant Precincts) 2005* (SEPP). Schedule 3, Part 28 Calderwood site of the SEPP applies to land within both the Wollongong City Council and the Shellharbour City Council areas. This plan applies to land within Calderwood Project Approval Area as identified in Figure 2.

The ultimate Calderwood Valley Area extends beyond the area zoned for urban development. At this time this Section 94 Plan only applies to the Calderwood Project Approval Area, zoned by the SEPP (State Significant Precincts) 2005. If other parts of the ultimate Calderwood Valley Release Area are rezoned for urban development, they will be considered for inclusion in the Plan at that time. West Dapto Release Area also contributes an apportioned share of the roads in the south of Wollongong LGA through the West Dapto Section 94 Development Contributions Plan. Both Plans seek a portion of the total cost of the identified roads.



2.4. What is the Purpose of this Plan?

The purpose of the Plan is to:

- a. Authorise the relevant consent authority to impose conditions under Section 94 of the EP&A Act 1979 for a contribution to the provision, extension or augmentation of public amenities and services, when granting consent to development on land to which this Plan applies.
- b. Outline the anticipated demand for roads as a result of new development in Calderwood.
- c. Provide a framework for the efficient and equitable determination, collection and management of development contributions.
- d. Ensure that development makes a reasonable contribution towards the provision of services and facilities.
- e. Ensure existing community is not burdened by the provision of roads required as a result of future development.
- f. Ensure Council's management of development contributions complies with relevant legislation and guidelines.

2.5. Application of This Plan

This plan applies to any development application lodged after the date of commencement of this Plan and relates to land to which this Plan applies. The consent authority shall levy contributions on development in accordance with the provisions of this Plan.

A Contributions Plan becomes part of the development control process under the EP&A Act by virtue of Sections 80A and 94. The provisions of this plan are one of a number of considerations that are relevant when Council determines a development application in accordance with Section 80 of the Act.

This Plan does not apply to Stage 1A (231 lots) as it was approved by the Land and Environment Court who set the contribution of \$1,320 per lot for that Stage.

Stage 2A (DA149/2015) for 234 lots approved by Shellharbour City Council does not include conditions that address the infrastructure contribution for Wollongong LGA roads and this cannot be recouped retrospectively.

In respect to Stage 2B (DA0663/2015) for 279 lots, this Plan applies should the Land and Environment Court or Shellharbour City Council determine that the development application requires re-assessment.

However this Plan will apply to any additional residential dwellings created within the above stages and to any further development in the Calderwood Valley Area including Stage 3A.

2.6. Development to which this Plan Applies

The following types of development are required to make a contribution:

- Subdivision for residential purposes;

- construction of a dwelling;
- a dual occupancy;
- multiple dwelling housing;
- multi-unit housing;
- seniors housing; and/or
- any other dwellings.

Development contributions will not be sought for retail premises, office premises, business premises, community facilities and recreational facilities (excluding any residential components).

2.7. Commencement of the Plan

This development contributions plan has been prepared pursuant to the provisions of Section 94 of the EP&A Act and Part 4 of the EP&A Regulation 2000 and takes effect from the date on which public notice is published, pursuant to clause 31(4) of the EP&A Regulation.

2.8. Relationship to Other Plans and Policies

This Plan repeals the following section 94 / 94A contributions plans applying in that part of the Wollongong LGA as referred to in section 2.3:

- The Calderwood Project Approval Area is partly identified in the West Dapto Release Area Section 94 Contributions Plan (2015) as part of the West Dapto Release Area but not as an area considered a Contribution Collection Area.

The West Dapto Section 94 Development Contributions Plan (2015) applies to the land north, neighbouring Calderwood Valley Area. A new draft West Dapto Section 94 Development Contributions Plan (2017) has also been assessed by IPART and forwarded to the Minister for approval. The cost of the provision for roads and bridges are apportioned between the two Section 94 Plans, as they will be utilised by residents of both release areas.

Any other contributions plan approved by Council (and in force under Division 6 or Part 4 of the EP&A Act at the time this Plan commenced) does not apply to development that is subject to a requirement to pay a contribution under this Section 94 Plan.

2.9. Relationship to Special Infrastructure Contribution

This Plan does not affect the determination, collection or administration of any special infrastructure contribution levied under section 94EF of the EP&A Act in respect to development on land to which this Plan applies.

Applicants should refer to details of Special Infrastructure Contributions issued by the Department of Planning in relation to the Calderwood Project Approval Area.

DEVELOPER CONTRIBUTIONS

2.10. Policies and Procedures on the Levying and Payment of Contributions

The following sections describe the policies and procedures involved in levying and payment of developer contributions under this plan including method/timing of payment, planning agreements, deferred/periodic payment, obligations of accredited certifier with respect to construction certificates/complying development, savings and transitional provisions, credits/offsets for works-in kind, calculation of contributions rates and the review and monitoring process of the plan.

2.11. Method of Payment

The consent authority will accept Section 94 payments in one or a combination of the following methods:

Monetary Contribution:

This is the most common method. However it can be offset by providing a material public benefit as identified in the Contributions Plan.

Material Public Benefit (Works-in-Kind):

Where an applicant makes a request and Council in its absolute discretion determines that it is appropriate, an applicant may provide a material public benefit (commonly referred to as works-in-kind) in part, or full, satisfaction of a monetary contribution.

Any request must demonstrate that the works in kind are of equivalent or greater benefit to the community compared to what has been identified under this Plan. The proposed works in kind offset must be included in the conditions of consent or a S96 modification of the consent, to reflect the proposed offset.

The works must be included in the works schedule as set out in Part 4. The cost of the work will be offset against the contribution required for the same facility category only.

The amount of the offset will be as agreed by the consent authority and will not exceed the cost allocation for the works included in this Plan.

In assessing such a request, the Council will generally take into account the following:

- whether the proposed work in kind will be to a suitable standard for Council to eventually accept;
- finalisation of, or consistency with, the detailed design of the facilities;
- the submission of plans and cost estimates to Council of the proposed works to be undertaken by the applicant;
- whether the location, siting and design of the proposed works has regard to the Master Plan for Calderwood and West Dapto Release Area;

- the timing of completion and future recurrent costs including staffing and maintenance and future management (particularly if work to a higher standard is proposed);
- Consent authority may consider works to a higher standard than this Plan's allowance, however no reimbursement of additional costs will be provided;
- the financial implications for cash flow and whether the proposed works pre-empt the future orderly implementation of works as identified in the works schedule; and
- future dedication, handover and management arrangements.

All agreements will include, but not be limited to, the following:

- the works to be undertaken;
- the timing of the works;
- the quality of the works;
- the cost of the works;
- the applicant's rights and responsibilities; and
- Council's rights and responsibilities.

Dedication of Land:

Council may accept the dedication of land (identified for public purposes under this plan) to offset the required monetary contribution. The value of land will be negotiated between the applicant and Council, and any monetary contributions payable will be reduced by the value of the land formally agreed upon. An appropriate condition will be included in any consent applying to land identified for public purposes to ensure that the land is transferred to Council at no cost.

Value of Works:

The value of works will be determined utilising the following method:

- a. Any Credit will be calculated based on the actual cost of works or the agreed cost estimate, whichever is the lesser. The agreed cost estimate will be determined by a review of the costs submitted by the applicant via Council's Infrastructure Team or a Registered Quantity Surveyor at Council's discretion;
- b. The agreed cost estimate can be amended by submission of a variation request by the applicant which will be reviewed and certified by a registered Quantity Surveyor;
- c. The actual cost of works is required to be evidenced and verified by a registered Quantity Surveyor;
- d. The Quantity Surveyor to act on the project will be chosen by Council from a list of 3 recommended by the applicant all of whom are to be members of Panels for The NSW Department of Commerce or Local Government Procurement; and
- e. Quantity Surveyor service costs are to be borne by the applicant.

Value of Land:

Developers of land to which this Plan applies will be required to provide either:

- sufficient, usable and (where appropriate) embellished land for the particular facilities identified in this Plan to meet the needs of the population attributable to the proposed development; or, alternatively
- an equivalent monetary contribution to Council for the acquisition and embellishment of land for the particular facilities identified in this Plan.

Council will, wherever appropriate, require developers to dedicate land free of cost for the facilities identified in this Plan. Where the development does not, or cannot provide the full land area required as a contribution, the shortfall will be required as a monetary contribution. The contribution rates included in this Plan reflect the monetary contribution required where land is not dedicated free of cost.

Where the contribution required is by way of dedication free of cost, the land:

- is to have an associated draft plan of management prepared in accordance with Part 2, Division 2 of the Local Government Act 1993 and Part 4, Division 2 of the Local Government (General) Regulation 2005 and prepared at full cost to the developer (This applies only where the dedication relates to the provision of community or open space and recreation facilities); and
- The value is determined in accordance with either section 2.13, the Land Acquisition (Just Terms Compensation) Act 1991 or if listed for sale on the open market potentially by way of negotiation in accordance with Council's obligations and policies. This will be offset against monetary contributions required under this Plan.

2.12. Planning Agreements

In accordance with Section 93F(1) of the EP&A Act, a planning agreement is a voluntary agreement or arrangement between a planning authority and a developer under which the developer agrees to make contributions towards a public purpose. A planning agreement may wholly or partly exclude the application of Section 94 to the development that is subject of the agreement.

This offer may include a monetary contribution, dedication of land, the carrying out of works, or another material public benefit for public purposes. Those purposes need not wholly relate to the impacts of the applicant's development but need to be consistent with the items listed in Section 3.3 and summarised Part 4.

The provisions of Sections 93F to 93L of the EP&A Act and accompanying Regulation prescribe the contents, form, subject matter and procedures for making planning agreements.

Any person seeking to enter into a planning agreement for land within Wollongong LGA should refer to Council's policy on Planning Agreements. In the first instance submit a proposal in writing to Council, documenting the planning benefits and how the proposal would address the demands created by development for new public infrastructure, amenities and services.

Public purposes are defined in the EP&A Act as (without limitation) the provision or recoupment of the cost for providing:

- public amenities or public services;
- affordable housing;
- affordable housing or transport or other infrastructure;
- transport or other infrastructure relating to land;
- funding of recurrent expenditure relating to the provision of public amenities or public services;
- monitoring of the planning impacts of development; and
- conservation or enhancement of the natural environment.

2.13. When must a Contribution be paid?

A contribution must be paid to Council at the time specified in the approval condition that imposes the contribution. This would be outlined as a condition to a development consent, complying development certificate, Subdivision certificate or construction certificate. If no such time is specified, the contribution must be paid prior to the issue of a subdivision certificate, construction certificate or complying development certificate.

2.14. Deferred or Periodic Payment

Council will only permit deferred or periodic payment where development is staged and only with approval of the Council Officer(s) whose position(s) holds the required Council delegations.

The stages of development and relevant contribution payment for each stage must be clearly documented in the conditions of consent. In this regard a Section 96 modification of consent is required if proposed staging of development is not reflected in the original consent.

For development which is staged, Section 94 contributions must be paid at the rate applicable at the time of subdivision or construction certificate, for at least the number of additional lots/dwellings for which subdivision or construction certificate release is sought.

For each stage, the calculation of the number of lots/dwellings for which contributions are payable will count any residue lot as a single lot.

The circumstances for deferred or periodic payments are as follows:

- Compliance with the provisions is unreasonable or unnecessary in the circumstances of the case.
- Deferred or periodic payment of the contribution will not prejudice the timing or the manner of the provision of public facilities included in the works program.

- Where the applicant intends to make a contribution by way of a planning agreement, works in kind or land dedication in lieu of a cash contribution, and Council and the applicant have a legally binding agreement for the provision of the works or land dedication.
- There are circumstances justifying the deferred or periodic payment of the contribution.

If Council does accept a deferred or periodic payment Council may require the applicant to provide a bank guarantee by a bank for the full amount of the contribution or the outstanding balance. The conditions for deferred or periodic payment and the requirements of the bank guarantee will be set in the conditions of consent.

2.15. Construction certificates and the obligation of accredited certifiers

In accordance with Section 94EC of the EP&A Act and clause 146 of the EP&A Regulation 2000, a certifying authority must not issue a construction certificate for building work or subdivision work under a development consent unless it has verified that each condition requiring the payment of monetary contributions has been satisfied.

In particular, the certifier must ensure that the applicant provides receipts confirming that contributions have been fully paid and copies of such receipts must be included with copies of the certified plans provided to the Council in accordance with clause 142(2) of the EP&A Regulation 2000. Failure to follow this procedure may render such a certificate invalid.

The only exceptions to the requirement are where a works in kind, material public benefit, dedication of land, or deferred payment arrangement has been agreed by the Council. In such cases, Council will issue a letter confirming that an alternative payment method has been agreed with the applicant.

2.16. Complying development and the obligation of accredited certifiers

In accordance with Section 94EC of the EP&A Act 1979 and Part 7, Division 2A, cl 136 of EP&A Regulation 2000, accredited certifiers must impose a condition requiring monetary contributions in accordance with this Contributions Plan for the following development types:

- Dwelling houses on an allotment where no previous contribution under Section 94 has been made.

The conditions imposed must be consistent with Council's standard Section 94 consent conditions and be strictly in accordance with this Contributions Plan. It is the professional responsibility of the accredited certifiers to accurately calculate the contribution and to apply the Section 94 condition correctly.

2.17. Credit and Offsets for Works in Kind

There may be cases where an applicant carries out works in kind, with the prior agreement of Council, with such works included in the Schedule of Works in this Contributions Plan but the cost of which exceeds the contribution required for that facility category. In these situations, the applicant will be reimbursed for the cost of the works that:

- exceed the contribution due within that facility category, and

- have been approved by Council as being consistent with the Contributions Plan.

2.18. Credit for Existing Development

Council will determine any applicable credit(s) based on the number & type of lawful existing development i.e. Residential Lot or Dwelling.

2.19. Savings and Transitional Arrangements

A development application which has been submitted prior to the adoption of this plan but not determined shall be determined in accordance with the provisions of the plan which applied at the date of determination of the application.

2.20. Pooling of Contributions

This plan authorises monetary Section 94 contributions paid for different purposes to be pooled and applied (progressively or otherwise) for those purposes. The priorities for the expenditure of levies are shown in the works schedule.

2.21. Exemptions

The only exemptions allowed are:

- a. Those that are subject to a Direction from the Minister for Planning under Section 94E of the EP&A Act 1979.
- b. An application by or on behalf of Council for community infrastructure, such as but not limited to libraries, community facilities, child care facilities, recreational areas, recreational facilities or car parks;
- c. An application by, or on behalf of, the NSW Government for public infrastructure, such as but not limited to hospitals, police stations, fire stations, educational facilities and public transport infrastructure, if supported by a comprehensive submission; and
- d. Any other development for which Council considers an exemption is warranted, where the decision is made by formal ratification of the Council at a Council meeting, if supported by a comprehensive submission.

For an exemption to be considered where a comprehensive submission is required, any such development will need to submit a comprehensive submission to justify the exemption and providing a case for the exemption by including, but not limited to, the following information:

- Justification for the exemption;
- The mechanism ensuring that such development will remain in the form proposed in the future (ie not to increase future demand on public amenities and services), note: where a further development application or application for complying development under the EP&A Act is required for any changes to the development no mechanism is required. However, if a change of use is available by way of exempt development then the requirements for a mechanism remains;
- Other items if applicable:

- How the Development will incorporate the maintenance of the item of heritage significance;
- How the development will contribute to the public benefit of the community;
- Works in the public domain included in the development; and
- How the residents/users will utilise existing private facilities attached to the development that replicate those types provided by Council.

Exemptions (part or full) as outlined above will only be granted with the approval of the Council Officer(s) whose position(s) holds the required Council delegations.

2.22. Calculation of Contributions

The purpose of this clause is to ensure that the monetary contribution rates imposed at the time of a development consent reflect the current costs of provision of the facilities included in this Plan.

To convert the cost of facilities included in the Plan to a current cost, the monetary contribution rates per lot/dwelling shown in Part 4, Table 4.1 are to be adjusted in accordance with the provisions set out below:

- at the time of imposing a condition on a development consent requiring payment of the monetary contribution; and again
- at the time that the monetary contribution is to be paid pursuant to the condition imposed on that same development consent.

2.22.1. Contribution Adjustments

The Producer Price Index (PPI) is a commonly used index for adjusting contribution rates. However, it is not a suitable index for adjusting contributions relating to land that is yet to be acquired as land prices do not correlate with movements in the prices of goods and services, especially in urban release areas. As a result, the land valuation index will be adjusted as informed by the following:

- The Established House Price Index for Sydney as published by the Australian Bureau of Statistics.
- Land acquisition costs by reference to average land valuation figures published by Council.
- Specific valuations for parcels of land affected by items included as identified by this Plan.

In accordance with the provisions of clause 32(3) of the EP&A Regulation, Council, without the necessity of preparing a new or amending contributions plan, will adjust the monetary development contribution rates set out in this Plan to reflect quarterly changes to both:

- the PPI (for all Works Schedule items identified in this Plan apart from the items comprising land yet to be acquired); and
- the Land Value Index (for Works Schedule items identified in this Plan involving land yet to be acquired).

2.22.2. Works Schedule items other than land

The monetary contributions rates for Works Schedule items as set out in Part 4 of this Plan will be adjusted to reflect quarterly variations in the PPI (Road and Bridge construction) from the date that the Plan came into effect. In the event that the current Road & Construction Index is less than the base, the current Road & Construction Index shall be taken as not less than the previous Road & Construction Index.

Contribution at time of development consent

$$C2 = \frac{C1 \times PPI2}{PPI1}$$

Contribution at time of payment

$$C3 = \frac{C2 \times PPI3}{PPI2}$$

Where:

- C1 = Contribution of rate for works as shown in this Plan
- C2 = Contribution rate for works to be included in the conditions imposed on the development consent
- C3 = Contribution rate for works at the time that the contribution is to be paid
- PPI1 = PPI (road and bridge construction) result at the time that the Plan was prepared (i.e. June 2016)
- PPI2 = PPI (road and bridge construction) result for the quarter immediately prior to the date of granting the relevant development consent
- PPI3 = PPI (Road and bridge construction) result for the quarter immediately prior to the date that the contribution is to be paid

2.22.3. Works Schedule items with land acquisition

The monetary contributions rates for Works Schedule items that relate to land as set out in Part 4 of this Plan will be adjusted in accordance to reflect quarterly variations in the Land Value Index from the date that the Plan came into effect.

The adjustments shall be made at the time of granting development consent so as to determine the appropriate contribution to be included on any relevant consent. A further

adjustment will be made at the time of payment to reflect any further changes between the date of consent and payment of contribution.

Contribution at time of development consent

$$C2 = \frac{C1 \times LVI2}{LVI1}$$

Contribution at time of payment

$$C3 = \frac{C2 \times LVI3}{LVI2}$$

Where:

- C1 = Land component of contributions as shown in this Plan
- C2 = Land component of contributions to be included in the conditions imposed on the development consent
- C3 = Land component of contributions at the time that the contribution is to be paid
- LVI1 = Land Value Index at the time that the Plan was prepared
- LVI2 = Land Value Index at the time of granting the relevant development consent
- LVI3 = The latest Land Value Index at time that the contribution is to be paid

2.22.4. Administration Cost

The contribution rate per residential allotment, dwelling, multiple dwelling housing and multi-unit housing is calculated using the following formula:

$$CA = \frac{A}{N}$$

Where

- CA = Contribution rate for administration costs to be included in the conditions imposed on the development consent
- A = Total administration cost for this Plan, which has be set at 1.5% of the total cost of the Section 94 Plan.
- N = Number of equivalent lots / dwellings in the catchment area

Note: This clause does not cover the adjustment of a contribution between the time of consent and the time payment is made. This is covered by clause 2.22.4.1.

2.22.4.1. Time of payments

The contributions stated in a development consent are calculated on the basis of the section 94 contribution rates determined in accordance with this plan. If the contributions are not paid within the quarter in which consent is granted, the contributions payable will be adjusted and the amount payable will be calculated on the basis of the contribution rates that are applicable at time of payment. The current contributions are published by Council and are available from Council offices. Should the Council not validly publish the applicable contribution rates, the rate applicable will be calculated in accordance with the rate prevailing in the previous year.

2.23. Review and Monitoring of Plan

This plan will be subject to regular review by Council in accordance with the provisions of the EP&A Regulation. The purpose of such a review is to ensure that:

- levels of service and amenity provisions are consistent with population trends and community needs;
- contribution levels reflect changes to construction costs and land values;
- the works program can be amended if the rate of development differs from current expectations.

The contribution rates and works program for this plan have been formulated using information available at the time of writing. A number of variables will be monitored to facilitate the review process. Some of these are listed below:

- lot production and dwelling construction.
- construction costs.
- land costs.
- anticipated population.

The contribution rates will be reviewed by reference to the following specific indices:

- construction costs by reference to the Australian Bureau of Statistics PPI (Road and Construction Index)
- land acquisition costs by reference to the Australian Bureau of Statistics Established House Price index for Sydney.
- changes in the capital costs of various studies and activities required to support the strategies in the plan by reference to the actual costs incurred by council in obtaining these studies.

Any changes to the Contributions Plan, apart from indexing and minor typographical corrections, will be placed on public exhibition in accordance with the requirements of the EP&A Act and Regulation.

2.24. Contributions Register

A Contributions Register will also be maintained for this Contributions Plan in accordance with the EP&A Regulation and may be inspected on request. This Register will include:

- (1) details of each consent for which a Section 94 condition has been imposed;
- (2) the nature and extent of the contribution required by the condition for each facility category;
- (3) the name of the Contributions Plan the condition was imposed under; and
- (4) the date any contribution was received and its nature and extent.

At the end of the each financial year, the Council is required to make an annual statement within the yearly budget. This statement must include the following:

- (1) Opening and closing balances of money held in the Section 94 Contributions Plan by the Council for the accounting period;
- (2) Total amounts received by way of monetary contribution under this Plan;
- (3) Total amount spent in accordance with this Plan; and
- (4) Outstanding obligations of the Council to provide works for which contributions have been received.

2.25. Inforce Date of Plan

This Plan was adopted by Council on XXXX and came into force on XX XXX 2017

Part 3 - Strategy Plans

This section sets out the strategies that Council intends to follow to cater to the needs of future population growth and development in the Calderwood Valley Area. It identifies the resulting demand for public services and facilities, the costs and estimated timing of provision of the works that the Council intends to provide to cater to that demand.

It is important to note that the Calderwood Valley Area will develop over many years and planning for facilities at this stage of the development must recognise that population demands will vary over time, and may possibly vary from the assumptions that are used to determine the contributions that are set out in this plan. The Council will continually monitor population growth and demand, and where necessary, will appropriately adjust the relevant infrastructure to ensure that it is delivered to meet the demands of the population.

3. Residential Development Nexus

3.1. Rationale for new infrastructure and services

A key principle of Section 94 is to demonstrate a relationship between the anticipated development and the demand for additional open space, community facilities, drainage and road works. The demonstration of a relationship between new development and such demand is a core requirement of a valid Contributions Plan.

The Calderwood Project Approval Area includes approximately 50 hectares for retail, community, education, commercial and employment uses.

The first stage of the development includes a village centre with specialty stores, office buildings and cafés. There will also be a town centre and multi-purpose community resource centre.

Calderwood Project Approval Area will also provide for open space within the project area. Therefore this Plan only seeks to recoup the costs for new roads within the Wollongong LGA.

The expected development from the Calderwood Valley Area's resulting population and their travel needs will create an increased demand on roads within the West Dapto Release Area.

The services identified as being required to address the impacts of the expected development includes:

- Traffic and transport management facilities; and
- Plan administration.

The following section of this Plan identifies the process that Council used to determine nexus between the Calderwood Valley Area and the infrastructure. It specifies the appropriate level of apportionment, and provides a brief description of the proposed works and their timing.

In order to model traffic demands as a result of Calderwood and West Dapto development areas, Wollongong City Council's WOLSH (Wollongong-Shellharbour) TRACKS strategic land use and transport model (WOLSH TRACKS model) was utilised.

The model highlights the traffic generated by the Calderwood development travelling to/from the north, will add a large proportion of travel onto West Dapto roads. This is based on accessibility and proximity, time and distance travelled to destinations such as employment areas. People do not take local government boundaries into account when making travel choices, therefore travel by all Calderwood residents should be taken into account, both in Wollongong and Shellharbour.

The ultimate Calderwood Valley Area is expected to generate 7700 dwellings, which was incorporated into the WOLSH TRACKS model. The model generated traffic volumes based on demographic data including household occupancy rate and is calibrated against Bureau of Transport Statistics Household Travel Survey (HTS).

Trips to and from the Calderwood Project Approval Area were identified separately to all other trips in the network in order to generate traffic volumes and apportionments on the affected roads. The Calderwood Valley Area flow was then calculated as a proportion of the total daily flow on each road segment in the network. This proportion was applied to the cost of improving each road segment as included in the Section 94 Development Contribution Plan. The per dwelling cost is based on the ultimate dwelling yield of 7700 dwellings in the Calderwood Valley Area. Using this information Council calculated the contribution that Calderwood Project Approval Area and the overall future development should make to the improvements of the roads in the Wollongong LGA.

Ultimately it is expected that Calderwood Valley Area will contribute to **\$53,073,111** of the total cost of roads in West Dapto. Calderwood Project Approval Area constitutes approximately 62 percent of the total Calderwood Valley area, based on an overall split of expected 7700 dwellings in Calderwood Valley and 4800 dwellings in Calderwood Project Approval Area.

3.2. Cost of Facilities

Costs for infrastructure included in this Plan were derived from the services of a qualified quantity surveyor and/or from Council's experience of infrastructure costs in other areas. Assumptions used to derive estimated costs of facilities included in this Plan are detailed in the following Sections.

A construction contingency of 15 percent and a design and project management contingency of 10 percent of the base cost was added to all works included in this Plan (excluding land acquisition).

The contingency allowance is considered reasonable given that the concept designs for roads have been prepared and costed to inform cost inclusions in this Plan.

3.3. Transport Facilities

3.3.1. Transport Facilities Demand

Wollongong City Council has developed an LGA wide traffic model to assist in establishing the required road network and hierarchy appropriate to service the future population of West Dapto and Calderwood Valley Areas. This model, combined with practical planning experience establishes the need for infrastructure works resulting from the development of these areas, namely:

- Capacity improvements to existing road and intersection infrastructure;
- Intersection treatment upgrades (i.e. priority controls, roundabouts, or traffic signals);
- Road widening, and condition improvements;
- Bridging structures over creek lines, railway corridors and major roads;
- Bus accessible routes through West Dapto and connections to Dapto, and bus stop facilities; and
- Optimising of public transport routes and infrastructure.

The urbanisation of the release area will necessitate the establishment of an extensive traffic movement network. The works are considered necessary to facilitate development, whilst ensuring an acceptable level of access, safety and convenience for all road users within the release area.

Based on the traffic modelling, the road network proposed consists of two road types, being major and minor collectors. Both these road types are suitable to cater for bus routes. The proposed road network has taken into consideration the heavily constrained nature of the release areas, including flooding and utility easements.

3.3.2. Proposed Transport Facilities

The following infrastructure works will be required to facilitate the development of the Release Areas (refer to Appendix 1 Infrastructure Plan for item locations):

3.3.2.1. Roads

This Plan includes a total of 11.6 km of funded collector roads.

Road Infrastructure			
Item Identification	Description	Quantity (Lin m)	Apportionment (%)
<i>Existing roads</i>			
Yallah Road	4 lane	1,200	24
Marshall Mount Road	2 lanes	5,600	51
<i>New roads</i>			
NR1-NR3	4 lanes	2,500	15
Town Centre Bypass Road	2 lanes	2,300	78

Design and Project Management		10%	42
Construction Contingency		15%	42

3.3.2.2. Road Intersections

This Plan contains four (4) funded intersections.

Intersections				
Site ID	Road 1	Road 2	Facility	Apportionment (%)
Int 40	Marshall Mount Rd	Yallah Rd	Large signals	28
Int 107	Town Centre Bypass Road	Marshall Mount Rd	Small signals	77
Int 108	Town Centre Bypass Road	Yallah Road	Small signals	36
Int 109	Marshall Mount Rd	North Marshall Mount Rd	Small Signals	81

3.3.2.3. Bridge Crossings

This Plan includes ten (10) funded bridges.

Bridge Crossings						
ID	Road No. &/or Name	Length (m)	Lanes	Width (m)	Type	Apportionment (%)
<i>Bridges for New Roads</i>						
B30A	NR1 – NR3 (2x Duck Ck tributaries)	18	4	21	RMS Plank	15
B30B	NR1 – NR3 (2x Duck Ck tributaries)	54	5	29	RMS Plank	15
B30C	NR1 – NR3 (2x Duck Ck tributaries)	9	4	21	RMS Plank	15
B46	Town Centre Bypass Road	7.2	2	14	Culvert	79
B47	Town Centre Bypass Road	21.6	2	14	RMS Plank	79
<i>Bridges for Upgrade Roads</i>						
B18A	Marshall Mt Rd (2 x Duck Ck tributaries)	6	2	14	RMS Plank	36
B18B	Marshall Mt Rd (2 x Duck Ck tributaries)	56	2	14	RMS Plank	36
B19	Marshall Mt Rd	8.1	2	14	Culvert	58
B20A	Yallah Rd (3 x Duck Ck tributaries)	15	4	21	Culvert	14

B20B	Yallah Rd (3 x Duck Ck tributaries)	6.6	4	21	Culvert	36
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3.3.3. Apportionment

The need to provide the infrastructure identified in this part of the Plan is generated by the residential development of the release areas. Calderwood Valley Area has been identified as a significant source of traffic generation travelling north/south through the Yallah Marshall Mount Area. As such the cost of infrastructure has been applied and apportioned across both this Plan and the draft West Dapto Section 94 Development Contribution Plan.

3.3.4. Schedule of Works and Costs Estimates

A schedule of infrastructure to be levied under this plan is included in Table 4.1 – Works Schedules.

3.3.5. Contribution Formula

The formula used to calculate the contributions rate for transport facilities costs is set out in Section 2.22.

The costs and contributions for transport facilities are set out in Table 4.1.

3.4. Plan Administration

3.4.1. Administration and Plan Preparation

The preparation, on-going review, and implementation of this Plan require significant Council resources. This includes allocation of time from strategic planning, services delivery and community development staff together with professional fees, to prepare and review the Contributions Plan.

Once the Plan is in place, further staff time will be required to manage the contributions system which includes the calculation and recording of contribution payments, monitoring development, population growth, works expenditure and indexation. The costs associated with the preparation and administration of this Plan will therefore be levied for under this Contributions Plan.

Administration and Plan preparation costs have been based on 1.5% of the total cost of the Plan.

3.4.2. Contribution Formula

The formula used to calculate the contributions rate for administration costs is set out in Section 2.22.

Part 4 – Work Schedules

Table 4.1 Transport Facilities (External to Calderwood Release Area)

Road	Stage	Lanes	Quantity	Unit	Acquisition Cost (\$)	Pavement Cost (\$)	Intersection Cost (\$)	Bridge Cost (\$)	Total Cost (\$)	Calderwood % *	Section 94 Cost (\$)
Existing Local Roads											
Yallah Road	5	4 Lanes	1,200	Lin M	624,700	11,762,049	-	677,886	13,064,635	24%	3,193,914
B20A Section 5	5	2 Lanes - 1 Lanes	550		533,200	5,656,191	-	432,956	6,622,347	13.5%	894,017
B20B Section 6	5	2 Lanes - 1 Lanes	650		91,500	6,105,858	-	244,930	6,442,288	35.7%	2,299,897
Marshall Mount Road	5	2 Lanes	5,600	Lin M	3,794,599	35,115,923	1,809,377	3,742,511	44,462,410	51%	22,709,173
Section 1 - CH0-1400	5	2 Lanes - 1 Lanes	1,400		922,100	7,096,853	-	-	8,018,953	76.8%	6,158,556
Int 109 Intersection 109 - with MM1	5				-	-	523,751	-	523,751	80.9%	423,715
Int 107 Intersection 107 - with Local Road	5				-	-	523,751	-	523,751	77.1%	403,812
B19 Section 2 - CH1400-3100	5	2 Lanes - 1 Lanes	1,700		2,131,500	10,991,127	-	155,864	13,278,491	58.4%	7,754,639
Int 40 Intersection 40 - with Yallah Road (MM4, Y1 & NR1)	5				-	-	761,875	-	761,875	28.4%	216,372
B18A Section 4	5	2 Lanes - 1 Lanes	2,500		741,000	17,027,942	-	349,621	18,118,563	36.3%	6,577,038
B18B Section 4	5				-	-	-	3,237,025	3,237,025	36.3%	1,175,040
New Local Roads											
NR1-NR3	5	4 Lanes	2,500	Lin M	5,250,000	14,410,017	-	8,348,645	28,008,662	15%	4,061,256
Section 7	5	2 Lanes - 1 Lanes	2,500		5,250,000	14,410,017	-	-	19,660,017	14.5%	2,850,702
B30A Bridge 30A	5				-	-	-	1,573,883	1,573,883	14.5%	228,213
B30B Bridge 30B	5				-	-	-	5,994,871	5,994,871	14.5%	869,256
B30C Bridge 30C	5				-	-	-	779,890	779,890	14.5%	113,084
Town Centre Bypass	5	2 Lanes	2,300	Lin M	2,658,880	12,630,268	523,751	1,520,633	17,333,533	78%	13,533,946
Int 108 Intersection 108 - with Y2 & Y3	5				-	-	523,751	-	523,751	35.7%	186,979
Section 3	5	2 Lanes - 1 Lanes	2,300		2,658,880	12,630,268	-	-	15,289,149	79.4%	12,139,584
B46 Bridge 46	5				-	-	-	435,430	435,430	79.4%	345,732
B47 Bridge 47	5				-	-	-	1,085,203	1,085,203	79.4%	861,651
Design & Project Management			10%	**					9,054,106	42%	3,829,929
Construction Contingency			15%	**					13,581,159	42%	5,744,893
TRANSPORT TOTALS					12,328,180	73,918,257	2,333,129	14,289,675	125,504,505		53,073,111

*is the averaged apportionment for the piece of infrastructure and/or road segment involved as determined with TRACKS modelling.

**is a percentage of the total construction cost for infrastructure, then apportioned to this Plan based on the Calderwood % apportionment (as determined with TRACKS model).

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Part 5 – Supporting Material

The Section 94 plan is supported by the following documents:

- West Dapto Urban Release Area – Integrated Transport Plan (Aecom, October 2010)
- Road Infrastructure (Section 94) Estimates Review (GHD 2010)
- Yallah Marshall Mount Traffic Study (Bitzios consulting 2013)
- Duck Creek Flood Study (BMT WBM 2012)
- Yallah Marshall Mount Floodplain Risk Management Study (BMT WBM 2013)
- Marshall Mount and Yallah Road Upgrade – Strategic Concept design (SMEC 2015)
- Yallah Marshall Mount Precinct Draft Structure Plan and Infrastructure Costs Report (WCC 2015)
- TRACKS Land Use/Transport models (WCC various)
- Draft West Dapto Section 94 Development Contributions Plan (2016)
- Independent Pricing and Regulatory Tribunal (IPART), Assessment of Wollongong City Council's Draft West Dapto Section 94 Development Contributions Plan, October 2016.

Part 6 – Definitions

In this Plan, the following words and phrases have the following meanings:

Applicant	means the person, company or organisation submitting a development application.
Attributable cost	means the estimated cost for each item in the works schedules set out in Part 4 of this Plan, which may differ from the final actual cost of the item. It will be the value used in determining the amount of any offset of monetary contributions as a result of any works-in-kind proposal.
Contribution	means the dedication of land, the making of a monetary contribution or the provision of a material public benefit, as referred to in Section 94 of the EP&A Act.
Consent Authority	means an authority such as a council or the NSW Department Planning and Environment with powers or delegations to approve or authorise a development consent or complying development certificate.
Council	means the Council of the City of Wollongong and council as defined in Local Government Act 1993: <i>(a) means the council of an area, and includes an administrator.</i>
CPI	means the All Groups Consumer Price Index (Sydney) as published by the Australian Bureau of Statistics.
Embellishment	means the enhancement of any public facility provided by the Council by the provision of services, facilities or works.
EP&A Act	means the <i>Environmental Planning and Assessment Act 1979</i> as amended.
EP & A Regulation	means the <i>Environmental Planning and Assessment Regulation 2000</i> as amended.
LEP	means a local environmental plan made by the Minister under Section 70 of the EP&A Act.
LGA	means local government area

Net developable land

means all land within West Dapto that can be used for economic purposes plus half the width of any adjoining access roads that provide vehicular access, but excluding land:

- that has been identified by the [NSW Department of Planning] to be required for the provision of infrastructure utilising the special infrastructure contributions under section 94EF of the EP&A Act;
- set aside for publicly owned community facilities and/or community services provided or to be provided under this Plan or another contributions plan prepared under section 94 of the EP&A Act;
- set aside for roads provided or to be provided under this Plan or another contributions plan prepared under section 94 of the EP&A Act;
- used as regional RTA roads;
- used as existing roads to be included as part of the proposed road network;
- identified in the Wollongong Development Control Plan 2009 Chapter D16 as being set aside for public open space;
- that is flood affected, below the 1 in 100 year flood level;
- that is located in a high hazard flood zone;
- that is within a core riparian zone or riparian buffer area;
- for public schools and TAFE colleges;
- for publicly owned health facilities;
- for ambulance stations, fire stations & police stations;
- for bus depots, bus/rail interchanges;
- for rail corridors, rail stations & associated parking facilities;
- and
- facilities provided by Sydney Water, Integral Energy or equivalent water, sewer or energy provider.

For the purposes of this Plan, economic purposes are residential purposes and retail, commercial, business, industrial, education and other employment purposes.

Planning Agreement

means a voluntary planning agreement referred to in Section 93F of the EP&A Act.

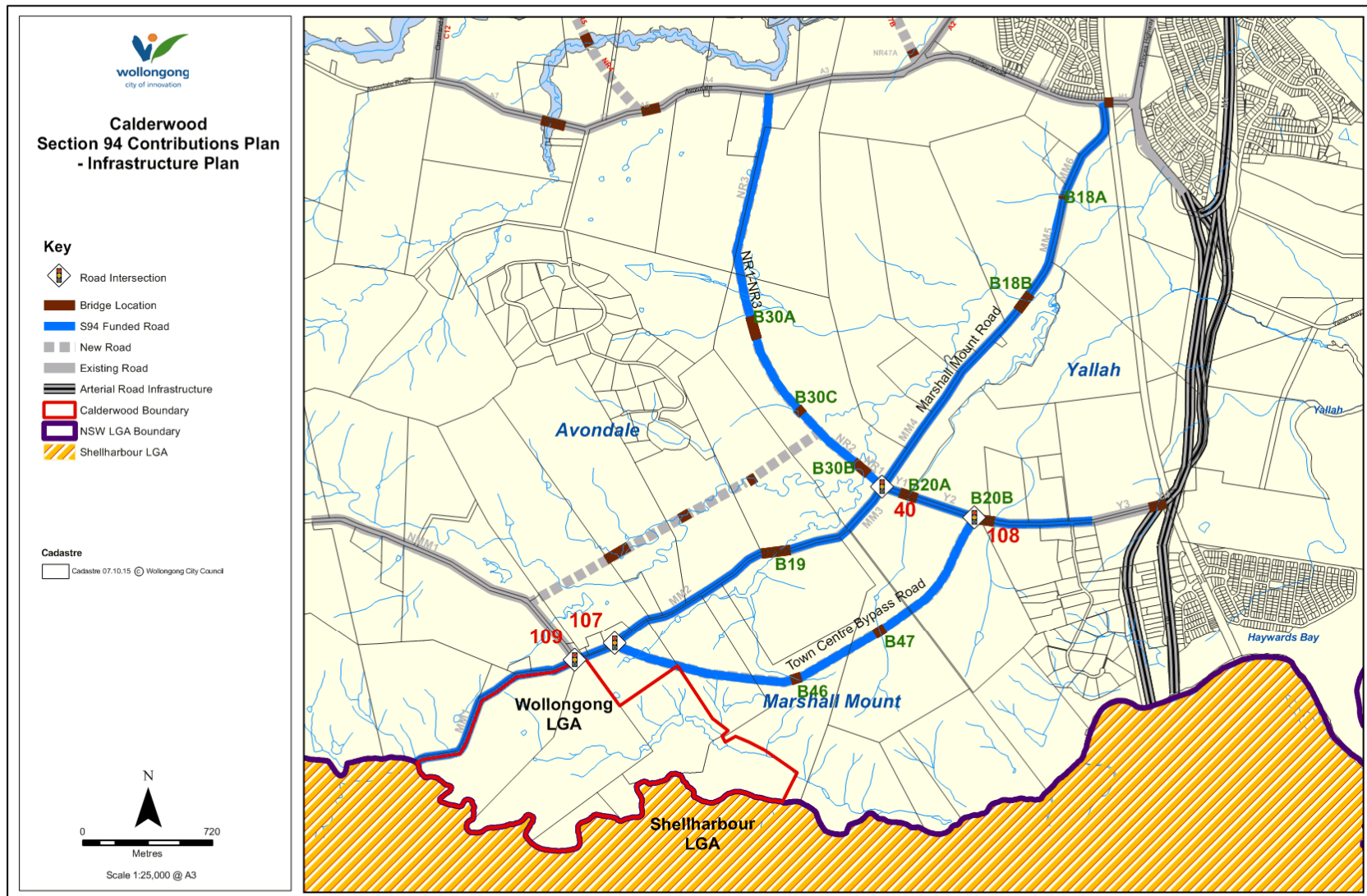
Public facility

means any public amenity or public service, as referred to in section 94 of the EP&A Act, the need for which has increased or been created by development.

Recoupment	means the payment of a monetary contribution to the Council to offset the cost (plus any interest) that the Council has already incurred in providing public facilities in anticipation of development.
Settlement	means the payment of a monetary contribution, the undertaking of a work in kind or the exchange of documents for the dedication of land required as a result of new development.
Special Infrastructure Contribution	means a contribution imposed as a condition of development consent in accordance with Section 94EF of the EP&A Act.
Works in kind	means the undertaking of a work or provision of a facility by an applicant which is already nominated in the works schedule of a contributions plan.
Works schedule	means the schedule of the specific public facilities for which contributions may be required, and the likely timing of provision of those public facilities based on projected rates of development, the collection of development contributions and the availability of funds from supplementary sources, as set out in this Plan.

**Appendix 1 – Calderwood Section 94 Development Contributions Plan
– Infrastructure Plan (Map)**

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28 July 2017

Our Ref: HSK:NER: LEN008/4003

Mr David Farmer
The General Manager
Wollongong City Council
Locked Bag 8821
Wollongong NSW 2500

"Without Prejudice"

Dear Mr Farmer

Calderwood Project – Major Project No. 09_0082

Offer to enter into a Voluntary Planning Agreement with Wollongong City Council

1. Introduction

- 1.1 We act for Lendlease Communities (Calderwood) Pty Ltd and Lendlease Communities (Australia) Limited (collectively, the **Developer**) in relation to the Calderwood Valley Urban Development Project approved pursuant to the Part 3A Concept Plan Approval to MP09-0082 by the Minister for Planning on 8 December 2010 (**Calderwood Project**).
- 1.2 Lendlease Communities (Australia) Limited submitted a letter of offer to enter into a voluntary planning agreement with Wollongong City Council (**Council**) on 27 July 2017. This letter updates and replaces that letter of offer and sets out the terms of the updated offer made by the Developer to Wollongong.
- 1.3 The Developer now makes the following offer to enter into a voluntary planning agreement with Council under section 93F of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) for the payment of monetary contributions for the upgrade of Marshall Mount Road and Yallah Road and NR1-NR3, on the terms set out in this letter (**VPA**).
- 1.4 This letter of offer constitutes an irrevocable offer to Council from the Developer to enter into the VPA on the terms set out in this letter.

2. Land to which the VPA applies

- 2.1 The VPA applies to all of the land comprising the Calderwood Project as approved by the Concept Plan Approval to MP09-0082 (**Land**). The Land is shown within the red line on the plan attached at Schedule 1.

3. Development to which the VPA relates

- 3.1 The VPA will apply to the development the subject of the Calderwood Project including to the extent it is modified from time to time (**Development**).

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4. Nature of public benefits to be made under the VPA

4.1 The VPA will require the Developer to provide monetary contributions as follows:

- (a) From the first lot to be created by a plan of subdivision other than a lot created pursuant to the approval to the Stage 1 Major Project Application 09_0083 (**Stage 1 Consent**), up to and including the 4800th lot created by a registered plan of subdivision, the Developer will pay \$4400 per lot.
- (b) For the 4801st lot proposed to be registered up to and including the 6000th lot, the Developer will pay \$1000 per lot.
- (c) No development contributions will be payable by the Developer on lots registered in excess of 6000 lots,

(collectively, **Monetary Contribution**).

4.2 For the purpose of determining the trigger at which time payments are to be made and for the purpose of calculating the monetary payment, all lots created and registered pursuant to the Calderwood Project will be included in the calculation of lots.

4.3 As development contributions were provided pursuant to the Stage 1 Consent, no further development contributions will be paid for lots created by the Stage 1 Consent. Notwithstanding this, the lots approved pursuant to the Stage 1 Consent are to be included in the calculation of the number of lots proposed to be registered as set out in paragraph 4.1.

4.4 The VPA will require that following the initial payment, further payments will be made prior to the issue of a subdivision certificate in respect of a plan of subdivision that when registered, would create the last allotment for the relevant payment stage.

4.5 The initial payment under the VPA will be required to be made on the earlier of:

- (a) 30 June 2026; or
- (b) registration of the plan of subdivision that when registered would create the 2,500th lot (**Initial Payment**).

The Initial Payment will be calculated at \$4,400 per lot for the first lot created by a plan of subdivision approved pursuant to a development consent granted subsequent to the lots approved by the Stage 1 Consent up to lot 2500. If the Initial Payment becomes payable on 30 June 2026, the payment will be calculated on a pro-rata basis for the number of lots registered at 30 Jun 2026.

4.6 Further payments will be made prior to:

- (a) if the Initial Payment becomes payable on 30 June 2026, registration of the plan of subdivision that when registered would create the 2,500th lot (\$4,400 per lot registered subsequent to the Initial Payment up to lot 2500);

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- (b) registration of the plan of subdivision that when registered would create the 3,000th lot (\$4,400 per lot for lots 2501 to 3000);
- (c) registration of the plan of subdivision that when registered would create the 3,500th lot (\$4,400 per lot for lots 3001 to 3500);
- (d) registration of the plan of subdivision that when registered would create the 4,000th lot (\$4,400 per lot for lots 3501 to 4000);
- (e) registration of the plan of subdivision that when registered would create the 4,800th lot (\$4,400 per lot for lots 4501 to 4800); and
- (f) registration of each plan of subdivision that when registered would create lots 4,801 to 6,000 (\$1,000 per lot created by the relevant plan of subdivision),

or at other times as agreed by the parties. A reference to a "lot" above means a lot which is part of land identified in a development application for subdivision which is intended to be developed by the construction of one or more dwellings and is not intended to be further subdivided prior to the construction of those dwellings.

- 4.7 The VPA will require that the Monetary Contributions be indexed pursuant to the Sydney Consumer Price Index (All Groups). A formula for indexation will be provided in the VPA.
- 4.8 The VPA will require that Council must only use the Monetary Contribution for upgrade works to Marshall Mount Road, Yallah Road and NR1-NR3.
- 4.9 The VPA will provide that Council agrees to refund to the Developer the applicable amount of the Monetary Contribution (or part thereof) if Council has not undertaken the upgrades to Marshall Mount Road or Yallah Road or NR1-NR3 by a date or milestone to be agreed.
- 4.10 Subject to paragraph 4.11, the VPA will provide that Council agrees to refund to the Developer the applicable contributions amount (or part thereof):
 - (a) if the upgrades to Marshall Mount Road or Yallah Road or NR1-NR3 are carried out by or funded by another authority; and/or
 - (b) if Council is directed by the Minister to impose a special infrastructure contribution in relation to the Land pursuant to section 94EF of the EP&A Act for purposes including funding road upgrades to Marshall Mount Road or Yallah Road or NR1-NR3.

- 4.11 The VPA will include a mechanism for the timing of the refund and a mechanism for determining the amount of the refund including where upgrades are partially funded by another authority or a special infrastructure contribution.

5. Time when the VPA would be entered into

- 5.1 The VPA will be publicly exhibited in accordance with the requirements of the EP&A Act and *Environmental Planning and Assessment Regulation 2000*. If following public exhibition Council determines to enter into the VPA, both parties will use best endeavours to execute the VPA as soon as reasonably practicable.

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6. Commencement of the VPA

- 6.1 The VPA will include a provision to the effect that the VPA operates and becomes legally binding on both parties if the VPA is entered into as required by clause 25C(1) of the Regulation.

7. Application of s94, s94A and s94EF to the Development

- 7.1 The VPA will exclude the application of section 94 and 94A of the EP&A Act (or equivalent provisions such as local infrastructure contribution requirements as a consequence of any reforms to planning legislation) to the Development on the Land, to the extent that the Development is to be carried out on any part of the Land subject to:

- (a) If prior to the issue of a subdivision certificate that creates one or more allotments on any part of the Land, the VPA has not been registered on title to any part of the land which is the subject of the subdivision certificate (**Unregistered Land**), then prior to the grant of any such certificate, the Developer must procure registration of the VPA on the Unregistered Land.
- (b) Where a person who is not a party to the VPA applies for development consent for the subdivision of Unregistered Land (**Relevant Development Application**) and paragraph 7.1(a) has not been complied with in respect of all subdivision contemplated by the Relevant Development Application, Council may:
 - (i) notify the Developer in writing that a Relevant Development Application has been made; and
 - (ii) if, after 20 Business Days following the notice given to the Developer, the steps in paragraph 7.1(a) have not been complied with, Council must elect to exclude the Relevant Development Application from the operation of the VPA so that sections 94 and 94A apply to the Relevant Development Application.

- 7.2 The VPA will not exclude the application of Section 94EF to the Development.

8. Registration and restrictions on dealings

- 8.1 The Developer agrees to procure the registration of the VPA under the *Real Property Act 1900* (NSW) in the relevant folio of the Register as soon as reasonably practicable after:
- (a) the date the VPA is executed, in relation to any part of the Land that the Developer owns at the date of execution of the VPA;

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- (b) the date on which the Developer becomes the registered proprietor of that part of the Land, in relation to parts of the Land that the Developer is currently not the registered proprietor of on the date the VPA is executed; and
 - (c) in relation to any other part of the Land not specified in (a) or (b), the date that the Developer enters into arrangements with any person which entitles the Developer to require that person to assist, cooperate and to otherwise do all things necessary for the Developer to procure the registration of the VPA under the *Real Property Act 1900* (NSW).
- 8.2 The VPA will not be registered over land that forms part of Stage 1 Consent.
- 8.3 The VPA will include a provision requiring the Developer to take all practical steps to procure the registration of the VPA on the title of the Land as soon as reasonably practicable after the triggers in paragraph 8.1 occur.
- 8.4 The VPA will include a provision that in the event that the Developer sells the Land or assigns its interests under the VPA or novates the VPA with Council's consent, to a third party (other than a related body corporate) (**Incoming Party**), then the Developer is not to settle on the sale or assignment or novation of its interest under the VPA to the Incoming Party unless before settlement:
 - (a) it has procured the execution by the Incoming Party of an agreement in favour of the Council on the same terms as the VPA, and;
 - (b) the Developer is not in breach of the VPA at the time of settlement of the sale, assignment or novation.
- 8.5 The provision in relation to the sale or transfer of the Land or assignment or novation of the Developer's interest in the Land would expressly exclude the following:
 - (a) where the transfer of any part of the Land is to the Minister for Planning or Shellharbour City Council pursuant to a planning agreement;
 - (b) its application where the Developer's obligations under the VPA have already been released or discharged;
 - (c) the Developer is not required to transfer its obligations under the VPA to any mortgagee or chargee;
 - (d) the Developer is not required to transfer its obligations under the VPA to any purchaser of a residential lot.
- 8.6 The VPA will require that Council agrees to remove the registration on title as soon as practicable after the subdivision certificate is issued.

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9. Security and enforcement

- 9.1 Registration of a VPA on the title of the land (see 8.1 above) will be available as a means of securing enforcement.
- 9.2 If prior to the issue of a subdivision certificate that creates one or more lots on any part of the Land, the VPA has not been registered on title of any part of the land which is the subject of that subdivision certificate (**Unregistered Land**), prior to the grant of any such certificate, the Developer must either:
- (a) provide security to the Council in the form of a bank guarantee for the face value equivalent to the sum of the Monetary Contribution that the Developer will be required to pay in relation to the granting of the subdivision certificate over the Unregistered Land; or
 - (b) in lieu of a Bank Guarantee, procure registration of the VPA on that Unregistered Land.
- 9.3 In addition, the restriction on the issue of the subdivision certificates provides further security for the performance of the Developer's obligations under the VPA as the Developer will be unable to register new lots unless payment of the Monetary Contribution for the relevant payment stage has occurred as set out in paragraph 4.4.

10. Release and discharge of VPA

- 10.1 Subject to the requirement in clause 8.6, the VPA will include a provision that once the Developer has completed the Development approved pursuant to the Calderwood, the Council is to do all things necessary to remove the VPA from the title of the Land within 15 business days of receipt of a written notice from the Developer requesting removal of the VPA from the title of the Land.

11. Resolution of disputes

- 11.1 Any dispute under the VPA is to be resolved by mediation in accordance with processes to be specified in the VPA.

12. Legal costs

- 12.1 The VPA will provide that the Developer is to pay the Council's reasonable legal and other costs incurred relating to the VPA.

13. Other matters

- 13.1 The VPA will include a provision to the effect that the VPA does not limit or fetter in any way the exercise of the Council's functions in assessing and determining any development application for the Development and in particular does not impose any obligation on the

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Council to grant development consent to any development application proposed as part of the Development.

13.2 The VPA will also include administrative provisions concerning:

- (a) notices;
- (b) entire agreement;
- (c) governing law and jurisdiction – in this case New South Wales;
- (d) the process for amending the VPA;
- (e) waiver; and
- (f) execution of the VPA in counterparts.

Way forward

We consider that the interests of the broader community are well served by entering into the proposed VPA which would provide the most appropriate and timely mechanism for the collection of development contributions for the Calderwood Project from the Developer by Wollongong Council.

The proposed form of the VPA is currently being finalised.

We look forward to your response.

Yours sincerely



Harshane Kahagalle
Partner

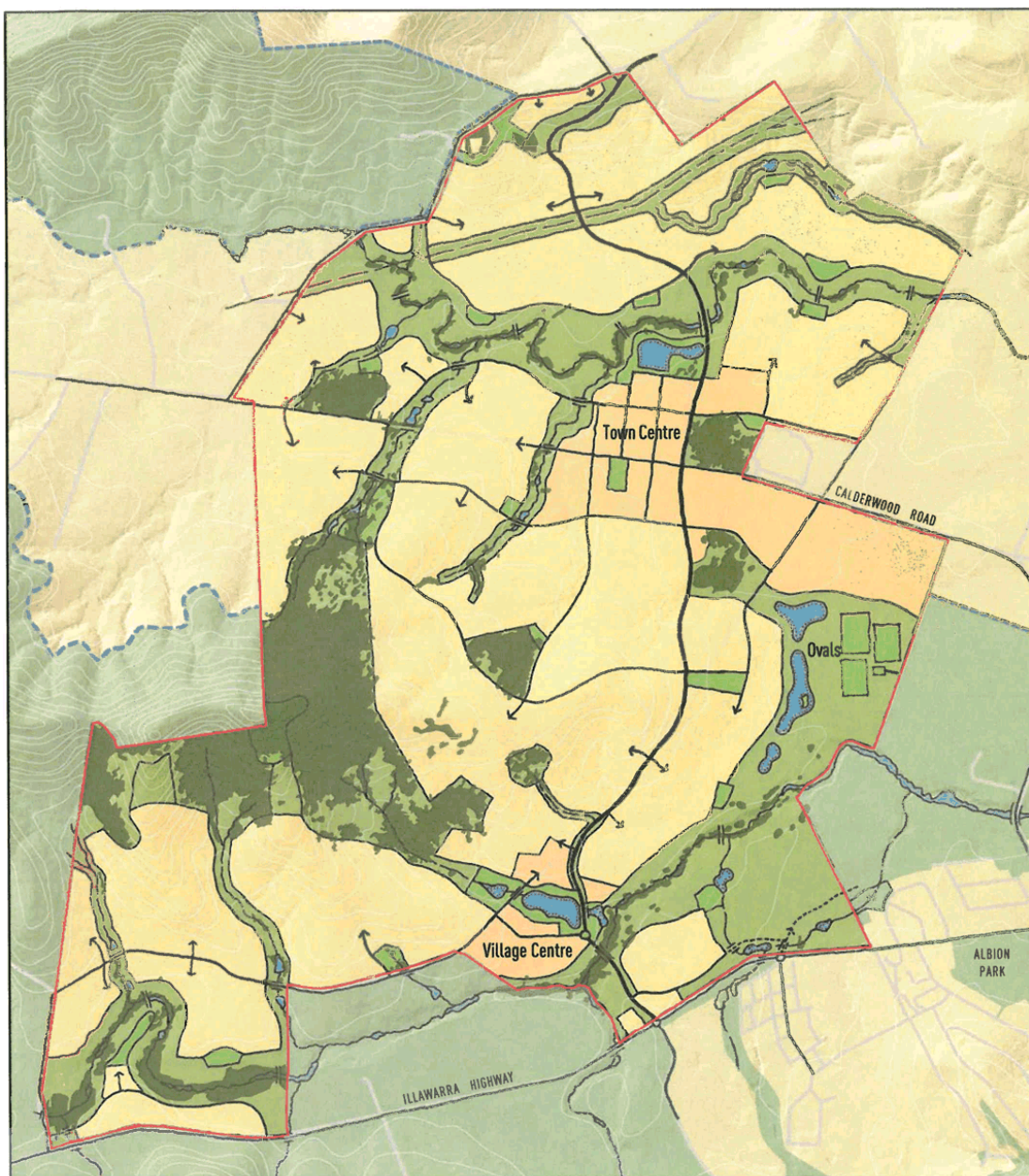
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Schedule 1



Concept Plan

Part 3A | Calderwood Urban Development Project

- Town and Village Centres**
Mixed Uses including Retail, Employment, Residential, Learning and Community Amenities
- Residential Neighbourhoods**
- Parks**
eg Citywide, district and local parks
- Principal Open Space and Drainage**
eg Environmental Conservation, Environmental Management and Drainage Corridors
- Indicative Water Bodies**

Delfin
Land Lease



0 100 500 1,000
m

Subject to verification and detailed site survey 1:20,000 @ A4 10m Contours February 2011

ITEM 2

FUNDING FOR SYNTHETIC FOOTBALL PITCH - IAN MCLENNAN PARK, KEMBLA GRANGE

Council on 17 July 2017 unanimously resolved that:

- 1 Councillors be provided with an urgent briefing on Monday 24 July which details –
 - a the shortfall in funding for a synthetic football pitch at Ian McLennan Park; and,
 - b the feasibility and budgetary implications of Council providing up to an extra \$700k to assist to assist with the implementation of this project.
- 2 A report with options be brought to the next Council Meeting on 31 July 2017 on the funding for a synthetic football pitch at Ian McLennan Park and the report include:
 - a details of extra funding support from Football South Coast and the State Government to fund the completion of the project; and
 - b information on the feasibility of staging the project and/ or funding it over the present and the next budgetary period (2018-2019).

This report presents current budget estimates and funding options for the project. It also outlines staging for delivery.

RECOMMENDATION

- 1 Council note the options outlined in this report.
- 2 In addition to its current financial commitment, Council commit a maximum of \$700,000 from the Strategic Projects Reserve in 2018-19 to allow the Ian McLennan Park synthetic football pitch at Kemplla Grange to progress to tender.
- 3 Council work with Football South Coast to explore all other options on the project proceeding and collaborate with the NSW Government to secure additional funding for the project.
- 4 Council officers prepare a plan for the delivery of multiple synthetic football pitches across the LGA, including partnerships and financial contributions, for the consideration of Council in the annual planning process.

REPORT AUTHORISATIONS

Report of: Jenny Towers, Manager Property and Recreation (Acting)
Authorised by: Kerry Hunt, Director Community Services (Acting) - Creative and Innovative City

ATTACHMENTS

- 1 Area Site Map
- 2 Site Map with Proposed Location of Synthetic Pitch
- 3 Smart Guide to Synthetic Sports Fields

BACKGROUND

Strategic Context

Council recently adopted the Sportsground and Sporting Facilities Strategy 2017-2021. This strategy guides Council in ongoing sportsground and facility planning and is based on research into participation trends in sport, and working collaboratively with members of Council's Sports and Facilities Reference Group and peak sporting bodies on current and future needs of their sport. The provision of quality sportsgrounds and sporting facilities is critical to the delivery of sport programs for the residents of Wollongong. Ensuring our community has access to appropriate sports infrastructure is a core function of local government.

Council currently has 67 sportsgrounds consisting of 222 playing surfaces consuming 332.8 hectares which represents 13.2% of Council's open space. These are divided into a hierarchy system, namely regional, district and local sportsgrounds catering for 33,159 participants and generate income of approximately \$268K annually for casual hire.

Of note are Council's current regional sporting facilities, the location and associated sports:

North Dalton/Thomas Dalton (Fairy Meadow) - Cricket, AFL and Touch Football
Beaton Park (Wollongong) - Tennis, Basketball, Athletics
Fred Finch Park (Berkeley) – Baseball, Netball
Lindsay Mayne (Unanderra) – Hockey.

Given sport is played all year round, the effective use, management and development of sports grounds and facilities is one of the key drivers for increased participation of players and sustainability of these facilities, particularly with increasing junior level and female participation. The availability and effective management of these council assets is a fundamental requirement for sports participation throughout our city.

The adopted strategy notes that "Council support partnering initiatives that provide for synthetic sports surfaces at key locations" and a specific action to "work with the sporting community on identifying funding sources to support the design and construction of a synthetic football pitch". The Strategy also recognises the need for improvements to lighting, drainage and fencing to be investigated across Council's sportsground portfolio.

Development of the concept

Since 2007 synthetic football pitches have appeared as a key solution to the issues facing the code of football (soccer) in Australia. These issues include increased participation levels, limited greenfield sites in metropolitan areas, increased costs of irrigation and grass maintenance, poor drainage, grass fields being impacted by compaction and influencing the standard of play and increasing the risk of player injury.

The demand for new generation synthetic football surfaces to address these issues has led to the construction of over 100 synthetic football surfaces throughout Australia with over 30 surfaces in New South Wales. These installations have been actively pursued by co-funded projects including football associations, private schools, State Government and Local Government authorities. This trend has supported the inclusion of synthetic football pitches in Council's long term strategy with the intention to establish facilities across the north, central and southern areas of the city in partnership with the sporting community, with the total portfolio eventually catering to the diverse needs of the sport.

Following the formal unification of the sport at a local level, Football South Coast (FSC) first approached Council in 2010 identifying the need for their sport to have a regional home for the sport to cater for local junior player development and provide a potential training and competition base for its current and future state and national teams. This would facilitate provision of the region's junior development programs [Skills Acquisition Program] for boys and girls with a catchment area covering from Helensburgh to Kiama, Picton and Mittagong areas.

In addition to growing the roots of the sport, a regional venue enables men's and women's NSW premier league teams to be hosted in competitions with the field meeting the Football NSW specification requirements. Similarly, a regional venue of this standard, strengthens the ability to host state titles. Similar events held over five days in the Shoalhaven had an estimated economic benefit of over \$400,000 to the local economy.

Whilst consideration of a synthetic football pitch was a key feature of early planning of the Cleveland Road sportsgrounds at West Dapto, flooding constraints makes this site unsuitable for such infrastructure.

In 2015, FSC applied through Council's Sports and Facilities Reference Group's Sports Planning Process for consideration of funding towards development of the city's regional synthetic football pitch at Ian McLennan Park at Kembla Grange.

Ian McLennan Park location was identified as the ideal location for the city's first synthetic football pitch given the existing infrastructure onsite including the covered grandstand for 400 spectators (an essential requirement for Football NSW for state level competition), extensive car parking, three fields and the location presents no potential noise and lighting impact on adjoining residents from training and competition. The proposed location is also adjacent to a key future arterial road link to West Dapto which will provide good access to the site.

The current licensee of the sportsground, South Coast United Football Club, is supportive of the proposal and has undertaken complex negotiations with FSC regarding the handover of the site and the club's ongoing interest in the growth of its junior and senior club being protected through a sub licence agreement. Such an agreement would articulate the available hours for training and competition, maintenance responsibilities regarding waste removal and outlines hire costs on fields and lighting. It is understood that the interests of the South Coast United Club in the site would be recognised should the proposed licensee, FSC not continue to pursue its interests in this location.

The project application from FSC in Council's Sports Planning Process, noted the continued growth of the sport in the city with junior and women's participation levels a key area of unmet demand. Women's participation in the sport is a particular area of growth. The project was hence favourably received by the Sports and Facilities Reference Group and received the No 1 priority ranking through the sports planning process.

In May 2016, FSC requested Council partner in the funding and delivery of a synthetic pitch at Ian McLennan Park given its long held vision of enhancing the city's reputation in hosting local, state and national football teams to the city at an all-weather venue.

The funding partnership involves the following:

- \$500,000 from the NSW Governments Club Grants
- \$600,000 from the FSC football community funds
- \$700,000 from Council, and a further,
- \$60,000 from the NSW Government's Community Building Partnerships Grant

The total confirmed funding towards the project is \$1.86M, which was consistent with the typical preliminary synthetic football pitch cost estimates by published 2014 industry sources.

As part of Council's preliminary project planning in early 2017, Council officers undertook a comprehensive site assessment and engaged a specialist consultant, Smart Connection Consultancy, to provide a more detailed design and scope of works for the design and construct tender documentation. This preliminary due diligence work has included provision of a schedule of costs to confirm the estimated project budget. To date this work has resulted in current commitments of \$196,000 in design costs associated with the project.

As a result of this work, a number of site related issues have been identified including sub surface drainage and insufficient current power supply to support the necessary lighting of the synthetic pitch. Given these constraints, the preliminary estimated budget for the total project, including design and construction, totalled \$3.2M resulting in a budget shortfall of approximately \$1.4M.

Council officers have been meeting with the FSC Project Team on a regular basis project and have collaboratively refined the scope to progress the project through to the pre-tender documentation stage.

The defined project scope encompasses:

- Synthetic pitch to main field at 68m by 100m to comply with all Football NSW requirements.
- Lighting the main field to 200 lux and including the connections to light the second grass field.
- Sportsfield fencing around the main pitch.
- Installation of player dugouts to the synthetic pitch.
- Installation of Steel Palisade style Perimeter fencing around the entire site boundary.

PROPOSAL

The proposal for a synthetic football pitch to be located at Ian McLennan Park at Kembla Grange has significant merit given the current football infrastructure onsite and FSC reaching agreement with the existing licensee.

As indicated earlier in this report, Council has worked closely with FSC to bring the project within the existing budget allocation. This has included a revision of the scope, consideration of alternate locations, responsibility for project management, and alternate funding sources. This includes FSC committing to an additional \$200,000 towards construction contingency costs. FSC is also pursuing additional funding via the NSW and Federal Government.

Despite efforts to date, the current detailed site assessment and preliminary estimates on the proposed synthetic football pitch at Ian McLennan Park indicate that there remains insufficient funding available to deliver the complete project.

Council has three options to consider -

- A Allocate the balance of the project estimate from the Strategic Projects Reserve to see the project proceed to tendering in accordance with the requirements of Section 55 (Tendering) of the Local Government Act 1993.
- B In addition to its current financial commitment, Council commit a maximum of \$700,000 from the Strategic Projects Reserve in 2018-19 to allow the Ian McLennan Park synthetic football pitch at Kembla Grange to progress to tender. This option also requests FSC continue to collaborate with its partners including the NSW Government to secure all remaining estimated funding for the project.
- C Council inform FSC that it remains committed to the current \$700,000 funding allocation towards the project and provide no further contribution.

The existing project scope has been confirmed as the bare minimum requirement for the synthetic football pitch to operate. Therefore, Option C is likely to see the project unable to proceed to tendering and delays in progressing the project will put at risk the NSW Government's Clubs NSW grant of \$500,000 and Community Building Partnerships funding of \$60,000.

Should Option B be resolved and the project proceed, FSC would, through a formal licence agreement and at the completion of construction, assume all ongoing maintenance responsibilities for the synthetic football pitch including scheduled top synthetic surface renewal estimated to occur in eight to 10 years following commissioning. Under this arrangement South Coast United Football Club would retain access via a sub-licence. On this basis, a 20 year licence with FSC is proposed.

The staging of the project has been reviewed based on the revised minimum scope and consultation with FSC. It is anticipated the construction of the project will commence in the winter of 2018 and span two financial years.

Noting one of the key actions of Council's Sportsground and Sports Facilities Strategy 2017-2021 is to *"Work with the Sports Associations and State Government to explore funding options for the provision of synthetic surfaces at key locations"* it is recommended that Council continue to collaborate with its partners and support the project as outlined in Option B.

As indicated in the body of this report, football is the fastest growing sport nationally. The Australian Sports Commission's official AusPlay 2016 survey shows football is once again the most popular sport to play in the country with over 1.1 million participants recorded (up 17,828 from the previous survey). This is consistent with local participation, where, of the 35,000 plus registered participants in sport, 11,300 play football.

Given the continued growth of the sport across the city, it is further proposed Council investigate options for the implementation of the Sportsgrounds and Sports Facilities Strategy, particularly the delivery of multiple synthetic football pitches across the local government area. To this end, it is proposed Council officers prepare a plan for the new Council on the delivery of synthetic football pitches across the LGA, including financial impacts, partnership opportunities and other methods of funding.

CONSULTATION AND COMMUNICATION

Council officers have been in contact with FSC board members and its project team throughout the preliminary stages of the project. These discussions have led to the scope of the project being refined and estimates associated with the project further scrutinised. FSC has been formerly requested to further explore all available funding options with its partners to see the project progress to tendering.

Council's Sports and Facilities Reference Group has also been informed of the challenges and constraints this key project has encompassed to date in design investigations and that the detailed budget estimate indicates a significant budget shortfall.

PLANNING AND POLICY IMPACT

The provision of a community focused synthetic football pitch in our city is a key contributor toward delivering and supporting a number of our Community Goals in Wollongong 2022, which include:

- Community Goal 2 – We have an innovative and sustainable economy
- Community Goal 3 – Wollongong is a creative and vibrant city
- Community Goal 4 – We are a connected and engaged community
- Community Goal 5 – We are a healthy community in a liveable city.

It contributes to the delivery of Wollongong 2022 goal “We are a Healthy Community in a Liveable City”, delivering specifically on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
5.1.6 Urban areas are created to provide healthy living environment for our community	5.1.6.2 Provide an appropriate and sustainable range of quality passive and active open spaces and facilities	Construct synthetic football pitch at Ian McLennan Park, Kembla Grange
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	Coordinate the Sports facilities planning priorities program with the Sports and Facilities Reference Group

RISK ASSESSMENT

The most significant risk at this stage is security of funds to deliver the project. The partnership currently consists of commitments from the NSW State Government, Football South Coast and Wollongong City Council to the value of \$1.86M. This is a significant allocation of funds. Failure to confirm the financial viability of the project, due to lack of additional funds, would require Council's contribution be retained and/or returned at any stage of the process. Further delays to the project may result in cost escalations and an extended delay further increases the risk for the NSW Government funding agreements to not be met by FSC and subsequent failure of the project to proceed.

As indicated through this report, Council undertook a comprehensive site assessment and obtained a more detailed design and scope of works for the design and construct tender documentation. This preliminary due diligence work has also included a schedule of costs to confirm the estimated project budget. These investigations demonstrate significant complexities on the site. Each of these have been identified and considered in the revised scope and phasing of this project with appropriate contingencies embedded. Proceeding to market will test the price and confirm the currently untested estimates.

As part of the review of the project, FSC has proposed to Council to take on project management responsibility for the project. This would mitigate overall financial risk to Council however may simply pass that risk to FSC. If this option was to be pursued appropriate governance and reporting arrangements would need to be negotiated, with FSC being required to engage suitably qualified project managers. At this stage, it is not recommended to pursue this offer.

An additional risk identified relates to perceptions regarding the impact of synthetic surfaces on the health and wellbeing of its users, and on the environment. Significant research development into synthetic surfaces has been undertaken over the past decade.

In the past decade the technological refinement of synthetic football turf has resulted in the emphasis on development being based on -

- Infill – to ensure ball, boot and player interactions play as a natural field;
- Yarn – to reflect blades of grass, being designed to stay vertically upright and soft on players skin; and
- Shock pad – introduced to provide a safer and more consistent playing surface.

The result of this ongoing research is that synthetic football fields are now being embraced by local junior and senior teams, and elite players, both in Australia and globally.

The benefits in installing synthetic surfaces are:

- **Climatic** - Under drought and water restrictions or excessive rain conditions, it can be difficult to maintain a safe and suitable natural grass surface. Synthetic sports surfaces in general are not affected by reduced or increased rainfall;
- **Usage** - There is a limit to the hours natural turf can be used before there is a significant impact on surface condition. A high quality natural turf surface may only withstand use for up to 20 hours per week before it starts to deteriorate. Synthetic surfaces can sustain significantly higher use than natural grass with 60 hours plus per week as an acceptable expectation;
- **Maintenance** - Maintaining a natural turf surface can be time consuming, expensive and generally requires an experienced and qualified horticulturalist to manage turf. Synthetic surfaces require programmed but lower ongoing maintenance and removes the need for end of season major renovations.
- **Consistency and quality of play** - Synthetic surfaces provide a consistent and safe surface all year round for all sports to play on, improving the quality of performance for each sport compared with natural playing surfaces; and
- **Health** - By allowing play on the surface more often and under safer conditions, enhances the physical health of participants.

The construction of synthetic surfaces for sport has also drawn some negative perceptions including concern around how the technology is made, managed and/or how it integrates into the local environment.

Common concerns relating synthetic surfaces include:

- **Health risk** – Research indicates that there are no additional health risks associated with playing on the infill based (from recycled tyres) synthetic surfaces. (Refer Attachment 2 – Smart Guide to Synthetic Sports Fields Rubber Infill).
- **Player comfort and safety** – For injuries such as skin abrasions, effectively maintained surfaces with grass blades being upright minimise the likelihood of player injury.
- **Loss of open space/amenity** – Planning consultants note that there is a perception from sections of the community that synthetic installations will translate to loss of open space. This perception needs to be carefully considered in the design of sports ground landscapes in residential areas.
- **Cost** – The initial capital cost of construction a full size synthetic football pitch only is estimated around \$1.2M - \$1.6M (subject to site conditions) is high but compared with the number of participants and the cost per hour of use, the synthetic surface could be as little as 25% of the cost of equivalent natural turf over the life of the surface.

FINANCIAL IMPLICATIONS

The proposed synthetic football pitch for Ian McLennan Park at Kembla Grange is a key project for the fastest growing sport in the region. The project has identified funding of \$1.86M through the funding partnership of FSC, the NSW Government and Council in 2017-18.

Based on the detailed site assessment, an estimate of the total project cost, including design and construction of a synthetic football pitch, is \$3.2M.

Council's Strategic Project Reserve (Internally Restricted Cash) has the capacity to provide funding of \$700,000 towards the project in 2018-19.

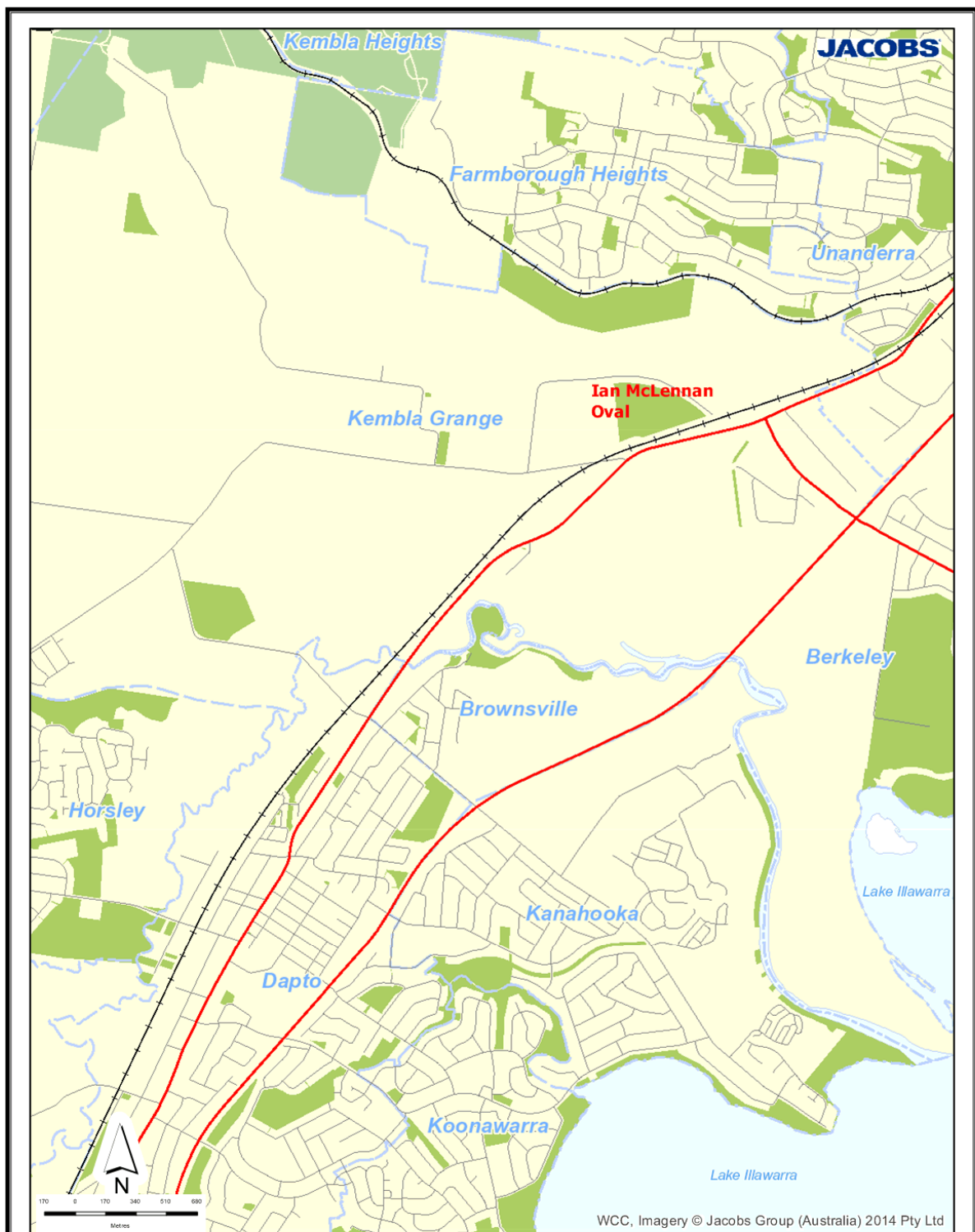
CONCLUSION

The construction of a synthetic football pitch proposal at Ian McLennan Park, Kembla Grange is a key Annual Deliverable identified in Council's Annual Plan. The project is also consistent with Council's adopted Sportsground and Sports Facilities Strategy 2017-2021.

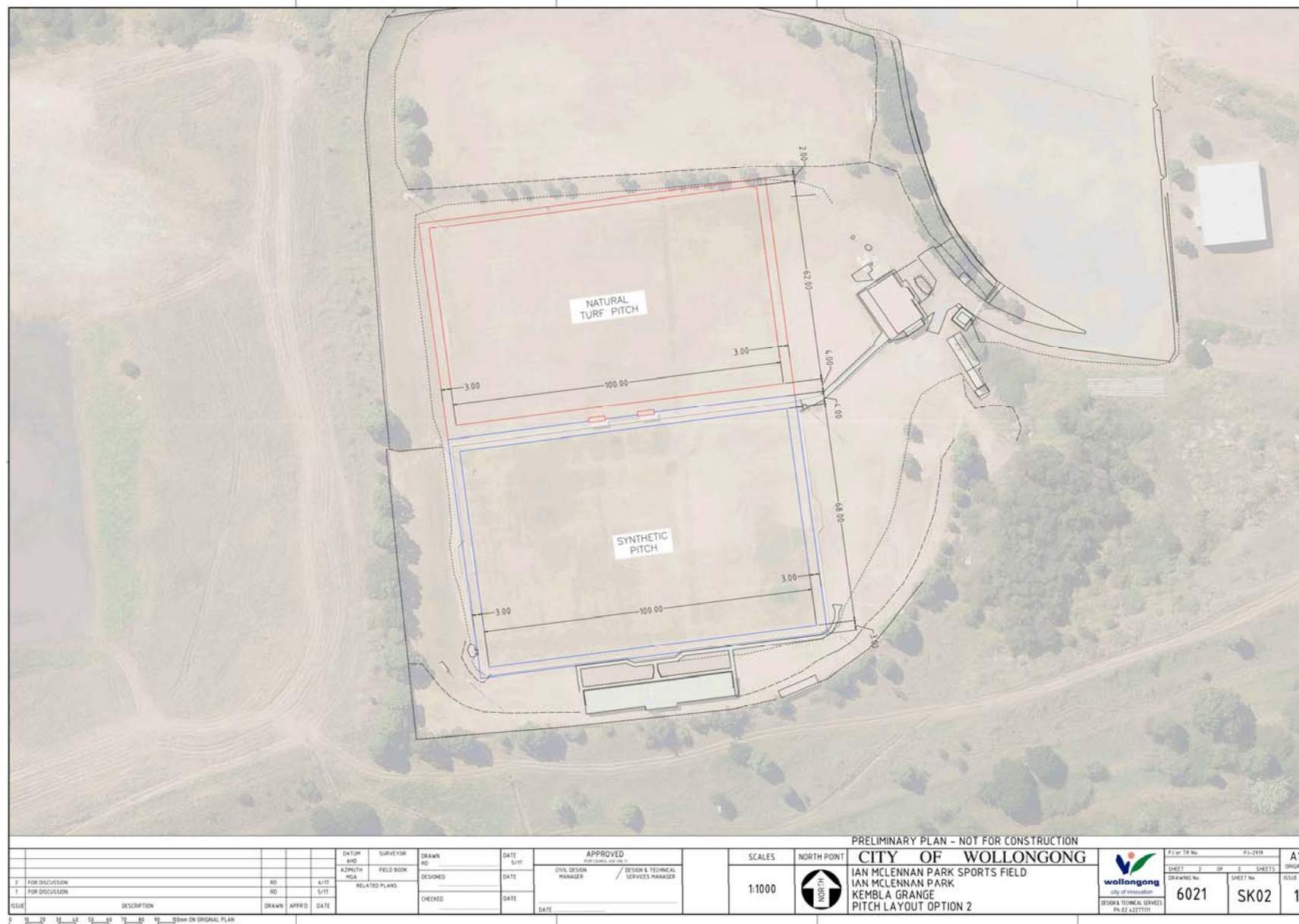
The strategy notes that *"Council support partnering initiatives that provide for synthetic sports surfaces at key locations"* and a specific action to *"work with the sporting community on identifying funding sources to support the design and construction of a synthetic football pitch"*.

The preliminary estimates on the proposed synthetic football pitch at Ian McLennan Park indicate to Council that the projected costs exceed the current \$1.86M allocated to the project.

Given the importance of this project to a sport which continues to experience growth in participation and noting the region currently does not have an all-weather football venue, the proposal for Council to contribute further funding towards the project is submitted for Council's consideration.



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THE SMART GUIDE TO SYNTHETIC SPORTS FIELDS RUBBER INFILL



The Smart Guide to Synthetic Sports Fields Rubber Infill

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Without their support, we would not be able to achieve our goal to enhance the knowledge of the industry on sports turf fields. We would also like to thank the colleagues, clients and organisations that we have completed work for in the sports industry. It is your appetite for change and progress that makes our job so rewarding.

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Disclaimer

Smart Connection Consultancy do not accept any liability for the accuracy of the information provided. All material and information that is provided from the third parties is done so in good faith to assist organisations understand the key issues around the infill used in synthetic sports fields. We will continually update the Smart Guide to attempt to keep the industry updated.



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Martin has worked in the sport and active recreation industry for 37 years, managing a diverse portfolio of facilities including leisure centres, sports facilities, parks and open spaces, athletic tracks, synthetic sports fields, golf courses and a specialist sports and leisure consultancy practice.

He clearly understands strategic and the political environment of sport, whilst also providing tactical and innovative solutions. Martin is an international speaker whose expertise is recognised for aligning synthetic surfaces and facility development, with player pathways, supply and demand forecasting and participation strategies.



Photo 1: Martin Sheppard receiving the PLA (Vic/Tas) Award for the 2015 Research Project for the Smart Guide to Synthetic Sports Surfaces.

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The Smart Guide to Synthetic Sports Fields Rubber Infill

Welcome and Purpose

The popularity of synthetic sports surfaces used by many sports, local governments and within the education sector in Australia has significantly grown in the last two decades to complement the natural turf fields. This enables the local community to participate in sport when the demand on natural fields cannot be accommodated.

There are some community groups who have concerns about aspects of the synthetic sports field systems having a negative impact on the players, the environment and the community. Media raised these concerns yet a gap in their coverage are the lack of facts.

The aim of this Smart Guide is to address this gap and provide objective evidence from around the globe to assist organisations with their decisions to embrace the technology to supplement their natural turf fields. It is anticipated that this should guide community groups in appreciating the benefits and use of such investments.

Smart Connection Consultancy is passionate about working with organisations that are keen to encourage their community to be more active. Sport is one of the vehicles to achieve this and provides many physical, community and health benefits.

Smart Connection Consultancy has embraced the use of sports field technology, whether that be natural, hybrid, synthetic or alternative sports surfaces to complement natural fields, as a vehicle to promote and provide the community with opportunities to be more active more often.



The Smart Guide to Synthetic Sports Fields Rubber Infill

Introduction

The growth of the Australian population over the past 20 years has seen an increase of over five million¹ (31.36%), and the expected population in the next 15+ years will rise to be over 31 million² (Approx. 40% increase).

The ability to cater for the growing demand of natural playing fields is causing concern to many inner city local governments. These natural turf fields are under greater capacity pressure and this results in increased stress levels to the natural turf. Many local governments are embracing the synthetic sports turf technology to complement natural turf and satisfy community need.



Photo 2: NSW Council field in typical mid-season condition for their natural turf field

The benefits of synthetic sports turf technology caters for increased playing capacity, often more than 60 hours a week, and offering a consistency that is not detrimentally impacted by drought or excessive rain. Most football codes in Australia benefit from this technology and the growth in synthetics fields for Soccer, Rugby (Union and League), AFL and multi-sports fields, continues to increase.

At times, there has been media coverage that has raised concern about the perceived health risks of

adopting the technology. The key health risk perceptions are based on:

- Truck and car rubber tyres which are recycled for the football field infill and commonly known as Styrene Butadiene Rubber (SBR) or crumb rubber. These may have chemicals or heavy metals within the rubber that may be carcinogenic if released or exposed to users or the environment; and
- The safety to players is compromised by playing on synthetic fields.

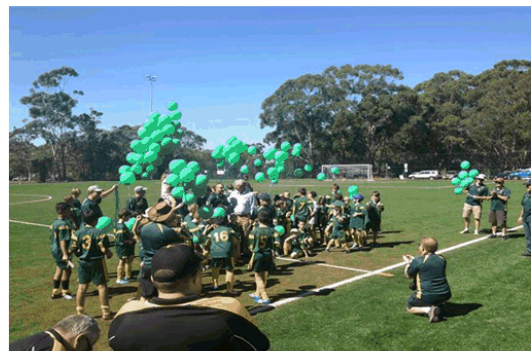


Photo 3: NSW Field after synthetic field installed

This Smart Guide addresses key issues in each section including:

- The purpose and types of infill
- Health issues - Frequently asked questions
- Environmental concerns - Frequently asked questions
- Global considerations and regulations - Frequently asked questions
- Conclusion and suggestions on how to reduce risk when purchasing synthetic fields with infill

¹ ABS, *Australian Demographic Statistics* (cat. no. 3101.0), Data extracted on 21st December 2016
<http://abs.gov.au/ausstats/abs%40.nsf/94713ad445ff1425ca25682000192af2/1647509ef7e25faaca2568a900154b63?OpenDocument>

² ABS, <http://www.abs.gov.au/AUSSTATS/abs%40.nsf/mf/3222.0>

The Smart Guide to Synthetic Sports Fields Rubber Infill

The Purpose and Types of Infill

The infill within the 3G long grass synthetic turf system aims to provide a consistency between the ball, player, and surface interaction that allows the synthetic system to perform to the required standards.

There are several aspects that need to be considered when choosing the most appropriate infill for a sports field including the:

- Type of infill for the surface;
- Depth and height of the infill compared to the yarn; and
- Amount of infill.

Purpose of Infill

The infill, or lack of it, is needed to assist the performance of the whole grass system, which ensures that the yarn plays a similar role as the soil in natural grass fields. The different types of grass surfaces and infill considerations commonly categorised are:

1) Unfilled

Although the first nylon pitches in the 1960's were unfilled, today the pitch systems are far more sophisticated. Water is used; predominantly for hockey's premium standard - global. Water is applied through an irrigation system immediately prior to play, increasing the speed of the ball interaction with the surface. Technology is now looking for unfilled fields that have similar playing conditions as traditional water based pitches. However, many are sand-dressed.

2) Sand-Dressed

Dressed synthetics surfaces aim to add weight to the carpet to keep the denier pile upright while also maintaining the playing standards for hockey. Some football (soccer) 5-a-side/futsal courts use this type of system as it seems to provide a more durable solution to people using flat training shoes.



Photo 4: Example of a mixed profile of sand and rubber infill

3) Filled Fields

The aim of the filling is to replicate soil in a natural pitch where the grass/synthetic yarn is held upright. The filling can be compiled from rubber, plastics, sand or organic infills. The amount of fill is normally determined by the manufacturer, when they consider the length of grass yarn, the performance outcomes, the shock pad and purpose of the field. For instance, rugby union is to be at least 60mm, whilst hockey can be around 11mm.

Type of Infill

Depending on the manufacturers' systems, there will always be a choice for the purchaser depending upon the affordability and philosophical standing. Some local governments do not like the idea of using recycled types (SBR) due to community perceptions, although these perceptions have been proved unfounded. In essence, there are five types of infill, offering slightly different options, but with the same outcome, namely the performance standards stipulated by the sport(s). The key options are:

1) Crumbed Rubber (Recycled SBR)

The most popular infill in the Asia Pacific region, historically due to the cost-effective price point. Derived from recycled truck tyres that are ground up and recycled. The recycled rubber is metal free, and according to the United States Synthetic Turf Council's (STC) Guidelines, which represents the manufacturers and suppliers of synthetic sports

The Smart Guide to Synthetic Sports Fields Rubber Infill

turf in the USA, the crumb rubber infill should not contain liberated fibre in the amount that exceeds 0.01 percent of total weight of crumbed rubber.

Recycled and shredded rubber is normally 0.5 - 2mm in size, is the least expensive and still provides the necessary sliding and shock absorbing qualities. The shredding of the rubber is normally completed mechanically. Sifting technology is used to ensure that the dimensions are correct. The benefits are it is recycled, economical, UV stable and has a long-life span.

The black rubber has been, according to the UK's Sport and Play Construction Association's (SAPCA) independent Consultant polymer chemist, Dr Bryon Willoughby, "selected to offer optimum performance in a demanding application which requires strength, fatigue and abrasion resistance".³

The ambient and cryogenically shredded rubber can be coated with obscurants, sealers or anti-microbial substance if required. This approach provides a great aesthetic appeal but the additional cost may not be justifiable for many Local Government Authorities (LGA's).

The recycled SBR infill is the most economically viable proposition compared to a premium virgin rubber or organic infill, adding another \$100,000 to a typical rectangular football field. Over the past two years in Australia, there has been a move for purchasers to invest more in the infill and select a virgin rubber or organic option.

2) Sands

Silica sand is the preference for sports fields due to the rounding of each particle, as opposed to the sharpness of natural sand, found on the beach. This sand is chemically stable, fracture resistant, non-toxic and is rounded.



Photo 5: Silica Sand (Source: www.flexsand.com)

It can be used by itself, or in combination with rubber or organic infills. It is important that the Silica sand has a high purity of grains of more than 90 percent as recommended by the STC. This sand can also be coated with either a firm or flexible coating which is normally elastomeric or acrylic, forming a coating that allows for different sizes depending on the system's needs. It is normal for these coatings over time to wear off during the life of the carpet.

3) TPE (Thermo Plastic Elastomer)

This is a new material, which is heated and compressed into grains or various shapes for performance. Once cooled, it retains its new shape, is elastic in nature and can also be recycled. It has a long life and shows durability according to various manufacturers.

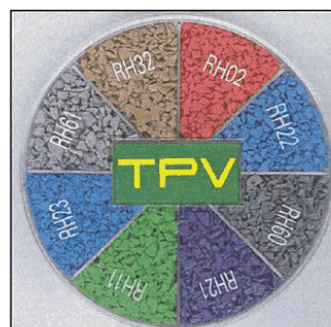


Photo 6: TPV Granules provide a greater colour range and less UV degradation (Source: Surface Designs)

This 'virgin plastic' infill is non-toxic, chemically stable, resists fading and is long lasting. It can also

³ Twenty Questions on Rubber Granulate: SAPCA: 2007 - Dr Bryon Willoughby - <http://www.murfittsindustries.com/wp-content/uploads/New-copy-of-20-questions.pdf>

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provide the benefit of being recycled at the end of the "grasses life". Providing a wide range of colours, TPE or similar sister products such as TPV, EVA etc., which are often used in playgrounds, athletic tracks and for field infills. It has elastic properties, uniform shape and its virgin rubber and filling provide a high-performance infill option. There has been some concern that cheaper made Thermo Plastic products may be more likely to melt in fields at higher temperatures, which would compromise the performance of the synthetic system.

4) EPDM Infill (Ethylene Propylene Terpolymer)

This type of infill is produced from a polymer recovered from three monomers: ethylene, propylene and diene. Common colours are red, green and brown and it is odourless and offers consistent quality. It is often used for playgrounds, on athletic tracks as well as for synthetic field infill.



Photo 7: EPDM 'Bionic' infill (Source MILOS)

5) Organic Infill

There has been experimentation using organic or natural infill's by a small number of companies. The basic offerings are:

- i. Cork infill – allowing cork to be stripped from trees (every nine years) then used as a top. The marketing rationale from a key supplier states that it has 12 million air cells per cubic cm. A few fields are being installed in Australia currently and much interest is being shown on how they perform in the hot dry weather in Australia.

- ii. Cork/organic infill – allowing less cork with other plant/organic compounds such as coconut husk etc. There seems to be more concerns about this combination due to:

- The plant/organic compound breaking down quickly from the typical level of use that Australian LGA's programme their pitches (e.g. 40-60 hours).
- Additional cost of maintenance due to compaction and possible organic growth with plant substance.
- Additional cost of continual replacement and top-up.
- This option, in Australia's climate also needs to be watered regularly as it will turn to dust with the breakdown of the natural fibres, which may indicate that a hybrid stabilised turf/grass solution should also be considered.



Photo 8: Organic Infill (Source: Limonta)

Amount of Infill

The amount of infill used in a field will depend on how the manufactured systems work and against what sports performance standards are chosen. If a shock pad is used, then for the same football codes the yarn length may be as little as 43mm. In Europe, the mix of silica sand and rubber infill is being used with a yarn of 50mm allowing 15-20mm for the fibre to be left above the infill.

The import aspects to consider are the structure of infill or square meter and the thickness of the yarn fibres to allow the yarn to stay upright.

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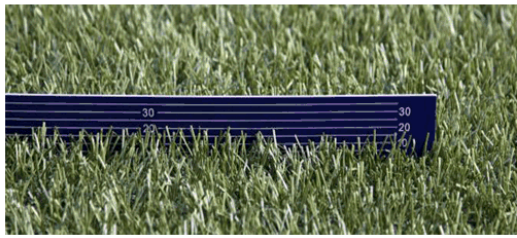


Photo 9: EPDM (Virgin Rubber) Infill allowing around 20mm of grass above the infill

FAQ 1: Is there a difference in the component make up of virgin rubber and recycled SBR rubber?

A: Synthetic rubber has been made for decades using chemicals that reflect the properties of natural rubber, to provide a robust and flexible surface. The synthetic rubber or plastic is made from bringing together various chemicals and curing the 'ingredients' to make polymers into rubber latex and plastics. This may in some cases include the use of Styrene (liquid) and Butadiene (gas) to form a liquid latex which is prepared into rubber for purposes e.g., shoes, toys and other products handled and used daily, as well as commercial products including rubber matting and vehicle tyres.

For vehicle tyres, there are also other compounds added to increase the durability for the needs on the roads. This adds a significant added benefit to the crumb rubber in synthetic fields as the infill is extremely durable.

Although Styrene and Butadiene are identified carcinogens in their natural state, when combined they, with other chemicals, form polymers which result in these chemicals being locked within the polymer chain. The latest independent research from the Dutch Government states *"...the effect of these substances on human health is virtually negligible."*⁴

Recycled SBR rubber, or crumb rubber as it is commonly known, predominantly sourced from vehicle tyres is used as the performance infill. After the tyres are stripped of the metal rims the rubber is recycled by shredding into crumbs.



Photo 10: Australia's Institute of Sport has embraced the sports turf technology and invested in EPDM infill as opposed to recycled SBR

⁴ National Institute for Public Health and the Environment (RIVM) Ministry of Health, Welfare and Sport, Netherlands, report on 'Playing sports on synthetic turf fields with rubber granules' 20-12-2016 OomenAG, de Groot GM (RIVM Summary Report 2016 - 0202) accessed on 22nd December 2016:

http://www.rivm.nl/en/Documents_and_publications/Common_and_Present/New_messages/2016/Playing_sports_on_synthetic_turf_fields_with_rubber_granulate_is_safe

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Health Issues - Frequently Asked Questions

FAQ 2: Does research identify that recycled SBR infill is harmful to users?

A: Concern from of the community gaps focuses on the Polymer base chemicals locked in the Polymer chain within the recycled SBR. The concern is there may be a danger of these components breaking down and the raw components being ingested, or reacting against player's skin, or inhaled into their lungs. Thus, increasing the likelihood of players being exposed to higher health risks.



Photo 11: Rubber granular infill for a synthetic surface

The Synthetic Turf Council (STC), has acknowledged community concern around the use of synthetic rubber and synthetic grasses. In response to this concern they have invested significantly to highlight the independent research by government agencies, chemical engineers, toxicologists, epidemiologists, chemists, biologists and other medical professionals.

The STC reviewed related research on inhalation toxicity (34 articles); ingestion toxicity (45 articles); and dermal toxicity (27 articles); links to cancer (11 articles). The findings were STC 'unequivocally failed to find any link between

recycled rubber infill and cancer or any other human health risk'.⁵

In February 2016, the STC produced a video explaining the infills, titled "The Truth About Artificial Turf and Crumb Rubber" (https://www.youtube.com/watch?time_continue=9&v=pVZSVhyMv-A)

In March 2016, the STC issued a statement on the 'Available Recycled Rubber Research'⁶. This was in response to the increased public interest in potential health effects of recycled rubber in sports fields.

Other independent European research in 2013⁷ involved a Tier 2 environmental – sanitary risk analysis, on five synthetic sports turf fields in Italy, Turin. It explored the exposure to adults and children from the projected three opportunities of exposure to any harmful components of the recycled rubber: direct contact; rain water soaking; and inhalation of dust and gases. The results of the research for all exposure opportunities, was based on the cumulative risk proved to be lower than one in a million.



Photo 12: Virgin rubber being used more in synthetic sports fields

Although dust and gases were found to be the main rate of exposure, the results assessed the impact on the inhalation pathway when compared to risk assessment conducted on citizens

⁵ Synthetic Turf Council , Executive Summary Catalogue of Available Recycled Rubber Research (march 3, 2016) http://c.yimcdn.com/sites/www.syntheticurf.org/resource/resmgr/docs/stc_cri_execsummary2016-0303.pdf

⁶ STC Executive Survey Catalog of Available Recycled Rubber Research (March 3, 2016)

http://c.yimcdn.com/sites/www.syntheticurf.org/resource/resmgr/docs/stc_cri_execsummary2016-0303.pdf

⁷ Ruffino, B., Fiore, S., & Zanetti, M.C., (2013). Environmental-sanitary risk analysis procedure applied to artificial turf sports fields. *Environ Sci Pollut Res Int.* 20(7):4960-92. doi: 10.1007/s11356-012-1390-2

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breathing gases and dusts from traffic emissions every day in Turin.

For adults and children, the conclusion of the report states: *"the inhalation of atmospheric dusts and gases from vehicular traffic gave risk values of one order of magnitude higher than those due to playing soccer on an artificial field"*.⁸

Additional independent research conducted between 2009-2013 have found similar results^{9 10 11}.

- Over a 12-year period, Simon¹² reviewed impacts of crumb rubber in artificial turf. Results showed: *"ingestion of a significant quality of type shared did not elevate a child's risk of developing cancer, relative to the overall cancer rates of the population"*.¹³
- Cardno Chemrisk found: *"regular exposure (e.g. regular play on ground rubber infilled fields) to ground rubber for the length of one's childhood does not increase risk of cancer above levels considered by the state of California to be de minimus (i.e. lifetime excess cancer risk of 1 in a million)"*.¹⁴

FAQ 3: Is there a link with rubber infills and Leukaemia or other cancers?

A: According to recent research in 2015 and 2016 the following summary can be provided.

In response to significant community concern during 2016 in the Netherlands the Dutch Governments' research states:

"No indications were found in the available literature of a link between playing sports on synthetic turf fields with an infill of rubber granulate and the incidence of leukemia and lymph node cancer. Moreover, it is clear from the composition of the rubber granulate that the chemical substances that are capable of causing leukemia or lymph node cancer are either not present (benzene and 1,3-butadiene) or are present in a very low quantity (2-mercaptobenzothiazole).

Since the 1980's, a slight rise has been observed in the number of people aged between 10 and 29 who get leukemia. This trend has not changed since synthetic turf fields were first used in the Netherlands in 2001".¹⁵

In response to community interest in the USA leading toxicologist Dr Laura Green, pragmatically considered and addressed a series of concerns raised by a Principal of Jonesport Elementary School in Main (USA). This response is potentially the most detailed explanation of the perceived links of recycled SBR tyres to cancer, found by the author of this FAQ Fact Sheet. In brief her conclusion states:

*"Overall, then, the evidence on crumb rubber and rubber mulch does not suggest, let alone demonstrate, that rubber poses a significant risk to the health of children and others. As such, I believe that Principal Lay can rest assured that the mulch in her playgrounds has not put her students at risk of developing cancer."*¹⁶

⁸ Ruffino, B., Fiore, S., & Zanetti, M.C., (2013). Environmental-sanitary risk analysis procedure applied to artificial turf sports fields. *Environ Sci Pollut Res Int*. 20(7):4980-92. doi: 10.1007/s11356-012-1390-2) Abstract Summary - <http://link.springer.com/article/10.1007/s11356-012-1390-2>

⁹ Krüger, O., Kalbe, U., Richter, E., Egeler, P., Römke, J., & Berger, W. (2013). New approach to the ecotoxicological risk assessment of artificial outdoor sporting grounds. *Environ Pollut*. Apr;175:69-74. doi: 10.1016/j.envpol.2012.12.024.

¹⁰ Sunduk, K., Ji-Yeon, Y., Ho-Hyun, K., In-Young, Y., Dong-Chun, S., & Young-Wook, Lim. (2012). Health Risk Assessment of Lead Ingestion Exposure by Particle Sizes in Crumb Rubber on Artificial Turf Considering Bioavailability. *Environ Health Toxicol*. 2012; 27: e2012005. doi: 10.5620/eht.2012.27.e2012005

¹¹ Menichini, E., Abate, V., Attias, L., De Luca, S., di Domenico, A., Fochi, I., Forte, G., Iacovella, N., Iamici, A.L., Izzo, P., Merli, F., & Bocca, B. (2011). Artificial-turf playing fields: contents of metals, PAHs, PCBs, PCDDs and PCDFs, inhalation exposure to PAHs and related preliminary risk assessment. *Sci Total Environ*. 409(23):4950-7. doi: 10.1016/j.scitotenv.2011.07.042

¹² Simon, R. (Feb. 2010). Review of the Impacts of Crumb Rubber in Artificial Turf Applications. UNIVERSITY OF CALIFORNIA, BERKELEY LABORATORY FOR MANUFACTURING AND SUSTAINABILITY

¹³ Rachel Simon, University of California, Buheberg, Review of Impacts of Crumb Rubber in Artificial Turf Applications (Feb 2010) p31

¹⁴ Review of the human Health and ecological safety of exposure to recycled tire rubber found at playgrounds and synthetic turf fields. Prepared by Cardno ChemRisk, Pittsburgh, PA (Aug 2013) http://c.ymcdn.com/sites/www.syntheticurfincouncil.org/resource/resmgr/files/rm_a_chemrisk_update-8-1-13.pdf

¹⁵ National Institute for Public Health and the Environment (RIVM) Ministry of Health, Welfare and Sport, Netherlands, report on 'Playing sports on synthetic turf fields with rubber granules' 20-12-2016 OomenAG, de Groot GM (RIVM Summary Report 2016 - 0202) accessed on 22nd December 2016: http://www.rivm.nl/en/Documents_and_publications/Common_and_Present/New_messages/2016/Playing_sports_on_synthetic_turf_fields_with_rubber_granulate_is_safe

¹⁶ Dr Laura Green Memorandum, June 29, 2015 Re: Comments on CPSC Report #20150608-22F81-2147431268 Assessment of the risk of cancer posed by rubber mulch used in playgrounds http://c.ymcdn.com/sites/www.syntheticurfincouncil.org/resource/resmgr/Files/Rubberecycle_-_Dr_Green_let.pdf

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In 2006, the Norwegian Institute of Public Health published their report,¹⁷ the investigators noted; *“Worse case calculation based on air measurements carried out..... does not cause any increased risk of leukaemia as a result of benzene exposure or any elevated risk as a result of exposure to Polycyclic Aromatic Hydrocarbons (PAH's).”*

FAQ 4: Can the community be sure of what chemicals and components are in the recycled rubber?

A: To ensure quality recycled SBR is used in sports field infill, it is important to appreciate the region of the globe where infill is sourced and the regions' regulations regarding the components makeup of the tyres.



Photo 13: Synthetic fields are being used for both full-side games and the intensity of training on small areas that natural turf could not accommodate

America and Europe have strict regulations on the safety of the chemicals and components used to make vehicle tyres. The US has a voluntary code¹⁸ and Europe has very strict compulsory legislation¹⁹ which has placed restrictions on the use of substances that may be carcinogenic in their raw form in any product being brought into Europe for sale.

This has resulted in the identification of eight key Polycyclic Aromatic Hydrocarbons (PAH's) that are deemed to be harmful and no product,

including car tyres can be provided in Europe without being certified on the sum of all the PAH's being less than 10mg/kg.

In summary, as long as the tyres can demonstrate that they have been certified to the American Code and European regulations there is a strong likelihood that they will not contain any harmful levels of PAH's.

Presently, Australia does not have a similar code.

¹⁷ Dye, C.; Bjerke, A.; Schmidbauer, N.; Mano, S. Measurement of Air Pollution in Indoor Artificial Turf Halls, Report NILU OR 03/2006. Norwegian Institute for Air Research: Kjeller, Norway, 2006.
¹⁸ ASTM D5603 - 01(2015): Standard Classification for Rubber Compounding Materials—Recycled Vulcanizate Particulate Rubber.
<https://www.astm.org/Standards/D5603.htm>

¹⁹ EU REACH ANNEX XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES (Source: http://www.reachonline.eu/REACH/EN/REACH_EN/articleXVII.html)

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Environmental Issues - Frequently Asked Questions

FAQ 5: Is recycled SBR infill safe to the environment?

A: There has been significant research globally on the impact of recycled SBR on local ecosystems. These research projects^{20 21} including those representing the California Environmental Protection Agency, the Norwegian Institute of Public Health, the French National Institute of Environment and Risk, and Auckland Council, all have similar conclusions.



Photo 14: Organic infills are now being embraced in certain parts of the world

The conclusions are best summarised by the Swiss Study²² by the Ministry of Environment, Traffic, Energy and Communications. The study was on the Environmental Compatibility of Synthetic Sports Surfaces which explored the secretion of synthetic surfaces from disintegration by UV radiation, mechanical destruction by abrasion, and diffusion of ingredients and washing off by rain water.

The testing was in a controlled environment with rain washing through the synthetic and natural turf systems over a two-year period then collected and measured for the secreted substances. The report summarises there is no risk for the environment

from Poly Aromatic Hydrocarbons (PAH's) or heavy metals including Mercury, Lead, Cadmium, Chromium, Zinc, and Tin, which were all lower than the required European safety levels.



Photo 15: Swiss Study collecting rain water through various synthetic sports surface systems

FAQ 6: Are there heavy metals in the infill or yarn?

A: Historically Lead Chromate was used for pigment colouring in yarn, and after research was conducted in 2008 the use of Lead Chromate as a pigment for the grass was stopped in 2009²³ for all sports turf.

The use of heavy metals is not common in the infill, although some cheaper virgin rubbers may use lead as colouring.

The European standards including the Swiss and German Regulation DIN 18035 parts 6 and 7 and ESM105, state the requirements of metals need to be less than:

- Mercury ≤ 0.01 mg/l,
- Lead ≤ 0.04 mg/l,
- Cadmium ≤ 0.005 mg/l,
- Chromium ≤ 0.008 mg/l,
- Zinc ≤ 3.0 mg/l, and
- Tin ≤ 0.05 mg/l.

²⁰ Humphrey, C. & Katz, L., (2000). Water-Quality effects of tire shreds placed above the water table: Five-year field study. Transportation Research Record: Journal of the Transportation Research Board, 1714, 18-24. DOI: <http://dx.doi.org/10.3141/1714-03>
²¹ Hofstra, U. (March, 2009). Zinc in drainage water under artificial turf fields with SBR. Summary ITRON Report. http://c.ymcdn.com/sites/syntheticurfscouncil.site-ym.com/resource/resmgr/Docs/Zinc_in_Drainage_Water_-_200.pdf

²² Muller, E. (2007). Results of a Field Study on Environmental Compatibility of Synthetic Sports Surfaces. Swiss Ministry of Environment, Traffic, Energy and Communication Authority of Environment Section Water.

²³ STC: Lead Chromate in Synthetic Turf, Though Safe for kids per CPSC, was discontinued in 2009 (20/3/2015 - STC Website)

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Synthetic systems purchased, should therefore meet these standards or the alternative standard, European Standard EN71-3 (2013) Table 2 Category III, which is the standard for Safety of Toys – Part 3 Migration of certain elements, and Category III (Scraped-off materials). In the US, the equivalent is the ASTM F3188 – 16.

Both the European and US alternative standards measures the possible heavy metal migration of material that may be hazardous if ingested.

FAQ 7: Does the introduction of synthetic turf using rubber infill impact on carbon sequestration?

A: Significant global research has been completed about the comparisons, including:

- A 9,000m² synthetic facility over 10 years, recorded a total CO₂ emission of 55.6 tonne and the tree planting offset requirements was approximately 900 trees²⁴.
- Natural grass helps remove carbon dioxide (carbon sequestration) from the atmosphere via photosynthesis and stores it as organic carbon in soil, depending on factors such as land practices and climatic conditions. Therefore, grass contributes to soil organic matter, mainly through its root system, which makes it an important carbon sink. A carbon sink can store some carbon-containing compound for a period of time. A typical lawn of 232m², converts enough carbon dioxide from the atmosphere to provide adequate oxygen for a family of four²⁵.
- Growing forests produce a net gain of oxygen because they store carbon in wood in the trees themselves. Whereas grass stores carbon in the form of sugars, starches and cellulose. However, the important point is that natural grass is often cut - particularly on a playing

field - which releases the carbon as it breaks down and rots, plus the reduction in blade length reduces the amount of absorption. This is compared with trees, which drop leaves while the wood components are more likely to stay intact. It should be noted that plants continue to release carbon dioxide and water into the atmosphere through the process of cellular respiration. Therefore, the net production oxygen in grass is very small in comparison to trees and bushes.

- Greenhouse gas emissions from natural turf production and maintenance is greater than the amount of carbon that can be stored in the grass. This study found that athletic sports fields do not store as much carbon as ornamental grass due to soil disruption by tilling and resodding. However, this methodology of research has since been reviewed and modified to suggest that it is a net sequester of carbon dioxide. Essentially, the difference is to do with the ability to counter balance emissions through the carbon sink²⁶.
- In 2010, the BASF Corporation Eco-Efficiency Analysis²⁷ compared synthetic fields with professionally installed and maintained grass fields. It concluded that the use of synthetics can lower consumption of energy and raw materials and the generation of solid waste, depending on field usage. BASF also found that the average life cycle over 20 years of natural grass fields are 15 per cent higher than the synthetic alternatives.

FAQ 8: Does the high UV in Australia impact on virgin rubber infills?

A: Due to the intensity of UV over Australia, the infill and yarn is tested using the Extended Test Method. This has been adopted by the majority of

²⁴ Meil, J and Bushi L, 2007. 'Estimating the Required Global Warming Offsets to Achieve a Carbon Neutral Synthetic Field Turf System Installation'. Athena Institute, Merrickville, Ontario, Canada.

²⁵ TurfGrass Producers International, 2010. 'Natural Grass and Artificial Turf: Separating Myths and Facts' published by Turf Grass Resource Centre, www.TurfResourceCentre.org viewed August 2011.

²⁶ TurfGrass Producers International, 2010. 'Natural Grass and Artificial Turf: Separating Myths and Facts' published by Turf Grass Resource Centre, www.TurfResourceCentre.org viewed August 2011.

²⁷ Submission for Verification of Eco-efficiency Analysis Under NSF Protocol P352, Part B Synthetic Turf, Eco-Efficiency Analysis Final Report – August 2010. BASF Corporation, NJ.

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International Federations to at least 5,000 hours as some infills have been found under the Australian heat and UV, to lose its performance properties.

The AFL introduced this UV standard in 2009 as part of its Quality Manual for synthetic turf being used for community Australian Rules Football fields²⁸. FIFA has followed in recognising this level in the 2015 Quality Manual for the football turf performance standards²⁹.



Photo 16: Synthetic fields are allowing young people continue to play the chosen games, by allowing the fields to be trained on for longer each week in a manner that the latest natural grass technology could not cope with

²⁸ AFL and Cricket Australia Handbook for Testing of Synthetic Turf (2013) page 21:
http://www.aflvic.com.au/wp-content/uploads/2013/10/AFL-CA-Testing-Manual_September-2013.pdf

²⁹ FIFA Quality Program for Football Turf, Handbook of Requirements (Oct 2015)
<http://quality.fifa.com/globalassets/fqp-handbook-of-requirements-2015.pdf>

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Global Considerations and Regulations - Frequently Asked Questions

FAQ 9: Is recycled SBR currently being investigated globally?

A: Concerns have been raised in the Netherlands and the USA about the safety of recycled tyre crumb used in playing fields and playgrounds.



Photo 17: Synthetic football field in NSW used by a university, schools and local community

The Dutch Governments' (RIVM - Dec 2016) main recommendation states:

*"adjusting the standard for rubber granulate to one that is closer to the standard applicable to consumer products. Rubber granulate is required to satisfy the legal requirements for 'mixtures'. The standard for consumer products is far more stringent: it allows far lower quantities of PAHs (100 to 1000 times lower) compared with the standard for mixtures. The quantity of PAH in rubber granulate is slightly higher than the standard for consumer products. The European Chemicals Agency (ECHA) is currently conducting research to determine a suitable standard for rubber granulate."*³⁰

³⁰ RIVM Website English Summary (accessed Dec 2016) http://www.rivm.nl/en/Documents_and_publications/Common_and_Present/New_messages/2016/Playing_sports_on_synthetic_turf_fields_with_rubber_granulate_is_safe

³¹ Lead Chromate in Synthetic Turf, Though Safe for Kids per CPSC, Was Discontinued in 2009 (Posted by Terrie Ward, STC Marketing and Education Director, March 20, 2015: <https://syntheticturfcouncil-site-ym.com/news/222483/Lead-Chromate-in-Synthetic-Turf-Though-Safe-for-Kids-per-CPSC-was-Discontinued-in-2009.htm>

The US Federal government has requested their Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (ATSDR), and the U.S. Consumer Product Safety Commission (CPSC), to investigate key community concerns around environmental and human health.³¹ The video explaining the research can be seen on

https://www.youtube.com/watch?v=O5Gk_bP39LQ. The investigation is transparent and has an informative website.

(<http://www.epa.gov/TireCrumb>), and the report is due early 2017. An interim report was published in December 2016 providing the results of the peer review and consultation process to date but does not identify any findings, conclusions or recommendations³².

The government's website refers to further research completed in the USA by their Environmental Protection Agency³³.

The California Office of Environmental Health Hazard Assessment is currently conducting an in-depth SBR infill study. This study includes a series of scientific studies to determine if chemicals in recycled SBR can potentially be released under various environmental conditions and what, if any, exposures or health risks these potential releases may pose to players who frequently play on artificial fields constructed with SBR.

It will also expand understanding on if chemicals can be released from the SBR infill when a person encounters the infill. For example, when recycled SBR comes in contact with sweat on the skin or are accidentally ingested by athletes playing on turf fields.

³² December 2016 Status Report: Federal Research Action Plan on Recycled Tire Crumb: (Source: <https://www.epa.gov/chemical-research/federal-research-recycled-tire-crumb-used-playing-fields>)

³³ Tire Crumb and Synthetic Turf Field Literature and Report List as of Nov. 2015 (Source: <https://www.epa.gov/chemical-research/tire-crumb-and-synthetic-turf-field-literature-and-report-list-nov-2015>.)

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The European Chemical Agency is also conducting a similar review process³⁴ and has had discussions with their US counterparts.

FAQ 10: Are there any regulations addressing what can be used as infills?

A: The performance regulations for the sports fields are established by each sports International Federation, such as World Rugby, FIFA or Australia's AFL/Cricket Australia etc. It is understood the international body for Hockey (FIH) will be issuing guidance on how and what infills are used for their fields in early 2017.

There is no peak body in Australia responsible for the environmental and toxicological parameters, thus the need to explore global initiatives and apply them here.

In Europe, there are comprehensive regulations known as Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) addressing the chemical industry and anything made from chemicals.

In the European Synthetic Turf Organisation (ESTO) Crumb Rubber (SBR) infill FAQ Sheet³⁵, it states that REACH:

"Applies to all individual chemical substances on their own, in preparations or in products. All car and truck tyres sold in the EU since 2012 have had to satisfy the relevant requirements of REACH. In March 2016, the Competent Authorities for REACH also stated that rubber crumb used as infill in synthetic turf pitches should be classified as a mixture and it needs to comply with entry 28 of annex XVII to the REACH regulations. This entry establishes a limit on the presence of substances which are carcinogenic and are placed on the market, or used by themselves, or in mixtures, for supply to the general public"

The ESTO FAQ Sheet also explains:

"In view of recent media and public concern, the European Commission has asked the European Chemicals Agency (ECHA) to determine whether certain hazardous substances contained in rubber crumb infill present any unacceptable risk to human health and, if so, to advise which risk management measures it needs to take. The ECHA is expected to report to the Commission in early 2017."

Smart Connection Consultancy will keep this FAQ sheet updated with recommendations produced. In addition, as a company responsible for facilitating the procurement of approximately 80% of the full-size sports fields in Australia, we will ask for preferences for infill to be sourced from organisations that can demonstrate they have a Quality Assurance system that meets the REACH Annex XVII – Entry 28 standards for infill.

FAQ 11: What safeguards are there for virgin rubber infills?

A: To explore the key safeguards for rubber infills the following should be considered:

- **For Heavy Metal Concerns** – Ensure the infills have been tested against EN 71.3 (2013) Table 2 Category III, which is the standard for Safety of Toys – Part 3 Migration of certain elements, and Category III (Scraped-off materials). In the US, the equivalent is the ASTM F3188 – 16. In addition, the European Standard DIN 1803.5 parts 6 & 7 / ESM105 are advised. These tests are harder to achieve in the recycled rubber as the source is not always known.
- **For PAH Concerns** – ensure that the sourced tyres have been certified to the European REACH regulation Annex XVII. This can also be used for the virgin rubber infills.

³⁴ ECHA Preliminary Evaluation if recycled Rubber Granules are a risk to human health. <https://echa.europa.eu/addressing-chemicals-of-concern/restriction/previous-calls-for-comments-and-evidence/-/substance-rev/15331/term>

³⁵ ESTO Crumb Rubber Infill FAQ Sheet (source: <http://www.theesto.com/images/ESTO-Publications/Crumb%20Rubber%20Infill%20-%20Frequently%20Asked%20Questions.pdf>)

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- **For UV Concerns** – the infill should be tested using the Extended Test Method for FIFA Quality Manual (2015) or the AFL Community Facility Manual for UV test of 5,000 hours.

Smart Connection Consultancy recommend all rubber infills are subject to the European Standard EN71-3 (2013) Table 2 Category III, which is the standard for Safety of Toys – Part 3 Migration of certain elements, and Category III (Scraped-off materials). In the US, the equivalent is the ASTM F3188 – 16. They both measure the possible heavy metal migration of material and may be hazardous if ingested.

FAQ 12: What should be specified when buying a synthetic football field?

A: Smart Connection Consultancy when providing advice, continually research the latest global trends and research. Based on the findings our recommendations are updated accordingly. Presently the following advice in regard to procuring synthetic field infills is provided:

- Infill – request two options as part of the procurement process – one should be a recycled SBR, the other a non-recycled infill;
- If economics will influence the choice between a non-recycled infill (virgin rubber such as EPDM/TPE/TPV/EVA or organic) and the economical option (SBR), the SBR needs to ensure it has minimum heavy metals as specified in EN71.3 Table 2 Category III;
- UV standards are achieved; and
- REACH standards are adopted for any recycled tyres used.

Useful Contact Details:

- Smart Connection Consultancy
www.smartconnection.net.au

Global Peak Bodies for Synthetic Turf

- Synthetic Turf Council
www.syntheticturfCouncil.org
- European Synthetic Turf Organisation
www.theesto.com
- Sport and Play Industry Association (Aus)
www.sapia.org.au
- Sports and Play Contractors Association (UK)
<http://www.sapca.org.uk/>

International Sports Federation

- FIFA Quality Program for Football Turf
<http://quality.fifa.com/en/About-the-programme/>
- World Rugby - Rugby Turf Program
<http://playerwelfare.worldrugby.org/rugbyturf>
- FIH Quality Program for Hockey Turf
<http://www.fih.ch/inside-fih/fih-quality-programme-for-hockey-turf/>

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Conclusion

To date, independent studies have shown there is limited health risk, if any, of playing on surfaces with recycled rubber (SBR).

There has been no health issue linked to field users, objectively proven to be linked to the SBR infill used in sports fields.

That said, by taking proactive steps, government, education, and sports purchasers of synthetic sports fields with infill have a number of options to ensure quality standards, including:

1. If resources allow, investing in a virgin rubber technology that has been tested to the latest European standards for 'Toy Ingestion';
2. Explore if organic infills are appropriate for the climate and use the field will have;
3. If the recycled SBR is the most economic option, explore if the tyres have been sourced from a supplier that can demonstrate key health and safety processes around:-
 - a. Reduced heavy metals that may be in the tyres which have been tested against EN71.3 Table 2 Category III
 - b. PAH reduction to acceptable levels in the source tyres which have been tested against the REACH Annex XVII - Entry 28 regulations

These options should alleviate this perceived concern from the community.



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About Smart Connection

Consultancy

Smart Connection Consultancy offers an innovative approach that delivers outcomes to enhance the experience of participation in physical activity, recreation and sport in local communities.

We specialise in the planning, development, management and procurement of synthetic sports surface technology. We see this technology as complementing natural grass and encouraging more people to be active, play and achieve success in sport because of its extended durability.

By embracing the skills sets and knowledge of our collaborative consultants, we can provide an integrated and holistic approach to our client's projects.

Smart Connection Consultancy is the Technical Consultants for FFA, the NRL, and the Australian Rugby Union for Synthetic Surfaces.

Field of Expertise

In collaboration with industry experts, we provide our clients with high level quality service that is offered for a very affordable investment.

Commitment to Knowledge Building

We are committed to providing leading edge advice and knowledge so that the industry and our clients can appreciate how synthetic sports turf can complement their natural turf options.

Our Services Include:

Feasibility and Funding Advice and Solutions

Completing a Business Case to justify the need of a synthetic surface can be streamlined by using our *Smart Whole of Life Costing Model*. We support clients in developing financial strategies, funding applications and where applicable offer funding packages with major financial institutes.

Masterplanning and Design Solutions

We will work with you in exploring the site parameters and constraints together with the opportunities to ascertain the best design and management options for your park or venue.

Procurement and Project Management Support

Over 20 years' experience in procurement and in collaboration with SportEng, we provide the detailed civil engineering hold points to ensure that every step of the installation meets the appropriate civil and performance standards.

Our Clients

We have successfully completed a significant number of sports performance standards reviews, sports strategies, master plans, feasibility studies, business cases and procurement projects. Our client base includes:

- International Federations (FIH, FIFA, World Rugby)
- National and State Sports Organisations (FFA, NRL, ARU, AFL (NSW/ACT), Golf Australia, ASC, Hockey ACT etc.)
- Local Governments – More than 100 local governments with fields worth over Au \$150m in most States/Territories.

"Over the last four years the relationship the City has built with Smart Connection Consultancy has become integral to the development of our public open space planning, most notably the Ellenbrook District Open Space, which includes four synthetic playing fields.

Smart Connection Consultancy has contributed in many ways including various studies, reports and research tours that we continue to use today. The work has been outstanding: on time, on budget and most importantly of a very high quality.

Martin has been very accommodating in its approach to our requirements and continues to go out of their way to help us where necessary – always going that extra mile."

Wayne Stuart, Facilities Planning Coordinator, Asset Management – City of Swan

SPORT INSPIRES A NATION

Synthetic Sport Surfaces Create Opportunities For The Next Generation



PO Box 5247

South Melbourne, Victoria

Australia 3205

t: +61 (0) 3 9421 0133

e: martins@smartconnection.net.au

w: www.smartconnection.net.au

ITEM 3

DRAFT PLANNING PROPOSAL: WESTERN PRECINCT REDGUM RIDGE ESTATE, LOT 815 DP 1193843 REDGUM FOREST WAY, FIGTREE AND BIODIVERSITY CERTIFICATION

On 15 December 2014, Council resolved to prepare a draft Planning Proposal to facilitate 29 new residential lots in the western precinct of Redgum Ridge Estate, Lot 815 DP 1193843 Redgum Forest Way, Figtree. On 14 December 2015, Council resolved to support a process to achieve a BioBanking Agreement for Redgum Ridge Estate in relation to the draft Planning Proposal, as an enhanced biodiversity offset to the proposed development, as well as seeking conferral of Biodiversity Certification.

The purpose of this report is to advise Council that a BioBanking Agreement for Redgum Ridge Estate has now been established between the landowner and the Office of Environment and Heritage (OEH), and to seek a resolution to lodge and exhibit the Biodiversity Certification application, prior to finalising the Planning Proposal.

RECOMMENDATION

- 1 The conferral of Biodiversity Certification for Redgum Ridge be progressed, with Council as the planning authority lodging the Biodiversity Certification application to the Office of Environment and Heritage, exhibiting the application for a minimum period of 30 days, and then reporting the findings to the Minister for the Environment;
- 2 Following the endorsement of the Biodiversity Certification application by the Minister for the Environment, the draft Planning Proposal for the Redgum Ridge Western Precinct be progressed by:
 - a Finalising the Planning Proposal that seeks to amend the Land Zoning Map from RU2 Rural Landscape to E4 Environmental Living with a Minimum Lot Size of 1,000m² and Floor Space Ratio of 0.3:1, and rezone the remainder of the site to E2 Environmental Conservation with a Minimum Lot Size of 39.99ha;
 - b The final Planning Proposal be referred to the NSW Department of Planning and Environment for the making of arrangements for drafting to give effect to the final proposal; and
 - c Note that the General Manager will thereafter proceed to exercise his delegation by the NSW Department of Planning and Environment under Section 69 in relation to the final proposal.

REPORT AUTHORISATIONS

Report of: Vanni De Luca, Manager Environmental Strategy and Planning (Acting)
Authorised by: Andrew Carfield, Director Planning and Environment - Future City and Neighbourhoods

ATTACHMENTS

- 1 Site location, current zoning and air photo
- 2 Planning Proposal Maps
- 3 Biodiversity Certification Application

BACKGROUND

On 15 December 2014, Council resolved to prepare a draft Planning Proposal to facilitate 29 new residential lots in the western precinct of Redgum Ridge Estate Figtree, together with the establishment of a BioBanking Agreement for the remainder of the land as an enhanced Biodiversity offset to the proposed development (Attachments 1 and 2). The draft Planning Proposal was exhibited between 16 March and 17 April 2015.

Discussions with the Office of Environment and Heritage (OEH) and the landowner during and following the exhibition period resulted in a recommendation for an amended conservation strategy. It should be noted that the conservation strategy has been expanded to include the eastern forest, which is already

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Discussions with the Office of Environment and Heritage (OEH) and the landowner during and following the exhibition period resulted in a recommendation for an amended conservation strategy. It should be noted that the conservation strategy has been expanded to include the eastern forest, which is already

proposed to be transferred to Council. The report to Council (14 December, 2015) considered the submissions received during the exhibition and detailed the proposed process, which Council resolved to support:

- 1 The proponent submit a BioBanking Agreement to OEH covering the two western areas as initially proposed (28.21 hectares currently zoned E2 Environmental Conservation plus the larger eastern forest comprising 26.2 hectares in Lot 814 DP 119843), plus the semi-circular area on the northern side of the proposed road that was identified to contain a dwelling. This results in the overall BioBanking area for conservation totalling 54.41 hectares.
- 2 The proponent prepare and submit to Council a Biodiversity Certification application, for Council review and endorsement. The Biodiversity Certification application will show the 54.41 hectares of land to be conserved and the 8.2 hectares of land to be zoned E4 Environmental Living within which large lot development will occur. The conservation credits required for the development will be obtained from the conservation area, and the balance will be available to be used in other parts of the City (such as West Dapto). This will provide funding for the on-going (in perpetuity) conservation of both the eastern and western forests. A Biodiversity Certification Application needs to be submitted by a planning authority (ie Council), rather than a landowner. If the draft is endorsed by Council the following process applies:
 - a. The application is required to be exhibited for a minimum of 30 days. The planning authority is required to publish notice of the application in a newspaper circulating generally throughout the state and on the planning authority's website;
 - b. When the exhibition period ends, the planning authority must provide a submissions report to the Minister for the Environment; and
 - c. OEH then make recommendations to the Minister for the Environment, who then either confers Biodiversity Certification on the specified land or refuses it.
- 3 If the Minister for the Environment endorses the Biodiversity Certification application, and is satisfied that the conservation measures for the eastern and western forests is progressing, then Council will finalise the Planning Proposal for the western lands.
- 4 Both the eastern forest and the western forest will be transferred to Council to ensure on-going conservation, with funding provided through the Biodiversity Certification process from OEH. Council officers are supportive of taking on the responsibility of managing a large conservation area, as in perpetuity funding will be available.

PROPOSAL

Since the exhibition period the proponent and their consultants have updated the environmental information on the site to inform the Biodiversity Certification process. Additional surveys and assessment of the site have been undertaken, including mapping of the tree canopy and targeted flora and fauna surveys, to prepare a Biodiversity Assessment Report and Biodiversity Conservation Strategy in support of an application to seek Biodiversity Certification under Section 126H of the *NSW Threatened Species Conservation Act 1995 (TSC Act)*. Council officers reviewed the draft documents providing comment and feedback to the proponent and their consultants.

On 7 July 2017 a BioBanking Agreement for Redgum Ridge Estate was established between the landowner and the Office of Environment and Heritage (OEH). Council has now prepared a Biodiversity Certification application, to be submitted to OEH for consideration and approval (Attachment 3). The Biodiversity Certification application comprises the following

- Completed application form;
- Biodiversity Certification Strategy 23 June 2017; and
- Biodiversity Assessment Report 23 June 2017.

The purpose of this report is to seek a resolution to lodge and exhibit the Biodiversity Certification application, prior to finalising the Planning Proposal for the western precinct.

CONSULTATION AND COMMUNICATION

A Biodiversity Certification Application must be submitted by a planning authority (ie Council), rather than the landowner. If the draft is endorsed by Council the following process applies once the application is made to the Office of Environment and Heritage (OEH):

- The application is required to be exhibited for a minimum of 30 days. The planning authority is required to publish notice of the application in a newspaper circulating generally throughout the state and on the planning authority's website;
- When the exhibition period ends, the planning authority must provide a submissions report to the Minister for the Environment; and
- OEH then make recommendations to the Minister for Environment, who then either confers Biodiversity Certification on the specified land or refuses it.

If the Minister for the Environment endorses the Biodiversity Certification application, and is satisfied that the conservation measures for the eastern and western forests are progressing, then Council will finalise the Planning Proposal for the western lands. Both the eastern forest and the western forest will be transferred to Council to ensure on-going conservation, with funding provided through the Biodiversity Certification process from OEH. Council officers are supportive of taking on the responsibility of managing a large conservation area, established as a BioBank site, as perpetual funding will be available.

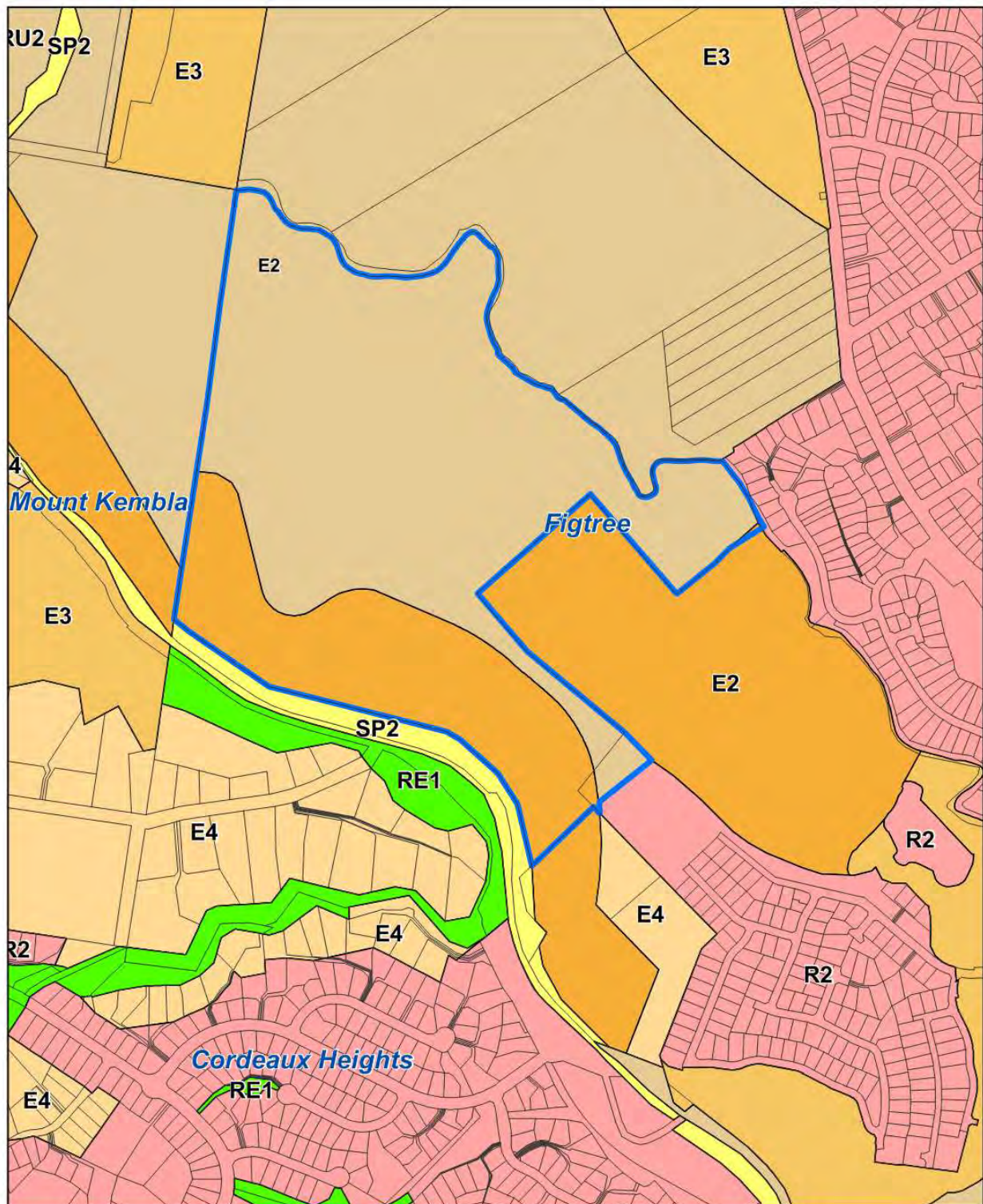
PLANNING AND POLICY IMPACT

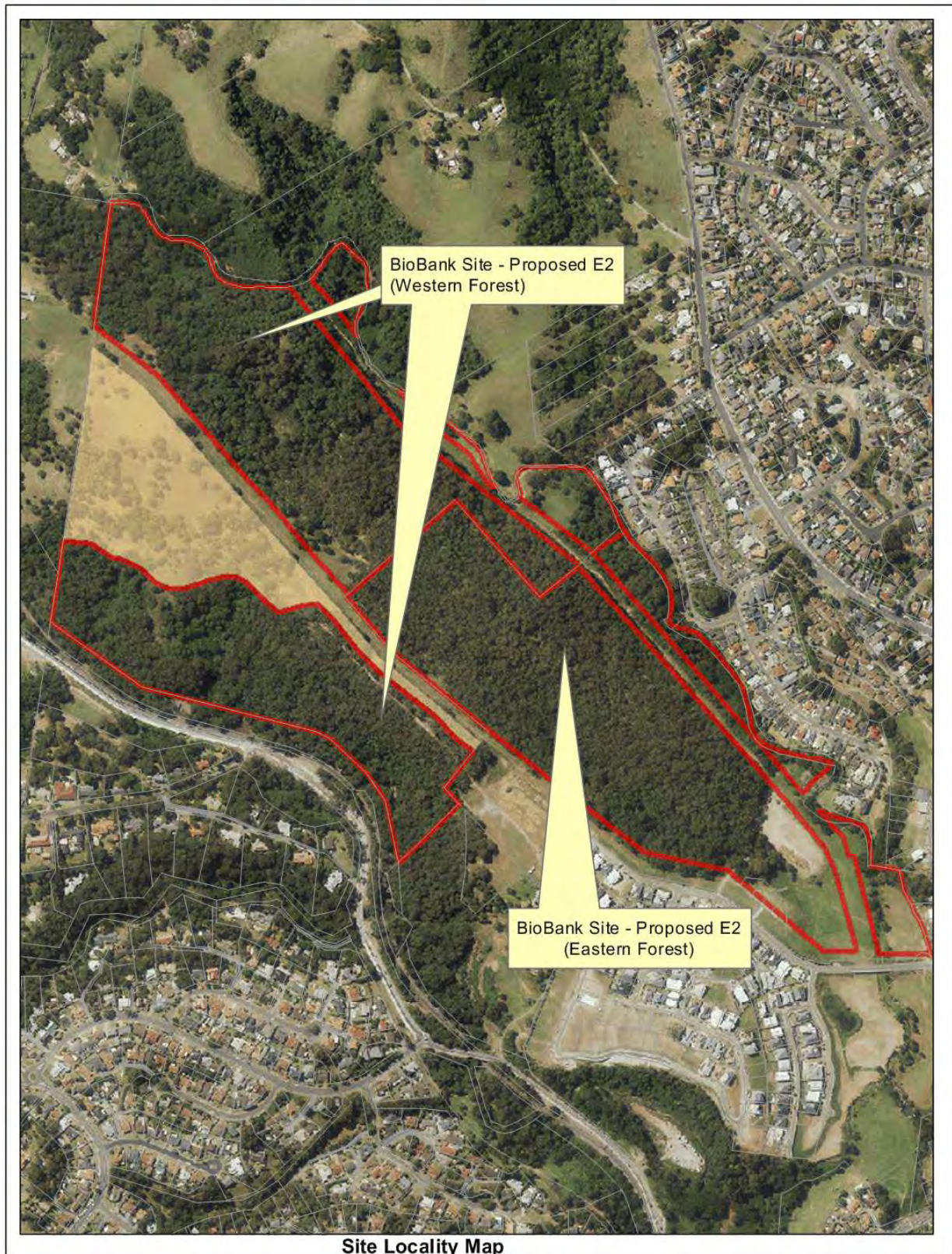
This report contributes to the delivery of Wollongong 2022 objective *"The natural environment is protected and enhanced"* under the Community Goal *"We value and protect our environment"*.

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
1.6.1 Our urban environment minimises impacts on habitat and biodiversity and areas of high conservation value are protected.	1.6.1.1 Review planning controls for environmentally sensitive locations	Continue to assess Planning Proposals against environmental strategies, including the Illawarra Biodiversity Strategy and the Illawarra Escarpment Strategic Management Plan.

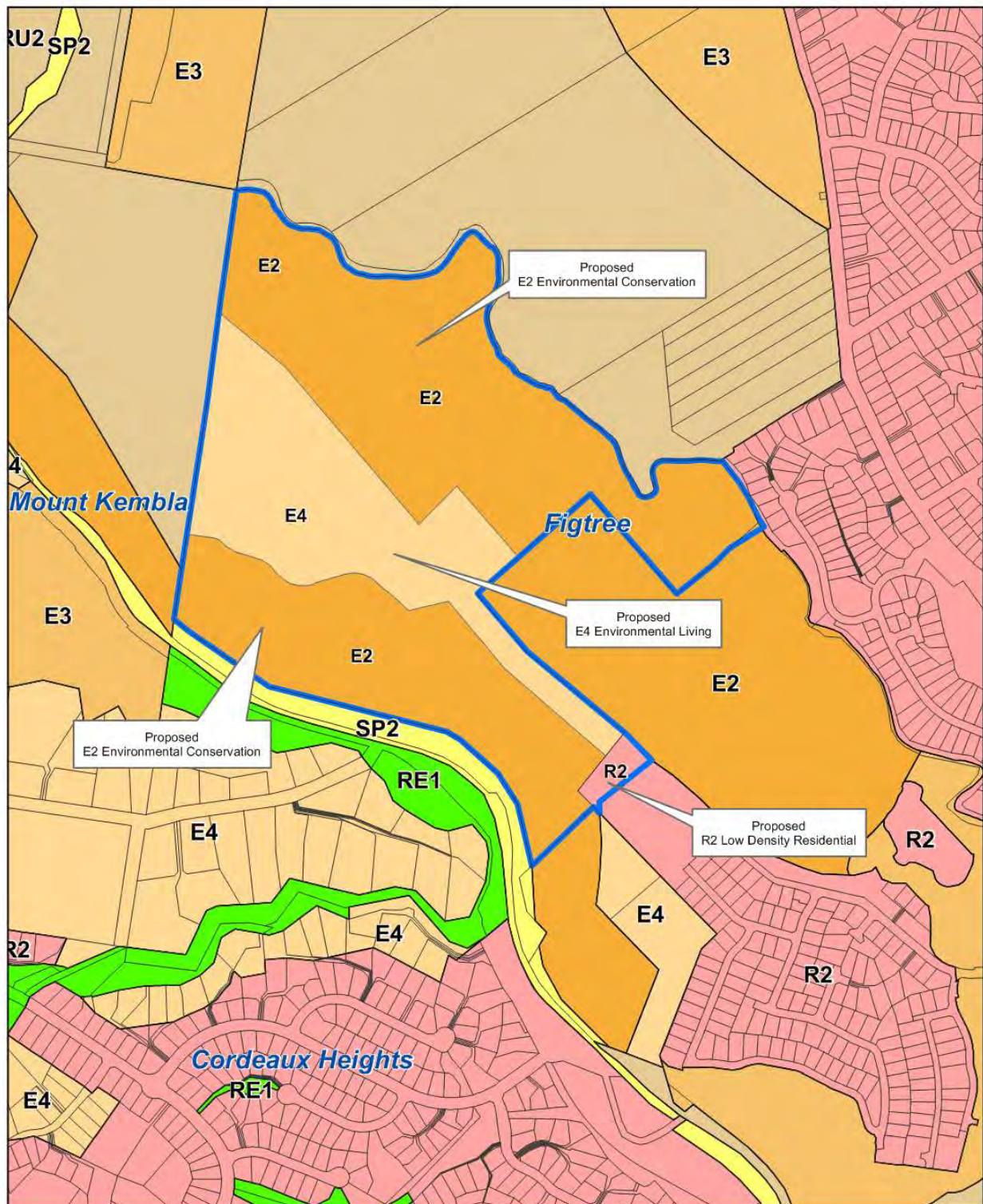
CONCLUSION

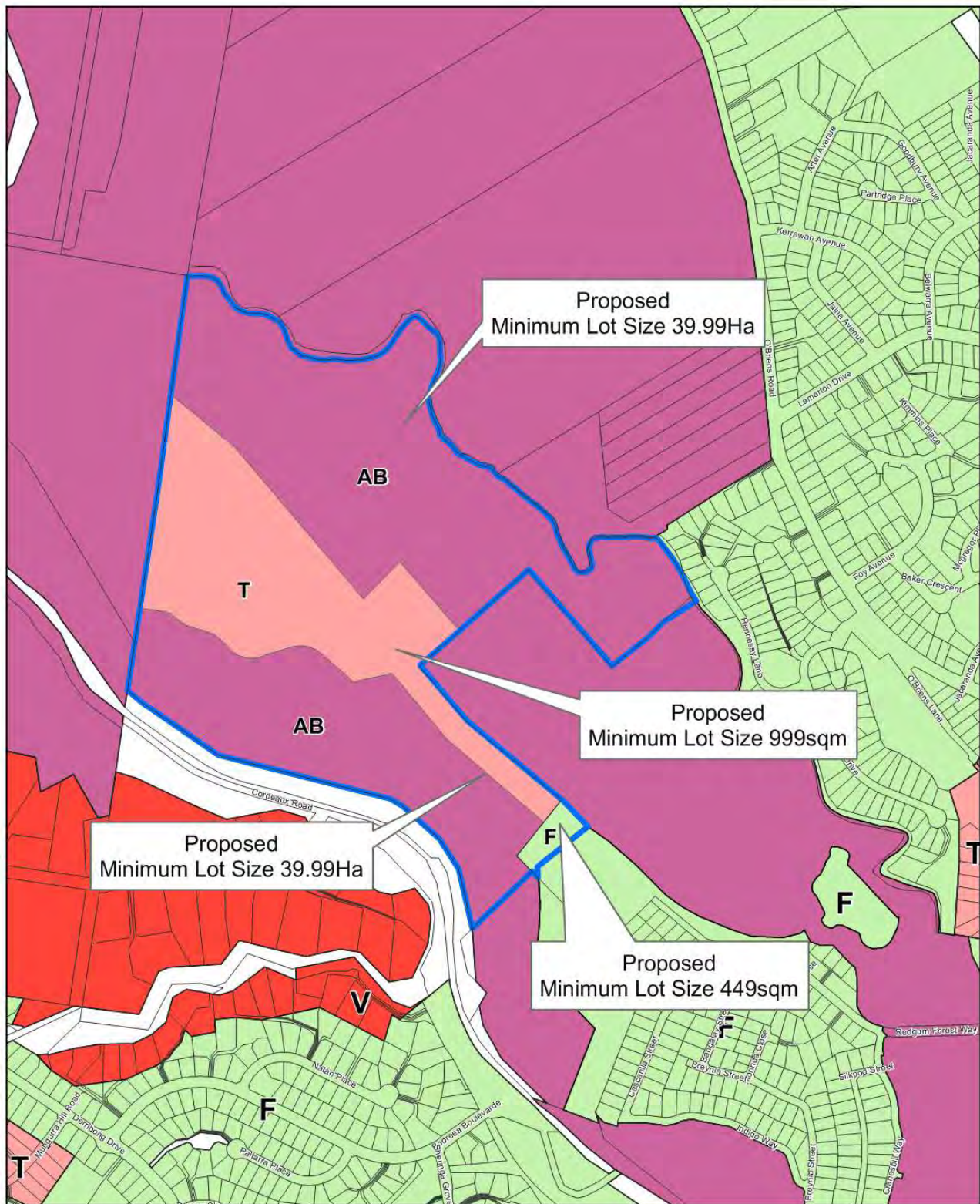
On 14 December 2015, Council resolved to support a process to achieve a BioBanking Agreement for Redgum Ridge Estate in relation to a draft Planning Proposal, as an enhanced biodiversity offset to the proposed development, as well as seeking conferral of Biodiversity Certification. A BioBanking Agreement for Redgum Ridge Estate has now been established between the landowner and the Office of Environment and Heritage (OEH). It is now recommended that Council resolve to lodge and exhibit the Biodiversity Certification application, prior to finalising the Planning Proposal.

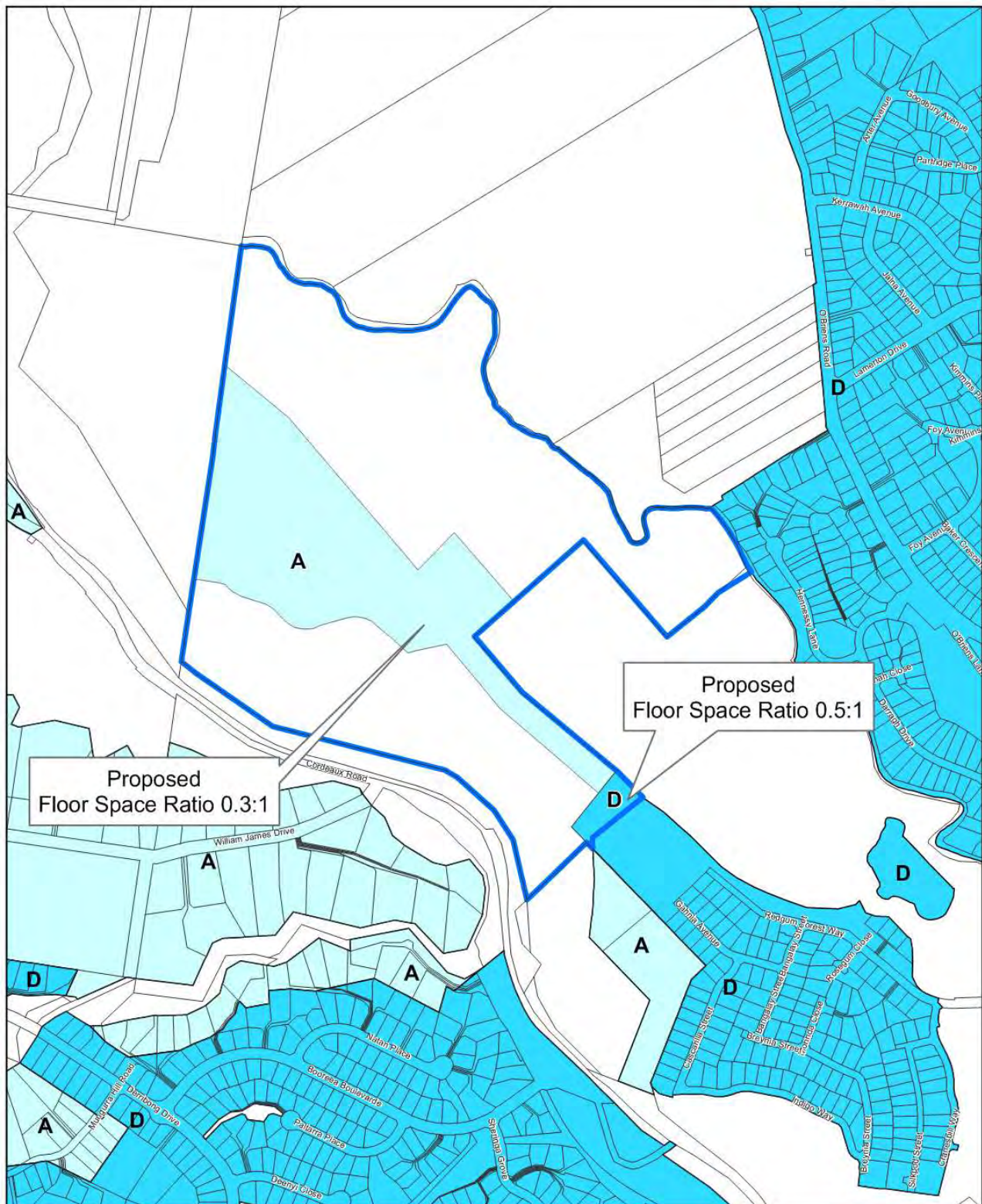




	<p>Planning Proposal = Redgum Western Precinct</p> <p> Proposed Environmental Living (E4) Biodiversity Certification Assessment Area (BCAA) </p>	<p>Drawn By: H Jones</p>	
		<p>Date: 12/07/2017</p>	
		<p>Date of Aerial Photography: 2016</p>	
		<p>PP Redgum Western Precinct.mxd</p>	
<p>0 250 Meters</p>			









Biodiversity certification application

Complete this form if you wish to apply to the Minister for the Environment for biodiversity certification under the *Threatened Species Conservation Act 1995*.

Before completing this form, please read the Biodiversity Certification Assessment Methodology at www.environment.nsw.gov.au/biocertification/index.htm. If you need help with completing the form, please phone 131 555.

This is an interactive form. Click on the check boxes and type in your responses. Each field has unlimited characters.

When you have completed the form, print it and **sign where necessary**. Then **post it to**:

Minister for the Environment
c/- the Chief Executive, Office of Environment and Heritage
PO Box A290
SYDNEY SOUTH NSW 1232.

1 Applicant

An applicant for biodiversity certification must be a planning authority (e.g. a local council or the Director-General of the Department of Planning and Infrastructure). If this is a joint application from multiple planning authorities, each authority's details must be provided. The form provides fields for two planning authorities. Photocopy extra pages if more than two planning authorities are involved.

Planning authority 1			
Name	Wollongong City Council		
ABN	63 139 525 939		
Street address			
Address	41 Burelli Street		
Town	Wollongong		
State	NSW	Postcode	2500
Mailing address (if different from above)			
Address	Locked Bag 8821		
Town	Wollongong DC		
State	NSW	Postcode	2500
Main contact			
Name	Brett Morrissey		
Phone	02 4227 7111	Mobile	
Fax	02 4227 7277	Email	bmorrissey@wollongong.nsw.gov.au
Alternative contact			
Name	Kathryn Adams		
Phone	02 4227 7111	Mobile	
Fax	02 4227 7277	Email	kadams@wollongong.nsw.gov.au

Planning authority 2 (if applicable)			
Name			
ABN			
Street address			
Address			
Town			
State		Postcode	
Mailing address (if different from above)			
Address			
Town			
State		Postcode	
Main contact			
Name			
Phone		Mobile	
Fax		Email	
Alternative contact			
Name			
Phone		Mobile	
Fax		Email	

2 Other proposed parties to biodiversity certification

The applicant(s) may propose any other person or body to be a party or parties to the biodiversity certification. By signing section 13 of this application form, such a person or body consents to being made a party to the biodiversity certification. This form provides fields for two proposed parties. Photocopy extra pages if more than two parties are proposed.

Proposed other party 1 (if applicable)			
Name	Edenvell Pty Ltd		
ABN	30091153687		
Street address			
Address	1/30 Kenny Street		
Town	Wollongong		
State	NSW	Postcode	2500
Mailing address (if different from above)			
Address	PO Box 1767		
Town	Wollongong		
State	NSW	Postcode	2500
Main contact			
Name	Richard Clifford		
Phone	02 4229 8799	Mobile	0412 421 748
Fax		Email	Richard@clifforddevelopments.com.au
Alternative contact			
Name	Diane Wykes Elvy		
Phone	02 4229 8799	Mobile	0414 555 393
Fax		Email	Richard@clifforddevelopments.com.au
Proposed other party 2 (if applicable)			
Name			
ABN			
Street address			
Address			
Town			
State		Postcode	
Mailing address (if different from above)			
Address			
Town			
State		Postcode	
Main contact			
Name			
Phone		Mobile	
Fax		Email	
Alternative contact			
Name			
Phone		Mobile	
Fax		Email	

3 Proposed land for biodiversity certification

List all parcels of land proposed for biodiversity certification. The land proposed for biodiversity certification is the land proposed for future development. A map showing the boundaries of the biodiversity certification area is also required. Sections 4 and 5 deal with the area(s) of land conservation measures will be implemented on.

If any area of the land is identified as being in a 'red flag area' (see section 2.4 of the Biodiversity Certification Assessment Methodology), biodiversity certification cannot be conferred unless the Director General has determined that the impacts on the red flag area may be offset (a 'red flag variation').

Location	
Name (if any)	Redgum Ridge Estate Western Precinct
Total area proposed for certification (hectares)	8.11 (see Figures 3 and 5 in attached Biodiversity Conservation Strategy)
Title reference (lot and DP numbers and folio identifiers)	Lots 814 and 815 in DP1193843
Is a red flag variation(s) sought in accordance with section 2.4 of the Biodiversity Certification Assessment Methodology? (See explanatory text above.)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If 'yes', explain how the criteria in section 2.4.1 of the Biodiversity Certification Assessment Methodology will be met.	Demonstration of consistency with section 2.4.1 of the BCAM is provided in Table 2 Red flag variation request of the Biosis (2017) BCS. In summary this includes a process of refining area for potential rezoning and development through a series of development concepts, restricting development to areas currently disturbed by rural land management, moving perimeter roads, dual use of perimeter roads to reduce APZ widths, locating new infrastructure such as stormwater trunk drainage adjacent to existing cleared easements and progressing the planning proposal to rezone areas of existing RU2 Rural Landscape to E4 Environmental Living for development and the remaining RU2 rezoned to E2 Environmental Conservation to include redflag areas into the biobank site.
What measures are proposed to mitigate the indirect impacts of biodiversity certification on biodiversity values (required under Chapter 6 of the Biodiversity Certification Assessment Methodology)?	<p>Under the biobanking agreement, management actions will be required throughout the biobank site adjoining the biodiversity certified land including within buffers to the biodiversity certified land. In addition all areas of the adjoining biobank site will be zoned E2 Environmental Conservation and with the objectives of E2 land as follows:</p> <p>To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.</p> <p>To prevent development that could destroy, damage or otherwise have an adverse effect on those values.</p> <p>To retain and enhance the visual and scenic qualities of the Illawarra Escarpment.</p> <p>The biobank site adjoining the biodiversity certified land is proposed to be dedicated to Council once the available credits have been retired to bring it under full management. Once in Council ownership, the biobank site will be suitable for classification as Community land - Natural area - Bushland under Division 2 Use and management of community land of the Local Government Act 1993.</p>

Note: Attach separate documents including maps.

4 Conservation measures proposed to be implemented on land within the biodiversity certification assessment area

<input type="checkbox"/>	There is no land in the biodiversity certification assessment area proposed for conservation measures (go to section 5)
<input checked="" type="checkbox"/>	There is land in the biodiversity certification assessment area proposed for conservation measures (specify below)

Specify the conservation measures proposed to be implemented on land in the biodiversity certification assessment area and list all parcels of land on which these conservation measures are proposed. A map showing the boundaries of the conservation measure area(s) is also required.

This form provides fields for two conservation measures. Photocopy extra pages if there are more than two conservation measures.

Conservation measure (land within assessment area) 1	
Type of conservation measure	Retirement of Biobanking ecosystem credits
Party responsible for implementing the conservation measure (include name, contact details and ACN or ABN if corporation)	Edenvell Pty Ltd Richard Clifford Mob Ph 0412 421 748 ABN 30091153687
Timing of implementation of conservation measure	At the time of conferral of biodiversity certification
Property name and/or street address (if any)	Pt Lot 815 Redgum Forest Way, Pt Lot 1801 Cordeaux Road, Figtree, N
Number of hectares on which proposed conservation measure will apply	Based on Tables 5 and 6 of the BCS (Biosis 2017), the total number of hectares to which the conservation measure will apply is 7.61 which will be entirely contained within biobank site ID BA221
Title reference (lot and DP numbers and folio identifiers)	Part Lots 815 DP1193843 and 1801 DP1223063
Is a biodiversity certification agreement proposed to secure the conservation measure? If 'yes', attach a copy of the draft agreement to this form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Conservation measure (land within assessment area) 2	
Type of conservation measure	
Party responsible for implementing the conservation measure (include name, contact details and ACN or ABN if corporation)	
Timing of implementation of conservation measure	
Property name and/or street address (if any)	
Number of hectares on which proposed conservation measure will apply	
Title reference (lot and DP numbers and folio identifiers)	
<p>Is a biodiversity certification agreement proposed to secure the conservation measure?</p> <p>If 'yes', attach a copy of the draft agreement to this form.</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

Note: If the conservation measure is a planning instrument, supply the relevant local environmental plan or development control plan, including zoning maps.

5 Conservation measures proposed to be implemented on land outside the certification assessment area (other than retirement of biodiversity credits and financial contributions)

<input type="checkbox"/>	There is no land outside the biodiversity certification assessment area proposed for conservation measures (go to section 6)
<input type="checkbox"/>	There is land outside the biodiversity certification assessment area proposed for conservation measures (specify below)

Specify the conservation measures proposed to be implemented on land outside the biodiversity certification assessment area and list all parcels of land on which the conservation measures are proposed. A map showing the boundaries of the conservation measure area(s) is also required.

Do not include conservation measures involving the retirement of biodiversity credits or financial contributions here as these will be dealt with in sections 6 and 7 respectively.

This form provides fields for two conservation measures. Photocopy extra pages if there are more than two conservation measures.

Conservation measure (land outside assessment area) 1	
Type of conservation measure	
Party responsible for implementing the conservation measure (include name, contact details and ACN or ABN if corporation)	
Timing of implementation of conservation measure	
Property name and/or street address (if any)	
Number of hectares on which proposed conservation measure will apply	
Title reference (lot and DP numbers and folio identifiers)	
Is a biodiversity certification agreement proposed to secure the conservation measure? If 'yes', attach a copy of the draft agreement to this form.	<input type="checkbox"/> Yes <input type="checkbox"/> No

Conservation measure (land outside assessment area) 2	
Type of conservation measure	
Party responsible for implementing the conservation measure (include name, contact details and ACN or ABN if corporation)	
Timing of implementation of conservation measure	
Property name and/or street address (if any)	
Number of hectares on which proposed conservation measure will apply	
Title reference (lot and DP numbers and folio identifiers)	
<p>Is a biodiversity certification agreement proposed to secure the conservation measure?</p> <p>If 'yes', attach a copy of the draft agreement to this form.</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

6 Biodiversity credits proposed to be (purchased and) retired as a conservation measure

<input type="checkbox"/>	There are no biodiversity credits to be retired as a conservation measure (go to section 7)
<input type="checkbox"/>	There are biodiversity credits to be retired as a conservation measure (specify below)

Specify the type of biodiversity credit and the number of credits to be retired. Specify who currently holds the credits. Photocopy extra pages if required.

Type of credit (ecosystem/species)	Name of credit	Number of credits	Current credit holder (name and ID number)	Timing of purchase/retirement of credits*
Ecosystem	SR652	54	Edenvell Pty Ltd ID 280	On conferral of biodiversity certification
Ecosystem	SR545	31	Edenvell Pty Ltd ID 280	On conferral of biodiversity certification

Timing is determined by the Minister under section 126Y 2(b) of the *Threatened Species Conservation Act 1995*

7 Financial contribution proposed as a conservation measure and secured by a biodiversity certification agreement

<input type="checkbox"/> There is no financial contribution proposed as a conservation measure (go to section 8)
<input type="checkbox"/> There is a financial contribution proposed as a conservation measure (specify below)

List any financial contribution (other than special infrastructure contributions which are dealt with in section 8) proposed as a conservation measure.

Conservation measure (financial contribution)	
Party responsible for providing financial contribution (include name, contact details and ACN or ABN if corporation)	
Date(s) by which financial contribution is proposed to be provided	
Number and type of credits used to calculate financial contribution	
Amount of financial contribution	
Number and type of credits to which financial contribution is equivalent	
Details of conservation measures proposed to be funded by the financial contribution	
Is a biodiversity certification agreement proposed to secure the financial contribution? If 'yes', attach a copy of the draft agreement to this application.	<input type="checkbox"/> Yes <input type="checkbox"/> No

8 Special infrastructure contribution (SIC) proposed as a conservation measure

<input type="checkbox"/> There is no SIC proposed as a conservation measure (go to section 9)
<input type="checkbox"/> There is a SIC proposed as a conservation measure (specify below)

Special infrastructure contribution (SIC)	
Details of SIC area declaration and Minister for Planning and Infrastructure's SIC determination	
Amount of SIC to be dedicated to conservation measures for the purposes of biodiversity certification	
Number and type of credits to which SIC is equivalent	
Estimated timing of SIC collection into SIC Fund (including commencement of SIC collection and estimated collection rate)	
Estimated timing of SIC payments out of SIC fund for the purpose of funding conservation measures	
Details of conservation measures proposed to be funded by the SIC	

Note: Please attach evidence of support from Director-General of the Department of Planning and Infrastructure

9 Credit summary

List the type and number of all ecosystem and species credits required for the land where biodiversity certification is proposed. Against each required credit type, list the number and type of credits to be created by the proposed conservation measures which are suitable to offset that particular credit type. Photocopy extra pages if required.

Type of credit required for the land where biodiversity certification is proposed	Name of credit and details of credit profile	Number of credits required for land proposed for certification (A)	Type of credit (or equivalent \$) created by proposed conservation measure	Number of credits created by proposed conservation measure (B)	Conservation measure(s) by which credits will be created	Surplus/ deficit of credits (B – A)	Biodiversity Conservation Assessment Methodology section 10 variation requested? (Yes/No)
Ecosystem	SR652	54	SR652	54	Biobanking credit	0	No
Ecosystem	SR545	31	SR545	31	Biobanking credit	0	No

10 Documentation required to be attached

<input type="checkbox"/> Biodiversity certification strategy
<p>The biodiversity certification strategy must detail:</p> <ul style="list-style-type: none"> <input type="checkbox"/> land proposed for biodiversity certification <input type="checkbox"/> land proposed for biodiversity conservation <input type="checkbox"/> proposed conservation measures <input type="checkbox"/> parties to the biodiversity certification <p>Both hard copies and electronic copies (on CD) of all information are required.</p>
<input type="checkbox"/> Biodiversity certification assessment report
<p>The assessment report should cover all land in the biodiversity certification area and all land proposed for conservation measures.</p> <p>Both hard copies and electronic copies (on CD) of all information are required.</p>
<input type="checkbox"/> Biodiversity certification agreement(s)
<p>Attach any draft or executed biodiversity certification agreements that relate to the conservation measures proposed in this form.</p>

11 Public notification – OEH Office Use Only

This section is to be completed after the application form has been submitted and notification requirements have been met.

Name of newspaper where notification published	
Date of publication	
Start date of notification period	
End date of notification period	
Public submission response report provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No

12 BioBanking Assessor declaration

Name	Nathan Garvey
Accreditation number	0103
Declaration	<p>I declare that all information supplied in relation to the biodiversity certification assessment complies with the Biodiversity Certification Assessment Methodology and, where applicable, the BioBanking Assessment Methodology.</p> <p>I understand that I am personally accountable for the validity of all data collected and analysis performed and that I have adequately supervised all support team members for this assessment.</p> <p>I have undertaken this assessment within the terms of my accreditation as a BioBanking Assessor and have adhered to the BioBanking Assessor code of conduct.</p>
Signature	



13 Consent of other proposed parties

Photocopy extra pages if there are more than three other proposed parties

Name	Richard Clifford
Consent	In accordance with s. 126Z(2)(b), I consent to being made a party to the biodiversity certification.
Signature	



Name	
Consent	In accordance with s. 126Z(2)(b), I consent to being made a party to the biodiversity certification.
Signature	

Name	
Consent	In accordance with s. 126Z(2)(b), I consent to being made a party to the biodiversity certification.
Signature	

14 Signature(s) of the planning authority(s)

This application should be signed by the legal representative(s) of the planning authority or authorities). The various ways in which the application may be signed, and the people who may sign the application, are set out in the categories below.

Planning authority	Application is signed and certified by
<input type="checkbox"/> A local council	<input type="checkbox"/> The general manager (or delegate) in accordance with s.377 of the <i>Local Government Act 1993</i> (LG Act), or <input type="checkbox"/> The seal of the council being affixed in a manner authorised under the LG Act
<input type="checkbox"/> Minister for Planning	<input type="checkbox"/> Minister for Planning and Infrastructure, or <input type="checkbox"/> Delegate of the Minister for Planning and Infrastructure
<input type="checkbox"/> Director-General of the Department of Planning and Infrastructure	<input type="checkbox"/> Director-General of the Department of Planning and Infrastructure, or <input type="checkbox"/> Delegate of the Director-General of the Department of Planning and Infrastructure
<input type="checkbox"/> Other (specify)	

I/we:

- apply to the Minister administering the *Threatened Species Conservation Act 1995* for biodiversity certification of land identified in section 3 of this form, and
- include particulars of the biodiversity certification strategy, and
- declare that the information in this biodiversity certification application (including any attachments) is not false or misleading in any material particular.

Photocopy extra pages if there are more than four signatories.



Signature		Signature	
Name		Name	
Position		Position	
Date		Date	

Signature		Signature	
Name		Name	
Position		Position	
Date		Date	

Affix common seal (if signing under seal)

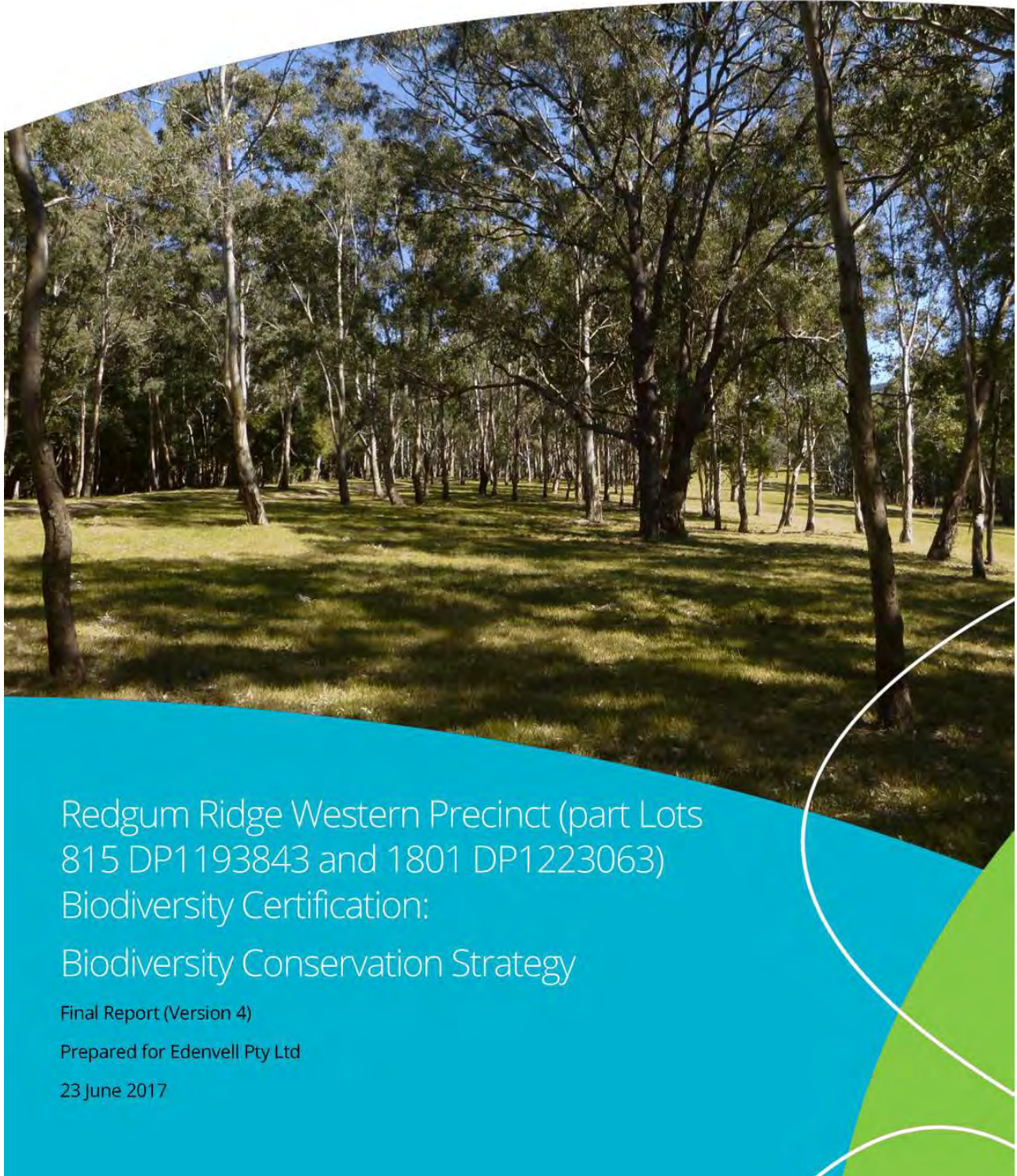
15 Lodging the application

Once completed and signed, send the application with all supporting documentation to:

Minister for the Environment
c/- the Chief Executive, Office of Environment and Heritage
PO Box A290
SYDNEY SOUTH NSW 1232.

Published by:
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Department of Premier and Cabinet
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OEH 2012/0044
January 2012



Redgum Ridge Western Precinct (part Lots
815 DP1193843 and 1801 DP1223063)

Biodiversity Certification:

Biodiversity Conservation Strategy

Final Report (Version 4)

Prepared for Edenvell Pty Ltd

23 June 2017



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Glossary

APZ	Asset Protection Zone
BAR	Biodiversity Assessment Report
BCAA	Biodiversity Certification Assessment Area
BCS	Biodiversity Conservation Strategy
BVT	Biometric Vegetation Type
CAP	Catchment Action Plan
CMA	Catchment Management Area
DECCW	NSW Department of Environment, Climate Change and Water (now OEH)
DP	Deposited Plan
DPE	Department of Planning and Environment
E4	Environmental Living zoning under the Wollongong LEP
EEC	Endangered Ecological Community
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
ha	Hectares
LEP	Local Environmental Plan
LGA	Local Government Area
OEH	NSW Office of Environment and Heritage
RU2	Rural Landscape zoning under the Wollongong LEP
SRCMA	Southern Rivers Catchment Management Area
TEC	Threatened Ecological Community
TSC Act	NSW <i>Threatened Species Conservation Act 1995</i>
WCC	Wollongong City Council



Executive summary

MMJ Wollongong, on behalf of Edenvell Pty Ltd, is co-ordinating a Planning Proposal with Wollongong City Council for the rezoning of land at Figtree in order to facilitate low density residential development within the western precinct of the Redgum Ridge Estate.

The 1998 Commission of Inquiry recognised that the partially cleared ridge plateau has potential for limited low density residential development, provided that the matter of vegetation management within the site can be satisfactorily achieved. More recent biodiversity assessments and investigations of the site identified that the centralised plateau was generally cleared and maintained, whilst the vegetated ridge side slopes possessed high biodiversity values, including threatened species and ecological communities

Based on these investigations Edenvell Pty Ltd proposes to rezone the centralised ridge plateau from RU2 Rural Landscape to E4 Environmental Living under the Wollongong Local Environmental Plan 2009 (LEP) to facilitate low density residential development. Areas of high biodiversity value on side slopes will be retained within an expanded E2 Environmental Conservation zone. This E2 zone will be retained and managed for conservation under a BioBanking Agreement (Agreement 221) and dedication of the land as a BioBank site. These two zones form the Biodiversity Certification Assessment Area (BCAA). Land proposed for future development will be biodiversity certified, with the BioBank site identified as retained land.

This Biodiversity Conservation Statement (BCS) assesses both the 'development' and 'conservation' area in one assessment. Credits required by the development will be offset through the retention and management of a conservation area within the Biobank site.

The BCAA supports three vegetation types, with land proposed for certification supporting a modified form of two communities including 3.15 hectares of *Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion* (SR652) and 1.44 hectares of *Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion* (SR545). Vegetation in the land proposed for biodiversity certification (Biocertification) is disturbed through regular slashing of the ground and midstory vegetation layers under a regrowth canopy. Areas where the tree canopy does not exist are dominated by exotic grasses.

No land is proposed for conservation measures as a part of the application for biocertification. Edenvell Pty Ltd have obtained a BioBanking Agreement to establish a BioBank site on land supporting high biodiversity value within the northern and southern sections of the BCAA (Agreement 221). To offset the impacts of conferral of biodiversity certification, the acquisition and retirement of biodiversity credits from within the BCAA is proposed via the biodiversity register.

The proposed low density residential development and retention of areas of high biodiversity value within a BioBank site are consistent with the outcomes of the 1998 Commission of Inquiry and associated *Illawarra Escarpment Strategic Management Plan* (WCC 2015), and the *Illawarra-Shoalhaven Regional Plan* (DPE 2015) and will assist Wollongong City Council, the NSW Office of Environment and Heritage (OEH) and Local Land Services in meeting the objectives of the *Illawarra Biodiversity Strategy* (WCC et al., 2011a, 2011b), the Southern Rivers Catchment Management Authority (SRCMA) *Catchment Action Plan* (CAP) 2006 to 2016, and the current SRCMA CAP 2013 – 2023 (SRCMA 2013).

Wollongong City Council, as the planning authority, will be submitting the application for biodiversity certification of a portion of the BCAA to OEH on behalf of Edenvell Pty Ltd. Once biodiversity certification is conferred Edenvell Pty Ltd will retire the required credits from the BioBank site within the BCAA and sell any



remaining credits on the BioBanking register. This will enable the long term conservation and management of this BioBank site. Long term, the BioBank site is proposed to be dedicated to Council.

The biodiversity certification of the development will enable the proposed low density residential development of the Western Precinct of the Redgum Ridge Estate, with development restricted to areas previously disturbed through regular slashing. From a conservation perspective, the Biocertification of this area will ensure all impacts resulting from the development are offset and enable the protection, long term conservation and management of areas of high biodiversity value through the establishment of a BioBank site. In turn, this will assist in meeting key objectives of the strategies and plans outlined above, resulting in an improved outcome for biodiversity.



1. Introduction

1.1 Strategic context

1.1.1 Planning proposal

MMJ Wollongong, on behalf of Edenvell Pty Ltd, is co-ordinating a Planning Proposal with Wollongong City Council (WCC) for the rezoning of land at Figtree in order to facilitate low density residential development.

The subject land is located between the Village of Mt Kembla to the west, the urban precinct of Figtree to the east, and the urban precinct of Cordeaux Heights to the south. It is located within the lower slopes of the Illawarra Escarpment to the west and is adjoined by the highly urbanised areas of the coastal plain to the east and south. The subject land is the remainder of the landholding recently residentially developed by the Redgum Ridge Estate to the east, which is accessed from O'Briens Road (via George Fuller Drive and Redgum Forest Way) (Figure 1). It is described as part of Lots 815 in Deposited Plan (DP) 1193843 and 1801 DP1223063 as having an area of approximately 55 hectares and is bounded to the north by Brandy and Water Creek, and to the south by American Creek, Cordeaux Road and adjacent rail line (Figure 2). The subject land is known as the Western Precinct of the Redgum Ridge Estate.

The long-term land use strategy for the subject land is guided by the site's existing topography and environmental qualities. The densely vegetated ridge side slopes possess high biodiversity values for ongoing conservation management, whilst the generally cleared centralised ridge plateau provides an opportunity to complement the "Redgum Ridge" Estate development by the addition of large lot low density residential development. Thus, the Planning Proposal seeks to rezone the centralised ridge plateau from RU2 Rural Landscape to E4 Environmental Living under the Wollongong Local Environmental Plan 2009 (LEP) to facilitate low density residential development (Figure 2).

Previous assessments (Biosis 2011, 2014) have identified that land to the north and south of the proposed development area support significant biodiversity values, including two threatened ecological communities (TECs) and one threatened flora species (White-flowered Wax Plant *Cynanchum elegans*) listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These lands will be retained in an expanded E2 Environmental Conservation zone (including APZ's and easements), and the biodiversity values managed in perpetuity for conservation purposes under the BioBanking Agreement (Agreement 221). This area has been designated as a BioBank site (Figure 2).

On 15 December 2014, WCC resolved to submit the draft Planning Proposal (MMJ 2014) to the NSW Department of Planning and Environment (DPE) seeking a Gateway Determination. The draft Planning Proposal was submitted to DPE in January 2015 and the Gateway Determination was granted in March 2015. The draft Planning Proposal was exhibited between 16 March and 17 April 2015. On 14 December 2015, WCC considered a report on the submissions, resolving to support a pathway for a BioBanking Agreement and Biodiversity Certification covering a larger area, and to finalise the Planning Proposal in two parts.

1.1.2 Biodiversity Certification Assessment Area

The Biodiversity Certification Assessment Area (BCAA) includes all land proposed for biodiversity certification, as well as retained land (including easements and a BioBank site) as shown in Figure 3.

Land identified for biodiversity certification includes land proposed to be zoned E4 Environmental Living and subject to future residential development. This area is 8.11 hectares and is identified as 'Land proposed for biodiversity certification' in Figure 3. Long term, this land will be subdivided for residential development, with



the creation of approximately 27 residential lots, asset protection zones (APZs), roads and other associated infrastructure (Figure 3). Lots will range in size from 1,229m² to 1.1 hectares. Access to these allotments will be gained via a public road to be constructed along the ridge line (adjacent to the 24 metre wide gas pipeline easement), which will be an extension of Redgum Forest Way servicing the Estate to the east. The internal road network will consist of a perimeter road to control bushfire hazard management considerations within BCAA. Full urban reticulation services will be provided from the existing service network within the Redgum Ridge Estate.

The BCAA contains several gas, water and energy transmission easements, totalling 5.31 hectares, identified as 'Retained land – Easement' in Figure 3. These easements are not proposed for biodiversity certification or subject to proposed conservation measures. The features of these areas are not discussed further.

No land is proposed for conservation measures as a part of the application for biodiversity certification. Edenvell Pty Ltd will conserve and manage land within the BCAA under a BioBanking Agreement over land to the north and south of land subject to future residential development (Agreement 221). This land, totalling 46.82 hectares, has been dedicated as a BioBank site and is identified as 'Retained land – BioBank site' in Figure 3. Biodiversity credits required to offset the area proposed for certification and to achieve the 'improve or maintain' outcome required under BCAM will be sourced from this BioBank site. The features of the BioBank site are outlined in Biosis (2015).

The BCAA incorporates part of the lower section of a ridge that extends from the Illawarra Escarpment before dropping onto the coastal plain nearby to the east. There is a moderate level of canopy connectivity between the BCAA and the Illawarra Escarpment State Conservation Area less than 2 kilometres to the west. Much of the higher ridge and upper moderate slopes, proposed for future residential development, has been cleared of native vegetation and is characterised by scattered individuals or stands of remnant and regrowth native trees. These open grassy woodland areas are being managed by regular slashing and are grazed by feral animals. Remnant and regrowth native vegetation is present over the mid to lower northern and southern slopes within the BioBank site. The condition of the native vegetation varies from relatively intact and weed-free to areas of remnant canopy with an understorey dominated by *Lantana camara*. Woody weeds, including *Lantana*, are being controlled in places.

Further discussion of the BCAA is provided in Section 2.2.

1.1.3 Term of biodiversity certification

This Biodiversity Conservation Strategy (BCS) seeks biodiversity certification of all land proposed for biodiversity certification within the BCAA in perpetuity.

1.1.4 Strategic context of the proposal

Wollongong Local Environmental Plan 2009

The principle planning instrument for land use control within the City of Wollongong is the Wollongong LEP 2009. As identified within Section 1.1.1, the centralised ridge plateau and western section of the northern slopes are currently zoned RU2 Rural Landscape, which has the following objectives:

- To encourage sustainable primary production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To encourage the retention, management or restoration of native vegetation.



It is considered that this current RU2 zone does not reflect the highest and best long-term use of the site, as agricultural activities are not in demand or economically viable within the site, primarily due to the fact that the allotment size and topography are not well suited to such activities. Given the presence of endangered ecological communities (EECs), any further traditional agricultural uses (such as cattle grazing) may threaten the long term conservation and management of the identified vegetation. The Planning Proposal argued that the densely vegetated areas containing EECs would be best conserved and managed for the long term in accordance with the E2 Environmental Conservation zoning, and protected under a Biodiversity management plan. The objectives of the E2 Environmental Conservation zone are as follows:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To retain and enhance the visual and scenic qualities of the Illawarra Escarpment.
- To maintain the quality of the water supply for Sydney and the Illawarra by protecting land forming part of the Sydney drinking water catchment (within the meaning of State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011) to enable the management and appropriate use of the land by Water NSW.

The BCAA and proposed biodiversity certification area includes areas of land mapped as Clause 7.2 Natural resource sensitivity - biodiversity of the Wollongong LEP 2009. The objective of Clause 7.2 is '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 the ecological processes necessary for their continued existence.
- Encouraging the recovery of threatened species, communities, populations and their habitats.

In contrast to the densely vegetated ridge side slopes, to be retained and managed as a BioBank site, the majority of the area that is proposed for rezoning from RU2 to E4 and certification is not mapped as Clause 7.2. Future rezoning and subsequent development applications resulting in a loss of a limited area mapped as Clause 7.2 would not be inconsistent with the objectives or further intent of Clause 7.2. In addition, the rezoning of the western section of the northern slopes from RU2 to E2, will provide a closer alignment of objectives for the retained areas of Clause 7.2 than is currently the case.

The majority of the BCAA, including the entire proposed biodiversity certification area, is mapped as Clause 7.8 Illawarra Escarpment area conservation of the Wollongong LEP 2009. The objective of this clause is to provide specific controls to protect, conserve and enhance the Illawarra Escarpment. Future rezoning of RU2 land to proposed E4 and E2 and subsequent development applications will result in a modification of defining attributes of the Illawarra Escarpment over a limited area. However this outcome is not considered to be inconsistent with the objectives or full intent of Clause 7.8.

Biodiversity certification provides for a strategic assessment including consideration, amendment and incorporation of local planning controls. In summary, it is considered that the proposed biodiversity certification aligns with environmental and conservation outcomes sought by the Wollongong LEP 2009 in the planning and development application process. The environmental and conservation outcomes accompanying a conferral of biodiversity certification would have otherwise been achieved through the alternative biodiversity assessment and approval pathways.



Commission of inquiry into the long term planning and management of the Illawarra Escarpment

The environmental planning and management functions associated with the Illawarra Escarpment within the City of Wollongong were examined in 1998 by a Commission of Inquiry (Simpson 1999) which, in addition to an extensive range of matters, considered numerous submissions associated with specific landholdings. The subject land, together with the adjoining Redgum Ridge Estate development, was one of the specific submissions considered and, in this regard, the following comments are relevant:

- The total property had an area of 106 hectares and was zoned 1 (Non Urban) within the Wollongong LEP 1990.
- The submission sought to rezone 44 hectares for the development of 420-440 residential lots and the remaining 66 hectares to be zoned for environmental protection purposes (it should be noted that Redgum Ridge Estate is expected to have a maximum yield of less than 220 residential lots).
- The site contained 22 hectares of moist Red Gum forest, of which 13 hectares will be lost for the residential development.
- The vegetation of the site to be retained should not be further fragmented and should be conserved as a whole with proper management.
- The site has opportunity for urban residential development (some 400 residential allotments) generally in the eastern portion of the site (again, see comment on maximum yield above).
- There appears to be opportunity for rural residential development within the cleared area in the centre of the north-western side of the site (1998 Commission of Inquiry, cited in WCC 2006).

It appears that the Commissioner recognised that the partially cleared ridge plateau had potential for limited low density residential development, provided that the matter of vegetation management within the site could be satisfactorily achieved. Accordingly, it is considered that the Planning Proposal is consistent with the findings of the Commission of Inquiry.

Illawarra Escarpment Strategic Management Plan 2015

Emanating from the Commission of Inquiry, the *Illawarra Escarpment Strategic Management Plan* (WCC 2015) was prepared by WCC to identify environmentally significant areas of the escarpment and foothills, and to identify possible changes to the zoning regime to align conservation requirements and land use zones. The partially cleared ridge plateau identified in the Planning Proposal is primarily mapped as "Landscape Support" which is defined as follows:

"Landscape support areas are those areas of land that form a link between core and support areas of the escarpment and foothills with the coastal plain. These areas have some scientific significance, as it relates to corridors and vegetation link, but are fragmented and do not always form contiguous links to core and support land . . ."

Landscape support areas have potential for residential development, though these areas are to be determined through a Land Use Review Strategy process . . ."

The *Illawarra Escarpment Strategic Management Plan* (WCC 2015) was a key planning document used in the determination of land use zones within Wollongong LEP 2009. The majority of the partially cleared ridge plateau is not identified for environmental conservation in either of these local planning instruments. The low density residential development (partially cleared ridge plateau) and environmental conservation (densely vegetated side slopes) envisaged by the Planning Proposal is consistent with the IESMP 2015.



Illawarra Regional Strategy: 2006-31

The *Illawarra Regional Strategy* (Department of Planning 2007) was considered in the development of the Planning Proposal including the following key outcomes:

- To provide 38,000 new dwellings by 2031 to accommodate the additional 47,600 people expected in the Region over the next 25 years.
- To ensure that 50% of new dwellings are provided in the form of detached housing.
- To protect high value environments including vegetation communities and habitat corridors by ensuring that new urban development minimise impacts on these important areas and their catchments.

Illawarra – Shoalhaven Regional Plan

The Illawarra – Shoalhaven Regional Plan (DPE 2015) provides the strategic policy, planning and decision-making framework to guide the region to sustainable growth over the next 20 years. Key principles underpinning the planning framework for this Plan include a range of cultural, economic and environmental considerations such as identifying and protecting land with high environmental value and recognising cultural heritage values. The Regional Plan identifies regional landscape biodiversity values and connections, and management challenges and sets directions for regional growth. In summary it is considered that the Planning Proposal, reliant on the conferral of biodiversity certification, is consistent with the following from the Regional Plan:

- Direction 2.4 Identify and conserve biodiversity values when planning new communities: biodiversity certification is acknowledged as a process to provide planning authorities the option to integrate biodiversity conservation with proposed development outcomes at the strategic planning stage.
- Direction 5.1 Protect the region's environmental values by focusing development in locations with the capacity to absorb development: the Planning Proposal has considered and applied aspects of Action 5.1.1 Avoid, minimise and mitigate the impact of development on significant environmental assets and Action 5.1.3 Protect the region's biodiversity corridors in local planning controls.

Environmental Planning and Assessment Act 1979

In considering the appropriate strategic outcome for the site, the objectives of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) should be considered. In particular:

“(a) To encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests . . . for the purpose of promoting the social and economic welfare of the community and a better environment.

(ii) the promotion and co-ordination of the orderly and economic use and development of land . . .

(iii) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats;

(vi) ecologically sustainable development . . .”

The low density residential development of the partially cleared ridge plateau within the site, together with the conservation outcomes outlined in the Planning Proposal, will result in an environmentally sustainable outcome, in line with the objectives of the EP&A Act.



This outcome will also be consistent with the relevant Ministerial Directions as follows:

- Direction 1.2 Rural Zone – the site is not suitable for agricultural activities due to allotment size and topography and, therefore, there is no need to protect the rural production value of this land.
- Direction 1.5 Rural Lands – noted as above.
- Direction 2.1 Environment Protection Zone – the environmentally sensitive areas within the site currently zoned for environmental protection will be maintained by this planning proposal and the BioBanking arrangements for the site will significantly enhance and conserve areas of environmental significance.
- Direction 4.4 Planning for Bushfire Protection – this direction has been appropriately addressed within the Bushfire Constraints Assessments (ABPP 2014).
- Direction 5.1 Implementation of Regional Strategies – this proposal will not be inconsistent with the housing and natural environment outcomes/actions contained within the *Illawarra Shoalhaven Regional Plan*.

The proposed residential development of the partially cleared centralised ridge plateau will be used to facilitate the retention, conservation and management of remnant vegetation on the northern and southern slopes within the BioBank site, resulting in a net positive benefit for native vegetation, including:

- Two threatened ecological communities (TECs) (*Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion* and *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion*).
- One threatened species (White-flowered Wax Plant *Cynanchum elegans*).

The dedication of moderate to good condition remnant native vegetation under a conservation covenant would also assist in meeting targets set out under the *Illawarra Biodiversity Strategy* (WCC et al. 2011a, 2011b) and Southern Rivers Catchment Management Authority (SRCMA) *Catchment Action Plan* (CAP) 2006 to 2016, and the current SRCMA CAP 2013 – 2023 (SRCMA, 2013).

Pillar 3: Natural resources – strategies and priorities of SRCMA (2013) has a goal to achieve diverse, healthy, connected and productive natural environments. The objective of the goal is that the health and integrity of natural habitats support people and the environment. The target of the goal is that by 2023 land and water managers are supported to increase the adoption of practices that maintain or improve the:

- Extent and condition of priority habitats where the priorities for action and investment are:
 - Under reserved and threatened vegetation communities.
 - Habitat that supports threatened species.
 - High carbon capture ecosystems.
- Habitats that support connectivity priorities where the priorities for action and investment include State, regional and locally significant corridors.

It is noted that the subject land is mapped as occurring in the Escarpment Moist Forests Corridor (WCC et al., 2011a, 2011b). The identification of regional corridors in the strategy is to:

"Highlight those highest priority areas where Councils and other lead agencies should direct scarce resources, and support private land managers to participate in conservation and restoration efforts where resources allow."

The strategy also states:



"Opportunities for acquisition of lands or rezoning should be guided by the values identified within this Strategy. Information that can be used to this end includes the mapping of regional biodiversity corridors, identification of vegetation priorities, and priority threatened species."

The dedication of the BioBank site for biodiversity conservation would see this strategic land retained for conservation in-perpetuity.

Written advice from OEH (18 February 2014) also acknowledges the potential for net conservation gains of the two TECs; Illawarra Lowlands Grassy Woodland and Illawarra Subtropical Rainforest. In addition to highlighting some of the specific benefits of establishing a BioBank site, OEH note that net gain conservation outcomes would be consistent with the objectives and targets of regional strategies including the *Illawarra Biodiversity Strategy* (WCC et al. 2011a and 2011b) and *Illawarra Regional Strategy: 2006-31* (Department of Planning 2007), with a focus on priority vegetation and important habitat corridors.

In view of the above, it is considered that the Planning Proposal is consistent with the relevant current strategic planning relevant to the BCAA.

1.2 Purpose of the document

This Biodiversity Conservation Strategy (BCS), and associated Biodiversity Assessment Report (BAR) (Appendix 1), has been prepared in support of an application to seek biodiversity certification under Section 126H of the TSC Act. This BCS seeks biodiversity certification of land proposed for future residential development within the BCAA (Figure 3).

The following parties have assisted in the preparation of these documents:

- Edenvell Pty Ltd: Richard Clifford
- MMJ Wollongong: Luke Rollinson
- Wollongong City Council: David Green, Kathryn Adams, John Wood and Brett Morrissey
- NSW Office of Environment and Heritage: Chris Page, Daniel Robson and Jedda Lemmon.

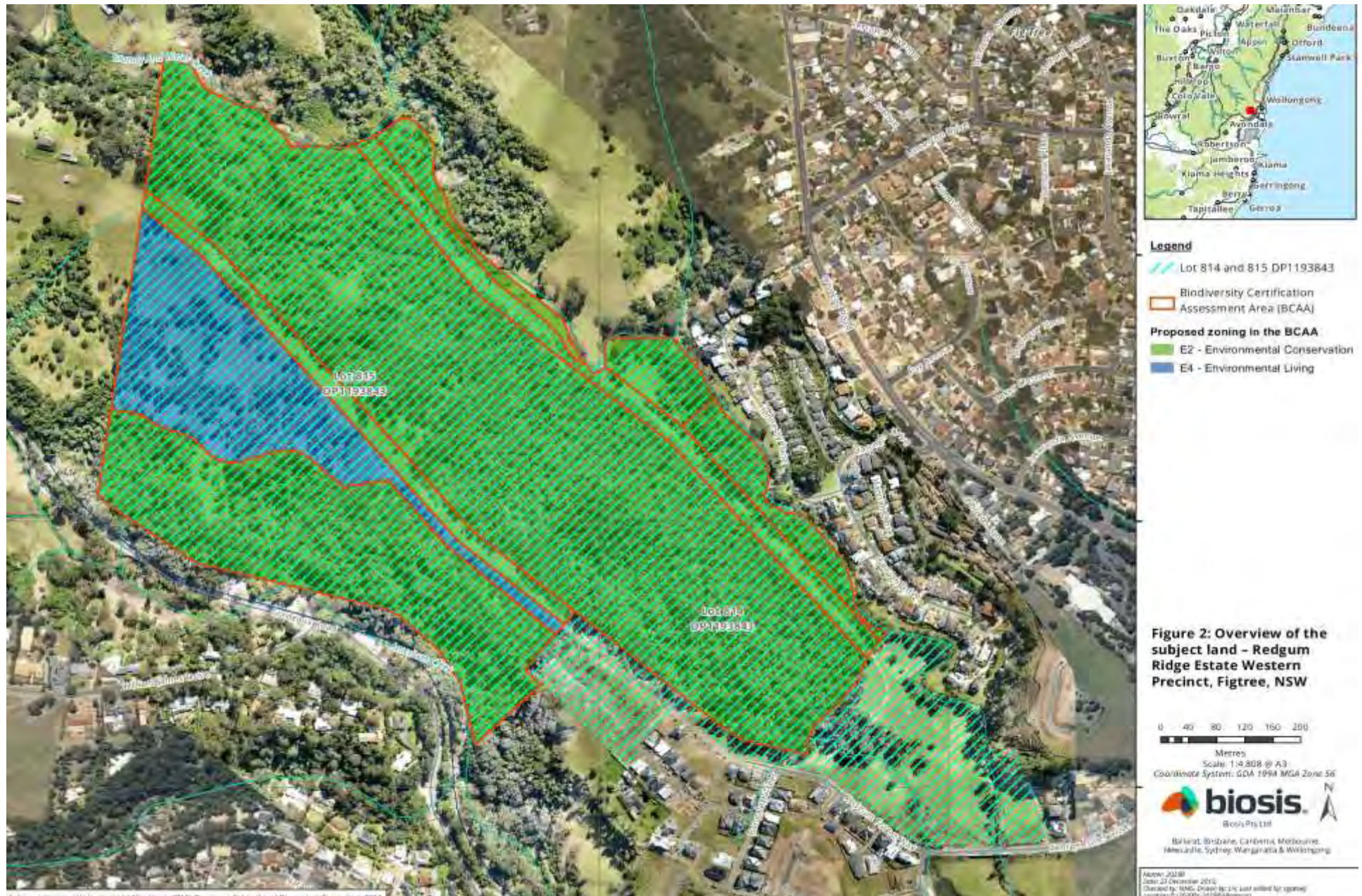
The BCS and BAR have been prepared by Nathan Garvey of Biosis Pty Ltd. Nathan is an accredited BioBanking Assessor (No. 0103). Nathan's curriculum vitae is included at Appendix 2.

The following groups are parties to the biodiversity certification:

- Edenvell Pty Ltd as the landowner and proponent for the proposed development.
- WCC as the planning authority lodging the biodiversity certification application.

No other groups are considered parties to the parties to the biodiversity certification.









2. Strategic planning

2.1 Preliminary investigations

2.1.1 Summary of the Biodiversity Assessment Report (Biosis 2017)

Investigations of the BCAA were carried out by Biosis between September 2011 and September 2015, including:

- 2011 – A constraints assessment undertaken to document the flora and fauna habitats within the BCAA, and to inform concept plans for a proposed rezoning and residential development. Field work undertaken included initial mapping of the vegetation communities, random meanders for threatened flora species and assessment of fauna habitat features.
- 2013-2014 – A preliminary BioBanking assessment, including consultation with OEH and Local Land Services, to determine the feasibility of BioBanking or Biocertification of the site. Field work undertaken included confirmation of the vegetation types present and alignment with the NSW Biometric Vegetation Types (BVTs), as well as more detailed assessment of fauna habitat features within the BCAA.
- 2015 – Additional detailed surveys, including refinement of vegetation mapping using Light Detection and Ranging (LiDAR) data to map the tree canopy, ground-truthing to provide detailed mapping of vegetation and targeted surveys for threatened flora species within the BCAA.

The methodology for these assessments is detailed in the BAR (Appendix 1).

Site investigations confirmed that the BCAA supports 51.41 hectares of native vegetation and three vegetation types, with land proposed for biodiversity certification containing 4.59 hectares of native vegetation and two vegetation types (Table 1 and Figure 4).

Table 1 Vegetation types mapped within the BCAA

Vegetation type	Vegetation class	Vegetation formation	Area within land proposed for certification (ha)	Area within retained land (Biobank site) (ha)
SR545 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion	Coastal Valley Grassy Woodlands	Grassy woodlands	1.44	9.31
SR652 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	Southern Escarpment Wet Sclerophyll Forests	Wet sclerophyll forests (shrubby sub-formation)	3.15	26.87
SR662 – Whalebone Tree - Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion	Dry Rainforests	Rainforests	0	10.64



Vegetation in the area proposed for biodiversity certification is disturbed through regular slashing of the ground and midstory vegetation layers under a regrowth canopy. Areas where the tree canopy does not exist are dominated by exotic grasses such as Small-flowered Summer Grass *Digitaria violascens* and Kikuyu *Pennisetum clandestinum*. These areas are not considered native vegetation and are not discussed further. Within the BioBank site, vegetation is largely intact, but subject to varying levels of weed infestation. Vegetation within the BioBank site is discussed in detail in Biosis (2015) and attached in Appendix 1.

Forest Red Gum - Thin-leaved Stringybark grassy woodland (SR545) occurs on the eastern section of the area proposed for biodiversity certification within the BCAA (Figure 4). The canopy is dominated by remnant and regrowth Forest Red Gum from 15 to 25 metres with occasional Coast White Box. This area is lacking midstory species (Plate 1), but contains a groundcover with a moderate diversity of native grasses and native herbs. Common native species include Bushy Hedgehog-grass *Echinopogon caespitosus*, Forest Hedgehog Grass *Echinopogon ovatus*, *Carex longibrachiata*, Kidney Weed, Climbing Guinea Flower *Hibbertia scandens*, Trailing Speedwell *Veronica plebeia*, Pennywort *Hydrocotyle peduncularis*, Weeping Grass, Whiteroot *Pratia purpurascens*, Slender Tick-trefoil *Desmodium varians* and Bearded Tylophora *Tylophora barbata*. The dominant exotic species include Small-flowered Summer Grass *Digitaria violascens*, Kikuyu *Pennisetum clandestinum*, Cobbler's Pegs *Bidens pilosa*, Spear Thistle *Cirsium vulgare*, Panic Veldtgrass *Ehrharta erecta* and Red-flowered Mallow *Modiola carolinianum*.



Plate 1 Illawarra Lowlands Grassy Woodland in the BCAA, showing disturbance resulting from regular slashing

Sydney Blue Gum X Bangalay - Lilly Pilly Moist Forest (SR652) occurs in the western two thirds of the area proposed for biodiversity certification within the BCAA (Figure 4). Along the western ridge *Eucalyptus saligna* X



botryoides, Blackwood *Acacia melanoxylon* and Cheese Tree *Glochidion ferdinandii* are dominant. Coast White Box *Eucalyptus quandrangulata* and Lilly Pilly *Acmena smithii* become progressively more prominent moving down the southern slope, with Forest Red Gum *Eucalyptus tereticornis* occurring occasionally and increasing to the east in the intergrade to Forest Red Gum - Thin-leaved Stringybark grassy woodland. The midstory and understory are highly modified through regular slashing, with both strata being absent in the higher ridge areas (Plate 2). The groundcover in the slashed areas is a mix of native grasses and vines, and exotic grasses and herbs. Native species include; Milk Vine *Marsdenia rostrata*, Sweet Morinda *Morinda jasminoides*, Blady Grass *Imperata cylindrica*, *Carex longebrachiata*, Kidney Weed *Dichondra repens*, Weeping Grass *Microlaena stipoides* var. *stipoides* and *Oplismenus aemulus*, whilst dominant exotic species included; Narrow-leaved Carpet Grass *Axonopus fissifolius*, Small-flowered Summer Grass *Digitaria violascens*, Cobbler's Pegs *Bidens pilosa*, Spear Thistle *Cirsium vulgare*, Panic Veldtgrass *Ehrharta erecta* and Black Medic *Medicago lupulina*.

While SR662 - Whalebone Tree - Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion occurs within the BCAA, this PCT is not present within the area subject to biodiversity certification. This PCT is consistent with Illawarra Subtropical Rainforest Endangered Ecological Community (EEC). Further details regarding the occurrence and condition of SR662 are provided within Appendix 1 of the BAR.



Plate 2 Illawarra Lowlands Grassy Woodland in the BCAA, showing disturbance resulting from regular slashing



Targeted surveys for threatened flora species did not record any threatened species in the area proposed for biodiversity certification within the BCAA. Habitat assessments undertaken to determine the likelihood of threatened fauna species occurring in the BCAA determined it was unlikely that the area proposed for biodiversity certification within the BCAA supports any threatened flora or fauna species ('credit species'), largely due to the high levels of disturbance within the site. Habitat in the area proposed for biodiversity certification within the BCAA is considered to be of poor quality.

A copy of the BAR is provided in Appendix 1.

2.1.2 Red flag areas and other constraints

One red flag was identified in the area proposed for biodiversity certification within the BCAA (Figure 5). Forest Red Gum - Thin-leaved Stringybark grassy woodland (SR545) is considered to be consistent with the *Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion endangered ecological community* (EEC) under the TSC Act and *Illawarra and south coast lowland forest and woodland ecological community* critically endangered ecological community (CEEC) under the EPBC Act. In addition, this vegetation type is estimated to be 85 percent cleared in the Southern Rivers Catchment Management Authority (CMA) area. This red flag is subject to ongoing disturbance through regular slashing.

A total of 10.64 hectares of Illawarra Subtropical Rainforest EEC and 89 individual White-flowered Wax Plant *Cynanchum elegans*, listed as vulnerable under the TSC Act and EPBC Act are located within the BioBank site of the BCAA. No vegetation consistent with the EEC Illawarra Subtropical Rainforest or any White-flowered Wax Plant individuals were identified within the land proposed for biodiversity certification. As such, these red flags will be protection and managed in perpetuity and a red flag variation is not required.

The bushfire constraints assessment undertaken by Australian Bushfire Protection Planners Pty Limited (ABPP 2014) and prepared to accompany the Planning Proposal, identified bushfire hazards affecting the BCAA, and assessed and designed amelioration measures to reduce this hazard. This has included the design of a perimeter road and recommendation of asset protection zones (APZs) for the proposed residential development of the BCAA (Figure 3). Correspondence has been received from the NSW Rural Fire Service (RFS) commenting on the Planning Proposal including the report by ABPP (2014). The RFS recommended consideration of an additional access point to the proposed development, or alternatively a plan of management be established with regard to the vegetation adjacent the proposed thoroughfare. An onsite meeting with RFS confirmed that a dual lane access road, with a managed corridor provided to each side of the road, would be a suitable outcome. The RFS will need to approve any vegetation management actions submitted as part of a subdivision development application.

2.2 Land proposed for biodiversity certification

2.2.1 Biodiversity Certification Assessment Area

As outlined in Section 1.1.2, the BCAA includes all land subject to future development, as well as retained land (including several easements and a BioBank site) and includes part of Lots 815 DP1193843 and 1801 DP1223063 (Figure 3).

The land proposed for biodiversity certification within the BCAA has been identified through an iterative process, with a focus on constraining development to land that has been subject to historic and ongoing disturbance. The land owner engaged Biosis to undertake a constraints assessment (Biosis 2011) to inform concept plans for the proposed rezoning and residential development. This assessment identified that biodiversity values along the centralised ridge plateau were limited to a regrowth canopy over a groundcover disturbed by regular slashing, whilst the northern and southern slopes support significant biodiversity values, including two TECs and one threatened flora species. The long-term land use strategy for the BCAA has been



directed by the site's existing environmental (and topographic) qualities, with proposed development restricted to disturbed land, minimising impacts to native vegetation and avoiding impacts to threatened biodiversity and its potential habitat.

As outlined in Section 1.1.2, no land in or outside the BCAA is proposed for conservation measures as a part of the application for biodiversity certification. A BioBank site has been established within the BCAA (identified as 'Retained land – BioBank site' in Figure 3). The appropriate conservation measure for the biocertification application will be the acquisition and retirement of credits from the BioBank site within the BCAA.

Through consultation between OEH, WCC and the land owner, this option has been selected as it will ensure that funding for ongoing management of the BioBank site is available to achieve the conservation management objectives.

2.2.2 Community engagement

The following summarises the community notification and engagement to date for the proposed biodiversity certification:

- The publically available WCC Business Paper for the Ordinary Meeting of Council on 15 December 2014 (WCC 2014b) noted feedback from the OEH review of the draft Planning Proposal and that biodiversity certification could be an option, as opposed to a conventional biobanking agreement.
- The draft Planning Proposal and suite of documentation was exhibited between 16 March and 17 April 2015, with surrounding residents and key stakeholders notified by mail and advertisements placed in the local newspapers. The suite of materials was made available on WCC's website, at libraries and in WCC's Customer Service Centre.
- The publically available WCC Business Paper for the Ordinary Meeting of Council 14 December 2015 (WCC 2015d) recommended that WCC support in-principle the establishment of a Biodiversity Certification Strategy for the Western Precinct Redgum Ridge Estate Planning Proposal.
- Agenda item for the March 2015 meeting of the Escarpment Planning Reference Group.

In accordance with Section 126N of the TSC Act, WCC as the planning authority is required to publish notice of the application in a newspaper circulating generally throughout the State and on the planning authority's website. Copies of the application and supporting documents must be publicly available for a minimum of 30 days. At the close of the exhibition, Council must provide a submissions report to the Minister administering the TSC Act. OEH then make recommendations to the Minister, who either confers biodiversity certification on the specified land or refuses it. The biodiversity certification application will be publically exhibited and submissions from the public will be sought, responded to where necessary and reported.

2.2.3 Red flag areas and variation request

The land proposed for biodiversity certification within the BCAA contains one red flag area, with 1.44 hectares of Forest Red Gum - Thin-leaved Stringybark grassy woodland (SR545) being a red flag as a result of this vegetation type being consistent with the Illawarra Lowlands Grassy Woodland EEC and being more than 70 percent cleared in the Southern Rivers CMA (estimated to be 85 percent cleared).

As a result, this BCS seeks a red flag variation to allow impacts to this red flag area to be offset.



Table 2 addresses the red flag variation criteria set out in Section 2.4 of the *Biodiversity Certification Assessment Methodology* (DECCW 2011). Only those criteria relevant to vegetation types (as opposed to threatened species) are considered.



Table 2 Red flag variation request, including variation criteria and response

Red flag variation criteria and response
<p>Feasibility of options to avoid impacts on red flag area(s) where biodiversity certification is conferred:</p>
<p>a) All reasonable measures have been taken to avoid adverse impacts on the red flag areas and to reduce impacts of development on vegetation remaining within the biodiversity certification area.</p>
<p>Measures to avoid and minimise impacts are outlined in Section 2.2.1. The biodiversity certification, as proposed, will result in the permanent removal of 1.44 hectares and the permanent protection of 9.31 hectares of Illawarra Lowlands Grassy Woodland. The area of Illawarra Lowlands Grassy Woodland to be removed is in low condition. The following process has been undertaken to avoid and minimise impacts to red flags areas occurring in the BCAA:</p> <ul style="list-style-type: none"> • The land owner engaged Biosis to undertake a constraints assessment (Biosis 2011) to inform concept plans for the proposed rezoning and residential development. • This assessment was used to inform the location of residential development in areas of lower quality vegetation previously subject to historic and ongoing disturbance resulting from regular slashing of understorey and groundcover vegetation. • Following consultation with Biosis, WCC and OEH, the land owner the reduced the lot yield and re-sited perimeter roads to further reduced impacts to the red flag. • The Planning Proposal to rezone RU2 Rural Landscape to E4 Environmental Living under the Wollongong LEP will also ensure that the long-term land use for the residential subdivision is guided by the site's existing topography and environmental qualities. <p>Finally, through the establishment of a BioBank site, areas supporting high biodiversity value on mid to lower slopes to the north and south of the BCAA will be conserved and managed for conservation in-perpetuity.</p>
<p>b) Appropriate conservation management arrangements cannot be established over the red flag area given its current ownership, status under a regional plan and zoning and the likely costs of future management.</p>
<p>The BCAA is located immediately to the west of the existing Redgum Ridge Estate and is owned by the developer Edenvell Pty Ltd. The land was purchased for residential development, in line with the recommendations of the 1998 Commission of Inquiry which concluded that the cleared area in the centre of the north-western side of the site was suitable for residential development.</p> <p>The majority of the red flag area, along with sections of the BioBank site, are currently zoned RU2 Rural Landscape. This zoning does not reflect the highest and best long-term use of land within the BCAA, as agricultural activities are not in demand or economically viable given the size of the site and surrounding land use, particularly residential development. This zoning may also jeopardise the long-term conservation and management of high biodiversity values identified within the BioBank site. Thus the Planning Proposal seeks to realign zoning boundaries to allow low density residential development in areas subject to disturbance whilst protecting areas of high biodiversity value. These objectives are aligned with the outcomes outlined in the <i>Illawarra Regional Strategy</i> (Department of Planning 2007) which seeks to encourage residential development whilst protecting high value environments and habitat corridors.</p> <p>The establishment of conservation measures over the red flag area is not considered suitable as they:</p>



- Are not consistent with the adjacent land use within the Redgum Ridge Estate or the purpose for which the land was purchased.
- Are not consistent with the land use recommended by the 1998 Commission of Inquiry.
- Are not consistent with the objectives of the current zoning.
- Do not encourage the long term conservation and management of high biodiversity values on land to the north within the BioBank site.
- Given the current condition of vegetation and past and ongoing land uses and associated disturbance, it is unlikely that management of this vegetation would result in an improvement in the viability without significant management of the site and associated high costs.

Additional assessment criteria for vegetation types (Section 2.4.2 of BCAM):

The viability of the red flag area must be low or not viable

(a) The current or future uses of land surrounding the red flag area where biodiversity certification is to be conferred reduce its viability or make it unviable. Relatively small areas of native vegetation surrounded or largely surrounded by intense land uses, such as urban development, can be unviable or have low viability because of disturbances from urbanisation, including edge effects.

The red flag area is subject to high levels of disturbance through regular slashing of the understorey and groundcover vegetation. The result is a regrowth canopy consisting of immature trees over a groundcover consisting of a mix of native and exotic grasses maintained at a height of approximately 10 centimetres.

(b) The size and connectedness of the vegetation in the red flag area where biodiversity certification is to be conferred to other native vegetation is insufficient to maintain its viability. Relatively small areas of isolated native vegetation can be unviable or have low viability.

The red flag area is located adjacent to other areas of remnant vegetation, and forms part of a corridor linking vegetation on coastal areas to the east with the Illawarra Escarpment and Woronora plateau to the west. However, native vegetation within land proposed for biodiversity certification is simplified and more highly disturbed compared with remnant vegetation in this corridor. Analysis of site attribute data obtained during surveys (Biosis 2011, 2014, 2017) indicates that the red flag area has much lower native midstory cover, lower native groundcover (shrubs), much higher levels of exotic plant cover and lower levels of fallen logs. Given the current slashing regime and grazing by deer, further degradation of the red flag area is likely to occur further reducing its long term viability.

(c) The condition of native vegetation in the red flag area where biodiversity certification is to be conferred is substantially degraded, resulting in loss of or reduced viability. Native vegetation in degraded condition can be unviable or have low viability. 'Degraded condition' means substantially outside benchmark for many of the vegetation condition variables as listed in Table 1 of the methodology (s.3.6.2), without the vegetation meeting the definition of low condition set out in section 2.3. Vegetation that is substantially outside benchmark due to a recent disturbance such as a fire, flood or prolonged drought is not considered degraded for the purposes of the methodology.

Given the current levels of disturbance, resulting in ongoing degradation of the red flag area, and the condition of the red flag area in comparison to adjacent areas of Illawarra Lowlands Grassy Woodland the viability of the red flag area is considered low. Even, if the Red Flag areas was retained in the BCAA



the future residential development in the proposed Biocertification area would impact its long term viability.

(d) The area of a vegetation type in a red flag area on land where biodiversity certification is conferred is minor relative to the area containing that vegetation type on land subject to proposed conservation measures.

The biodiversity certification, as proposed, will result in the permanent removal of 1.44 hectares and the permanent protection of 9.31 hectares of Illawarra Lowlands Grassy Woodland. The vegetation to be retained represents a total of 87% of the Illawarra Lowlands Grassy Woodland occurring within the BCAA. Therefore, the removal of 1.44 hectares in low condition is considered to be minor in relation to that subject to conservation.

Based on an assessment of the criteria above, the viability of the red flag area is considered to be low in accordance with Section 2.4.2.1 of the BCAM (OEH 2014).

The contribution to regional biodiversity values of the red flag area is low

a) relative abundance: that the vegetation type or critically endangered or endangered ecological community comprising the red flag area is relatively abundant in the region

The proposed residential development will result in the permanent removal of 1.44 hectares of Illawarra Lowlands Grassy Woodland in degraded condition, consisting largely of scattered trees over a mown grassy groundcover. However, the proposed residential development will enable the conservation and management of 9.31 hectares of Illawarra Lowlands Grassy Woodland in higher condition.

Further, NPWS (2002) maps a total of 794 hectares of Coastal Grassy Red Gum Forest (MU23) and 473 hectares of Lowland Woollybutt-Melaleuca Forest in the region, totalling 1268 hectares. These communities are equivalent to Illawarra Lowlands Grassy Woodland.

b) percent remaining is high: that the percent remaining of the vegetation type or critically endangered or endangered ecological community comprising the red flag area is relatively high in the region

Vegetation mapping by NPWS (2002) maps a total of 1268 hectares of Illawarra Lowlands Grassy Woodland in the region. The 1.44 hectares to be removed represents 0.11% of the community in the region.

c) percent native vegetation (by area) remaining is high: that the percent remaining of all native vegetation cover in the region is relatively high.

As outlined above, NPWS (2002) maps a total of 1268 hectares of Illawarra Lowlands Grassy Woodland in the region. The removal of 1.44 hectares will result in 1266 hectares of Illawarra Lowlands Grassy Woodland remains.

NPWS (2002) maps 18,829 hectares of native vegetation in the region. The removal of 1.44 hectares of Illawarra Lowlands Grassy Woodland will result in 18,828 hectares of native vegetation remaining in the region.

Based on an assessment of the criteria above, the contribution of the red flag area to regional biodiversity values is low in accordance with Section 2.4.2.2 of the BCAM (OEH 2014).



2.2.4 Indirect impacts

Potential impacts resulting from the proposed residential development in the BCAA will be largely restricted to land proposed for biodiversity certification. Indirect impacts are largely restricted to:

- Reduced viability of flora and fauna species in the BioBank site due to influence of adjacent land use, including:
 - Encroachment of weeds into the BioBank site.
 - Management of vegetation within APZs impacting on the BioBank site.
 - Increased predation of native fauna by domestic pets.
- Changes in the quality of water entering American Creek and Brandy and Water Creek due to increased levels of pollutants and contaminants and additional weed invasion from stormwater run-off, resulting in impacts to biodiversity values in these waterways.

It is important to note that the proposed residential development is not high intensity development, but rather, low density residential development within an E4 Environmental Living zoning. The objectives of this zoning are:

- *"To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.*
- *To ensure that residential development does not have an adverse effect on those values."*

These objectives will influence future development of land proposed for residential development, ensuring development is consistent with the biodiversity values present in the BioBank site.

The EPBC Approved Conservation Advice (DEE 2016) for the Illawarra and south coast lowland forest and woodland ecological community recommended a minimum buffer zone of 30 m from the outer edge of the patch is provided to act as a barrier to further direct disturbance. Where the buffer is subject to existing land uses, such as cropping, grazing or fire breaks, these can continue. The BioBank site is buffered from the area proposed for residential development by the perimeter road and a gas easement to the north, and the perimeter road to the south (Figure 3). This will result in a buffer between residential development and the BioBank site of between 40 metres and 20 metres, reducing the impacts of weed invasion from future development areas.

In addition, the BioBank site currently supports moderate levels of weed invasion, particularly from Lantana. As a part of the management actions to be undertaken within the BioBank site weeds will be managed resulting in an overall net positive outcome and lower weed levels.

The current bushfire protection measures proposed for the residential development include a perimeter road around residential areas, and incorporation of the gas easement into the APZ along the northern boundary. These measures have minimised the amount of the APZ that will be located within the BioBank site, reducing the area of native vegetation that will be managed for bushfire protection to a small area along the access road. This small section of the APZ is currently disturbed by regular slashing; the management of this area will result in the same level of disturbance, but will not result in any additional clearing of vegetation. This management does not require additional credits, but will rather reduce the number of credits generated within the relevant management zone in the BioBank site.

Stormwater will be managed in accordance with standard WCC development control requirements and include:



- Rainwater harvesting from the roof of structures and storage within tanks for use in association with landscaping.
- The collection and direction of water associated with the impervious surface area to an underground drainage network (including on-site detention) to be connected to the existing network to the east.

This management will prevent the direction of stormwater to the residue lands and, therefore, maintain the existing water balance associated with these sensitive environments. As required by “best practice” engineering requirements, temporary erosion control and silt arresting measures will be installed and maintained during construction work.

The majority of potential indirect impacts will be managed and mitigated through the measure above and those included in the BioBank site BAR such as fencing to restrict access for rubbish dumping and the like.

2.3 Conservation measures

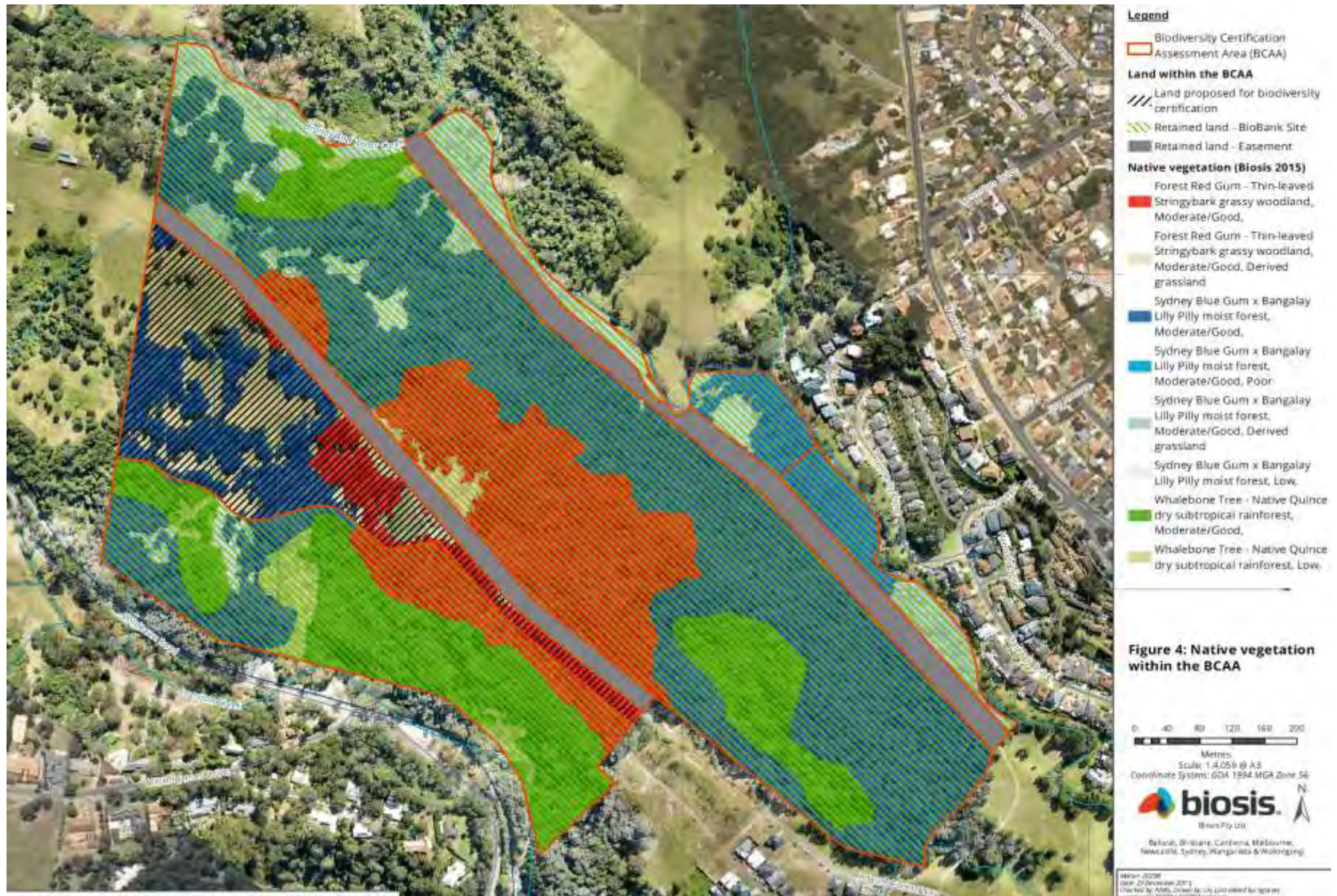
No land in the BCAA is proposed for conservation measures as a part of the application for biodiversity certification. However, Edenvell Pty Ltd have obtained a BioBanking Agreement (Agreement 221) to establish a BioBank site on land supporting high biodiversity value within the northern and southern sections of the BCAA (Figure 3). This will result in permanently managed and funded conservation measures within the BCAA. Biodiversity credits required to achieve biodiversity certification of land within the BCAA will be sourced from this BioBank site.

2.4 Processes and procedures

WCC, as the planning authority, will be submitting the application for biodiversity certification of the BCAA to OEH on behalf of Edenvell Pty Ltd.

Edenvell Pty Ltd have obtained a BioBanking agreement, to establish a BioBank site on retained land in the north and south of the BCAA in order to retain and manage land supporting high biodiversity value. This BioBank site will be used to fulfil the biodiversity credits required to offset losses arising from the removal of native vegetation due to biodiversity certification. Once biodiversity certification is conferred over the BCAA, Edenvell Pty Ltd will immediately retire the required credits.

Once development of the BCAA is completed (subject to a separate development application and WCC approval) Edenvell Pty Ltd will dedicate the BioBank site to WCC. Subject to sale of the biodiversity credits within the BioBank site, management of the biodiversity values in the BioBank site will be fully funded.







3. Matching losses and gains in biodiversity credits

3.1 Summary of credits required

Table 3 provides a summary of biodiversity credits required to offset losses arising from the removal of 4.59 hectares of native vegetation due to biodiversity certification.

Table 3 Summary of biodiversity credits required to offset losses due to biodiversity certification

Vegetation zone details	Vegetation zone area (ha)	Number of credits required
Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion - SR652_Moderate/Good	3.15	54
Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion - SR545_Moderate/Good	1.44	31

The biodiversity credit report is provided in Appendix 3.

Section 10 of the Biodiversity Certification Assessment Methodology (DECCW 2011) sets out rules which govern how credits required by the biodiversity certification of the BCAA can be offset. Table 4 provides a summary of credit matching options for biodiversity credits required to offset losses due to biodiversity certification.

Table 4 Credit matching options for biodiversity credits required to offset losses due to biodiversity certification

Vegetation type	Credit matching options
SR545 Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion	SR545 Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion Coastal Valley Grassy Woodlands Grassy woodlands
SR652 Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	SR652 Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion Southern Escarpment Wet Sclerophyll Forests Wet sclerophyll forests (shrubby sub-formation)

As per Section 2.3, biodiversity credits required by biodiversity certification of the BCAA will be offset by purchasing and retiring credits from the BioBank site, meaning credits to be retired will be of matching vegetation i.e. like for like credits/vegetation types.



3.2 Summary of credits generated from proposed 'on land' conservation measures

No 'on land' conservation measures are proposed. Edenvell Pty Ltd have obtained a BioBanking Agreement (Agreement 221) to establish a BioBank site on land supporting high biodiversity value within the northern and southern sections of the BCAA (identified as 'Retained land – BioBank site' in Figure 3). This will result in permanently managed and funded conservation measures.

Table 5 provides a summary of the ecosystem credits available within the BioBank site.

Table 5 Summary of biodiversity credits available in the BioBank site

Vegetation type	Vegetation type area (ha)	Number of credits available
Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion – SR652	26.87	281
Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion – SR545	9.30	118
Whalebone Tree - Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion – SR662	10.65	115

In addition, 632 White-flowered Wax Plant *Cynanchum elegans* credits are generated.

In accordance with Section 8.1.1 of DECCW (2011) to offset the impacts of conferral of biodiversity certification, the acquisition and retirement of biodiversity credits from the biodiversity register within the BCAA is proposed.

3.3 Credit status

The biodiversity certification proposal will result in the retirement of all biodiversity credits required to offset losses due to biodiversity certification and achieve the improve or maintain outcome required under BCAM.

Following retirement of these credits, the BioBank site will retain the credits outlined in Table 6.

Table 6 Summary of biodiversity credits retained within the BioBank site following retirement of required credits

Vegetation type	Number of credits retained
Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion – SR652	227
Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion – SR545	87
Whalebone Tree - Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion – SR662	115

The surplus credits in Table 6 will be available for sale by Edenvell Pty Ltd which will provide the funding to satisfy the Biobank site Total Fund Deposit.



No financial contributions are required, as there is no credit deficit.

3.4 Improve or maintain status

The biodiversity certification of the BCAA will improve the biodiversity values in the region by:

- Enabling the establishment of a BioBank site, ensuring the conservation and management of high biodiversity values on land located in the northern and southern parts of the BCAA.
- Assisting in meeting targets set out under the *Illawarra Biodiversity Strategy* (WCC et al., 2011a, 2011b) and *Southern Rivers Catchment Management Authority (CMA) Catchment Action Plan (CAP) 2006 to 2016*, and the current *SRCMA CAP 2013 – 2023* (SRCMA, 2013).
- Providing ongoing, in-perpetuity protection for two TECs (Illawarra Lowlands Grassy Woodland and Illawarra Subtropical Rainforest) and one threatened flora species (White-flowered Wax Plant), including improvement in habitat through ongoing, funded management.
- Maintaining connectivity between significant biodiversity values on the Woronora plateau and in the Illawarra escarpment, to the west, and the Illawarra coastal floodplain to the east identified in biodiversity corridor mapping of regional strategic plans (WCC et al 2011a and DPE 2015).



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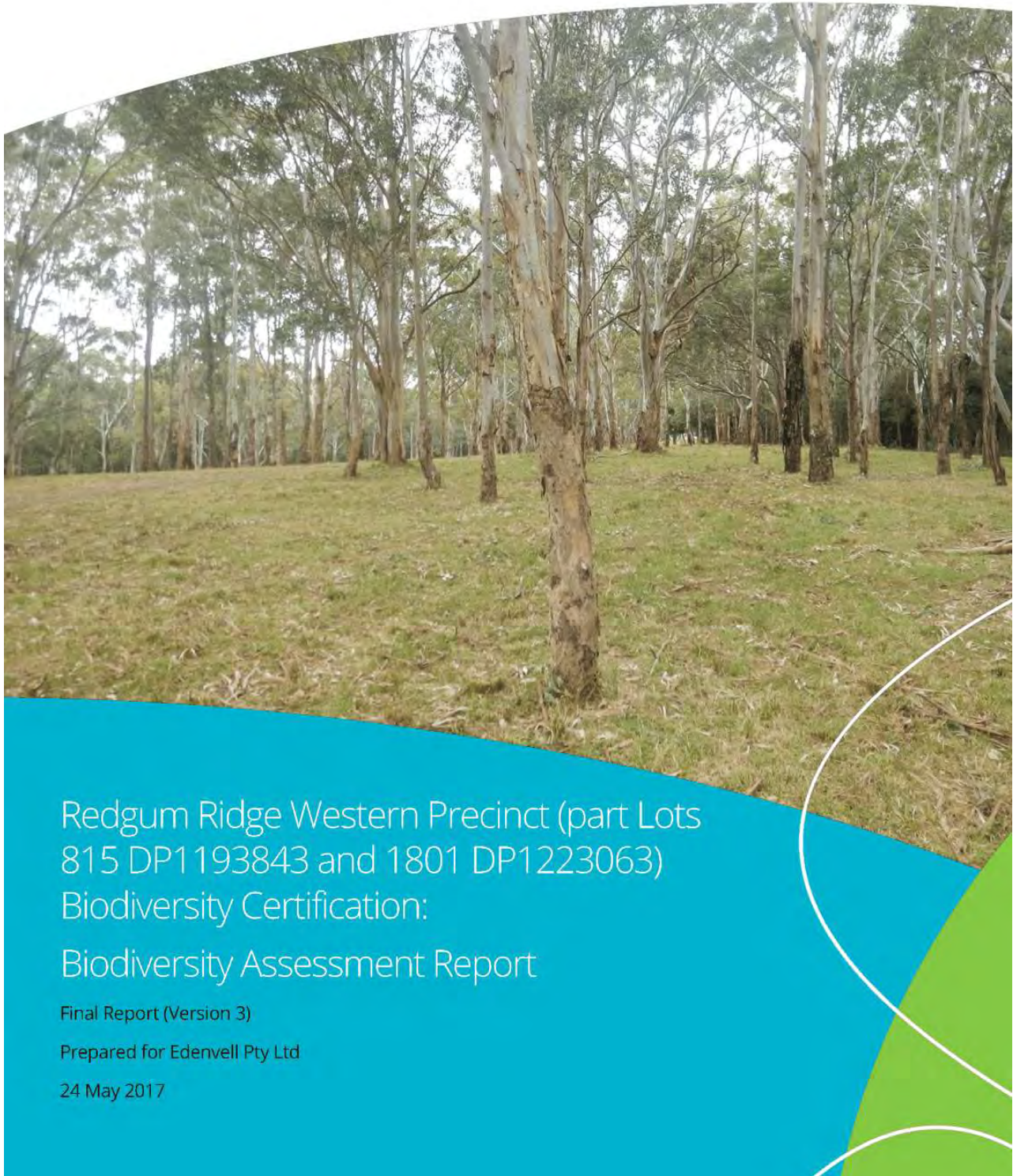
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Appendices



Appendix 1 Redgum Ridge Western Precinct (part Lot 815 DP1193843): Biodiversity Assessment Report (BAR)



Redgum Ridge Western Precinct (part Lots
815 DP1193843 and 1801 DP1223063)

Biodiversity Certification:

Biodiversity Assessment Report

Final Report (Version 3)

Prepared for Edenvell Pty Ltd

24 May 2017



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Glossary

APZ	Asset Protection Zone
BA	Birds Australia
BAR	Biodiversity Assessment Report
BCAA	Biodiversity Certification Assessment Area
BCS	Biodiversity Conservation Strategy
BVT	Biometric Vegetation Type
CAP	Catchment Action Plan
CMA	Catchment Management Area
Council	Wollongong City Council
DCDB	Digital Cadastral Database
DIWA	Directory of Important Wetlands
DoE	Commonwealth Department of the Environment
DP	Deposited Plan
DTDB	Digital Topographic Database
E4	Environmental Living zoning under the Wollongong LEP
EEC	Endangered Ecological Community
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
GIS	Geographic Information System
GPS	Geographic Position System
ha	Hectares
IBRA	Interim Biogeographical Regionalisation of Australia
LEP	Local Environment Plan



LGA	Local Government Area
LiDAR	Light Detection and Ranging
Locality	10 kilometre buffer of the study area
LPI	NSW Lands and Property Information
NV Act	NSW <i>Native Vegetation Act 2003</i>
OEH	NSW Office of Environment and Heritage
PCT	Plant Community Type
RU2	Rural Landscape zoning under the Wollongong LEP
SALIS	Soil and Land Information System
SEPP	State Environmental Planning Policy
SRCMA	Southern Rivers Catchment Management Area
TEC	Threatened Ecological Community
TSC Act	NSW <i>Threatened Species Conservation Act 1995</i>
VIS	NSW Vegetation Information System



Summary

MMJ Wollongong, on behalf of Edenvell Pty Ltd, is co-ordinating the preparation and lodgement of a Planning Proposal request to Wollongong City Council for the rezoning of land in Lot 815 in Deposited Plan (DP) 1193843, Figtree (Figure 1) from RU2 Rural Landscape to E4 Environmental Living and E2 Environmental Conservation under the Wollongong Local Environment Plan 2009 (LEP) in order to facilitate low density residential development and long term conservation of environmental values on site. The Planning Proposal request includes the creation of approximately 27 residential lots, asset protection zones (APZs), roads and other associated infrastructure (Figure 2).

Based on these investigations Edenvell Pty Ltd proposes to rezone the centralised ridge plateau from RU2 Rural Landscape to E4 Environmental Living under the Wollongong Local Environment Plan 2009 (LEP) to facilitate low density residential development. Areas of high biodiversity value on side slopes will be retained within an expanded E2 Environmental Conservation zone. This E2 zone will be retained and managed for conservation through the development of a BioBanking Agreement and dedication of the land as a BioBank site. Land proposed for future development will be biodiversity certified (to be zoned E4), with the BioBank site identified as retained land (to be zoned E2).

This Biodiversity Assessment Report (BAR) has been prepared in support of an application to seek biodiversity certification under Section 126H of the NSW *Threatened Species Conservation Act 1995* (TSC Act). The Biodiversity Certification Assessment Area (BCAA) includes both the land proposed for biodiversity certification and the BioBank site Figure 2. The area proposed for biodiversity certification includes part of Lot 815 in Deposited Plan (DP) 1193843 and encompasses 8.11 hectares, the Biobank site includes part of Lots 815 DP1193843 and 1801 DP1223063 and encompasses 46.82 hectares.

Biodiversity assessment of the BCAA has been ongoing since 2011. These assessments identified that two parcels of land to the north and south, within Lots 815 of DP 1193843 and 1801 DP1223063, support significant biodiversity values, including two threatened ecological communities (TEC) as well as threatened species listed under the TSC Act and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The protection and management of these areas is supported by both Wollongong City Council (Council) and the NSW Office of Environment and Heritage (OEH) due to the conservation outcomes and assistance in meeting targets set out under the *Illawarra Biodiversity Strategy* (WCC et al., 2011a, 2011b) and Southern Rivers Catchment Management Authority (SRCMA) Catchment Action Plan (CAP) 2006 to 2016, and the current SRCMA CAP 2013 – 2023 (SRCMA, 2013).

Consultation with Council, the OEH and Local Land Services (LLS) determined that the NSW BioBanking scheme was the most appropriate metric to facilitate low density development and allow for the retention and management of high biodiversity values identified. However, due to the proposed zoning of the land as E4 Environmental Living, clearing of native vegetation would require approval under the *Native Vegetation Act 2003* (NV Act), resulting in BioBanking not being available to facilitate the removal of vegetation for residential development from this site. As a result, it was determined that Biodiversity Certification was best suited to facilitate the net positive biodiversity outcomes that will result from a future proposed development.

The land proposed for biodiversity certification within the BCAA supports 4.59 hectares of native vegetation across two vegetation types (Table 1).



Table 1 Vegetation types mapped within the biodiversity certification area

Vegetation type	Area (ha)
SR652 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	3.15
SR545 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion	1.44

Vegetation in the area proposed for certification is considered to be of poor quality for threatened species. No threatened species were recorded within the biodiversity certification area and none are expected to occur due to the high levels of disturbance and past clearing.

This BAR will form an Appendix to the Biodiversity Conservation Strategy (BCS) prepared for the proposed rezoning and Biodiversity Certification.



1. Introduction

MMJ Wollongong, on behalf of Edenvell Pty Ltd, is co-ordinating the preparation and lodgement of a Planning Proposal request to Wollongong City Council for the rezoning of land at Figtree in order to facilitate low density residential development and long term conservation of environmental values on site.

This report has been prepared in support of an application to seek biodiversity certification under Section 126H of the NSW *Threatened Species Conservation Act 1995* (TSC Act).

1.1 Site description

1.1.1 Biodiversity certification area

The Biodiversity Certification Area (BCAA) is located in Figtree, approximately 5 kilometres south-west of the Wollongong Central Business District (CBD). It includes part of Lots 815 in Deposited Plan (DP) 1193843 and 1801 DP1223063, and encompasses 55 hectares of private land (Figure 1).

The centralised ridge plateau is proposed for rezoning from RU2 Rural Landscape to E4 Environmental Living under the Wollongong Local Environment Plan 2009 (LEP). Long term, this land will be subdivided for residential development, with the creation of approximately 27 residential lots, asset protections zones (APZs), roads and other associated infrastructure. Land to the north and south of the proposed development area support significant biodiversity values, including two threatened ecological communities (TECs) and one threatened flora species (White-flowered Wax Plant *Cynanchum elegans*) listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These lands have been retained in an expanded E2 Environmental Conservation zone, and the biodiversity values managed under a BioBanking Agreement to protect these lands, in perpetuity, as a BioBank site (Figure 2). Together, these areas form the BCAA. Biodiversity certification is being sought for land proposed for future development, with the BioBank site identified as retained land within the BCAA. Therefore, this report focuses on the biodiversity values within the area proposed for biodiversity certification within the BCAA. The biodiversity values of the BioBank site are outlined in the *Redgum Ridge Western Precinct (part Lots 814 and 815 DP1193843) BioBank Site: Biodiversity Assessment Report* (Biosis 2015).

The BCAA incorporates part of the lower section of a ridge that extends from the Illawarra Escarpment, incorporating the subject site, before dropping onto the coastal plain nearby to the east. There is a moderate level of canopy connectivity between the BCAA and the Illawarra Escarpment State Conservation Area less than 2 kilometres to the west. Much of the higher ridge and upper moderate slopes have been cleared of native vegetation and are characterised by scattered individuals or stands of remnant and regrowth native trees. These open grassy woodland areas are being managed by regular slashing and are grazed by feral animals. Remnant and regrowth native vegetation is present over the mid to lower northern and southern slopes. The condition of the native vegetation varies from relatively intact and weed-free to areas of remnant canopy with an understorey dominated by Lantana *Lantana camara*. Woody weeds, including Lantana, are being controlled in places.

The northern slopes drain toward Brandy and Water Creeks, whilst the southern slopes and ephemeral drainages are within the American Creek catchment. Brandy and Water Creeks and American Creek converge nearby to the east of the BCAA.

The BCAA is mapped as occurring on the Gwynneville Soil Landscape (NSW Soil and Land Information System (SALIS) which is present in the footslopes of the Illawarra Escarpment and isolated rises of the Wollongong



Plain between Coledale and Dapto. This soil landscape unit overlies the Illawarra Coal Measures geologic unit. Dominant soils in the upper profile are sandy loams and sandy clay loam with pedal clay in the lower profile (Hazelton and Tille 1990).

The BCAA is within the:

- Sydney Basin Interim Biogeographical Regionalisation of Australia (IBRA) Region.
- Illawarra IBRA Subregion.
- Dapto Wollongong Coastal Slopes Mitchell Landscape.
- Southern Rivers CMA area.
- Wollongong Local Government Area (LGA).

1.2 Planning context

1.2.1 Development history

MMJ Wollongong, on behalf of Edenvell Pty Ltd, is co-ordinating the preparation and lodgement of a Planning Proposal request with Wollongong City Council to rezone land within the western precinct of the Redgum Ridge Estate from RU2 Rural Landscape to E4 Environmental Living and E2 Environmental Conservation under the Wollongong LEP to facilitate low density residential development, with areas of higher biodiversity to be retained in an expanded E2 Environmental Conservation zone.

Whilst the biodiversity values within the land proposed for certification and future development are limited, previous assessments have identified that two parcels of land to the north and south, within Lots 815 DP 1193843 and 1801 DP1223063, support significant biodiversity values. Following these assessments and additional planning with the proponent it was determined that the use of the NSW Biodiversity Banking and Offsets Scheme was appropriate, allowing for losses of biodiversity values arising from development to be offset through the conservation and protection of high biodiversity value land.

Ongoing consultation with Council, the OEH and LLS has garnered significant support for this approach due to the potential for a positive net benefit to biodiversity, including threatened species and communities, in the region. In addition to the net positive benefit of ongoing management of native vegetation within the BioBank site for threatened species and communities, the dedication of moderate to good condition remnant native vegetation under a conservation covenant would assist in meeting targets set out under the *Illawarra Biodiversity Strategy* (WCC et al., 2011a, 2011b) and Southern Rivers Catchment Management Authority (SRCMA) Catchment Action Plan (CAP) 2006 to 2016, and the current SRCMA CAP 2013 – 2023 (SRCMA, 2013).

Pillar 3: Natural resources – strategies and priorities of SRCMA (2013) has a goal to achieve diverse, healthy, connected and productive natural environments. The objective of the goal is that the health and integrity of natural habitats supports people and the environment. The target of the goal is that by 2023 land and water managers are supported to increase the adoption of practices that maintain or improve the:

- Extent and condition of priority habitats where the priorities for action and investment are:
 - Under reserved and threatened vegetation communities.
 - Habitat that supports threatened species.
 - High carbon capture ecosystems.
- Habitats that support connectivity priorities where the priorities for action and investment include State, regional and locally significant corridors.



It is noted that the BCAA is mapped as occurring in the Escarpment Moist Forests Corridor (WCC et al., 2011a, 2011b). The identification of regional corridors in the strategy is to *'highlight those highest priority areas where Councils and other lead agencies should direct scarce resources, and support private land managers to participate in conservation and restoration efforts where resources allow.'* The strategy also states *'Opportunities for acquisition of lands or rezoning should be guided by the values identified within this Strategy. Information that can be used to this end includes the mapping of regional biodiversity corridors, identification of vegetation priorities, and priority threatened species.'* The dedication of the BioBank site for biodiversity conservation would see this strategic land retained for conservation in perpetuity aligning with the following from the *Illawarra - Shoalhaven Regional Plan* (DPE 2015):

- Direction 2.4 Identify and conserve biodiversity values when planning new communities; where biodiversity certification is acknowledged as process providing planning authorities the option to integrate biodiversity conservation with proposed development outcomes at the strategic planning stage.
- Direction 5.1 Protect the region's environmental values by focusing development in locations with the capacity to absorb development; where the Planning Proposal has considered and applied aspects of Action 5.1.1 Avoid, minimise and mitigate the impact of development on significant environmental assets and Action 5.1.3 Protect the region's biodiversity corridors in local planning controls.

Written advice from OEH also acknowledges the potential for net conservation gains of the two TECs; *Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion* and *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion*. In addition to highlighting some of the specific benefits of establishing a BioBank site, OEH note that net gain conservation outcomes would be consistent with the objectives and targets of regional strategies including the *Illawarra Biodiversity Strategy* (WCC et al, 2011a and 2011b) and *Illawarra Regional Strategy: 2006–31* (Department of Planning, 2007), with a focus on priority vegetation and important habitat corridors.

Given the land identified for development is proposed to be zoned E4 Environmental Living, any clearing of native vegetation would require approval under the NSW *Native Vegetation Act 2003* (NV Act). Under Section 127Zj of the TSC Act, a BioBanking Agreement is not available for any clearing of native vegetation requiring approval under the NV Act. Due to the potential for a positive net benefit to biodiversity from the proposed use of the NSW BioBanking Scheme, an alternate approach was sought. Through ongoing consultation with Council and OEH, Biodiversity Certification of land proposed for future development within the BCAA is now proposed. Under Section 126I of the TSC Act, this has the effect of determining that any future development will not significantly affect any threatened species, population or ecological community under this Act, or its habitat and in determining any future development applications for certified land the planning authority is not required to take into consideration the likely impact of the development on biodiversity values (including under the NV Act).

1.2.2 Development strategy

The development strategy is outlined in the Planning Proposal (MMJ 2015) and is summarised here.

The long-term land use strategy for the BCAA is directed by the site's existing topography and environmental qualities. The densely vegetated ridge side slopes possess high values for ongoing conservation management, whilst the generally cleared centralised ridge plateau provides an opportunity to complement the "Redgum Ridge" Estate development by the addition of large lot low density residential development. Thus, the Planning Proposal seeks to rezone the proposed area for development to E4 Environmental Living whilst retaining land with high biodiversity values within an expanded E2 Environmental Conservation zone. This development strategy is identified within concept plans prepared by KFW Pty Ltd and is shown in Figure 2.



In summary, the existing densely vegetated ridge side slopes will be retained and enhanced for their environment qualities, whilst the ridge plateau will accommodate approximately 27 large residential lots ranging in size from 1,229m² to 1.1 hectares. Access to these allotments will be gained via a public road to be constructed along the ridge line (adjacent to the 24 metre wide gas pipeline easement), which will be an extension of Redgum Forest Way servicing the Estate to the east. The internal road network will consist of a perimeter road to control bushfire hazard management considerations within areas proposed for future development. Full urban reticulation services will be provided from the existing service network within the "Redgum Ridge" Estate.

As mentioned above, the existing densely vegetated southern and northern ridge side slopes are to be enhanced through their protection and management as a BioBank site. Edenvell Pty Ltd have obtained a BioBanking Agreement for the E2 lands, providing ongoing management and improvement of biodiversity values therein. Long term, the BioBank site will be dedicated to Council, with management actions funded under the BioBanking Agreement.

1.3 Information sources

1.3.1 Publications and databases

In order to provide a context for the assessment, information about flora and fauna from the 'locality' was obtained from relevant public databases. Records from the following databases were collated and reviewed:

- DoE Protected Matters Search Tool for matters protected by the EPBC Act.
- NSW BioNet - the database for the Atlas of NSW Wildlife, Office of Environment and Heritage (OEH).
- BirdLife Australia, the New Atlas of Australian Birds 1998-2013 (BA).

Other sources of biodiversity information:

- Relevant vegetation mapping, including:
 - Native vegetation of southeast NSW: a revised classification and map for the coast and eastern tablelands (SCIVI) (Tozer et al. 2010).
 - Native vegetation of the Illawarra Escarpment and Coastal Plain (NPWS 2002).
- NSW Vegetation Information System (VIS): Classification Version 2.1.

The following reports were also reviewed:

- Planning Proposal (MMJ 2015).
- Redgum Ridge Estate BioBanking Assessment (Biosis 2014).
- Redgum Ridge Rezoning Investigation: Terrestrial Flora and Fauna Constraints Analysis (Biosis 2011).
- Vegetation Management Plan for Red Gum Ridge, Figtree (UBM Consultants 2005).

1.3.2 Spatial data

The indicative subdivision layout was supplied by KFW Pty Ltd. Data was converted into shapefile format and imported into ArcGIS.

Basemap data was obtained from NSW Land and Property Information (LPI) 1:25000 digital topographic database (DTDB), with cadastral data obtained from LPI digital cadastral database (DCDB). Mapping of stream order was undertaken manually, using the Hydroline layer within the DTDB.



The following spatial datasets were utilised during the development of this report:

- Catchment data was obtained from the Catchment Boundaries of New South Wales dataset.
- Mitchell Landscapes Version 3.0.
- Interim Biogeographic Regionalisation of Australia (IBRA) Version 7.
- Directory of Important Wetlands (DIWA).
- State Environmental Planning Policy (SEPP) 14 Wetlands.
- Spatial data associated with Tozer et al. (2010) vegetation mapping.
- Spatial data associated with NPWS (2002) vegetation mapping.
- NSW Soil and Land Information System (SALIS).
- Aerial photography was obtained from NearMap (date: November 2014 to January 2015).

Aerial imagery for the BCAA was obtained from KFW, with aerial imagery for the assessment circle obtained from NearMap®.







2. Landscape features

2.1 Bioregions and landscapes regions

The BCAA occurs within the:

- Sydney Basin IBRA region and the Illawarra IBRA subregion.
- Dapto Wollongong Slopes Mitchell Landscape.

No additional IBRA regions or subregions occur within the assessment circle. The Bulli Coastal Escarpment Mitchell Landscape occurs within the western and north-western sections of the assessment circle, while the Lake Illawarra Alluvial Plains Mitchell Landscape occurs in the eastern section of the assessment circle.

2.2 Waterways and wetlands

The BCAA is located between Brandy and Water Creeks (to the north) and American Creek (to the south), with the two creeks converging to the east of the BCAA before discharging to Tom Thumb Lagoon via Allans Creek (Figure 3).

The BCAA supports the upper reaches of two tributaries of American Creek. Within the BCAA these tributaries are present as ephemeral drainage lines, with the upper reaches barely discernible and the lower reaches present as an incised minor drainage line.

No SEPP No. 14 wetlands or DIWA wetlands were located within the BCAA or assessment circle.

2.3 Native vegetation extent

Mapping of vegetation within the outer assessment circle was undertaken using the NPWS (2002) vegetation mapping dataset, along with review of these datasets using aerial photo interpretation. Vegetation in the assessment circle is shown in Figure 3. Native vegetation covers 360 hectares (36 per cent) of the 1000 hectare assessment circle, with the vegetation providing connectivity from the BCAA to the Illawarra Escarpment and large tracts of native vegetation on the adjacent Woronora plateau to the west.

Vegetation mapping of the BCAA was undertaken by Biosis between 2012 and 2015 (see Section 3.2). Native vegetation within the BCAA covers 51.41 hectares (85 per cent) of the 60.23 hectare BCAA. Native vegetation covers 4.59 hectares (57 per cent) of the 8.11 hectares of land proposed to be biodiversity certified (to be zoned E4).

2.4 Assessment of landscape value

Landscape value has been calculated using the method outlined in Part 1.2 of the Biodiversity Certification Operational Manual (OEI 2015).

2.4.1 Assessment of the current extent of native vegetation cover

A 1000 hectare assessment circle was used, as this was the minimum assessment circle which contained the entire BCAA. The assessment circle was centered on the eastern section of the BCAA, where the majority of native vegetation removal will occur.



As conservation measures will be provided by the purchase and retirement of biodiversity credits under the NSW BioBanking scheme, i.e. through a third party, landscape value for the offset area has not been calculated.

Native vegetation cover within the assessment circle was determined using regional vegetation mapping undertaken by NPWS (2002), with some revision made by aerial photo interpretation (API) using recent NearMap© imagery. To determine the extent of native vegetation cover after certification, the extent of vegetation removal (4.59 hectares) was subtracted from the extent of native vegetation cover before certification. Table 2 provides a summary of the extent of native vegetation cover within the assessment circle, before and after certification.

Table 2 Extent of native vegetation cover before and after Biodiversity certification

Assessment Circle	Before Certification		After Certification	
	Area (ha)	Per cent	Area (ha)	Per cent
1000 hectare assessment circle	360	36	356	36

2.4.2 Assessment of connectivity value

The area of land proposed for certification within the BCAA does not support any of the following:

- An area identified as being part of a state biodiversity corridor.
- A riparian buffer 40 metres either side of a major river.
- An area identified as being part of a regional biodiversity corridor.
- A riparian buffer 30 metres either side of a minor river or major creek.
- A riparian buffer 20 m either side of a minor creek on the coast.

Therefore, the proposed development will not impact on any state biodiversity corridor or regional biodiversity corridors.

Native vegetation within the BCAA forms part of a large tract of vegetation, extending into the Illawarra escarpment and adjacent areas of the Woronora plateau to the west. This native vegetation conforms to the definition of a local biodiversity link. Therefore, the land proposed to be certified will impact on a local biodiversity link.

2.4.3 Assessment of adjacent remnant area

Adjacent remnant area was assessed using a Geographic Information System (GIS). All patches of native vegetation in moderate to good condition and separated by a distance of less than 30 metres were mapped sequentially using a selection process in ArcGIS. Using this method, vegetation within the BCAA forms part of a large remnant of native vegetation extending into the Illawarra Escarpment and Woronora plateau to the west. The BCAA was assessed as having an adjacent remnant area of > 501 hectares.

The Dapto – Wollongong Coastal Slopes Mitchell Land scape is estimated to be 71 per cent cleared. A patch size of greater than 50 hectares is deemed to be 'Very Large' for Mitchell Landscapes with a percent native vegetation cleared of 70 – 90 per cent. Therefore the BCAA fits into the 'Very Large' patch size class.





3. Native vegetation

The extent of native vegetation within land proposed for biodiversity certification in the BCAA was determined in accordance with Part 2 of the Biodiversity Certification Operational Manual (OEH 2015).

3.1 Background review

A review of regional vegetation mapping by NPWS (2002) was undertaken to inform the site investigation. NPWS (2002) shows two native vegetation communities within land proposed for biodiversity certification in (Figure 4), with patches of Moist Box-Red Gum Foothills Forest (MU13) mapped along the entrance road in the eastern section of the proposed certified land, with a small patch along the western boundary, and a small patch of Coastal Grassy Redgum Forest (MU23) mapped along the northern boundary.

Detailed mapping of vegetation within the BCAA was undertaken for this assessment and the BioBanking Assessment (Biosis 2015). The methodology for all field assessments is outlined in Section 3.2 and results presented in Section 3.3.

3.2 Methods

3.2.1 Site investigation

Investigations of the BCAA have been carried out between September 2011 and September 2015, including:

- 2011 – A constraints assessment undertaken to document the flora and fauna habitats within the BCAA and to inform concept plans for a proposed rezoning and residential development. Field work undertaken included initial mapping of the vegetation communities, random meanders for threatened flora species and assessment of fauna habitat features.
- 2013-2014 – A preliminary BioBanking assessment, including consultation with OEH and Local Land Services, to determine the feasibility of BioBanking or Biocertification of the site. Field work undertaken included confirmation of the vegetation types present and alignment with the NSW Biometric Vegetation Types (BVTs), as well as more detailed assessment of fauna habitat features within the BCAA.
- 2015 – Additional detailed surveys, including refinement of vegetation mapping using Light Detection and Ranging (LiDAR) data to map the tree canopy, ground-truthing to provide detailed mapping of vegetation within the BCAA, and targeted surveys for threatened flora species within the BCAA.

Constraints assessment (Biosis Research 2011)

Flora and fauna field assessments were undertaken on 14 September 2011. The flora and fauna surveys were preliminary in nature and designed to inform key elements of concept planning for a rezoning and indicative lot layout of the subject site.

Flora surveys focused on ground-truthing the existing NPWS (2002) vegetation mapping and defining vegetation formations for consideration in bushfire hazard assessment and planning. Redefining the boundaries of plant communities and alignment into vegetation types was based on sampling and observations of vegetation, structure, floristic composition and physiographic features such as soils and aspect. Flora surveys were undertaken using a combination of 20 x 20 metre quadrats, spot locations and



random meanders to sample each stratification unit. Flora surveys were carried out in the following landscape stratification units:

- Closed forest
- Woodland
- Open woodland
- Closed scrub
- Cleared and disturbed areas.

Flora habitat assessments focused on the potential for threatened flora species and populations to occur within the BCAA, and the presence or absence of TECs. The general condition of the vegetation was assessed based on disturbance history, the degree of infestation by exotic species, structure and overall resilience. Threatened flora species previously recorded in the locality and with potential to occur on the site were targeted in the quadrats and random meanders. An inventory of the native and exotic flora species recorded for each plant community was compiled.

Brief diurnal fauna surveys were conducted over the BCAA to determine the values of the site for fauna. These were determined, primarily, on the basis of the types and qualities of habitat(s) present on the site. The presence of the following habitat features was noted:

- Structure and floristics of vegetation communities.
- Ground cover vegetation, leaf litter and presence of coarse woody debris.
- Size, range and abundance of hollow-bearing trees.
- Rocky outcrops, overhangs or crevices.
- Presence of specific feed trees or host plants.
- Presence of foraging, roosting or nesting resources.
- Size, number and vegetation cover of waterbodies present.
- Connectivity to off-site habitat.
- Disturbance, including weed invasion, clearing, rubbish, fire and urban development.

All species of fauna observed during the assessment were recorded and active searching for fauna was undertaken. This included direct observation, searching under rocks and logs, examination of tracks and scats and identifying calls. Particular attention was given to searching for significant species and their habitats. Fauna species were recorded with a view to characterising the values of the site and were not intended to provide a comprehensive survey of all fauna that has potential to utilise the site over time.

Preliminary BioBanking assessment (Biosis 2014)

Diurnal flora and fauna surveys were carried out over the BCAA site on 1 August 2013 to confirm vegetation types and map condition for BBAM surveys. This was followed by a general flora and fauna assessment incorporated as part of the more formal BBAM surveys on 16 October 2013. Flora surveys included:

- Random meanders over the BCAA in the main landscape stratification units targeting threatened flora species and populations previously recorded in the locality and with potential to occur on the subject site. Species targeted included:
 - Eastern Flame Pea *Chorizema parviflorum* (threatened population)



- White-flowered Wax Plant *Cynanchum elegans*
- Illawarra Socketwood *Daphnandra johnsonii*
- Rainforest Cassia *Senna acclinis*
- *Solanum celatum*.
- Searches to locate and confirm the continued presence of threatened flora species recorded in previous surveys by UBM Consultants (2005).
- Assessment to confirm the extent of the of the TSC Act listed threatened ecological communities (TECs) *Illawarra lowlands grassy woodland in the Sydney Basin Bioregion* and *Illawarra subtropical rainforest in the Sydney Basin Bioregion* as previously mapped by NPWS (2002) or amended and mapped by Biosis Research (2011).

General fauna surveys focused on the types and qualities of habitat(s) present. All species of fauna observed during the assessment were noted and active searching for fauna was undertaken. This included direct observation, searching under rocks and logs, examination of tracks and scats and identifying calls. All trees on the site were inspected and the presence of hollow-bearing trees noted. Particular attention was given to searching for significant species identified as potentially occurring within the subject site during database review and their habitats. Fauna species were recorded with a view to characterising the values of the site and the investigation was not intended to provide a comprehensive survey of all fauna with the potential to utilise the site over time.

Additional survey and assessment (Biosis 2015)

Additional surveys and assessment of the BCAA have been undertaken during the development of this Biodiversity Assessment Report and development of the BioBanking Agreement (Biosis 2015). This additional survey and assessment has focused on refining the mapping of vegetation types within the BCAA and targeted surveys for threatened species.

Mapping of the tree canopy was obtained using LiDAR data, sourced from the NSW Lands and Property Information (LPI). Small gaps in the LiDAR data were manually filled to obtain a defined boundary for the tree canopy layer across the BCAA. Data obtained using this method provides an accurate representation of the tree canopy, but does not define if this is native vegetation, and does not provide information on areas with a native understorey but no overstorey. This tree canopy layer was used to inform further surveys.

Flora surveys undertaken for this assessment included the refinement of previous vegetation mapping (Biosis Research 2011, Biosis 2014). Vegetation mapping was conducted using hand-held (uncorrected) tablet units using the ArcGIS Collector application, the tree canopy layer and aerial photo interpretation, with the boundaries of vegetation types determined by ground-truthing. The accuracy of this mapping is therefore subject to the accuracy of the GPS units (generally ± 5 metres) and dependent on the limitations of aerial photo rectification and registration. Mapping has been produced using a GIS. Electronic GIS files containing the relevant flora and fauna spatial data are available to incorporate into design concept plans; however this mapping may not be sufficiently precise for detailed design purposes.

Delineation of vegetation community boundaries was undertaken using the vegetation community definitions of NPWS (2002), definitions for the relevant vegetation types obtained from the NSW Vegetation Information System (VIS): Classification Version 2.1, along with the final determination (NSW Scientific Committee 2011) for the Illawarra Lowlands Grassy Woodland endangered ecological community (EEC).

General classification of native vegetation in NSW used in this report is based on the classification system in Keith (2004) which uses three groupings of vegetation: vegetation formation, vegetation class and vegetation type, with vegetation type the finest grouping. The grouping referred to in this report is vegetation type.



Vegetation types were identified using the NSW Vegetation Information System (VIS): Classification Version 2.1.

A 0.1 hectare area of Whalebone Tree – Native Quince dry subtropical rainforest (SR662) was identified within land proposed for biodiversity certification in the BCAA. This area did not meet the minimum size thresholds defined in the Biodiversity Certification Operational Manual (OEH 2015) and a plot / transect could not be placed within this area. For these reasons this small area was included in an area of adjacent Sydney Blue Gum x Bangalay Lilly Pilly moist forest (SR652).

Vegetation types were stratified into vegetation zones based on condition (low or moderate/good) and ancillary code (where relevant). Vegetation types within land proposed for biodiversity certification in the BCAA were relatively homogenous, consisting of a tree canopy layer over a low understorey being maintained through ongoing slashing.

Following stratification of vegetation zones, site value were assessed using plot and transect survey data, as per the methodology outlined in Step 2.2 and Appendix D of OEH (2015). Plot and transect surveys included:

- A 20 metre x 50 metre quadrat and 50 metre transect for assessment of site attributes.
- A 20 metre x 20 metre quadrat, nested within the quadrat outlined above, for full floristic survey to determine native plant species richness.

The minimum number of plots/transects per Vegetation Zone was determined using Table 1 of OEH (2015). A total of five plots/transects were completed within land proposed for biodiversity certification in the BCAA (Figure 5). A list of flora species was compiled for each vegetation type. Records of all flora species will be submitted to OEH for incorporation into the BioNet Atlas of NSW Wildlife.

3.3 Results

3.3.1 Vegetation description

The BCAA supports 51.41 hectares of native vegetation and three vegetation types, with land proposed for biodiversity certification containing 4.59 hectares of native vegetation and two vegetation types (Figure 5). Vegetation in land proposed for biodiversity certification in the BCAA is disturbed through regular slashing of the ground and midstory vegetation layers under a regrowth canopy.

Areas where the tree canopy does not exist are dominated by exotic grasses such as Small-flowered Summer Grass *Digitaria violascens* and Kikuyu *Pennisetum clandestinum*. These areas are not considered native vegetation and are not discussed further within this report.

For further details on vegetation in the BioBank site see Biosis (2015).

3.3.2 Vegetation types

Site investigations, including determination of vegetation types using the methodology outlined in Section 3.2.1, confirmed the presence of three vegetation types within the BCAA, with two of these mapped within land proposed for biodiversity certification.

All areas of vegetation land proposed for biodiversity certification were assessed as being in moderate/good condition using the definitions outlined in Part 2.1.2 of OEH (2015), resulting in two vegetation zones being mapped. Vegetation zones identified within land proposed for biodiversity certification in the BCAA, including the vegetation type, the vegetation formation and vegetation class (Keith 2004) and the area of each vegetation zone are described in Table 3.



Table 3 Vegetation zones mapped within the land proposed for biodiversity certification of the BCAA

Vegetation zone	Vegetation type	Vegetation class	Vegetation formation	Vegetation community (Tozer et al. 2010)	Area (ha)
01	SR652 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	Southern Escarpment Wet Sclerophyll Forests	Wet sclerophyll forests (shrubby sub-formation)	Moist Box-Red Gum Foothills Forest (MU13)	3.15
02	SR545 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion	Coastal Valley Grassy Woodlands	Grassy woodlands	Coastal Grassy Redgum Forest (MU23)	1.44

A detailed description of each Vegetation Zone within the land proposed for biodiversity certification is provided in Table 4 (Vegetation Zone 1) and Table 5 (Vegetation Zone 2).

Table 4 Vegetation zone 1 - Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion

Vegetation zone 1 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	
PCT ID	1245
Biometric vegetation type ID	SR652
Common name	<i>Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion</i>
Condition	Moderate/good
Extent within the land proposed for biodiversity certification	3.15 ha of Sydney Blue Gum x Bangalay - Lilly Pilly moist forest was mapped across the western section of land proposed for biodiversity certification in the BCAA (Figure 5).
Description	Sydney Blue Gum X Bangalay - Lilly Pilly Moist Forest occurs in the western two thirds of land proposed for biodiversity certification in the BCAA (Figure 5). Along the western ridge <i>Eucalyptus saligna</i> X <i>botryoides</i> , Blackwood <i>Acacia melanoxylon</i> and Cheese Tree <i>Glochidion ferdinandii</i> are dominant. Coast White Box <i>Eucalyptus quandrangulata</i> and Lilly Pilly <i>Acmena smithii</i> become progressively more prominent moving down the southern slope, with Forest Red Gum <i>Eucalyptus tereticornis</i> occurring occasionally and increasing to the east in the intergrade to Forest Red Gum - Thin-leaved Stringybark grassy woodland. The midstory and understory are highly modified through regular slashing, with both strata being absent in the higher ridge areas. The groundcover in the slashed areas is a mix of



Vegetation zone 1 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion

	native grasses and vines, and exotic grasses and herbs. Native species include; Milk Vine <i>Marsdenia rostrata</i> , Sweet Morinda <i>Morinda jasminoides</i> , Blady Grass <i>Imperata cylindrica</i> , <i>Carex longibrachiata</i> , Kidney Weed <i>Dichondra repens</i> , Weeping Grass <i>Microlaena stipoides</i> var. <i>stipoides</i> and <i>Oplismenus aemulus</i> , whilst dominant exotic species included Narrow-leaved Carpet Grass <i>Axonopus fissifolius</i> , Small-flowered Summer Grass <i>Digitaria violascens</i> , Cobbler's Pegs <i>Bidens pilosa</i> , Spear Thistle <i>Cirsium vulgare</i> , Panic Veldtgrass <i>Ehrharta erecta</i> and Black Medic <i>Medicago lupulina</i> .
Survey effort	Three plots/transects were completed in this vegetation zone (Figure 5).
Disturbance	This vegetation zone shows high levels of disturbance due to consistent slashing of the midstory, understory and ground cover vegetation.
Species relied upon for identification of vegetation type and relative abundance	The midstory and understory are largely absent, and ground cover vegetation is maintained as a low cover through regular slashing, making identification difficult. However, adjacent patches within the proposed BioBank site maintain a diverse midstory and understory, assisting with identification. The presence of White-topped Box and <i>Eucalyptus saligna</i> X <i>botryoides</i> in the overstory, along with the mapping of this community within the proposed BioBank site and alignment of boundaries, were used to identify the extent of this vegetation type within the area proposed for certification
TEC Status	Commonwealth EPBC Act: Not listed NSW TSC Act: Not Listed
Estimate of percent cleared value of vegetation type	45%

Vegetation zone 1 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion

Plate 1 Sydney Blue Gum x Bangalay - Lilly Pilly moist forest



Table 5 Vegetation zone 2 - Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion

Vegetation zone 2 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion

Plant community type ID	838
Biometric vegetation type ID	SR 545
Common name	<i>Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion</i>
Condition	Moderate/good
Extent within the land proposed for biodiversity certification	1.44 ha Forest Red Gum - Thin-leaved Stringybark grassy woodland was mapped across the access road and eastern section of land proposed for biodiversity certification in the BCAA (Figure 5).
Description	This vegetation type occurs on the eastern section of the ridge within land proposed for biodiversity certification in the BCAA (Figure 5). The canopy is dominated by remnant and regrowth Forest Red Gum from 15 to 25 m with occasional Coast White Box. This area was also lacking midstory species, but contained an understorey with a moderate diversity of native grasses and native herbs. Native species including; Bushy Hedgehog-grass <i>Echinopogon caespitosus</i> , Forest Hedgehog Grass <i>Echinopogon ovatus</i> , <i>Carex longibrachiata</i> , Kidney Weed,



Vegetation zone 2 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion

	Climbing Guinea Flower <i>Hibbertia scandens</i> , Trailing Speedwell <i>Veronica plebeia</i> , Pennywort <i>Hydrocotyle peduncularis</i> , Weeping Grass, Whiteroot <i>Pratia purpurascens</i> , Slender Tick-trefoil <i>Desmodium varians</i> and Bearded Tylophora <i>Tylophora barbata</i> . The dominant exotic species included Small-flowered Summer Grass <i>Digitaria violascens</i> , Kikuyu <i>Pennisetum clandestinum</i> , Cobbler's Pegs <i>Bidens pilosa</i> , Spear Thistle <i>Cirsium vulgare</i> , Panic Veldtgrass <i>Ehrharta erecta</i> and Red-flowered Mallow <i>Modiola carolinianum</i> .
Survey effort	Two plots/transects were completed in this vegetation zone (Figure 5).
Disturbance	This vegetation zone shows high levels of disturbance due to consistent slashing of the midstory, understory and ground cover vegetation.
Species relied upon for identification of vegetation type and relative abundance	<p>The midstory and understory are largely absent, and ground cover vegetation is maintained as a low cover through regular slashing, making identification difficult. However, adjacent patches within the proposed BioBank site maintain a diverse midstory and understory, assisting with identification.</p> <p>The presence of dominance of Forest Redgum in the overstory, with only scattered occurrence of other species, and the predominantly grassy understory, along with the mapping of this community within the proposed BioBank site and alignment of boundaries, were used to identify the extent of this vegetation type within the area proposed for certification.</p>
EEC Status	<p>Commonwealth EPBC Act: <i>Illawarra and south coast lowland forest and woodland ecological community</i> critically endangered ecological community</p> <p>NSW TSC Act: <i>Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion</i> endangered ecological community</p>
Estimate of percent cleared value of vegetation type	85%

Vegetation zone 2 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion

Plate 2 Forest Red Gum - Thin-leaved Stringybark grassy woodland



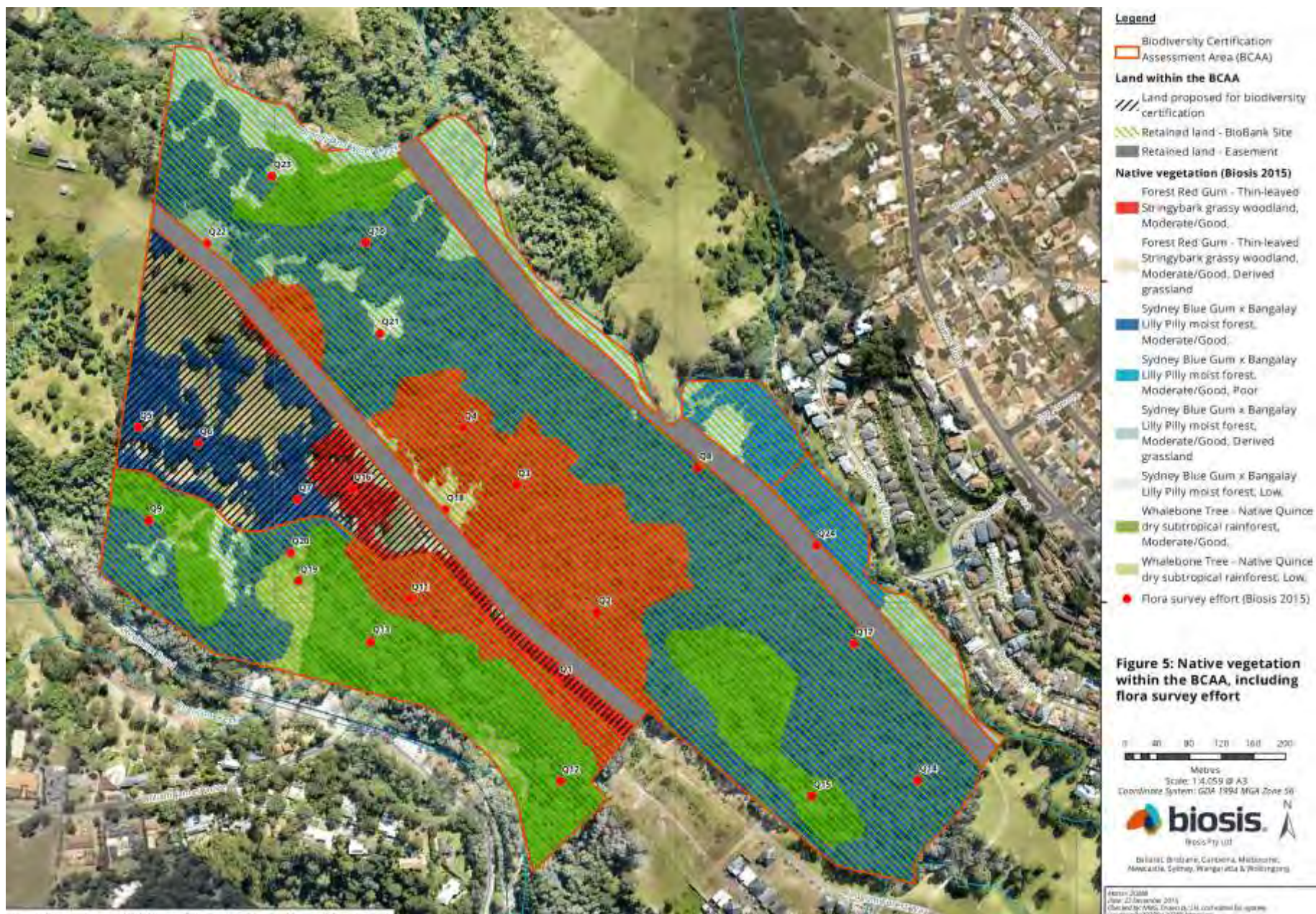
3.3.3 Site value scores

Plots and transect survey data was inputted into the Biocertification Credit Calculator (version 1.09.01) to determine site value scores. Plot and transect survey data is presented in Appendix 1. Current site value for each vegetation zone is outlined in Table 6.

Table 6 Site value scores for all Vegetation Zones

Vegetation zone	Vegetation type	Site value score	Area (ha)
01	SR652 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion	29.17	3.15
02	SR545 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion	39.93	1.44







4. Threatened species

4.1 Methods

Flora and fauna assessments of the BCAA are outlined in Section 3.2.

Targeted flora surveys have been undertaken, using a variety of survey techniques, including 20 x 20 metre quadrats, Biobanking plots/transect surveys and random meanders. The majority of targeted flora surveys within land proposed for biodiversity certification in the BCAA have focused on searching at the base of trees, as these areas show lower levels of disturbance from slashing. Threatened flora survey tracks are shown in Figure 6.

Fauna surveys have focused on identifying habitat features suitable for supporting threatened species. These assessments determined that the fauna habitat features within land proposed for biodiversity certification in the BCAA are substantially degraded by ongoing maintenance of the understorey through slashing. These areas lack any midstory or understorey cover, there is little to leaf litter or coarse woody debris and trees within land proposed for biodiversity certification in the BCAA lack hollows, with only a limited number of mature trees providing hollows up to 25 centimetres in diameter. Fauna habitats within land proposed for biodiversity certification in the BCAA are considered to be of poor quality for most threatened fauna species.

For details of threatened species surveys within the BioBank site see Biosis (2015).

4.2 Ecosystem credit species

4.2.1 Species predicted to occur

A list of ecosystem credit species predicted to occur within land proposed for biodiversity certification in the BCAA, based on the CMA subregion, Mitchell landscape and vegetation types present is provided in Table 7.

Table 7 Assessment of ecosystem credit species within the BCAA

	Common Name	Tg Value
SR545 Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion		
<i>Ninox connivens</i>	Barking Owl	0.33
<i>Burhinus grallarius</i>	Bush Stone-curlew	0.38
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	0.75
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	0.45
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	0.45
<i>Petroica phoenicea</i>	Flame Robin	0.75
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	0.5
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	0.55
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	0.45
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	0.93



	Common Name	Tg Value
<i>Hieraaetus morphnoides</i>	Little Eagle	0.73
<i>Glossopsitta pusilla</i>	Little Lorikeet	0.58
<i>Tyto novaehollandiae</i>	Masked Owl	0.33
<i>Petroica boodang</i>	Scarlet Robin	0.75
<i>Myotis macropus</i>	Southern Myotis	0.45
<i>Circus assimilis</i>	Spotted Harrier	0.73
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	0.38
<i>Lophoictinia isura</i>	Square-tailed Kite	0.73
<i>Lathamus discolor</i>	Swift Parrot	0.75
<i>Neophema pulchella</i>	Turquoise Parrot	0.55
<i>Daphoenositta chrysoptera</i>	Varied Sittella	0.75
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	0.45
SR652 Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion		
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	0.75
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	0.45
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	0.45
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	0.5
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	0.55
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	0.45
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	0.93
<i>Miniopterus australis</i>	Little Bentwing-bat	0.75
<i>Tyto novaehollandiae</i>	Masked Owl	0.33
<i>Ninox strenua</i>	Powerful Owl	0.33
<i>Myotis macropus</i>	Southern Myotis	0.45
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	0.38
<i>Lophoictinia isura</i>	Square-tailed Kite	0.73
<i>Daphoenositta chrysoptera</i>	Varied Sittella	0.75
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	0.45

Tg values represent how well as species will respond to management at a BioBank site, and, therefore, how the removal of habitat features will impact on the species in a local area. If a species is reliant on habitat



features that take a long time to develop (e.g. hollows), or management actions are ineffective at addressing a species decline, or the species has poor fecundity or dispersal capability this will generate a higher Tg value.

The Barking Owl, Masked Owl and Powerful Owl return the lowest Tg value (0.33) for Vegetation Zone 1 (SR545), and the average Tg value is 0.58. The Masked Owl and Powerful Owl return the same lowest Tg value for Vegetation Zone 2 (SR652) and the average Tg value is 0.55.

4.3 Species credit species

4.3.1 Assessment of geographic / habitat features

An assessment of the occurrence of geographic / habitat features in land proposed for biodiversity certification within the BCAA was undertaken in accordance with Step 3.3.1 of OEH (2015). Geographic and habitat features associated with the vegetation types within land proposed for biodiversity certification in the BCAA and identified by the credit calculator, along with an assessment of their occurrence, is provided in Table 8.

Table 8 Assessment of geographic and habitat features within the BCAA

Feature	Occurs within land proposed for biodiversity certification	Justification
Hollow-bearing trees, bridges, caves or artificial structures within 200 m of riparian zone	No	The land proposed for biodiversity certification in BCAA is located over 200m from any riparian zone.
Land containing caves or similar structures	No	The land proposed for biodiversity certification in BCAA does not contain and caves or similar structures.
Land containing escarpments, cliffs, caves, deep crevices, old mine shafts or tunnels	No	The land proposed for biodiversity certification in BCAA does not contain any of the habitat features identified.
Land within 40 m of gullies in eucalypt forests	No	The land proposed for biodiversity certification in BCAA is not located within 40m of any gullies.
Land within 40 m of heath, woodland or forest	Yes	The land proposed for biodiversity certification in BCAA contains, and is within 40m of the vegetation communities identified.
Land within 40 m of rainforest, coastal scrub, riparian or estuarine communities	Yes	The land proposed for biodiversity certification in BCAA is within 40m of rainforest vegetation.
Rainforest or tall open wet forest with understorey and/or leaf litter and within 100 m of streams	No	The land proposed for biodiversity certification in BCAA is not within 100m of any streams and



Feature	Occurs within land proposed for biodiversity certification	Justification
		vegetation does not contain understorey or leaf litter due to regular maintenance.
Forests along edge of escarpment	No	The land proposed for biodiversity certification in BCAA is located approximately 2.5km east of the Illawarra escarpment, and was not considered to be located 'along the edge'.
North of Batemans Bay	Yes	The land proposed for biodiversity certification in BCAA is located north of Batemans Bay.
Shoalhaven River Valley, and/or north of Oallen	No	The land proposed for biodiversity certification in BCAA is not located within the Shoalhaven River valley, however it is located northeast of Oallen. The biodiversity certification area is located in a different IBRA subregion and different geological formations of Oallen.
Within 5 km of coast	No	The land proposed for biodiversity certification in BCAA is located 5,230m from the coast.
Within 5 km of escarpment, and/or west of Princes Highway	Yes	The land proposed for biodiversity certification in BCAA is located within 5km of the Illawarra escarpment and west of the Princes Highway.

This assessment generated a list of species credit species predicted to occur within land proposed for biodiversity certification in the BCAA. The following sections provide an assessment of whether the land proposed for biodiversity certification in BCAA provides suitable habitat and whether the species will be impacted by the biodiversity certification.

4.3.2 Assessment of candidate species for further assessment

A list of species credit species predicted to occur within land proposed for biodiversity certification in the BCAA, based on the CMA subregion and vegetation types present, along with an assessment of whether this area provides suitable habitat, and therefore the species require further assessment, is provided in Table 9 (flora) and Table 10 (fauna). The potential for a species to occur within land proposed for biodiversity certification in the BCAA was assessed in accordance with Step 3.3.2 of OEH (2015).

It is considered unlikely that the area proposed for certification in the BCAA supports any threatened species credit species, largely due to the high levels of disturbance within this portion of the site.



Table 9 Species credit species (flora) and an assessment of the potential to occur within the area proposed for certification within the BCAA

Scientific Name	Common Name	Likely to occur in the area proposed for certification within the BCAA	Justification
<i>Cynanchum elegans</i>	White-flowered Wax Plant	No	Targeted surveys were undertaken for all flora species listed within the area proposed for certification. These surveys were undertaken in accordance with the methodology outlined in Section 4.1. These surveys focused on searching at the base of trees, as these areas show lower levels of disturbance from slashing. No threatened species were recorded within land proposed for biodiversity certification. The presence of these species is considered unlikely due to the level of disturbance from slashing.
<i>Daphnandra</i> sp. C Illawarra	Illawarra Socketwood	No	
<i>Irenepharsus trypherus</i>	Illawarra Irene	No	
<i>Pimelea curviflora</i> var. <i>curviflora</i>	N/A	No	
<i>Pterostylis gibbosa</i>	Illawarra Greenhood	No	
<i>Senna acclinis</i>	Rainforest Cassia	No	
<i>Zieria granulata</i>	Illawarra Zieria	No	

Table 10 Species credit species (fauna) and an assessment of the potential to occur within the area proposed for certification within the BCAA

Scientific name	Common name	Likely to occur in the area proposed for certification within the BCAA	Justification
<i>Anthochaera phrygia</i>	Regent Honeyeater	No	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. There are only three known key breeding regions remaining, including the Capertee Valley and the Bundarra-Barraba region in NSW. The Regent Honeyeater is a generalist forager, which mainly feeds on the nectar from a wide range of eucalypts and



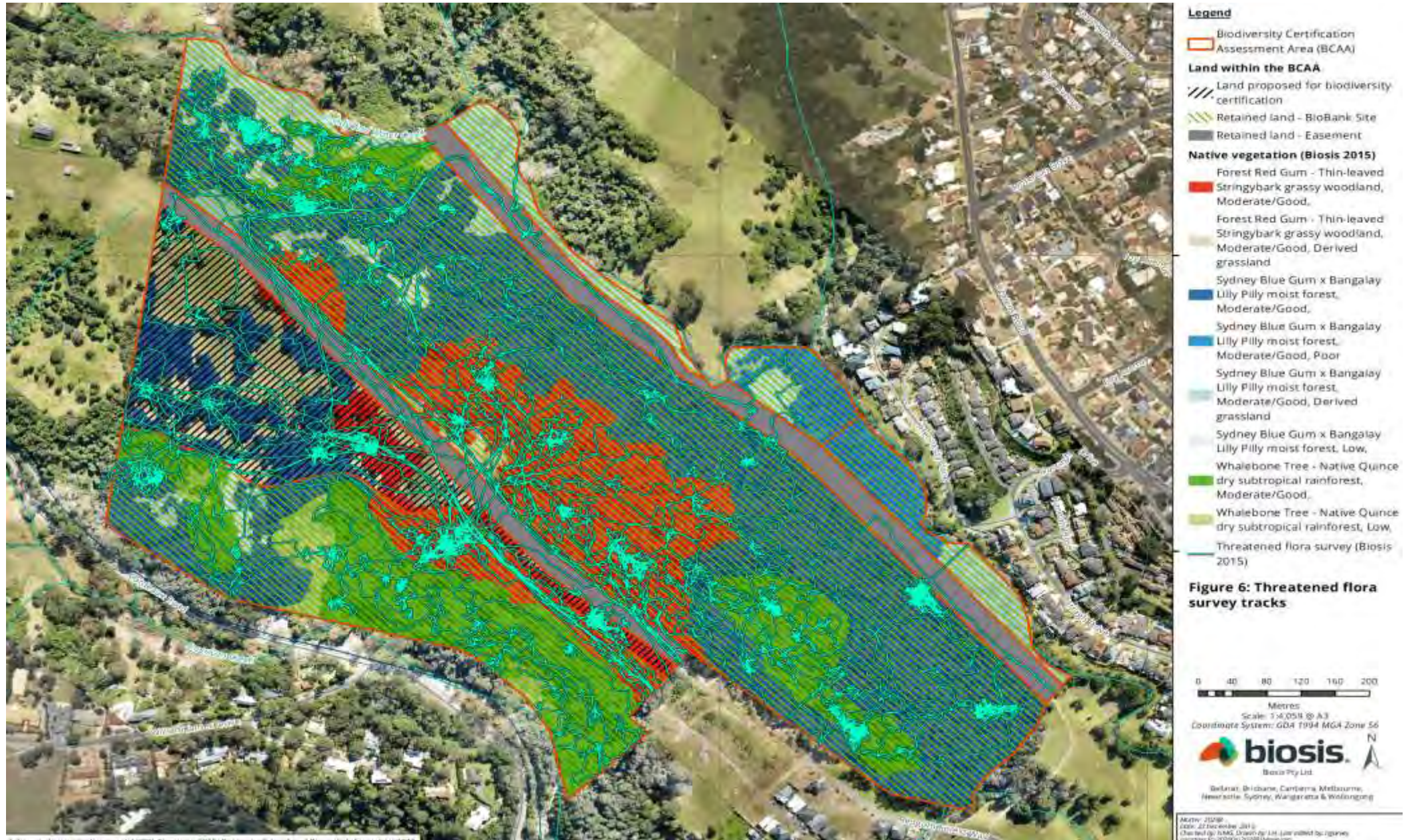
Scientific name	Common name	Likely to occur in the area proposed for certification within the BCAA	Justification
			mistletoes. Key eucalypt species include Mugga Ironbark, Yellow Box, Blakely's Red Gum, White Box and Swamp Mahogany. Also utilizes a variety of other Eucalypt species. There are five records of this species within the Illawarra CMA subregion. The land proposed for biodiversity certification in BCAA is not part of a breeding region, and does not support key eucalypt feed species. Although the species may forage within land proposed for biodiversity certification in BCAA on occasion, it is considered a vagrant species, in accordance with Part 3.3.2 of OEH (2015).
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	No	The species occurs in a broad range of habitat types, with heaths and woodlands preferred. There are 11 records of this species within the Illawarra CMA subregion; however, these records are located in areas more associated with sandstone heaths. Habitat within the BCAA is substantially degraded and of poor quality due to disturbance from slashing. The land proposed for biodiversity certification in BCAA lacks a number of habitat features, including dense complex habitat, nectar producing species and hollows that the Eastern Pygmy Possum is reliant upon.
<i>Miniopterus australis</i> (Breeding Habitat)	Little Bentwing-bat (breeding habitat)	No	Whilst the Little Bentwing-bat has been recorded roosting within tree hollows, it prefers caves, abandoned mines, tunnels, stormwater drains or buildings (Churchill 2008). However, this species breed exclusively within caves, often in conjunction with the Eastern Bentwing-bat <i>Miniopterus schreibersii oceanensis</i> . The BCAA does not contain any caves or structures that would provide breeding habitat suitable for this species.



Scientific name	Common name	Likely to occur in the area proposed for certification within the BCAA	Justification
<i>Petaurus norfolcensis</i>	Squirrel Glider	No	In coastal areas the Squirrel Glider inhabits Blackbutt-Bloodwood forest with heath understory, often with mixed stands of Acacia species. Require abundant tree hollows for refuge and nest sites. There are two records within the Illawarra CMA subregion; however, these records are located at Jarvis Bay and Kangaroo Valley where more suitable habitat occurs. No records exist in relation to the BCAA, and the habitat is considered poor quality due to the absence of suitable forest types and a lack of abundant hollows.
<i>Phascolarctos cinereus</i>	Koala	No	The Koala inhabits a number of forest and woodland vegetation types, with the presence of Koala feed trees an important indicator. In the Southern Rivers CMA Forest Redgum is considered a primary feed tree. There are 18 records of the Koala within the Illawarra CMA subregion; however the majority of these are aged, with only five records within the past 10 years with the majority coming from community surveys. The Koala is rare in the Illawarra, and the BCAA would provide poor quality habitat due to the presence of immature feed tree species and open habitats elevating the risk of predation.
<i>Pteropus poliocephalus</i> (Breeding Habitat)	Grey-headed Flying-fox (Breeding habitat)	No	The BCAA does not support a camp of the Grey-headed Flying-fox.
<i>Sminthopsis leucopus</i>	White-footed Dunnart	No	The White-footed Dunnart occurs in a wide range of vegetation types, including forest and woodland communities, generally with an open understory structure. There is one record of this species within the Illawarra CMA subregion, at the furthest southern reach of the subregion. There are no records in close proximity to the BCAA. Habitat within land proposed for



Scientific name	Common name	Likely to occur in the area proposed for certification within the BCAA	Justification
			biodiversity certification in the BCAA is substantially degraded and would be considered poor quality as it has been maintained continuously for long period of time by slashing. It lacks the habitat complexity required by this species.





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WCC et al. 2011b. Illawarra Biodiversity Strategy. Volume 2 Background Information. Wollongong City Council, Shellharbour City Council and Kiama Municipal Council, Wollongong, NSW.



Appendices



Appendix 1 Plot and transect data



Table 11 Plot and transect data

PlotName	NPS	NOS	NMS	NGCG	NGCS	NGCO	EPC	NTH	OR	FL	Easting	Northing	Zone
SR545 – Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion													
Q1	28	42.5	7	58	2	16	16	0	1	0	301354	6187502	56
Q16	28	38	0	50	0	38	38	0	0	4	301097	6187741	56
SR652 – Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion													
Q5	22	21	0	66	0	12	18	0	0	0	300830	6187818	56
Q6	20	44	0	32	4	56	44	0	1	0	300905	6187798	56
Q7	15	22.5	0.2	74	0	24	18	0	1	2	301029	6187728	56



Appendix 2 Curriculum Vitae for Nathan Garvey

Curriculum vitae

Nathan Garvey



Position

Senior Consultant Ecologist and
Resource Group Manager

Qualifications

BSc, GDip BioSc
Certified Environmental Practitioner
Accredited Biobanking Assessor (No. 0103)



Professional experience

Nathan has more than 15 years' experience in ecology and impact assessment. Nathan's technical expertise is well regarded throughout NSW with several of his reports receiving high acclaim from state regulators. His ecological knowledge has been endorsed by the industry as a Certified Environmental Practitioner and Accredited BioBanking Assessor.

Leading specialist teams on a wide variety of projects in NSW, Victoria and the ACT, Nathan has a thorough understanding of how to deliver complex projects. He is well versed in project methodology and design as well as having in depth knowledge of NSW and Commonwealth legislation. He is an accredited BioBanking assessor with a reputation as the 'go-to' consultant for offset solutions.

His capacity to design innovative assessment methodologies and new approaches, frequently result in achieving the client's outcomes together with time and cost efficiencies. This capacity can be highlighted by Nathan's development of a LiDAR assessment methodology to improve spatial modelling of upland swamp distribution on the Woronora plateau. This method has improved the accuracy of swamp distribution modelling, reducing field effort, and enabling desktop-based 'what if' impact scenarios to be applied with increased confidence.

Nathan combines an innovative approach with sound processes which includes working closely with clients to identify and resolve issues in a timely and cost-effective manner.

Key project experience

Project Director

Nathan is currently acting as the Project Director for the Coffs Harbour Bypass Biodiversity and Heritage Impact Assessment being undertaken for Arup on behalf of NSW Roads and Maritime Service. This project, involving the final stage of the Pacific Highway upgrade between Sydney and Brisbane, will be a legacy project. Biosis is currently undertaking preliminary biodiversity and heritage assessments to identify key constraints to inform the detailed design for the project. Future work will include targeted surveys for threatened species, development of management plans and preparation of the Biodiversity Assessment Report and Biodiversity Offset Strategy.

Curriculum vitae

Nathan Garvey



BioBanking Assessor

Nathan is currently engaged by the NSW Office of Environment and Heritage to provide BioBanking assessor services. This involves Nathan undertaking assessments of BioBanking statement and BioBanking agreement applications on behalf of OEH. Nathan undertakes a review of the technical aspects of these applications.

Project Manager/Ecologist

Nathan has recently completed the biodiversity impact assessment for the proposed Goonumbra Solar Farm at Parkes for Geolyse on behalf of Renewable Energy Developments. The project was deemed State Significant Development and the project has been assessed in accordance with the NSW Offset Policy for Major Projects and associated Framework for Biodiversity Assessment. Nathan has provided well considered technical advice in an understanding of the cost and timing implications for the project. This has resulted in the proponent making an informed decision to avoid impacts to biodiversity, resulting in a zero credit requirement and fast submission process.

Project Manager/Ecologist

Nathan assisted Hansen Bailey and Wollongong Coal in the preparation of the Biodiversity and Heritage assessments for the proposed Underground Expansion Project. This State Significant large scale mining project has involved a multi-faceted assessment, including application of the NSW Offset Policy for Major Projects, new guidelines for offsets for upland swamps and referral of the project to the Commonwealth Department of the Environment. This project gave Nathan the opportunity to develop new methods for the mapping and assessment of impacts to upland swamps and Nathan's work has received significant praise from regulators, with the Department of Planning and Environment calling Biosis' assessment *"the most comprehensive swamp impact assessment yet undertaken in the Southern Coalfield"*.

Project Manager/Ecologist

Nathan has recently undertaken detailed flora and fauna assessments for the proposed Nyngan Inground Storage on behalf of NSW Public Works. Previous habitat based assessments identified the potential for a significant impact to several threatened fauna species. Nathan was engaged to help the proponent navigate this complex projects. Through his expert advice, thorough understanding of the legislative framework and detailed assessment approach Nathan has been able to work with the proponent to design a project that will avoid a significant impact and therefore avoid the need for further assessment and offsetting.

Project Manager/Ecologist

Nathan has recently gained approval for a BioBanking statement for the residential subdivision of land at 33 – 35 Warradale Road, Silverdale BioBanking Statement for SitePlus on behalf of TRN Group. Through the application of the NSW BioBanking Assessment Methodology Nathan assisted TRN Group gain approval for this project, including referral and approval of the project under the EPBC Act.

Curriculum vitae

Nathan Garvey



Other project experience

Project Manager/Ecologist	Gunnedah Solar Farm Biodiversity Assessment. For Overland Sun Farming.
Ecologist	Hillston Solar Farm Biodiversity Assessment. For Overland Sun Farming.
Ecologist	Limondale Solar Farm Biodiversity Assessment. For Overland Sun Farming.
Project Manager/Ecologist	89 Port Stephens Drive Taylors Beach, Biodiversity Assessment Report for proposed BioBanking Agreement. For Port Stephens Council.
Project Manager/Ecologist	89 Port Stephens Drive Taylors Beach, Biodiversity Assessment Report for proposed BioBanking Statement. For Port Stephens Council.
Project Manager/Ecologist	Walgett Solar Farm Biodiversity Impact Assessment. For Geolyse on behalf of Epuron.
Project Manager/Ecologist	Balickera Tunnel Targeted Microbat Surveys. For GHD Pty Ltd on behalf of Hunter Water.
Project Manager/Ecologist	Amended Rocky Hill Coal Project Response to Submissions. For RW Corkery & Co on behalf of Gloucester Resources Limited.
Project Manager/Ecologist	Amended Rocky Hill Coal Project Targeted Fauna Surveys. For RW Corkery & Co on behalf of Gloucester Resources Limited.
Project Manager/Ecologist	Yarraman Abattoir and Feedlot Biodiversity Impact Assessment. For KMH Environmental.
Project Manager/Ecologist	Goonumbla Solar Farm Biodiversity Impact Assessment. For Geolyse on behalf of Renewable Energy Developments.
Project Manager/Ecologist	Brandy Hill Quarry Expansion Biodiversity Impact Assessment. For Hanson Construction Materials.
BioBanking Assessor	Provision of BioBanking Assessor Services. For NSW Office of Environment and Heritage.
Project Manager/Ecologist	Nyngan Inground Storage Biodiversity Impact Assessment. For NSW Public Works.
Project Manager/Ecologist	Additional Crossing of the Clarence River at Grafton, Flora and Fauna Management Plan. For Fulton Hogan.
Project Manager/Ecologist	Redgum Ridge Western Precinct Biodiversity Certification. For Clifford Developments.
Project Manager/Ecologist	Redgum Ridge Western Precinct BioBanking Agreement. For Clifford Developments.

Curriculum vitae

Nathan Garvey



Project Manager/Ecologist	33 – 35 Warradale Road, Silverdale BioBanking Statement. For SitePlus on behalf of TRN Group.
Project Manager/Ecologist	33 – 35 Warradale Road, Silverdale BioBanking Agreement. For SitePlus on behalf of TRN Group.
Project Manager/Ecologist	Crest Road, Albion Park Flora and Fauna Assessment. For Spinitu Pty Ltd.
Project Manager/Ecologist	Underground Expansion Project: Environmental Impact Statement under the EPBC Act. For Wollongong Coal Ltd.
Project Manager/Ecologist	Underground Expansion Project: Biodiversity Offset Strategy. For Wollongong Coal Ltd.
Project Manager/Ecologist	Literature Review on the Effects of Climate Change on Upland Swamps. For Illawarra Coal.
Project Manager/Ecologist	Longwall 6 and 7: Biodiversity and Upland Swamp Management Plans. For Wollongong Coal Ltd.
Project Manager/Ecologist	Russell Vale Colliery Exploration Boreholes Review of Environmental Factors. For Wollongong Coal Ltd.
Project Manager/Ecologist	Russell Vale Colliery Environmental Monitoring Review of Environmental Factors. For Wollongong Coal Ltd.
Project Manager/Ecologist	Underground Expansion Project: Preferred Project Report. For Gujarat NRE Coking Coal Ltd.
Project Manager/Ecologist	Underground Expansion Project: Environmental Impact Assessment. For Gujarat NRE Coking Coal Ltd.
Project Manager/Ecologist	Gujarat NRE Major Expansion – Detailed Upland Swamp Impact Assessment. For Gujarat NRE Coking Coal Ltd.
Project Manager/Ecologist	Longwall 4 and 5 Exploration Works Ready Reckoner. For Gujarat NRE Coking Coal Ltd.
Project Manager/Zoologist	Dendrobium Area 3A, WC 17 – Monitoring of Littlejohn's Tree Frog Populations. For BHP Billiton Illawarra Coal.
Project Manager/Ecologist	Dendrobium Area 2, Swamp1, Impact Assessment. For BHP Billiton Illawarra Coal
Project Manager/Ecologist	NRE No.1 Preliminary Works Biodiversity Management Plan. For Gujarat NRE Coking Coal Ltd.
Project Manager/Ecologist	NRE No.1 Longwalls 4 Biodiversity Management Plan. For Gujarat NRE Coking Coal Ltd.
Project Manager	Dendrobium Area 2 and Area 3A Ecological Monitoring Program 2011/12. For BHP Billiton Illawarra Coal.

Curriculum vitae

Nathan Garvey



Project Manager	Dendrobium Area 2 and Area 3A Ecological Monitoring Program 2010/11. For BHP Billiton Illawarra Coal.
Project Manager/Zoologist	Appin Area 9 Revised Biodiversity Impact Assessment. For BHP Billiton Illawarra Coal.
Project Manager/Zoologist	Appin Area 9 Biodiversity Management Plan. For BHP Billiton Illawarra Coal.
Project Manager/Zoologist	Wongawilli Colliery 33kV Powerline Maintenance Ready Reckoner. For Wollongong Coal Ltd.
Project Manager/Ecologist	Russell Vale Colliery Environmental Monitoring Review of Environmental Factors. For Wollongong Coal Ltd.
Project Manager/Zoologist	NRE No. 1 Colliery - Targeted Green and Golden Bell Frog Surveys. for Gujarat NRE Coking Coal Ltd.
Project Manager/Ecologist	Wonga South Exploration Boreholes Review of Environmental Factors. For Wollongong Coal Ltd.
Project Manager/Ecologist	Motorcycling NSW Peak Motorcycle Facility, Yerrilyong: Flora and Fauna Assessment. For Cowman Stoddart and Motorcycling NSW.
Project Manager/Ecologist	TRN Warradale Road, Peer Review. For SitePlus Pty Ltd.
Ecologist/BioBanking Assessor	NorthConnex Biodiversity Offset Strategy. For Lend Lease Bouyeres Joint Venture.
Ecologist/BioBanking Assessor	Redgum Ridge BioBanking Assessment and Planning Proposal. For Clifford Developments.
Project Manager/Ecologist	Oatley Accessibility Upgrade: Flora and Fauna Assessment. For Transport for NSW.
Ecologist/BioBanking Assessor	Wilton Park Offset Assessment. For Clinton Weaving, Chris Vella and David Manning.
Project Manager/Zoologist	Shell Port Kembla, Green and Golden Bell Frog Management Plan. For URS Australia Pty Ltd.
Project Manager/Ecologist	Darrawank (2NAB) fibre spur route: Desktop ecology and Aboriginal heritage assessment. For NBN Co.
Project Manager/Ecologist	Bamarang Power Station BioBanking Advice and Assessment. For Beca.
Project Manager/Ecologist	AGL Camden North Gas Project – Flora and Fauna Assessment. For AGL Upstream Investments Pty Ltd.
Project Manager/Zoologist	193 Lawrence Hargrave Drive, Coalcliff – Flora and Fauna Assessment. For Cardno.

Curriculum vitae

Nathan Garvey



Project Manager/Zoologist	East Lynne Fibre Optic Cable Flora And Fauna Assessment. For Optus Communications.
Project Manager/Zoologist	Proposed Rezoning Application, Yerriyong – Flora And Fauna Habitat Assessment. For Locale Consulting
Project Manager/Zoologist	National Broadband Network, Minnamurra Wetlands – Flora and Fauna Assessment. For Cardno.
Project Manager/Zoologist	Dundas Tablelands Wind Farm – Detailed Flora and Fauna Assessment. For Origin Energy.
Project Manager/Zoologist	Tarrone Gas-fired Power Station – Flora and Fauna Assessment. For URS Corporation.
Expert Witness	Tarrone Gas-fired Power Station – Expert Witness Statement. For URS Corporation.
Zoologist	Penshurst Wind Farm – Targeted Surveys for the Brolga and Southern Bent-wing Bat. For RES Australia Pty Ltd..
Project Manager/Zoologist	Halladale Speculant 3D Transitional Seismic Survey - Detailed Flora and Fauna Assessment. For Origin Energy Pty Ltd.
Project Manager/Zoologist	Holcim Colac Quarry – Coorangamite Water Skink Translocation Plan. For Holcim Australia Pty Ltd.
Project Manager/Zoologist	Upgrade of the Western Highway between Dimboola and Kiata – Flora and Fauna Assessment. For VicRoads.
Project Manager/Zoologist	Halladale Blackwatch Project – Flora and Fauna Assessment. For Origin Energy Pty Ltd.
Expert Witness	Ballarat Koala Habitat Assessment – Appearance at the Victorian Civil and Administrative Tribunal (VCAT).
Project Manager/Zoologist	Aurora Residential Development - Annual monitoring of the Growling Grass Frog, Striped Legless Lizard and Golden Sun Moth. For VicUrban.
Project Manager/Zoologist	Victorian Desalination Plant - Targeted Surveys for the Growling Grass Frog. For GHD Pty Ltd.
Zoologist	Victorian Desalination Plant - Flora and Fauna Assessment. For GHD Pty Ltd.
Project Manager/Ecologist	Management of the kangaroo population at the former Australian Defence Industries site. Including implementation of a large scale, non-lethal, program to manage the kangaroo population.

Curriculum vitae

Nathan Garvey



Other qualifications and training

Introduction to Groundwater Course
NSCA Occupational Health and Safety Workplace Committee Course
Senior First Aid – St Johns Ambulance
SafeTrek Four Wheel Drive, Driver Training Program
EIANZ Expert Witness Masterclass
Victorian RBA & AUSRIVAS Training Course
Conservation, Welfare and Handling of Australian Marsupials (Macquarie University)

Publications

Garvey, N., Ben-Ami, D., Ramp, D. & Croft, D. Survival behaviour of swamp wallabies during prescribed burning and wildfire. *Wildlife Research*, 37 (1), 1-12.

Presentations

Garvey, N. The Assessment and Offsetting Of Indirect Impacts. Presentation to the Biodiversity Offsetting for Mining, Infrastructure and Urban development Conference 2015.

Garvey, N. Coastal Upland Swamps and Longwall Mining. Presentation to the Australian Institute of Mining and Metallurgy.

Garvey, N. Ecology and Heritage Assessment for the Underground Expansion Project. Presentation to the Russell Vale Community Consultative Committee.

Professional affiliations and memberships

Certified Environmental Practitioner (CEnvP)
Environment Institute of Australia and New Zealand (EIANZ)
Ecological Consultants Association of New South Wales (ECANSW) – Councillor
Australasian Bat Society (ABS)



Appendix 3 Ecosystem credit report



Table 7 Ecosystem credit report

Vegetation zone details	Vegetation zone area	Percent cleared value	EEC	Red Flag	Loss of SV score	LV score (certification area)	Landscape Tg value	Area of veg zone certified	Number of credits required
Sydney Blue Gum x Bangalay - Lilly Pilly moist forest in gullies and on sheltered slopes, southern Sydney Basin Bioregion - SR652_Moderate/Good	3.15	45	Not an EEC	No	29.17	16	0.55	3.15	54
Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion - SR545_Moderate/Good	1.44	85	Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion	Yes	39.93	16	0.58	1.44	31

ITEM 4

DRAFT PLANNING PROPOSAL: 26 WAREHOUSE PLACE (PART OF LOT 12 DP 1188144), 13 BRADY STREET (PART OF LOT 7 DP 1090509) AND 15 BRADY STREET (PART OF LOT 22 DP 1188144), BERKELEY

A draft Planning Proposal request has been submitted for land at the eastern end of Warehouse Place (Part of Lot 12 DP 1188144) and Brady Street (Part of Lot 22 DP 1188144 and Part of Lot 7 DP 1090509), Berkeley which seeks to facilitate additional industrial uses and employment land through the extension of the adjacent IN3 Heavy Industrial zoning (approximately 7.75 hectares).

This report presents the preliminary assessment of the draft Planning Proposal request and recommends that Council resolve to prepare a draft Planning Proposal for Warehouse Place (Part of Lot 12 DP 1188144) (5,065m²) and submit it to the NSW Department of Planning and Environment seeking a Gateway determination to enable exhibition.

RECOMMENDATION

- 1 A draft Planning Proposal be submitted to the NSW Department of Planning and Environment for 26 Warehouse Place (Part of Lot 12 DP 1188144), Berkeley seeking a Gateway determination to rezone 5,065m² of the site from E3 Environmental Management to IN3 Heavy Industrial with a Minimum Lot Size of 3,999m² and no height;
- 2 Following the Gateway determination, the draft Planning Proposal be exhibited for 28 days; and
- 3 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.

REPORT AUTHORISATIONS

Report of: Vanni De Luca, Manager Environmental Strategy and Planning (Acting)
Authorised by: Andrew Carfield, Director Planning and Environment - Future City and Neighbourhoods

ATTACHMENTS

- 1 Site Locality Map and Current Zoning
- 2 Requested Zoning
- 3 Map showing Land Constraints
- 4 Proposed Zoning and Minimum Lot Size

BACKGROUND

In May 2014 a Planning Proposal request was submitted by TCW Consulting on behalf of the landowners for Lot 7 DP 1090509 Brady Street and Part of Lot 4 DP 528932 Berkeley Road, Berkeley seeking a rezoning of land from E3 Environmental Management to IN3 Heavy Industrial zoning (Attachment 1). In July 2016 Lot 4 DP 528932 was subdivided into 15 lots and the subject lands are now Lots 12 and 22 DP 1188144.

Based on internal referral feedback and site inspections, the proponent was advised in May 2015 that there were a number of constraints to the progression of the Planning Proposal and that Council would be unlikely to support the request. Additional information was submitted and changes made to the Planning Proposal request between January 2016 and February 2017.

The proposal has been examined in the context of the two development consents for industrial lot subdivision for this locality (DA-2004/1686 for a 15 lot subdivision and DA-2005/2068 for a 22 lot subdivision) and DCP Chapter D2: Berkeley (Berkeley Road Industrial Estate). Advice on the proposal has also been sought from other divisions of Council.

The land that is subject to the Planning Proposal request is currently zoned E3 Environmental Management. To the north and west is IN3 Heavy Industrial zoning, with approved industrial

subdivisions. To the east and south the land is zoned E3 Environmental Management (Berkeley Hills area).

The majority of the land proposed for possible industrial use is covered by thick grass, with trees covering most of the deeply incised watercourse gully that passes through the property. The site features a series of broad ridges separated by watercourse gullies. Grass covered ridge crest areas are gently to moderately sloping, with steep slopes uphill to the east and south, covered with dense tree growth. The steeper slopes of the Berkeley Hills, uphill of the site, also have a medium to dense cover of trees. Land to the east of the site rises to a highpoint and contains a water reservoir near the top of the hill. The site is burdened by electricity and Sydney Water easements and is mapped as containing areas of slope instability.

PROPOSAL

The draft Planning Proposal request proposed the rezoning of 7.75 hectares of land at 26 Warehouse Place and 13-15 Brady Street, Berkeley from E3 Environmental Management to IN3 Heavy Industrial, to expand the current industrial uses (Attachment 2). The change of zoning was requested on the premise that the site is more suited to the IN3 Heavy Industrial zone and objectives.

It is proposed that access to any new allotments would be gained from separate points off the eastern end of Warehouse Place and Brady Street. Full services (power, sewer, water and telecommunications) can be provided to the site.

Other supporting documents submitted with the draft Planning Proposal request included:

- Ecological Constraints Assessment (EcoLogical 2014);
- Preliminary Geotechnical Assessment (Coffey 2015);
- Ecological Assessment (EcoLogical 2015); and
- Arborist report (Moore Trees 2016).

KEY ISSUES FOR CONSIDERATION

The following key issues are relevant to the evaluation of the Planning Proposal request:

DCP Chapter D2: Berkeley (Berkeley Road Industrial Estate)

DCP Chapter D2: Berkeley (Berkeley Road Industrial Estate), developed as a result of the Berkeley Hills Study, applies to the site and contains the following aims and objectives:

- Facilitate industrial development, which has regard to the scenic and environmental attributes of the Berkeley Hills;
- Encourage the efficient utilisation of industrial zoned land and to restrict development of land identified for environmental protection purposes;
- Provide for an effective transition between the industrial land and existing residential uses along Berkeley Road;
- Promote the provision of buffers between potentially conflicting land uses;
- Promote the retention of significant trees and vegetation on the site and encourage the revegetation of cleared land; and
- Encourage the preservation of the existing riparian environment on the site and to ensure the retention of downstream water quality.

This DCP Chapter recognises the environmental importance of the adjoining Berkeley Hills and seeks to encourage the preservation of existing vegetation and riparian qualities and revegetation of cleared lands, while also maintaining a buffer between potentially conflicting land uses.

The intention of the E3 Environmental Management zoning is to apply to land with special ecological significance, scientific, cultural or aesthetic attributes, or land highly constrained by geotechnical or other hazards.

Ecological Constraints

The Planning Proposal request was supported by two reports prepared by EcoLogical Australia (2014 and 2015). These reports identified areas of low and moderate ecological constraint and concluded that the area mapped as “Illawarra Subtropical Rainforest in the Sydney Basin Bioregion”, as well as vegetation within the buffers of streams, represent moderate ecological constraints for rezoning and land development. These areas have “Special ecological, scientific, cultural or aesthetic values” associated with E3 Environmental Management zoning, and also provide habitat for fauna species, including the threatened species *Pteropus poliocephalus* (Grey-headed Flying-fox), and possibly the rare plant, *Alchornea ilicifolia* (recorded by Wollongong Council).

The 2015 Ecological Constraints report prepared by EcoLogical recommended avoiding impacts to “Illawarra Subtropical Rainforest in the Sydney Basin Bioregion”, vegetation within the buffers of streams, along drainage lines and where the “Fig Trees” are mapped. A Flora and Fauna report will be required for submission with any proposed development application.

Despite the findings from the EcoLogical Studies that there are no “high” ecological constraint areas on the site, a site inspection by Environmental Council officers (19 March 2015) did identify areas of special ecological value, specifically:

- Illawarra Subtropical Rainforest (approximately 1,000m²), an endangered ecological community and protected under the Threatened Species Conservation Act 1995;
- The presence of the regionally rare plant species *Alchornea ilicifolia* (Native Holly) within a patch of Illawarra Subtropical Rainforest;
- Two first order watercourses that join to become a second order watercourse; and
- Two possibly 50+ year old mature *Ficus rubiginosa* (Port Jackson Figs) with a canopy of approximately 2,500m², which provide roosting/foraging habitat (between Shellharbour and Figtree camps) for the Grey-headed Flying Fox, protected under the EP&C Act and Threatened Species Act.

The Council Environment referral concluded that the majority of the subject land is unlikely to be able to provide a suitable building site for an industry type permitted under the proposed IN3 Heavy Industrial zone without adverse environmental and visual impacts due to:

- the presence of endangered ecological communities;
- the limited already cleared area not affected by riparian corridors (minimum 10 metres required either side from top of bank);
- access being required across several watercourses;
- the land identified for a zoning change at Brady Street being on a spur and elevated, with the surrounding land generally hilly and undulating as the land rises from the end of Brady Street; and
- earthworks being required to create a flat building platform.

An Arborist report was requested to investigate the two possibly 50+ year old mature *Ficus rubiginosa* (Port Jackson Figs) on site. This report (Moore Trees 2016) concluded that a “Tree Protection Zone (TPZ)” buffer to these trees should be observed in any future development of the land and any building works near these trees will require further assessment to determine potential construction impacts. Advice from Council’s Environment team states that a buffer of a minimum of 30 metres from the outer canopy of the coalesced Fig trees is required to define the boundary between the existing E3 Environmental Management zone and proposed industrial zone in order to avoid indirect impacts that may critically impact the canopy health of these trees.

Existing 88B Instrument Restriction

There is an existing Vegetation Management Plan (VMP) and obligations to enhance and maintain the identified riparian corridor zone, linked to DA-2005/2068/C. An 88B Instrument restriction applies to the site, and the riparian zone is also currently subject to the implementation of a VMP for Weed Control and Revegetation as part of a Controlled Activity Approval (Office of Water December 2012).

The Environment team confirmed that during their 2015 site inspection the VMP works had been commenced in the lower end of the drainage line. Any proposed development would need to be located outside of the covenanted riparian zone maintenance areas and riparian corridors.

Geotechnical

Much of the land is mapped as suspected landslip area, contaminated land and uncategorised flood risk. The Statement of Environmental Effects submitted with the Development Application for subdivision states that much of the land area is unstable, with the current subdivision being located on the more level land and lower slopes of the Berkeley Hills at the front of the site (with a low risk of slope instability). The geotechnical report submitted with the subdivision development application (Coffey 2004) noted that slope instability has occurred in the past on the steeper slopes and poorly drained areas of the Berkeley Hills area.

Some evidence of previous instability having occurred on the slopes to the east of the water main easement was also documented with a notation that the surface features and subsoil conditions indicate that further movement is possible (eg. groundwater seepage, deep clay soils, deeply incised watercourse at top of slope and irregular shape of ground surface). Areas of low through high risk of slope instability were identified on the site, and development of buildings not recommended where medium to high risk or high risk of slope instability exists. It was further recommended that vegetation should be maintained over the slopes uphill of the subdivision to reduce the risk of significant erosion and that deep excavation should be avoided on this site.

A preliminary Geotechnical Assessment (Coffey 2015) submitted with the Planning Proposal request provided a preliminary landslide assessment of DP 1188144 based on site topography, expected geology and site observations. This report concluded that generally land considered as medium or low landslide risk has potential for development, however as much of the land is within a hillside area, development for industrial uses will require consideration at the development application stage of the extent of earthworks required to create level areas for buildings, access and hardstand storage areas as this could significantly affect current drainage patterns and slope stability of both the disturbed land and adjoining slopes. The areas identified as having a moderate to high, or high risk to property as a result of landslide should not be developed.

Further subsurface investigation and surface mapping will be required at the development application stage to refine the limits of the slope instability risk categories.

Easements

The Planning Proposal request notes the significant area of land burdened by a registered electricity transmission easement, with associated transmission towers. Additionally, there is a Sydney Water easement on the site. Both these easements restrict land use.

An electricity easement is an encumbrance on the title of the land which confers the right to construct, operate, maintain, renew, repair, replace or upgrade an electricity power line, cable or infrastructure. The easement refers to a clearly defined area and enables the network operator to control activities within that defined area and access electrical assets. Easements therefore impose an obligation on affected property owners to avoid doing anything which may interfere with the rights of the network operator. Easements are primarily created in the electricity industry to:

- Ensure public safety by restricting activities or encroachments that may cause danger to land users or interference to the network assets;
- Protect the Electricity Operators' assets from damage; and

- Maintain unimpeded access to electricity easements and infrastructure to install, operate, maintain, repair, replace or upgrade infrastructure.

It is essential that:

- Buildings, structures or other objects not be placed; and
- That no activities be undertaken

within an easement area or close to electrical infrastructure if doing so may affect the safe and continuous operation of the electricity infrastructure or prevent its maintenance, repair renewal, replacement or upgrade.

Recommendation

As noted, the proponent sought the rezoning of 7.75 hectares to IN3 Heavy Industry. Based on the site constraints it is proposed that only an area of 5,065m² be rezoned, which won't be able to be further subdivided. Attached is a map of the area subject to the Planning Proposal request, illustrating the abovementioned land constraints to further development (Attachment 3).

It is recommended that an area of 5,065m² at 26 Warehouse Place (Part Lot 12 DP 1188144) Berkeley immediately adjacent land zoned for industrial operations be rezoned from E3 Environmental Management to IN3 Heavy Industrial with a Minimum Lot Size of 3,999m² to facilitate further industrial uses (Attachment 4).

This area has been identified for extension of the IN3 Heavy Industrial zoning based on an assessment of ecological and geotechnical constraints, and the need to observe an adequate buffer to the existing Port Jackson Figs and riparian corridor. The geotechnical assessment concludes that development of this area should be feasible with controls over drainage and extent of earthworks. Creation of large flat sites for industrial warehouses may not be feasible however smaller areas with limited cuts and fills may be feasible for building areas and/or storage of vehicles and equipment with appropriate surface and subsurface drainage measures provided.

The proposed rezoning of other sections of DP 1188144 for industrial purposes, including land at the end of Brady Street (Lot 7 DP 1090509), is not supported given the riparian zone (currently being rehabilitated as part of a VMP) and other ecological considerations, the presence of the electricity transmission and Sydney Water easements (and associated restrictions on development and earthworks) and geotechnical constraints.

CONSULTATION AND COMMUNICATION

Preliminary consultation was undertaken with relevant internal divisions of Council as part of the assessment of the draft Planning Proposal request. Members of the Environment team conducted a site visit (19 March, 2015) to ascertain environmental attributes on the site.

As noted above, internal consultation identified environmental constraints to intensification of land use for industrial purposes. The traffic referral noted that the site is located on the edge of an industrial area with a sufficiently wide access road to accommodate future industrial development, with any future development application requiring further traffic and parking analysis to demonstrate adequate access arrangements and parking.

Should Council resolve to prepare a draft Planning Proposal for the subject lands the proposal will be forwarded to the NSW Department of Planning and Environment for a Gateway determination. The Gateway determination, if granted, permits Council to publicly exhibit the draft Planning Proposal and provides a directive as to the relevant public authorities to be consulted.

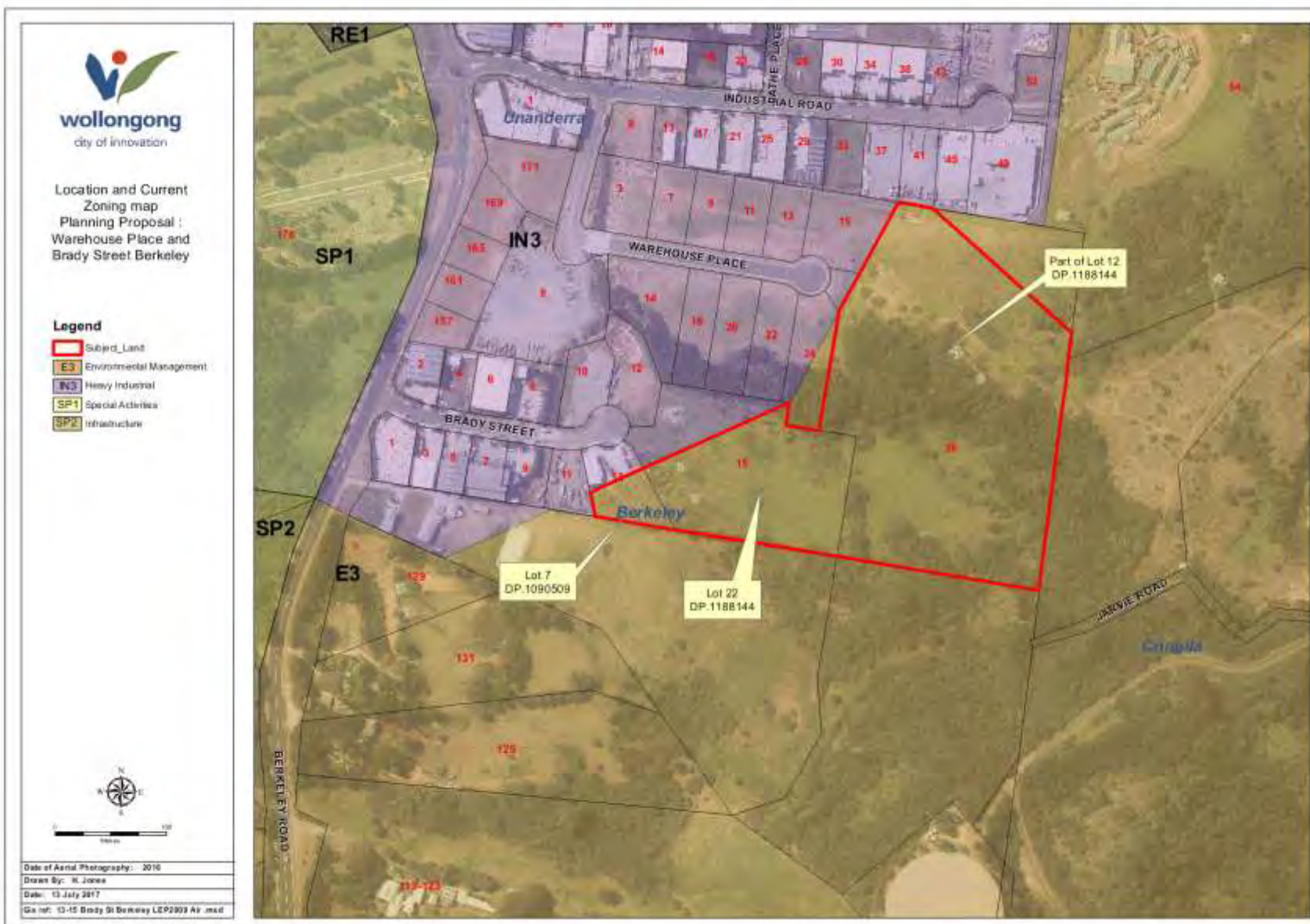
PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 objective *“The Natural environment is protected and enhanced”* under the Community Goal *“We value and protect our environment”*.

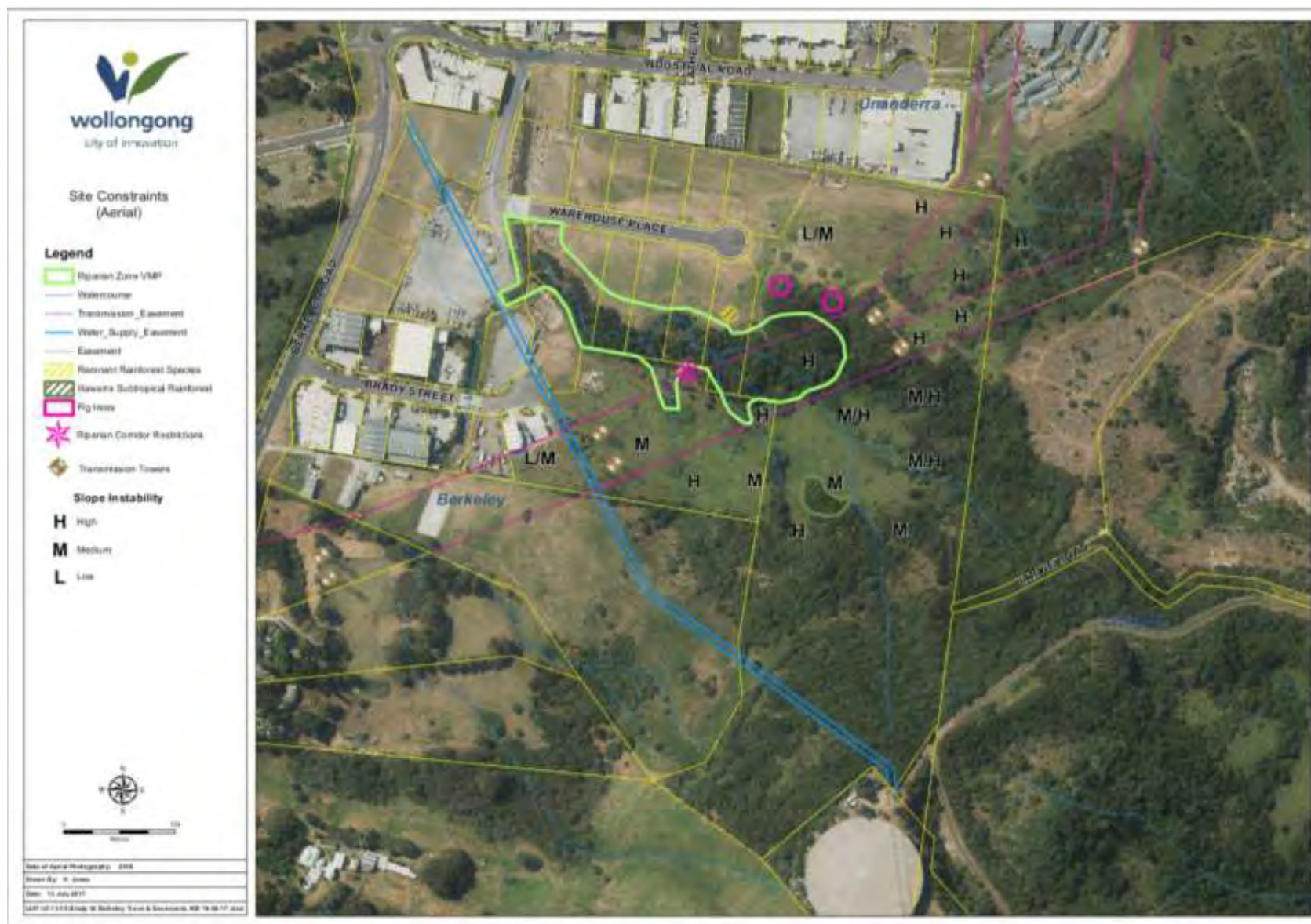
Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
1.6.1 Our urban environment minimises impacts on habitat and biodiversity and areas of high conservation value are protected	1.6.1.1 Review planning controls for environmentally sensitive locations	Continue to access Planning Proposals against environmental strategies, including the Illawarra Biodiversity Strategy, the Illawarra Escarpment Strategic Management Plan, and the Farmborough Heights to Mt Kembla Strategic Plan

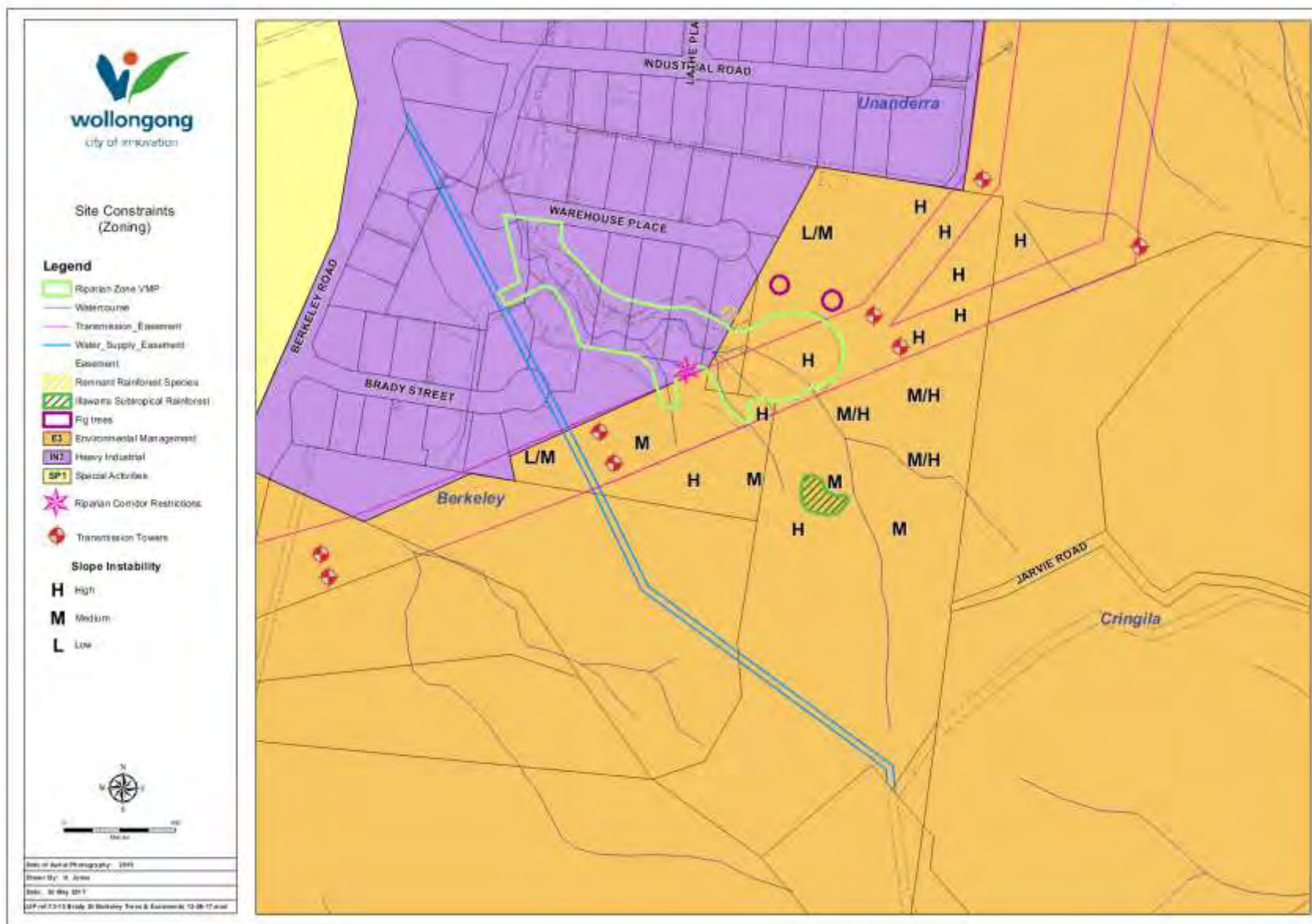
CONCLUSION

The consideration of a Planning Proposal request has identified an area of 5,065m² at 26 Warehouse Place (Part of Lot 12 DP 1188144) Berkeley as suitable for an extension of the IN3 Heavy Industrial zoning associated with an approved industrial subdivision, in order to facilitate further industrial uses. It is recommended that Council resolve to prepare and submit a draft Planning Proposal for 26 Warehouse Place (Part of Lot 12 DP 1188144) to the NSW Department of Planning and Environment seeking a Gateway determination to enable exhibition.















ITEM 5 EXHIBITION OF DRAFT CITY OF WOLLONGONG PEDESTRIAN PLAN 2017-21

The draft City of Wollongong Pedestrian Plan 2017-2021 has been developed to address a range of factors that currently deter walking in the city and assist Council to fulfil the community's aspiration for sustainable, affordable and accessible transport.

The draft Plan has been prepared with significant input from Council's Active Transport Reference Group at multiple points throughout the course of its development. Community views on walking obtained via engagement on a range of Council projects were also considered in developing the draft Plan.

This report seeks endorsement for the draft City of Wollongong Pedestrian Plan 2017-2021 to be placed on public exhibition.

RECOMMENDATION

- 1 The draft City of Wollongong Pedestrian Plan 2017-2021 be placed on public exhibition for a period of six weeks.
- 2 Following the public exhibition period, a final draft City of Wollongong Pedestrian Plan 2017-2021 be presented to Council for adoption.

REPORT AUTHORISATIONS

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

ATTACHMENTS

- 1 Draft City of Wollongong Pedestrian Plan 2017-2021

BACKGROUND

Walking is the cheapest, most equitable and sustainable form of transport. The positive benefits of walking are well documented and include:

- Improved public health
- Passive surveillance creating safer streets
- Community cohesion
- Personal independence and resilience
- Reduced road congestion
- Fewer carbon emissions

Despite walking's numerous health, social, economic and environmental benefits, travel and movement data has shown that over the past decade, walking rates to schools and work places in the Wollongong Local Government Area have been in decline whilst private car use has increased.

Community Aspiration for Active Transport

One of the six community goals in the *Wollongong 2020 Community Strategic Plan* is that "We have sustainable, affordable and accessible transport". One of the identified strategies to achieve this goal is that "Interconnected and accessible cycleways and footpaths are planned and delivered". The plan identifies an Annual Deliverable to support this strategy to "implement footpath and cycleway improvement programs and the development of city wide pedestrian plan".

The *Delivering Wollongong 2022 A Summary Document* includes the following Councillors' aspiration for walkability/connectivity in the city:

“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”

International Best Practice Principles

In September 2014, Council became a signatory to The International Charter for Walking that was developed over a number of years at the International Walk21 Conference. The Charter includes the following strategic principles for walking:

1. Increased inclusive mobility
2. Well-designed and managed spaces and places for people
3. Improved integration of networks
4. Supportive land-use and spatial planning
5. Reduced road danger
6. Less crime and fear of crime
7. More supportive authorities
8. A culture of walking

Development of the draft Plan

In order to determine the state of walking across the city, information was gathered on the following -

- The number and proportion of walking trips compared to other modes of transport
- Areas of high levels of walking
- Road crashes involving pedestrians
- The magnitude and condition of the pedestrian infrastructure network footpaths and shared pathways
- The public transport network
- The community's views and attitudes

Based on best practice principles, the Draft City of Wollongong Pedestrian Plan sets out Council's vision for walking recommends a range of strategies that address issues revealed in the above information, developed in consultation with internal stakeholders and the Active Transport Reference Group.

The proposed Vision Statements are -

- *Walking is the preferred means of transport for short trips in the city and adjoins a public transport trip for longer journeys.*
- *The walking network is accessible to all and is a safe, quick and pleasurable way to move to and through centres and other popular destinations in the city.*
- *High quality walking information including wayfinding and trip planning is readily available to the travelling public.*
- *The wide-ranging benefits of walking are recognised and valued in the community.*

The draft City of Wollongong Pedestrian Plan is built around the five goals set out below aimed to help Council to achieve its vision for walking across the local government area and address a number of factors that deter walking as a key mode of transport. The objectives that underpin each goal are supported by specific strategies.

- Goal 1 – Encourage Walking

- Objective 1.1 More children walking safely to school

- Objective 1.2 More walking in everyday life

- Objective 1.3 Information that supports walking is readily available

- Objective 1.4 Initiatives that encourage walking are supported

- Goal 2 – Create Pedestrian Friendly Places

- Objective 2.1 Pedestrian activity centres have high quality walking environments

- Objective 2.2 Pedestrian infrastructure is accessible

- Goal 3 – Make Walking Safe

- Objective 3.1 Pedestrian crossing opportunities are improved

- Objective 3.2 Conflicts between pedestrians and other road users are reduced

- Objective 3.3 Pedestrians feel safe in the city

- Goal 4 – Make Walking Easy and Convenient

- Objective 4.1 Walking is well integrated with other transport modes

- Objective 4.2 Wayfinding is available in areas of pedestrian activity

- Objective 4.3 Walkability in the city is increased

- Goal 5 – Work Effectively to Implement the Pedestrian Plan

- Objective 5.1 Good data is used to inform decision making and monitoring

- Objective 5.2 Pedestrian Infrastructure Capital projects contribute to Pedestrian Plan Objectives

- Objective 5.3 Work with the NSW Government to facilitate delivery of Pedestrian Plan and complimentary programs

The Draft City of Wollongong Pedestrian Plan works in association with other Council supporting documents to collectively set Council's direction for developing delivery programs to improve the walking environment at a city-wide scale and for specific locations and precincts. These include –

At a City-wide scale –

- Transport Asset Management Plan
- City of Wollongong Bike Plan
- Disability Inclusion & Access Plan

At a local / precinct scale –

- Town & Village Plans
- Access & Movement Strategies (eg: City Centre)
- Local Area Traffic Management Plans (LATMs)
- Pedestrian Access & Mobility Plans (PAMPs)

Implementation of the Pedestrian Plan will strengthen Council's role in fulfilling the community's aspiration for sustainable, affordable and accessible transport.

PROPOSAL

It is proposed that Council endorse the draft City of Wollongong Pedestrian Plan 2017-2021 to be placed on public exhibition for a period of 6 weeks. Following community feedback, a final draft City of Wollongong Pedestrian Plan 2017-2021 incorporating public comments, will be reported to Council for adoption.

CONSULTATION AND COMMUNICATION

Community views on walking obtained via engagement on a range of Council supporting documents and projects were considered in developing the draft Plan. These include; a City for People, the City of Wollongong Bike Plan, the Disability Inclusion Action Plan, Town Centre Masterplans for Warrawong, Unanderra and Figtree as well as the biannual Community Survey.

The draft City of Wollongong Pedestrian Plan 2017-2021 has been prepared with significant input from Council's Active Transport Reference Group at multiple points throughout the course of its development. The group's key priority is to *"ensure Council policies and strategies encourage the use of active transport methods"* and comprises three Councillors, community members that represent bicycle and pedestrian user needs and one Council officer from the Infrastructure Strategy & Planning Division.

PLANNING AND POLICY IMPACT

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

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
6.1.3 Interconnected and accessible cycleways and footpaths are planned and delivered	6.1.3.1 Improve the connectivity of the local government area through the upgrade in our network of footpaths and cycleways	Implement footpath and cycleway improvement programs and the development of city wide pedestrian plan

Ecological Sustainability

Council's vision for walking and its supporting goals, objectives and strategies provided in the draft City of Wollongong Pedestrian Plan 2017-2021 aims to increase participation in all forms of walking. Less use of motor vehicles resulting from a greater take up in walking, for commuting trips and short distance trips in particular, will reduce carbon emissions and noise pollution.

FINANCIAL IMPLICATIONS

Costs associated with the public exhibition of the draft Plan will be funded from an existing operational budget allocation.

Funding for implementation programs associated with the various strategies listed in the plan will be allocated on a priority basis through the annual planning and capital budget process. Many programs are eligible for funding under various NSW Government and Australian Government grant programs.

CONCLUSION

The draft City of Wollongong Pedestrian Plan 2017-2021 includes a series of strategies involving walking safety, accessibility, convenience, education, promotion and implementation that will not only address an array of existing factors that discourage walking but will significantly contribute to the Wollongong 2022 – Community Strategic Plan goal for sustainable, affordable and accessible transport. The public exhibition of the draft Plan is required to generate valuable input from the community that will be incorporated into the final draft plan and reported to Council for adoption.

DRAFT

City of Wollongong

Pedestrian Plan

2017-21

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Summary

Walking is the cheapest, most equitable and sustainable form of transport. Despite walking's numerous health, social, economic and environmental benefits, travel and movement data has shown that over the past decade, walking rates in Wollongong have been in decline and car use has increased. Council is committed to the planning and the delivery of policy, services and infrastructure that can help to reverse this trend.

The City of Wollongong Pedestrian Plan sets out Council's vision for walking and recommends a range of strategies to address key walking issues facing the city, and contributes to the goal in the *Wollongong 2022 Community Strategic Plan* that we have *sustainable, affordable and accessible transport*. The Plan also seeks to support the Councillors' aspiration for walkability and connectivity identified in the *Delivering Wollongong 2022: A Summary Document*.

In the development of the Plan, the following factors were identified as deterring walking as a key mode of transport:

- Growing ageing population will increase the need for accessible pedestrian infrastructure
- Council has limited data on pedestrian volumes
- Traffic signal timings and phasings in major centres are optimised for vehicle movement rather than pedestrians
- Areas of high pedestrian activity have low numbers of pedestrian priority crossings
- Walking rates to school declined over the past few decades despite increases in footpaths
- Town centres have significant clusters of road accidents involving pedestrians
- Road accidents involving pedestrians are mainly occurring away from designated crossings
- New footpaths along with maintenance and improvements are community priorities
- A large proportion of suburban streets lack footpaths
- Many residential streets are unsuitable for footpaths due to their steepness.
- The distance between residential streets and public transport links and local destinations make walking unattractive, even if footpaths were available
- Some key town centres' accessibility is reduced by substandard kerb ramps

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- Town centres lack wayfinding for pedestrians
- Busy roundabouts hinder safe crossing of pedestrians
- Vehicles parked on nature strips or driveways impede pedestrian access with or without the presence of an adjacent footpath
- In many locations the City's terrain is a hindrance to walkability
- Obstructions such as bins, vegetation, parked cars and signs hamper pedestrian access in many parts of the city

The five goals below are the basis of the draft City of Wollongong Pedestrian Plan. This draft Plan will help Council to achieve its vision for walking across the local government area and address the challenges listed above. The objectives that underpin each goal are supported by a range of specific strategies.

Goal 1 – Encourage Walking

Objective 1.1

More children walking safely to school

Objective 1.2

More walking in everyday life

Objective 1.3

Information that supports walking is readily available

Objective 1.4

Initiatives that encourage walking are supported

Goal 2 – Create Pedestrian Friendly Places

Objective 2.1

Pedestrian activity centres have high quality walking environments

Objective 2.2

Pedestrian infrastructure is accessible

Goal 3 – Make Walking Safe

Objective 3.1

Pedestrian crossing opportunities are improved

Objective 3.2

Conflicts between pedestrians and other road users are reduced

Objective 3.3

Pedestrians feel safe in the city

Goal 4 – Make Walking Easy and Convenient

Objective 4.1

Walking is well integrated with other transport modes

Objective 4.2

Wayfinding is available in areas of pedestrian activity

Objective 4.3

Walkability in the city is increased

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Goal 5 – Work Effectively to Implement the Pedestrian Plan

Objective 5.1

Good data is used to inform decision making and monitoring

Objective 5.2

Pedestrian Infrastructure Capital projects contribute to Pedestrian Plan Objectives

Objective 5.3

Work with the NSW Government to facilitate delivery of Pedestrian Plan and complimentary programs

Introduction

Walking is the most equitable, environmentally friendly and cheapest mode of transport. It's part of almost every door-to-door trip and is defined as movement by foot, wheelchair and/or motorised scooters.

However, the provision of a safe and convenient urban walking environment relies on a range of interconnected elements and can be either enhanced or hindered by other users of an area, including cars. The intention of this Plan is to help Council meet pedestrian needs and integrate them into a range of urban activities.

The following statement describes the Council's aspirations for walking in the City of Wollongong.

Vision

Walking is the preferred means of transport for short trips in the city and adjoins a public transport trip for longer journeys.

The walking network is accessible to all and is a safe, quick and pleasurable way to move to and through centres and other popular destinations in the city.

High quality walking information including wayfinding and trip planning is readily available to the travelling public.

The wide-ranging benefits of walking are recognised and valued in the community.

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Purpose

The City of Wollongong Pedestrian Plan sets out a range of strategies to address key walking issues facing the city, and facilitate Council's contribution toward its vision for walking and the following community goal established in the *Wollongong 2022 Community Strategic Plan*:

We have sustainable, affordable and accessible transport

The plan also seeks to support the Councillors' walkability/connectivity aspiration identified in the *Delivering Wollongong 2022 A Summary Document*:

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

The International Charter for Walking

Council is a signatory to *The International Charter for Walking* that was developed over a number of years at the International Walk21 Conference. The Charter includes the following strategic principles for walking:

1. Increased inclusive mobility
2. Well-designed and managed spaces and places for people
3. Improved integration of networks
4. Supportive land-use and spatial planning
5. Reduced road danger
6. Less crime and fear of crime
7. More supportive authorities
8. A culture of walking



The Pedestrian Plan will also help Council meet the Walk21 principles.

To replicate other global cities' success in increasing walking to high levels, Council needs to use a wide range of approaches including programs, policy, urban design, signage, regulations, education and promotions⁷.

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Relationship to Key Strategic Council Documents

The draft City of Wollongong Pedestrian Plan is one of a number of supporting documents that will contribute to the achievement of the Wollongong 2022 Community Goals and guide Council's decision making throughout the development of its Delivery Program and Annual Plans.

The draft Plan is associated with several other of Council's supporting which include relate to improving the walking environment of the whole city as well as specific precincts. The figure overleaf provides a number of examples and lists relevant NSW Government Plans and Delivery Programs.

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Benefits of Walking

The positive benefits of walking are well documented and include:

<p>Health</p> 	<ul style="list-style-type: none"> • Improved heart and lung fitness • lower risk of heart disease and stroke • reduced impact of high blood pressure, high cholesterol, joint and muscular pain or stiffness and diabetes • better balance and stronger bones • improved muscle strength and stamina • fall in body fat.¹
<p>Social Benefits</p> 	<ul style="list-style-type: none"> • Allows for casual social interaction • Fosters community cohesion • Increases passive surveillance • Improves independence and resilience⁶
<p>Economic</p> 	<ul style="list-style-type: none"> • Congestion cost savings • Vehicle operating cost savings • Less spent on roads • Parking cost savings
<p>Environmental</p> 	<ul style="list-style-type: none"> • Less noise pollution • Cleaner air • Fewer greenhouse gas emissions • Less dependency on non-renewable energy
<p>Benefits for children</p> 	<ul style="list-style-type: none"> • Walking to school linked with better concentration ² • Walking to school also makes children more geographically aware of their neighbourhoods³ • Improves independence and resilience⁶

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Walking in the City of Wollongong

The state of walking in the city can be appreciated by considering the following aspects:

- The number and proportion of walking trips compared to other modes of transport
- Locations in the city which attract high levels of walking
- Information of road crashes involving pedestrians
- The magnitude and condition of footpaths and shared pathways
- The public transport network as each public transport trip has significant walking trips at either end
- The community's views and attitudes regarding walking in the city and in general

Mode of travel

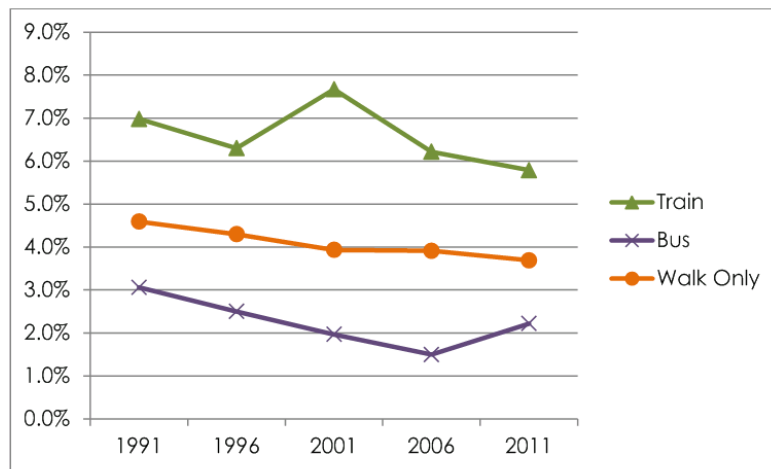
Australian census data provides an indication of how much walking people do in our local government area when compared to other modes of travel, including cars. On census day, one of the key questions is on how people travelled to and from their workplace that day.

The data shows that over the past 20 years there has been a steady decline in walking as the only method used in a commute trip (around a 20% drop). As many public transport journeys are usually accompanied by significant walks at either or both ends, data related to public transport use is also an important indicator of how much walking occurs in an area. The latest available travel data shows about a 30% drop in train travel and close to a 40% reduction in bus travel between 1991 and 2011. Interestingly, there has been an increase in bus travel between 2006 and 2011, which could be attributed to the introduction of the very popular NSW Government free 'Gong Shuttle' service.

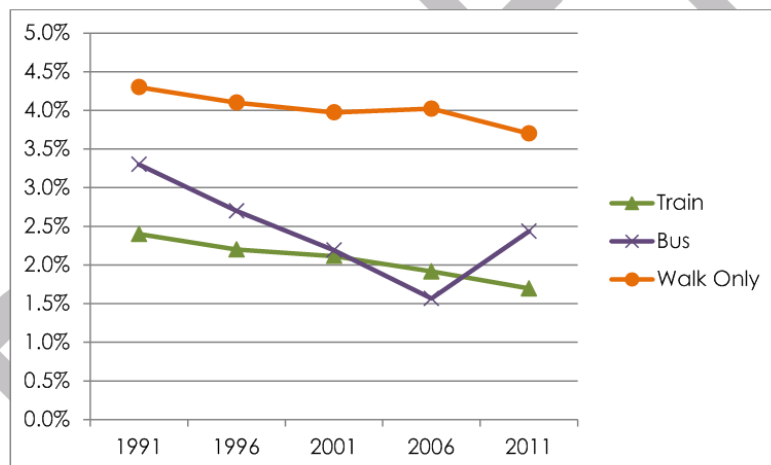
"Fresh air to get fit walking ... being walkable is important."

Unanderra Town Centre Study Community Engagement Respondent

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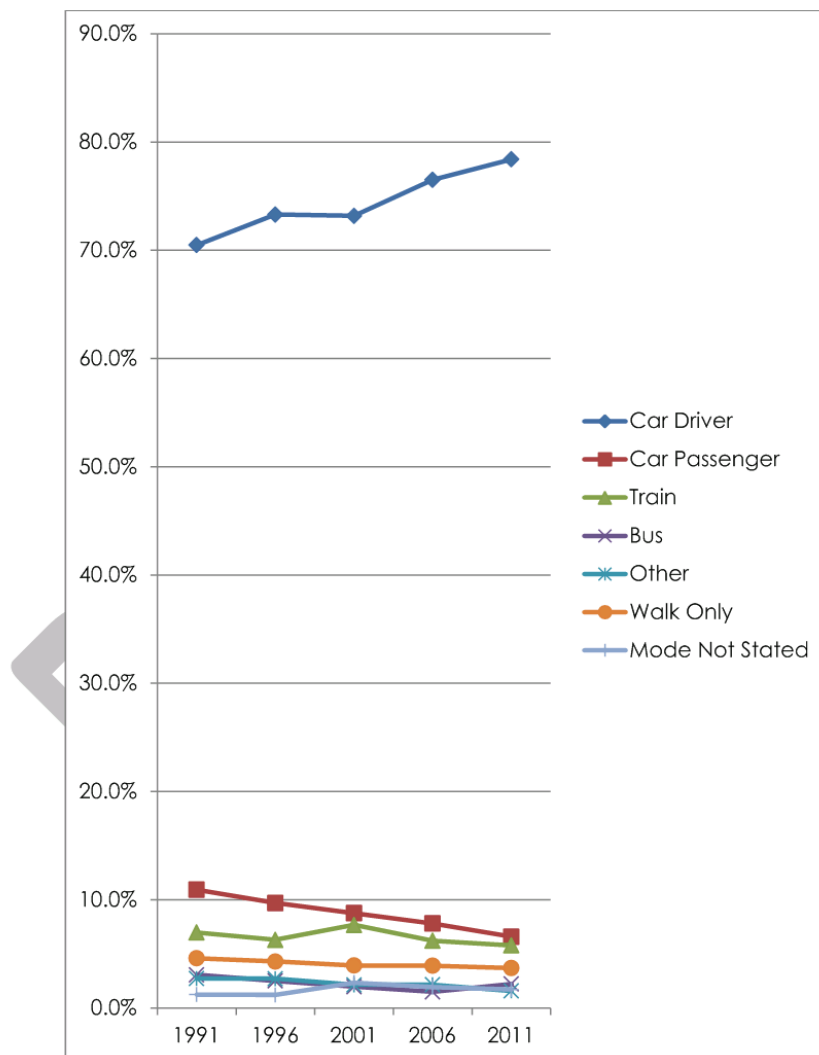
Public Transport and Walking Commuting Trips
(Origin in Wollongong LGA)



Public Transport and Walking Commuting Trips
(Destination in Wollongong LGA)

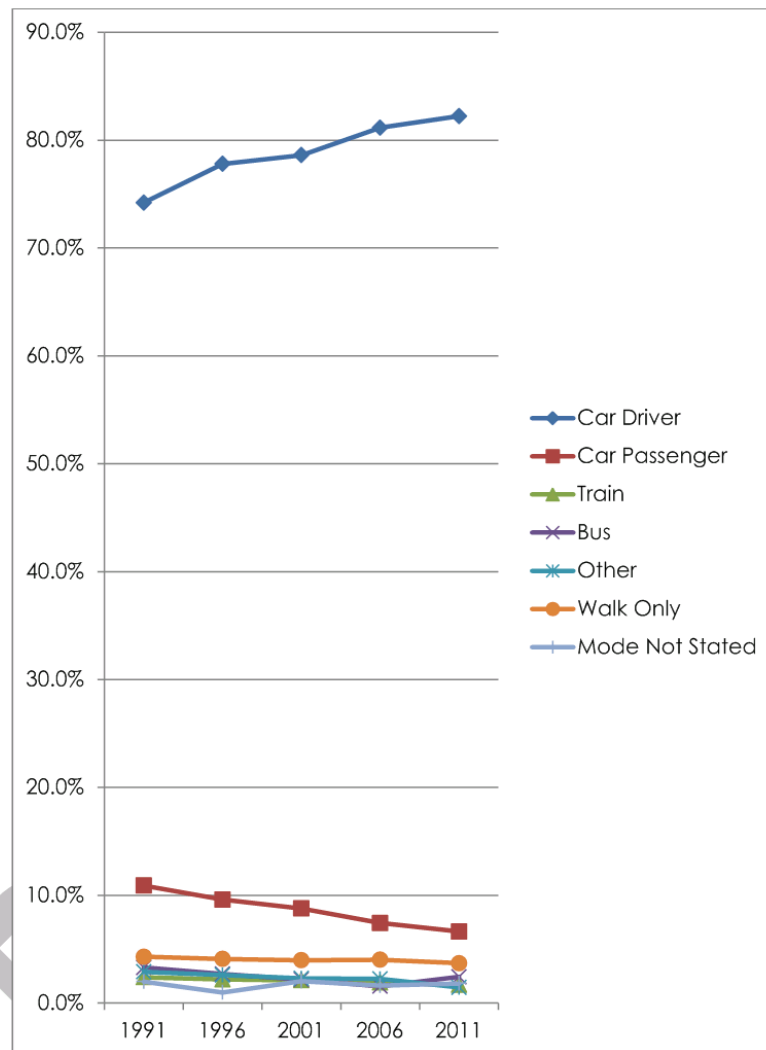
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The following figures reveal carpooling has also reduced over the same 20 year period with around a 65% fall in people travelling to work as a car passenger. While there has been a fall in the use of sustainable transport modes such as public transport, carpooling and walking, there has been a corresponding rise in car use. The most recent results show some 80% of commuters in the City of Wollongong drive their cars to work.



All Commuting Trips
(Origin in Wollongong LGA)

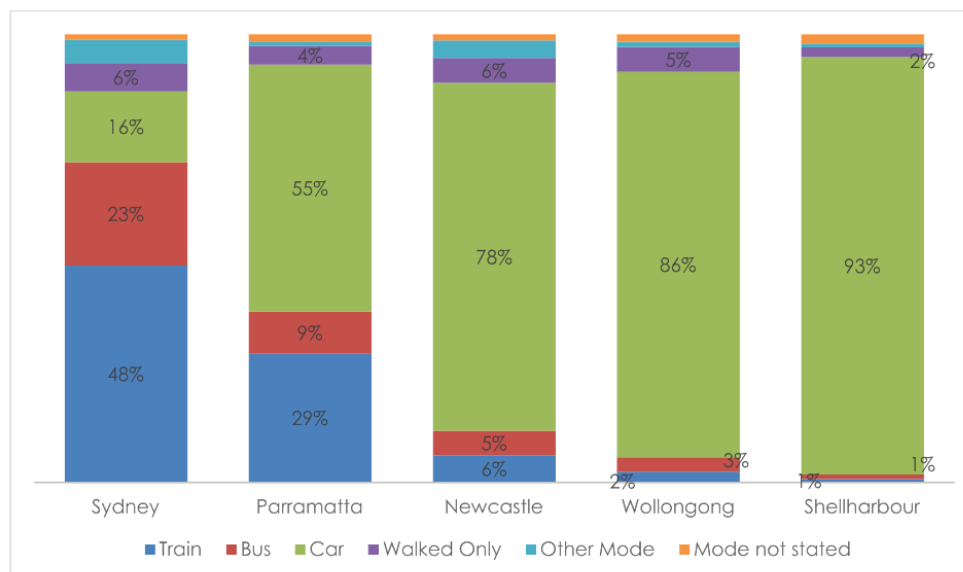
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All Commuting Trips
(Destination in Wollongong LGA)

A comparison of Wollongong City Centre to a number of other significant city centres in NSW shows a comparable proportion of workers walking from home to work (~4-6%). Unfortunately, Wollongong has low levels of public transport use compared to data to other centres and a high proportion of car travel.

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Commuting Trips – City Centre Comparisons

Areas of significant pedestrian activity

Activity centres are places that bring together a number of uses and attractions creating a range of social, environmental and economic benefits¹². Subsequent to arrival, walking tends to be the main travel mode between uses within a centre. Accordingly, pedestrian networks play a major role in the success of an activity centre.

Key activity centres in the City of Wollongong include Wollongong City Centre, major town centres of Dapto and Warrawong and town centres including Corrimal, Fairy Meadow, Figtree and Unanderra. A number of special use activity centres are also present in the city including the University of Wollongong, Wollongong Botanic Gardens, Wollongong Hospital Precinct, Innovation Campus, Port Kembla, Blue Mile Precinct (Wollongong – North Wollongong Foreshore) and Nan Tien Temple & Institute.

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Areas of high pedestrian activity (placeholder image)

Existing Walking Infrastructure

The existing walking infrastructure network in the city consists of paths, road crossings and associated infrastructure such as seating, bus shelters, awnings and signage.

Footpaths

Wollongong has some 420km of publicly owned footpaths that include paths on public roads and through open space. The figures below provide a snapshot of footpath quantities and condition in the city.

Asset Type	Quantity
Cycleway / Shared Paths	87km
Off-Road Footpaths	52km
Roadside Footpaths	368km
Roads	897km



Footpath quantity and condition from
2011 Asset Strategy

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The grade, cross fall, width and surface condition of footpaths are all critical aspects that, when combined with the surrounding environment, contribute to a favourable walking experience. Each year, Council spends up to \$3M renewing footpaths to ensure they provide a safe and comfortable walking experience.

Many streets in across the city don't have footpaths on one or both sides. Each year, Council plans and prioritises where new paths would most effectively help to achieve a safe and convenient footpath network that generally services the greatest number of users. Paths can also be built as part of larger projects including new developments, where there is population growth and significant road works projects.

Stairs

Some established urban areas of the city have a landscape that doesn't suit the provision of accessible pathways. That's why, it has been necessary to build stairs to link pathways or connect footpaths to adjacent land uses. Natural areas, such as beaches, also often require the use of stairs to provide pedestrian access. Stairs must be compliant with relevant building standards including consistent steps heights, railings, landings and non-slip surfaces.

Shared Paths

The vast majority of the city's bicycle path network is shared paths, which are used by both cyclists and pedestrians. On shared paths pedestrians have right of way, but are expected to keep left to allow other users, including cyclists, to pass them. The success of shared paths relies on the appropriate behaviour of all users and cyclists need to travel at safe speeds, particularly in areas with large numbers of pedestrians.

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Grand Pacific Walk

The vision of this major project is to create a pathway along our coastline, from the Royal National Park to Lake Illawarra. Council is currently working on Stage One which will establish a close to 3km walking and cycling connection between Coalcliff and Stanwell Park. This part of the route is considered a high priority by Council as it is there are no existing pathways for much of this section and it has steep and sometimes unstable land, narrow roads and a lack of provisions for pedestrians and cyclists.



Crossings

The footpath network is closely tied to a number of other systems including the road and bicycle networks and access points to properties. The following facilities aim to enable the safe overlap of these networks:

- Pedestrian crossing aids
 - Refuge islands
 - Kerb blisters
 - Fencing
 - Speed control device
- Time separated (traffic controlled) facilities
 - Traffic signals
 - Marked foot crossings
 - Children's (school) crossings
- Spatially Separated
 - Overpass
 - Underpass
 - Pedestrian Malls
- Driveway crossings
- Shared Paths
- Shared Zones

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With all the above facility types, any ambiguity about who has right of way can significantly increase the risk of a collision. Accordingly, meeting relevant design standards, including the clear delineation of areas – such as where driveways cross a footpath – where pedestrians have priority over other road users is of particular importance to pedestrian safety.

Refuge Islands

Refuge islands provide an area in the centre of the road where pedestrians can wait, making it easier to safely cross a road. The refuge area should be large enough to accommodate wheelchairs, mobility scooters, prams and bicycles and users should give way to vehicles.



Pedestrian Refuge (placeholder image)

Kerb Blisters and Road Narrowings

These facilities reduce the crossing distance by bringing the kerb out in the road way. They significantly reduce the gap needed by pedestrians to cross safely, and provide better visibility for pedestrians and drivers. Kerb blisters or road narrowings are often used with other crossing types to improve safety outcomes.

If there is an increase in the number of pedestrians using these facilities, an upgrade to another type may be required to increase the ease of crossing.



Kerb Blisters (placeholder image)

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Fencing

Fencing is often used to encourage the use of a designated crossing point rather than crossing at other less safe locations nearby. Fencing can create a safety hazard as a pedestrian, crossing at an incorrect location, may be trapped on the road behind the fence. Fencing can also hinder sightlines, reduce the appeal of business centres and the connectedness of land uses either side of the road.

Shared Zones

A shared zone is an area on a public road where pedestrians have right of way over vehicles. They have a 10km/hr speed limit, a road environment that strongly encourages low speed and forces pedestrians and vehicles to share the same space with a single continuous surface across the road (i.e. without kerb and gutter). Sight distance to pedestrians needs to be maintained throughout the shared zone. Shared zones are not usually suitable for low and larger vehicles such as buses or trucks.



Shared Zone (placeholder image)

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Marked Foot Crossings

Marked foot or 'zebra' crossings are a road area where pedestrians have right of way over all other road users. As these crossing types require vehicles to see and stop safely for pedestrians about to cross or crossing the road, there a number of requirements which need to be met. These include:

- Sufficient sight distance (often achieved through building kerb blisters and/or removing on-street parking)
- Appropriate street lighting
- Enough pedestrians using the crossing that motorists could expect pedestrians and are prepared to stop as necessary
- Location where pedestrians want to/must cross
- Lack of anticipated vehicle queuing over the crossing
- One vehicle travel lane each way

Current best practice sees marked foot crossing installed with supporting infrastructure such as a raised platform.



Marked foot crossing on raised platform (placeholder image)

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Multiple Marked Foot Crossings

A marked foot crossing is generally placed where there is a single location or 'desire line' where pedestrians choose to cross a road. In high pedestrian areas where pedestrians cross over a number of locations along a section of road, installing a number of equally spaced marked foot crossings may be suitable. This set up supports a low speed environment and provides a high level of amenity for pedestrians. Council is preparing a pilot of such a configuration in the retail area of Central Road, Unanderra



Children's Crossings

These are located outside primary and secondary schools. They operate around the start and finish of the school day during which timed parking is banned adjacent to the crossing and crossing flags are erected. Users have right of way over vehicles on the road and school crossing attendants often assist pedestrians.



Childrens Crossing Flag (placeholder image)

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Traffic Signals

There are many locations where the number of pedestrians and vehicles using the area and the sight lines mean traffic signals provide a safer option to roundabouts or stop/give way signs. Traffic signals allocate and visually convey the time during which pedestrians and vehicles use the part of the road over which the pedestrians cross. The time pedestrians wait for their turn to cross a road can significantly impact the convenience of a walking trip, particularly along a route with numerous traffic signal crossings. Adjustment of traffic signal timings can increase the throughput of pedestrians compared to motor vehicles. Walking routes in key activity centres which have or should have high numbers of pedestrians moving safely and quickly would benefit from this approach, even if vehicle trip times are increased.

Traffic signalised pedestrian crossings are occasionally provided midblock and away from road intersections. These provide a safe crossing opportunity in areas where there is significant pedestrian demand and high traffic volumes, or other factors that make other crossing types undesirable.

Pedestrian Countdown Timers

Pedestrian countdown timers were recently installed in three locations in Wollongong City Centre. These timers replace the flashing don't walk red person symbol with a number counting the seconds left to cross until vehicles get a green light. Trials in Sydney's CBD have indicated the majority of pedestrians using the crossings feel much safer and the crossings are easier to understand.⁹



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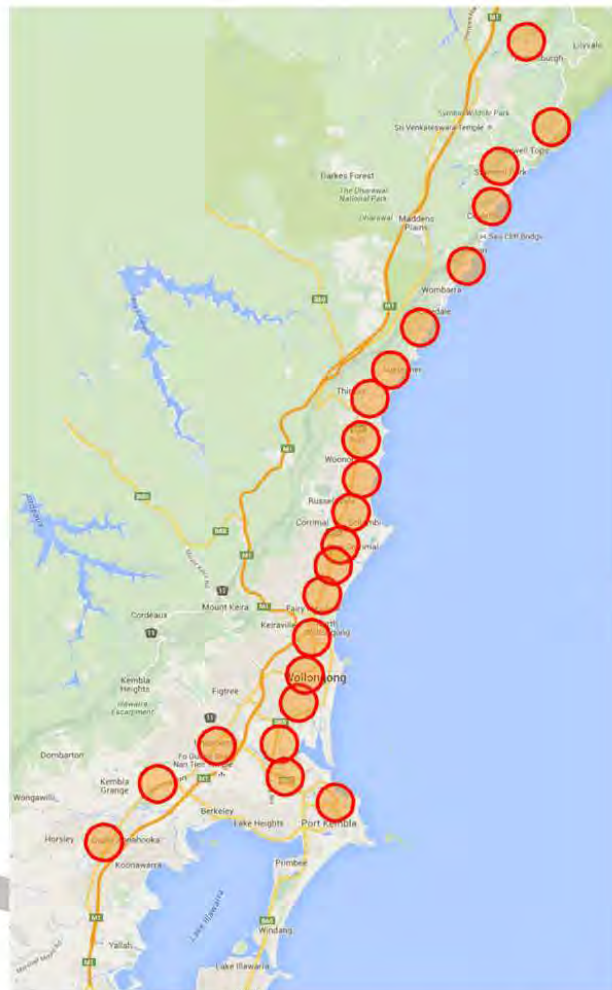
Public Transport

Public transport plays a very important role in how much walking people do because people walk more at either end of a trip than when using a vehicle. As a result, increasing public transport use will also significantly increase levels of walking. In suburban areas where housing is located outside the walkable catchment of key services and employment, public transport (usually bus transport) plays an key role in enabling active travel for a large part of the local community.

Pedestrian infrastructure that integrates with public transport includes bus shelters and seats, as well as paths and crossings that link to bus stops, railway stations and taxi ranks to residences and other land uses.

The generally accepted average distance a person is willing to walk to a railway station for transport is 800m. As shown in the figure, much of the city lies outside the 800m catchments of its railway stations. In addition, much of the city does not have available footpaths reducing this accessibility further. As a result, walking to rail transport is an attractive option for a relatively small portion of the travelling public. The bus transport system therefore plays a key role in extending rail station catchments to much of the remaining areas of the city.

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800m Railway Station Catchments

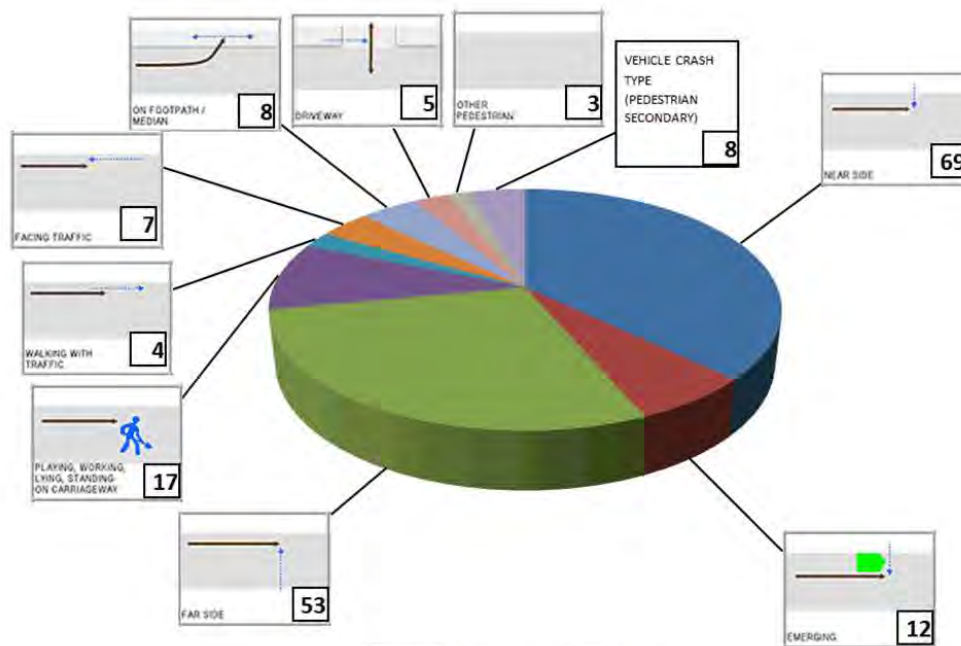
Map Data Source: Google

Pedestrian Crashes

Data provided by NSW Police for crashes in the City of Wollongong shows some 197 road crashes occurred that involved injury to pedestrians during the five years between July 2011 and June 2016. Within these crashes there were 9 pedestrian fatalities a further 110 seriously injured pedestrians.

While these figures capture the most significant pedestrian accidents they do not include unreported incidents, those on private roads and crashes that did not involve injury or death.

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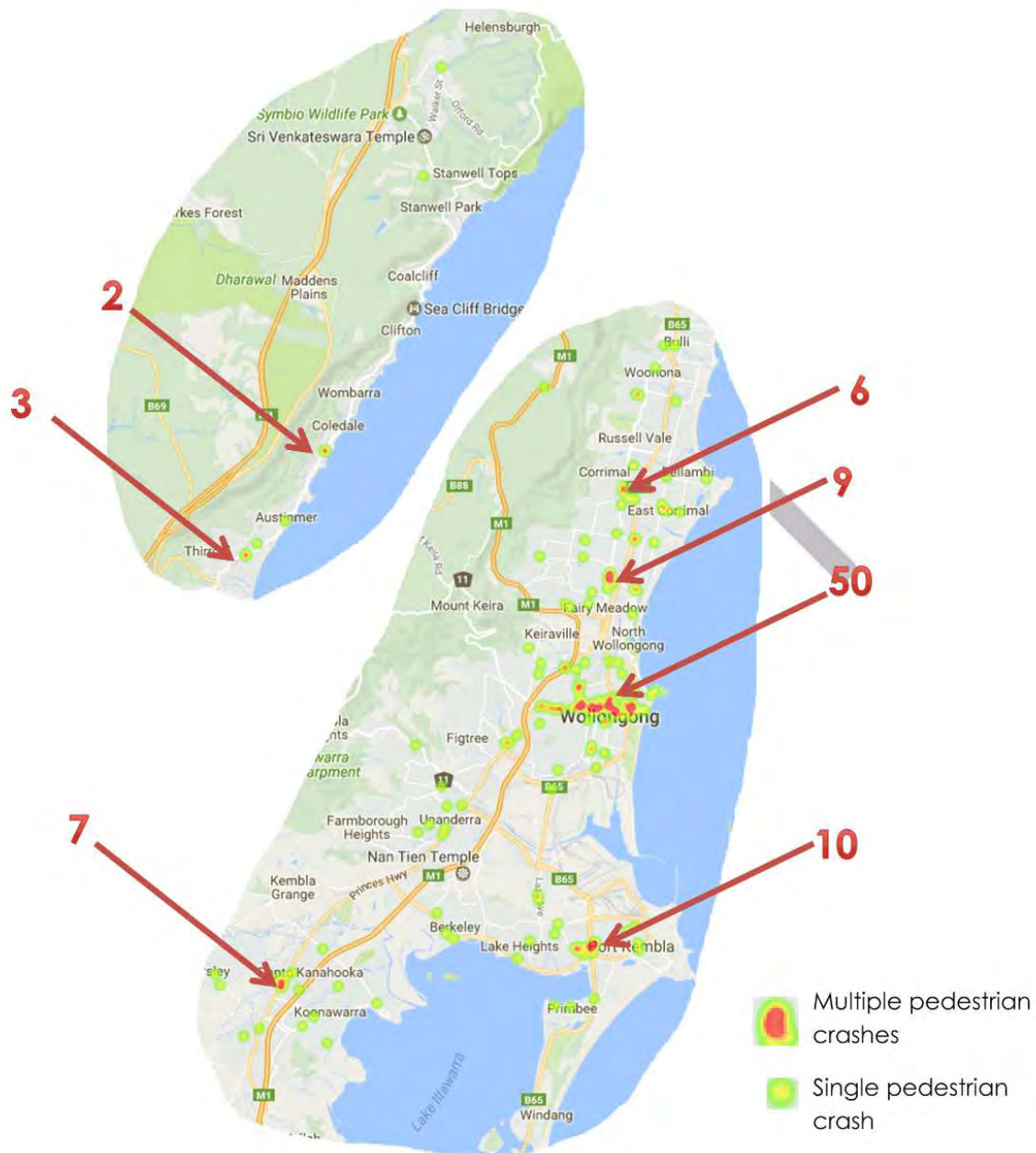
Number of Pedestrian Crashes by Crash Type

While the statistics show the majority of crashes occurred when pedestrians were crossing roads, significant numbers of crashes where pedestrians were walking along roads (11) or were relatively stationary on a roadway (17). There were 13 crashes off the road and in areas where pedestrians have right of way. Analysis of the crossing road type crashes (near side, far side and emerging) shows that 80% occurred away from designated pedestrian crossings.

Measures that help reduce the severity and frequency of pedestrian accidents are varied and include provisioning crossing points, reducing vehicle speeds and volumes, and improving alternate routes by offering new or wider paths. Other proactive measures include safety promotion and education campaigns such as the "look out before you step out campaign"



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Number of pedestrian crashes at hot spots across city

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Community Views

Community consultation has consistently shown that moving around the city safely and conveniently is a major concern for pedestrians. This sentiment has been reflected in a range of Council documents including our biannual Community Survey indicated footpaths and their maintenance was of key importance.

Wollongong City Council Community Survey 2012

- “Maintenance of footpaths” was as an area for improvement in 2008, 2010 & 2012
- “maintenance of footpaths” was of high importance, with medium satisfaction
- Both “Footpath maintenance/improvement” and “more footpaths” were noted as being key priority issues



Wollongong City Council Community Survey 2014

- “Footpaths/cycleways” were listed as the 3rd highest “priority area” identified in the survey
- “Maintenance of footpaths” was noted in quadrant analysis of being an area for improvement in 2008, 2010, 2012 & 2014

“Better footpaths in the suburbs and more of them”

Wollongong City Council Community Survey 2014 respondent

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Unanderra Town Centre Community Engagement

Many concerns relayed regarding pedestrian safety in the Unanderra Town Centre, particularly crossing Tannery St

"Want to have a pedestrian link from Woolies car park through to Central Road."

"Footpaths on northern side of Tannery Street need to be updated."

"Need footpaths in residential areas."

Wollongong A City for People Engagement

Support for making the City Centre more pedestrian and cyclist 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....

Other popular themes identified were: ... "improve the accessibility of the centre for people with a disability and older people;" ... "improving safety"; ... "improved connectivity between the City Centre and railway station and foreshore".

Wollongong Play Strategy

"What the community told us....

Consultation has highlighted the importance of good connection to walking routes, pathways amenities and parking, to increase the accessibility of a play space. Children need support to independently access play spaces in their own areas, close to home."

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Warrawong Town Centre Community Engagement

"Confusing on (pedestrian) crossing near Westfield – this should be clear – a zebra crossing or nothing."

"Pedestrian crossings – need to make safe for elderly people to cross roads"

"The roundabout on Cowper Street and Shellharbour Road is too big and a nuisance to walk around."

Figtree Town Centre Study – Community Engagement

"Need (safe) pedestrian crossings – especially along the Princes Highway."

"No footpaths on residential streets. It is too hard to walk to the town centre – I live up the hill."

"To be able to live in city area that is well connected and offers all services within a walkable distance."

"We need to walk on the road with prams in Figtree Heights."

"I would like to see one pedestrian crossing from Crinis to Westfield, instead of two."

"There needs to be better pedestrian connection across town, particularly east-west (across the highway)."

Disability Inclusion Action Plan Engagement

"Roadway crossings for people in motorised scooters are inadequate or too few"

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Challenges

The following factors discourage or prevent individuals from choosing walking in the City of Wollongong as a key mode of transport:

- Our ageing population increases the need for accessible pedestrian infrastructure
- Council has limited data on pedestrian volumes
- Traffic signal timings and phasings in major centres are focused on vehicle movement rather than pedestrian throughput
- Areas of high pedestrian activity have low numbers of pedestrian priority crossings
- Walking rates to school have been in decline for decades despite increases in footpaths¹¹
- Town centres have significant clusters of pedestrian accidents
- Pedestrian crashes mainly occur away from designated crossings
- Footpath maintenance/improvement and the need for more footpaths are key priority issues for the community
- A large proportion of suburban streets lack footpaths
- Many residential streets are unsuitable for footpaths due their steepness.
- Distance between residential streets and public transport or local destinations makes walking unattractive even if footpaths were to be provided
- Key town centres' accessibility is hindered by some substandard kerb ramps
- Town centres lack wayfinding for pedestrians
- Busy roundabouts prevent safe crossing by pedestrians
- Vehicles parking on nature strips or driveways obstruct pedestrians, with or without an adjacent footpath

General Barriers to Walking¹¹

- Distance
- Terrain
- Time
- Carrying heavy bags
- Lack of motivation
- Level of fitness
- Poor quality footpaths
- Multi-destination/purpose trip (especially dropping children at school or childcare)
- Habit (especially car use)
- Safety and security concerns.

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- City's topography can be a hindrance to walkability
- Obstructions such as bins, vegetation, parked cars and signs impede pedestrian access in many parts of the city

Goals

The five goals listed below form the basis of the draft City of Wollongong Pedestrian Plan. These goals will assist Council to achieve its vision for walking in the city and address a series of issues that reduce participation in walking. A range of objectives and supporting strategies are proposed that will help achieve these goals.

Goal 1 – Encourage Walking

Goal 2 – Create Pedestrian Friendly Places

Goal 3 – Make Walking Safe

Goal 4 – Make Walking Easy and Convenient

Goal 5 – Work Effectively to Implement the Pedestrian Plan

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Goal 1 – Encourage Walking

While there are numerous benefits of walking for individuals and there are extensive networks of paths to and within key activity areas around the city, travel by private motor vehicle is the most popular travel mode, even for short trips. Although optimising the layout of land use and surrounding transport networks as well as improving infrastructure will be necessary to increase walking, promotion and education are also effective ways of encouraging people to walk rather than use a car.

In order to increase the proportion of all trips completed by walking, the daily travelling routines which facilitate movement to schools and workplaces need to change. The following four objectives and supporting strategies seek to educate and promote walking in a way that targets these trips as well as provide information that makes walking more attractive and convenient.

Objective 1.1 More children walking safely to school	
Strategies	
1.1.1	Determine principal safe school routes to primary and secondary schools
1.1.2	Pilot safe routes to school programs at selected primary and secondary schools
1.1.3	Conduct education campaigns to change perceptions of walking to schools

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Objective 1.2 More walking in everyday life

Strategies

1.2.1	Develop and conduct promotional campaigns that encourage more active travel to work
1.2.2	Provide information to the community about the various benefits of walking for individuals
1.2.3	Investigate mechanisms to increase off-site parking provision in Wollongong City Centre and town centres

Objective 1.3 Information that supports walking is readily available

Strategies

1.3.1	Show footpaths and crossing points available on Council's interactive maps
1.3.2	Provide walking information on Council's website
1.3.3	Provide GIS information of footpath and crossing locations to key external trip planning platforms
1.3.4	Produce a Travel Smart Map for the City of Wollongong

Objective 1.4 Initiatives that encourage walking are supported

Strategies

1.4.1	Support workplace walking initiatives including Walk to Work Day
1.4.2	Support local walking groups
1.4.3	Investigate the development of self-guided heritage walks for locations outside of Wollongong City Centre and foreshore

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Objective 1.1

More children walking safely to school

There are 66 primary schools and 19 secondary schools in the Wollongong local government area. It is considered that a student will generally walk up to 800 m from school to home and so extending this walking catchment beyond this distance is an important area with respect to walking levels. Given the sheer number of schools in the city as well as the often unfavourable local topography, it is unlikely to be feasible to deliver paths across the complete walking catchments of every school in the LGA in the short or even medium term timeframe. A more focussed approach is needed to deliver walking connections that will be feasible within a reasonable timeframe as well as located where they will be attractive to the most students and address the most safety risks.

Principal Safe Walking Routes to Schools

An emphasis on a small number of walking routes (i.e. principal routes) to schools will enable this focus. Once determined, a principal walking route to a school can be prioritised with respect to infrastructure improvements. Furthermore the route can be recommended to users within school communications and targeted education campaigns.

Identification of principal routes will involve consideration of a number of aspects including

- Traffic volumes on road
- Number of crossing points
- Density of school students along or close to walking route
- Passive surveillance
- Steepness
- Existing walking infrastructure
- School bus stop locations

Public schools tend to have higher proportions of students that live within the area surrounding a school whereas independent schools tend to have wider catchment areas. Other aspects being equal, the attractiveness of walking to schools is greater for public schools rather than independent schools due to the proximity of student residences.

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“Parental behaviours and attitudes are the key determinant for travel to school. Measures which target parents travel needs are likely to be most successful in influencing children's travel. However schools must be a walkable distance from homes or behavioural change programs will be unsuccessful. “7

Safe Routes to School Programs

Behaviour change will require specific programs to increase awareness of the benefits of active travel for the school community and involve students, teachers and parents. The programs will need to address issues that impede such travel to school such as existing travel patterns and preferred potential routes. Safe routes to school programs can facilitate these discussions and include the coordination of participation measures such as walking to schools days and walking buses.

Perceptions of walking to school

Walking and cycling to school rates have declined dramatically over the past couple of decades. Over this same time, pedestrian accident rates have fallen (more so than the reduction in walking), footpaths have improved significantly and vehicle speeds around schools have dropped with the implementation of 40km/hr school zones. The reduction in active travel to school has occurred in spite of these safety and amenity enhancements. A change in perceptions of the safety of walking to school is likely to be a major contributor to the reduction.

Fears relating to abduction of children walking to school and dangers arising from car accidents have contributed to the greater use of vehicle travel to school, which itself carries greater risk of injury and poor health outcomes over the longer term when compared to active travel. Promotional campaigns with messaging that highlights the many benefits and ultimately safer outcomes for children is needed as part of a suite of measures to raise walking and cycling rates to school.

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Objective 1.2

More walking in everyday life

Promotion of active travel

Increasing the walking component of commute trips would result in a number of positive outcomes for individuals and communities. By reducing commuters' reliance on motor vehicles, there will be less peak traffic congestion in most activity centres in the city, and a reduction in traffic congestion, air pollution and lost productivity. The physical activity would, meanwhile, improve public health. Promotional campaigns have the potential to change attitudes of the travelling public and encouragement of active travel to work.

Similarly, promoting short non-work related trips, as another opportunity for individuals to increase the amount of walking they do is a valuable idea. Key messages could include highlighting a number of health benefits including social interaction, and fitness.

Off-site parking provision in major centres

Commuters who drive door-to-door miss the benefit of incorporating any significant walking into their work trips. Locating parking in off-site parking stations rather than within the workplace property brings about a number of benefits with respect to reduced infrastructure costs, sharing of parking and less road congestion. Another benefit is the opportunity that is created for walking between the car park and the workplace resulting in more activity on city streets and greater physical activity for the working population. Investigation is needed to determine appropriate mechanisms to increase such off-site parking in key town centres.

Objective 1.3

Information that supports walking is readily available

Mapping of Pedestrian Infrastructure

Council's interactive maps provide a valuable resource for the community and include information on property and suburb boundaries, aerial photography, Local Environmental Plan (LEP) features and bicycle network infrastructure. The mapping of walking infrastructure including path and crossing points can be added to the interactive maps to further improve the usefulness of the interactive maps.

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Walking Information on Council's website

Council's website receives some 2.9 million page views per year and is a destination for a wide range of information needs. New visitors and residents alike use the site when making decisions about places to visit and how to travel to them. The presence of useful and convenient active travel information on Council's website will be important for encouraging walking as a transport option. Examples of such information could include: this draft Plan, information on the benefits of walking, links to walking maps, safety messaging and information, walking to school promotions and walking event information.

External Trip Planning Platforms

Many online applications on a range of platforms exist to guide motorists on their journey. The functionality and usefulness of an application for walking journeys is largely dependent on the quality of geographic information that feeds the applications. Trip planning or guidance applications that do not include path networks or crossing points may direct users to routes without sufficient infrastructure potentially causing safety risks. The provision of GIS information of footpath and crossing locations to key external trip planning platforms will allow for the creation of applications that can provide more meaningful and safe route recommendations.

City of Wollongong Travel Smart Map

Making available information of the range of transport options aside from the private motor vehicle will significantly encourage walking, albeit indirectly. Public transport trips have more lengthy walking trips at the origin and destination as compared to private motor vehicles. Research of several major centres found that "Roughly half of the kilometres walked are associated with a public transport trip"⁷.

'Travel Smart' maps have been developed in other locations around Australia to serve this purpose and provide a 'one stop shop' resource for active travel options in a city and are generally free and can be taken anywhere. A travel smart map for Wollongong would encourage walking directly by containing specific walking information but also indirectly through the encouraged use of various public transport modes.

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City of Melbourne TravelSmart Map

Objective 1.4

Initiatives that encourage walking are supported

Workplace Walking Initiatives including Walk to Work Day

There are several types of workplace initiatives that foster communal walking experiences on a single day or over a longer period. Walk to Work day is one long running example however 'challenge' type events are another popular variant. A common benefit of such schemes is that they can increase awareness of how pleasurable and convenient walking can be and how it can be incorporated into work day routines in the long term. Council can support such initiatives by facilitating such events for its own staff and providing in-kind support for events in the wider community.



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Local Walking Groups

Walking groups can provide an attractive option for people to increase their walking in a social context. A number of focuses for such groups can exist including recreation, social interaction, commuting and physical health.

Self-Guided Walks

The city centre heritage walk is a self-guided tour showcasing the history of Wollongong City Centre. Such tours provide tourism opportunities for visitors and residents and help to build connections between community members, heritage items and the city's history. Other aspects of the city which could be the basis for additional self-guided walks include:

- Wollongong City Centre architecture
- Heritage in locations outside Wollongong City Centre
- Street Art
- Escarpment and coastline views

In addition to showcasing the features of the city that are best experienced as a pedestrian, such tours would encourage walking for the purposes of recreation, tourism and education.

Online technologies can be used to facilitate self-guided walking experiences. One such example would be the development of a smart phone app that utilises real time GPS location data of the user to provide wayfinding information and tour commentary.

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Goal 2 – Create Pedestrian Friendly Places

Walking more than other transport modes provides the opportunity to actively experience the surrounding environment while traveling. Walking speed and the level of exposure to the environment are the main factors that facilitate this characteristic.

Pedestrian friendly places provide an interesting and varied environment for walkers. Council's Town and Village Plans such as the Wollongong City Centre Planning Policy 'A City for People' emphasise these aspects and include proposals that aims to create vibrant places that are best enjoyed as a pedestrian. Main street improvements recommended in these plans form the basis for commercial centre upgrades listed on Council's Capital Works Program. Pathway renewals in special use activity centres also present opportunities to create new pedestrian friendly places such as the Blue Mile shared path upgrade.

"A pleasant environment can significantly extend (perhaps double) the distance people are willing to walk." ⁷



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Pedestrian friendly places are designed, built and maintained in ways that enable walking by the people with a wide range of mobility needs. In this respect, Council aims to provide footpath infrastructure that meets all relevant standards for accessibility. For paths this means ensuring that they are:

- Wide enough to cater for the volume of expected pedestrians and that wheelchairs can easily pass other path users travelling in the opposite direction
- Unobstructed and reach their destination
- Not too steep
- Have smooth, non-slip surfaces
- Contain utility lids that are also smooth and non-slip
- Have narrow grid grates where stormwater inlets are unavoidable
- Avoid adjacent plantings that may create a hazard for path users, for example spiked plants, vegetation that blocks important sight lines or sheds significant leaf matter onto paths

Ancillary walking infrastructure also features prominently in places that are conducive to walking for all abilities and include:

- Regularly spaced street furniture that allows rest such as seating
- Trees and structures that provide weather protection

These characteristics are important not only for existing areas of high pedestrian activity but also in new subdivisions and existing suburban areas.

The following objectives focus on a number of aspects raised above to help improve the amenity of key locations for pedestrians.

Objective 2.1 Pedestrian activity centres have high quality walking environments	
Strategies	
1.4.1	Improve the pedestrian amenity and accessibility at and between Council buildings
1.4.2	Improve weather protection in major activity centres
1.4.3	Improve rest opportunities in major activity centres

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Objective 2.2 Pedestrian infrastructure is accessible	
Strategies	
1.4.1	Ensure continuous accessible path of travel preferably along building lines
1.4.2	Replace non-compliant pedestrian crossing kerb ramps in Wollongong City Centre, town centres and village centres
1.4.3	Provide bus stop shelter seating with back and arm rests

Objective 2.1

Pedestrian activity centres have high quality walking environments

Pedestrian amenity and accessibility at and between Council buildings

Council provides many of its services to the community through a range of buildings across several activity centres in the city. Improving the walking linkages of these buildings to the surrounding pedestrian network, public transport nodes and local car parks will assist in improving the accessibility of the services provided in these buildings to the community.

Weather protection in major activity centres

Weather protection is a key element in increasing the amenity of the walking environment of a centre. Awnings along building frontages provide the main component of weather protection along footpaths in significant town centres. DCP requirements for awnings on new buildings in particular locations do aim to expand the coverage of weather protection. However, there are many locations which do not have awnings and are unlikely to for decades until redevelopment occurs. An investigation of means to provide weather protection in the interim is needed. Covered walkways may provide an option in this respect however impacts on aesthetics and the creation of obstructions on the path to support such structures would need to be carefully considered.

Rest opportunities in major activity centres

Rest opportunities can serve a number of needs. The distance people are willing to walk generally increases where adequate rest opportunities exist such as seating, shade and water drinking facilities. Such facilities are

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particularly beneficial to seniors and children. Public toilets also enhance the capacity for pedestrians to travel further distances in a walking network.

Objective 2.2**Pedestrian infrastructure is accessible**Continuous accessible path of travel

Fixed obstacles on paths can take many forms and include sign posts, overgrown vegetation, utility posts, seats, bus shelters, folding signs to name a few. These obstacles create, at best, an inconvenience for most users, but can be hazardous to impaired pedestrians or when volumes of pedestrians reach a significant level. A continuous accessible path of travel that is free from such obstructions should be incorporated as a key component of projects that include pedestrian connections. This concept also includes a requirement that the path of travel links an origin to the destination completely and is not broken up by an intermediate missing path section or that the path falls short of its destination.

Pedestrian Crossing Kerb Ramps

Kerb ramps, especially at pedestrian crossings are a critical element of an accessible pedestrian network. Ramps that don't meet the relevant design standards can be inconvenient or uncomfortable at best, or pose significant safety risks at worst. Problems can include steepness, misalignment, poor sizing or lack of definition. Numerous kerb ramps are either missing or in need of replacement in the Wollongong City Centre, town centres and village centres around the city. A program of replacement at these locations is needed to progressively improve the most critical locations in the city.

Bus stop infrastructure

Most public transport trips are bookended by significant amounts of walking. Increasing the amenity of bus stop infrastructure can increase its utilisation and hence walking to/from the stop. Most seating within bus shelters in the city lack back and arms rests. Opportunities to retrofit such seating elements to existing shelters and to provide them for new bus stop shelters should be pursued. Town centres and village centres around the city as well as adjacent to seniors living communities should be prioritised in such a replacement program.

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Goal 3 – Make Walking Safe

Pedestrians represent the largest group of vulnerable road users. In an accident between a vehicle and a pedestrian, the latter often sustains severe injuries due to a lack of protection. There are around 40 pedestrian crashes a year in the city. Making improvements to crossing facilities will contribute greatly to making walking safer in the city.



Raised Marked Foot Crossing

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Objective 3.1 Pedestrian crossing opportunities are improved	
Strategies	
3.1.1	Increase formal crossing opportunities including pedestrian priority crossings where appropriate in pedestrian priority zones
3.1.2	Increase formal crossing opportunities on principle walking routes to schools
3.1.3	Investigate opportunities for 'continuous footpath' treatments Wollongong City Centre and in town centres of Dapto, Warrawong, Corrimal, Fairy Meadow, Figtree and Unanderra
3.1.4	Develop and implement proactive programs of zebra crossing maintenance and upgrades to address non-compliances and improve pedestrian safety

Objective 3.2 Conflicts between pedestrians and other road users are reduced	
Strategies	
3.2.1	Conduct audit of pedestrian safety at roundabouts and program improvements
3.2.2	Continue shared path user behaviour initiatives
3.2.3	Develop and deliver pedestrian safety education campaigns

Objective 3.3 Pedestrians feel safe in the city	
Strategies	
3.3.1	Undertake Crime Prevention Through Environmental Design (CPTED) assessments of major town centres and program priority recommendations
3.3.2	Street lighting improvements

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Objective 3.1

Pedestrian crossing opportunities are improvedFormal crossing opportunities

Pedestrian crash data shows the majority of pedestrian accidents occur where there is no crossing facility. Formal crossings are located where there is demonstrated pedestrian crossing demand and are designed with safety as the key objective. Several crossing types are available for use and a range of characteristics such as vehicle volumes and movements, road geometry and numbers of pedestrians are considered when selecting the appropriate type.

Where pedestrian volumes are high and there is a desire to encourage walking over vehicle use there may be an opportunity to provide pedestrian priority crossings such as a marked foot crossing, traffic signals or a continuous footpath treatment. A number of crossing operation types can be used at traffic signals including exclusive pedestrian phases where all traffic is stopped and pedestrians can use all available crossings. Pedestrian refuges, kerb blisters and road narrowings are generally used in lower volume locations, but may also be useful in areas of high demand where site characteristics do not support the use of other crossing types.

Crossings on walking routes to schools

Principle walking routes to school that are convenient and promoted by schools will concentrate walking activity. The provision of formal crossing opportunities along these routes will increase safety and amenity of these routes.

Marked Foot Crossing Safety

Marked foot crossings, also known as zebra crossings, provide the highest level of priority for pedestrians over vehicles. As pedestrians have complete right of way at such facilities, their safe operation relies on the driver's ability to detect the crossing or approaching pedestrian in time to stop safely. Infrastructure non-compliances may compromise pedestrian safety and a program of maintenance and upgrades is suggested for the city.

Placement of marked foot crossings on raised platforms is preferred as the treatment is effective at reducing vehicle speed and increasing driver awareness of the pedestrian crossing. The upgrade of an existing marked foot crossing can include placement on a raised platform if site conditions allow such a change.

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Objective 3.2

Conflicts between pedestrians and other road users are reducedPedestrian Safety at Roundabouts

Roundabouts can hinder pedestrian amenity and safety for a number of reasons including:

- Unpredictable vehicle speeds and manoeuvring in a roundabout.
- Left turning drivers tend to check their right side only for approaching vehicles and not for pedestrians crossing on their left. Left turn manoeuvres can also happen more quickly than at a regular intersection.
- Where there is a lot of traffic, pedestrians will find crossing difficult as they are required to give way to vehicles on all sides of the roundabout.
- Pedestrian routes through a roundabout intersection tend to be less direct than at other intersection types.

These aspects can make crossing roundabouts less safe for pedestrians than give way or stop controls at cross or T intersections. Improvements can be made to roundabouts such as providing splitter islands that include a refuge area or moving crossing points away from the intersection edge. An audit of roundabouts in the city with respect to pedestrian safety would help to identify opportunities for improvements.

Shared path user behaviour initiatives

The shared path network provides an extensive set of paths along the coast and in key inland locations for a range of user groups. By not following key shared path rules, conflict can quickly arise due to the range of speeds between user types on these paths. Wollongong Council has worked in partnership with Shellharbour and Kiama Councils as well as the Illawarra Bicycle User Group and Healthy Cities Illawarra Inc to develop a 'Share the Track' education campaign encouraging user practices that result in a safe and convenient path environment. Council will continue to deliver material and events as part of this campaign leading into and during peak periods of shared path use. Furthermore, Council will continue to provide centreline markings on the shared path network that have been shown to improve user behaviour¹⁶

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Share the Track Flyer

Pedestrian Safety Education Campaigns

Road user behaviour has a major influence on pedestrian safety outcomes. Council regularly delivers education campaigns focusing on improving pedestrians, drivers and cyclists' behaviour to help reduce the number and severity of pedestrian injury crashes and address behaviour that hinders pedestrian access. Council will continue the delivery of a range of education campaigns that target specific user groups, problem behaviours and misunderstood road rules. Potential areas for future attention include:

- Distraction caused by mobile devices
- Parking on nature strips and over driveways on the footway
- Drivers giving way to crossing pedestrians when turning at intersections
- Crossing at designated crossing facilities

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Objective 3.3

Pedestrians feel safe in the cityCrime Prevention Through Environmental Design

How public places and the paths which connect them are designed can have an impact on crime rates. Carrying out an assessment of major town centres from a crime prevention perspective may identify locations where improvements could be made to make pedestrians feel safer and more likely to use city streets night and day.

"Crime prevention through environmental design (CPTED) seeks to influence the design of buildings and places by:

- increasing the perception of risk to criminals by increasing the possibility of detection, challenge and capture
- increasing the effort required to commit crime by increasing the time, energy or resources which need to be expended
- reducing the potential rewards of crime by minimising, removing or concealing 'crime benefits'
- removing conditions that create confusion about required norms of behaviour." ¹²

Street lighting improvements

Street lighting can make a location more attractive for walking at night by improving passive surveillance potential as well as enhancing pedestrians' visual perception of the path location, other users and obstructions or surface damage. Lighting can also make pedestrians more visible to drivers improving safety when a pedestrian is crossing a road. Council will continue to improve street lighting along key pedestrian paths and in significant public carparks.

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Goal 4 – Make Walking Easy and Convenient

The simplicity and convenience of a footpath network is interlinked with users being able to choose suitable direct walking routes to their destination. This is often referred to as an area's walkability. The layout of paths in a way that maximises the number of route options is of prime importance in a walkable precinct. Being able to see visual information conveying route options to local destinations is also crucial.

Convenient walking networks also need points where pedestrians can comfortably switch to other modes of transport for parts of their journey that are less suited to walking. There are several areas where Council can facilitate effective integration of pedestrian infrastructure with public transport systems and car parking.

"A major reason for walking in urban areas, is walking to and from transit. Better transit, including community or urban design to support such transit, can likely increase walking."⁷

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Objective 4.1 Walking is well integrated with other transport modes	
Strategies	
4.1.1	Provide timetable information bus stops
4.1.2	Provide weather protection at taxi ranks
4.1.3	Provide footpath connections to bus shelters

Objective 4.2 Wayfinding is available in areas of pedestrian activity	
Strategies	
4.2.1	Develop and implement a wayfinding signage system for pedestrians in the town centres of Dapto, Warrawong, Corrimal, Fairy Meadow, Figtree, Unanderra
4.2.2	Develop a consistent city wide approach to wayfinding signage for pedestrians in key special use activity centres
4.2.3	Develop a consistent city wide approach to wayfinding signage for railway stations walking catchments

Objective 4.3 Walkability in the city is increased	
Strategies	
4.3.1	Investigate opportunities to increase pedestrian permeability in the town centres of Dapto, Warrawong, Corrimal, Fairy Meadow, Figtree and Unanderra
4.3.2	Establish targets for the percentage of households within walking distance of open space and corner shops or higher order retail within new subdivisions

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Objective 4.1

Walking is integrated with other transport modes

Timetable information at bus stops

Many bus stops around the city lack timetable information and/or the infrastructure to display information without it getting damaged by the sun and rain.

Timetable information can be improved by providing information that is legible for a range of users, and with supporting information such as a local map.

The city has a hierarchy of bus stops and more significant stops, such as those in town centres, have a higher level of infrastructure including seating, a larger bus shelter and a waste bin. Accordingly, the standard of timetable and other information should reflect the importance of the bus stop. Whichever standard is applied, consistent quality with respect to legibility and currency should be maintained for all stops

Weather protection at taxi ranks

Taxis provide a service for many users, and the amenity of taxi ranks would be improved with weather protection, particularly where users have luggage or shopping.

Footpath connections to bus shelters

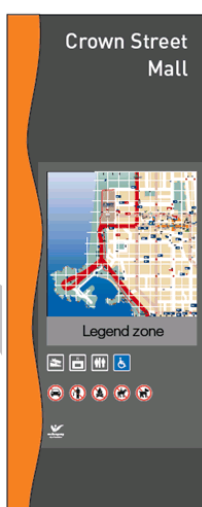
Council is running a bus shelter installation program that has seen approximately 350 bus shelters provided at the most used bus stops. In addition to this, the presence of good walking infrastructure at and around a bus stop is important for the safety, function and attractiveness public transport. Accordingly, new footpath connections should be provided between bus shelters and existing footpath networks and/or key local destinations.

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Objective 4.2

Wayfinding is available in areas of pedestrian activity

Wayfinding helps people to understand where they are in a particular area, what destinations of interest are nearby and how to get to them. Generally wayfinding is provided via a number of different types of signs that have different functions including map signage, information signage (often combined with map signage) and directional signage at intersections of paths and/or roads.



Pedestrian information sign ¹³

Fundamental principles for wayfinding signage include:

- *showing accessible paths to destinations, if different from main pathway*
- *maintaining a hierarchical level of information for the user (i.e. do not direct to all destinations from all locations)*
- *providing 'you are here' maps that are oriented towards the viewer's view (not north)*
- *providing other signage that regulates behaviour and activities where required*
- *using internationally recognised pictograms and English text*
- *using consistent names and terms that are user friendly and easily understood*
- *continuing the signage through the whole visitor experience from arrival to destinations to exit.¹³*

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Distances to destinations should also be shown on directional signs. A system of wayfinding signage for pedestrians in the town centres of Dapto, Warrawong, Corrimal, Fairy Meadow, Figtree and Unanderra should be developed and implemented.

Special use activity areas such as popular tourist precincts or destinations also require wayfinding as they may have a significant public transport hub but no signage that directs people from their drop off point to the destination. Tourist precincts that contain a number of activities or uses would require wayfinding that is part of the gateways or main entry points to these areas that would direct visitors to the various destinations using a network of signs. Example locations include:

- Nan Tien Temple and University
- Blue Mile Precinct
- Lake Illawarra.

Many railway stations in the city have a range of services and attractions within walking distance. A consistent city wide approach to wayfinding signage for railway station walking catchments would simplify implementation and provide users with a level of familiarity across different locations.



Wayfinding at Wollongong Railway Station

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Objective 4.3

Walkability in the city is increased

Pedestrian network permeability

A key aspect of walkability is the number of available pedestrian routes or permeability through a network which result in shorter and quicker walking trips for all users. This characteristic should be greater for pedestrians than for vehicles particularly in areas of high pedestrian activity such as our town centres. Laneways, arcades, public open space and shared zones are some options that increase permeability.



Ethel Hayton Walk increases pedestrian connectivity in Lower Crown Street



Low vs High Permeability in Pedestrian Network ¹⁴

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Much of Wollongong City Centre's pedestrian network is permeable through current and historic planning efforts. The investigation of opportunities to further increase pedestrian permeability in Wollongong City Centre as well as higher order centres such as Dapto, Warrawong, Corrimal, Fairy Meadow, Figtree and Unanderra is also needed.

Neighbourhood planning

Another feature of urban networks that impact walkability is distance between popular origins and destinations. In the residential neighbourhood context, local centres are often outside the walking catchment of many residences. Public spaces and smaller retail can be more numerous and service more residences if located correctly. Planning of neighbourhoods including local centres should seek to maximise the number of households within walking distance to 'everyday' services. A target for the number of households in walking distance of open space and corner shops or retail within new subdivisions can help to prioritise walkability in the planning phase. One way to increase the number of households within walking distance to local services is to increase the density of housing around these uses.

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Goal 5 – Work Effectively to Implement the Pedestrian Plan

Implementation of this Plan will depend on the availability of local data and information relevant to pedestrian infrastructure planning and delivery. It will be necessary for Council to work with NSW Government partners where there is an impact on state property or infrastructure, and to secure grant funding to supplement Council's limited funds for new pedestrian infrastructure.



Objective 5.1 *Good data is used to inform decision making and monitoring*

Strategies

5.1.1	Establish ongoing pedestrian count data collection program
5.1.2	Collect Public Life Data at town centres, regional play spaces and key tourism destinations
5.1.3	Collect data on school student populations

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Objective 5.2 Pedestrian Infrastructure Capital projects contribute to Pedestrian Plan Objectives	
Strategies	
5.2.1	Give priority to pedestrian infrastructure within walking catchments of activity centres, public transport hubs and along principal school routes
5.2.2	Provide separate funding allocations for pedestrian infrastructure works within and outside of activity centre catchments

Objective 5.3 Work with the NSW Government to facilitate delivery of Pedestrian Plan and complimentary programs	
Strategies	
5.3.1	Work with NSW Roads and Maritime Services to improve pedestrian amenity and safety at traffic signals
5.3.2	Work with Transport for NSW to improve pedestrian safety and amenity around railway stations and level crossings
5.3.3	Work with the NSW Government to progress Safe Routes to Schools initiatives
5.3.4	Work with NSW Roads and Maritime Services to reduce vehicle speeds

Objective 5.1

Good data is used to inform decision making and monitoring

Ongoing pedestrian data collection

Council has a rolling program of traffic data collection that is used to plan, prioritise, design and implement a range of road works types. Council currently does not have such a program for pedestrian data. Instead, this information is collected on a site-by-site basis as part of specific planning studies or capital projects. A rolling program of pedestrian data collection would help to identify trends of pedestrian usage and high demand areas in

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need of attention. This information would also help to respond to community requests, prioritise pedestrian infrastructure delivery and assess the benefits of new infrastructure or education/promotion activities.

As well as collecting traditional pedestrian movement data like the number of pedestrians passing a certain location, gathering more holistic "Public Life Data" that records stationary activities as well as origins and destinations would help in the planning of quality streetscapes rather than just footpaths.

School population data collection

Increasing the numbers of pupils walking to schools will rely on a number of factors including the number of students that live within walking distance from the school. Data would help to identify schools with large numbers of students within walking distance and allow Council to target those most likely to benefit from both infrastructure and non-infrastructure walking to school initiatives.

Public Transport Accessibility Levels

Public Transport Accessibility Levels are calculated based on the proximity of a location to a bus stop or railway station and the frequency of services at that stop/station. This provides a means of mapping the level of public transport access at a particular location and can be used to help identify and prioritise pedestrian network improvements, and indicate sites where opportunities to limit car parking exist.

Public Life Data

A Public Spaces Public Life Study was undertaken in Wollongong City Centre to inform the creation of the overarching plan for the centre called "A City for People". "Public Life" data not only included pedestrian movements in locations of interest but also stationary activities such as children playing, café seating, bench seating, waiting for transport and lying down.¹⁸ These are a good indicator of the quality of an urban space.



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Public Transport Accessibility Level Mapping¹⁷

Objective 5.2

Pedestrian Infrastructure projects contribute to Pedestrian Plan Objectives

Pedestrian infrastructure project prioritisation

To support this Plan and meet its objectives it's suggested that projects within the following areas be targeted as priorities when developing of forward pedestrian related infrastructure programs:

- Walking routes to schools with significant student populations within 1km of the school
- Walking catchments of Wollongong City Centre , major town centres of Dapto and Warragong and town centres including Corrimal, Fairy Meadow, Figtree and Unanderra
- Walking catchments of special use activity centres are also present in the city including the University of Wollongong, Wollongong Hospital Precinct, Innovation Campus, Blue Mile Precinct (Wollongong – North Wollongong Foreshore) and Nan Tien Temple & Institute.
- Walking routes from public transport nodes to significant education sites and seniors living developments
- 800m walking catchments of railway stations
- 400m walking catchments to high service frequency bus stops
- Continuous accessible paths of travel for people with disability to key Government (Local and State) facilities and infrastructure including playgrounds, libraries, facilities, parks, health services and social services

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Apportionment of funding for capital works footpath projects

In order to maximise the community benefit of infrastructure works, projects at high use sites are often prioritised. Quarantining of funding each year for works outside of activity centre catchments would help to ensure distribution of work across the local government area.

"The pedestrian crossing times across the highway do not give people sufficient time to cross." Figtree Town Centre draft Study respondent

Objective 5.3

Work with NSW Government to facilitate implementation of strategies and complimentary programs

Traffic Signals

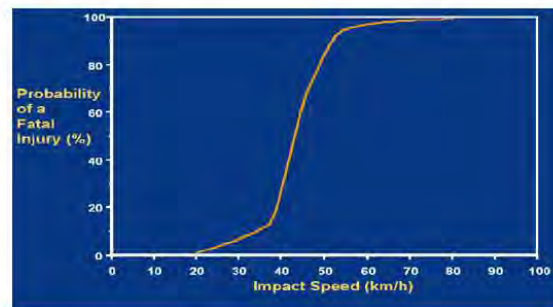
NSW Roads and Maritime Services is responsible for the operation of all traffic signal sites. Traffic signals that provide pedestrian crossings are very important as they provide safer crossing of roads with medium to high volumes of traffic.

Suggested improvements to the operation of traffic signals include increases in pedestrian green times and automatic pedestrian call up in pedestrian priority zones, additional pedestrian crossings at existing signal sites and additional pedestrian count down timers at suitable sites.

Speed Limits

Road speed limits are managed by NSW Roads and Maritime Services and therefore, Council cannot change speed limits on any classified or local roads. The likelihood of pedestrian survival during a crash is strongly related to the speed of the vehicle at impact. It has been found that survivability falls rapidly once impact speed goes above 40km/hr. Many European cities as well as New York and many UK municipalities have introduced 30km/hr speed limits to further reduce the number and severity of pedestrian crashes. Council will continue to work with NSW Roads and Maritime Services on arrangements that reduce speeds in areas of significant pedestrian demand such as 40km/hr High Pedestrian Area schemes and 10km/hr Shared Zones.

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Probability of Fatally Injuring a Pedestrian by the Speed of the Car on Impact¹⁵

The Railway Network

Railway stations attract large numbers of pedestrians and, at minimum, require a corresponding level of pedestrian infrastructure to cater for this demand. An increase in the use of rail travel can be achieved by improving pedestrian amenity and safety at key locations surrounding railway stations throughout the city. Enhanced pedestrian connections and crossing opportunities are the key infrastructure measures that Council will seek to introduce in cooperation with Transport for NSW and NSW Roads and Maritime Services.

The railway network is also significant with respect to pedestrians at any interface between it and the road and/or pedestrian network. Bridges, underpasses and level crossings funnel vehicle and pedestrian traffic as they facilitate crossing points of railway lines. Railway level crossings present unique safety risks and although improvements have been made at a number of them in the city in recent years, there is a

NSW Government Walking Communities Program

The NSW Government provides funding to local councils for improvements to walking infrastructure within two kilometre catchments of centres and transport interchanges.⁵ Projects should be planned within these catchment areas to be eligible for this funding program.



2km walking catchments shown in purple

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general consensus that new level crossings are not supported and ultimately sites with significant road or foot traffic will be closed either with or without some grade separated crossing for pedestrians and/or motor vehicles.

Council will continue to work with Transport for NSW and NSW Roads and Maritime Services on new bridges that cross railway lines or the improvement of existing underpasses or level crossings to enhance safety for all users including pedestrians.

Walking to School

Data on school populations will need to be obtained in order to determine the density of school students that live along or close to particular walking route. Collaboration with the NSW Department of Education will be necessary to acquire and analyse such data.

The planning, development and delivery of safe routes to schools initiatives will require liaison and coordination with the Department of Education and Transport for NSW.

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ITEM 6 DRAFT URBAN GREENING STRATEGY 2017 - 2037

The draft *Urban Greening Strategy 2017-2037* is being considered at a time of significant urban renewal and growth in Wollongong. 'Urban greening' aims to strategically increase the quality and quantity of all vegetation in an urban setting. The Strategy identifies opportunities for our City to harness the benefits of trees and vegetation, contributing towards creating a world class urban landscape.

Enhanced urban greening will underpin our City's superb liveability, attract investment, enhance productivity and deliver a healthy and well-managed environment for people and the ecosystems that support us.

The Strategy analyses the current status of Wollongong's urban trees and vegetation. It describes a set of principles, a vision, and four goals for urban greening in Wollongong. Each goal is supported by a series of prioritised actions. These will inform key deliverables for resourcing within future Council Annual Plans. This report recommends that the Draft *Urban Greening Strategy 2017-2037* be endorsed for public exhibition.

RECOMMENDATION

- 1 The draft *Urban Greening Strategy 2017-2037* be endorsed for public exhibition for a minimum period of 28 days.
- 2 Following the public exhibition period, a further report be provided to Council recommending adoption of the draft *Urban Greening Strategy 2017-37* which includes a summary of submissions received and amendments proposed.

REPORT AUTHORISATIONS

Report of: Vanni De Luca, Manager Environmental Strategy and Planning (Acting)
Authorised by: Andrew Carfield, Director Planning and Environment - Future City and Neighbourhoods

ATTACHMENTS

- 1 Draft Urban Greening Strategy 2017-2037

BACKGROUND

The Environmental Sustainability Strategy (2013) identified the need for an Urban Greening Strategy under Focus Area 3 – Improving our Urban Environment. The Draft Annual Plan 2015-16 operational budget and future year forecasts included the preparation of an Urban Greening Strategy (the Strategy) as a funded priority.

Without a coherent and consistent plan for urban trees and vegetation, the quality and amenity of our City will decline over time. Well planned and managed urban greening delivers quantifiable long term benefits to cities. These include reduced energy consumption and lower health costs, a boost to business, restoring natural ecosystem services, and purifying air and water. People are healthier, with increased wellbeing, in greener places.

Approach to developing the Strategy

Urban greening is about strategically increasing the quality and quantity of all vegetation and open space in an urban setting. The sum of all of the trees, plants and green space is called the 'urban forest', and this is divided into the public and the private realm. Council manages the City's public spaces, street trees, parks and natural areas. Privately owned and controlled property makes up the majority of land area, and the majority of urban vegetation in Wollongong.

Forward-thinking cities in Australia and around the world are measuring the condition, diversity, and extent of urban greening, setting targets and realigning their operational programs to work towards improving 'urban forests' in particular. They are doing this because there is strong evidence that well-

managed trees and vegetation cost-effectively improve the quality, liveability and performance of our urban spaces.

Council has used the *2020 Vision* approach in preparing the Strategy. This has largely followed the 'How to Grow an Urban Forest' process, developed by a national network of organisations (predominantly local government) collaborating to share expertise in urban greening across industry, business, government and the not-for-profit sector.

The *2020 Vision* strategic approach to urban greening has some key differences from the status quo approach to tree management, including:

- the 'urban forest' is considered a continuous resource, regardless of ownership;
- trees are valued as essential infrastructure, and afforded equal status to 'grey' assets;
- individual trees are managed as assets, with financial rigour and ongoing commitment;
- there is a focus on holistic, integrated design;
- diversity and context of planting is important, but there is a focus on large canopy trees; and
- management is consistent and coordinated across the whole 'urban forest'.

Scope

Strategy development has involved a range of data-gathering and consultation activities in order to capture, and interpret, as much qualitative and quantitative information as possible on the 'urban forest' across the study area. It delivers a high-level framework for understanding the issues and opportunities for trees and vegetation in Wollongong.

The Strategy has defined a study area totaling 178 km² which focuses broadly on trees and vegetation on all land types within the 'urban' setting. Specific actions for natural areas are outside of the scope of the Strategy. However, those natural areas occurring within the study area do contribute to the analysis of tree canopy cover and opportunities for improved biodiversity connectivity and prioritisation of street tree planting. Similarly, open space is included in tree canopy cover yet detailed analysis and actions for open space is outside of the scope of the Strategy.

The Strategy provides a snapshot of the current status of Wollongong's urban forest, with a particular focus on series of staged prioritised actions towards implementing best practice management of the tree canopy and other vegetation as a whole.

Data

Good data is required to understand the context, challenges and opportunities for urban greening in Wollongong. Recognising this, Council has invested in creating a series of broad scale datasets to inform the Strategy. These include: assessment and analysis of tree canopy cover across the urban area of Wollongong; canopy cover distribution and land use categories across the City, desktop analysis of vacant tree sites on urban streets, mapping of attributes including census-derived social vulnerability to determine priority areas for tree planting and urban greening.

Other data sources include existing natural areas mapping, transport and pedestrian information, and town and city centre studies. Council does not currently hold detailed plans or data for individual trees or vegetation including in streets, public spaces and parks. Importantly, whilst canopy cover mapping is a valuable tool, it does not provide the qualitative data required to interpret tree vegetation changes on private land, or to develop and implement a robust public tree management plan. Invaluable anecdotal data was obtained through structured workshops, key informant conversations and other processes which provided a consistent and constructive set of recommendations on issues, opportunities and priority actions for Council to consider.

Analysis

The Strategy includes detailed analysis of the drivers, context, status, and priorities for urban greening (and the urban forest in particular) in Wollongong.

There are strong drivers for a strategic approach to urban greening, as identified through consultation, in existing plans and strategies, and in the overarching goals set by our community in the Wollongong Community Strategic Plan 2022. These include improving our City's amenity, recreation and liveability, adapting to and mitigating the impacts of climate change, delivering safe reliable and sustainable services to our community through asset management, quality urban renewal and growth, including the West Dapto Urban Release Area, a strategic approach to replacing trees and supporting our unique biodiversity.

Analysis of spatial datasets, including tree canopy cover, has revealed:

- Wollongong's average urban tree canopy cover of 17% is well below the national average of 39%;
- there is considerable variation in tree canopy cover when looking at finer scales such as suburb or land use type, from 3 - 51%;
- of the total 17% urban tree canopy cover in Wollongong, the majority is held on private land - only 5.5% occurs on public land;
- there are over 42,000 parcels of land without trees in the adjacent road reserve; and
- priority areas for planting be targeted to where there is highest need for greatest benefit: those with low canopy cover (high planting opportunity), high human activity (need for shade and amenity), and high levels of social vulnerability (need for shade and quality streetscapes).

The Strategy identifies key issues and opportunities for urban greening in Wollongong. Council delivers services and makes decisions which impact on the quality of urban greening in our City every day. Due to the significance of the opportunity to increase tree canopy cover across public spaces and the road network, short-term actions are geared towards putting in place the necessary elements for a proactive, funded public tree program. All actions which are required to address specific limitations in Council's current capacity to deliver good urban greening outcomes have been scheduled as part of a staged approach to transition to best practice.

PROPOSAL

The draft *Urban Greening Strategy 2017-2037* delivers a vision, set of principles, key objectives and priority actions for managing the urban forest as a continuous resource regardless of ownership boundaries. It recognises the benefits of an asset-based approach to vegetation management, including the opportunity to underpin both civic renewal and ecological resilience through urban greening. The Strategy has a focus on opportunities to address limitations in Council's current approach, particularly in the public realm.

Recognising that trees and vegetation need to be managed and funded as critical public assets, the Strategy outlines the steps required to implement a program of planning and targeted investment in public urban greening in a way that will maximise the benefits, reduce risks and enable responsible and long term investment for the whole community. This is also supported by a range of strategies to protect and enhance the urban forest on private land.

Strategy Overview

The Strategy has identified a set of principles, a vision, and four goals for urban greening in Wollongong. Each goal is supported by a series of strategies and key actions. Actions have been prioritised with a staged approach to implementation focused in the short term on putting in place the necessary elements for Council to deliver improved technical guidelines for all trees and vegetation, and better urban greening outcomes on public land.

The **Vision** is that:

Wollongong will grow and nurture a healthy, diverse and well-managed urban forest to deliver a renewed and resilient place for people, enterprise and the ecosystems that support us.

The following Principles will inspire and inform Council's approach to urban greening in Wollongong:

- more strategic and targeted urban greening;
- evidence-based decision making and programming;
- enhanced amenity of public spaces;
- maximisation of ecosystem services and biodiversity connections;
- stronger leadership and partnerships with the community; and
- greater diversity of urban greening.

There are four Goals, supported by strategies (each illustrating a key opportunity) and a range of actions to achieve each outcome.

Goal 1: Grow

Grow the City's canopy cover through a targeted planting program to harness the economic, social and natural benefits of trees and urban greening.

Strategies include:

Establish baseline data and monitoring systems

Invest in a targeted tree planting program to maximise the benefits of urban greening

Integrate tree planting into existing Council programs and works

Pursue a range of opportunities to increase canopy cover in the private realm

Goal 2: Manage

Manage existing vegetation through a coordinated regulatory, planning, design and maintenance program to deliver a quality, world-class urban landscape.

Strategies include:

Establish clear policies and guidelines for urban forest management

Collect and use high quality asset data to inform decision making

Implement a cost effective, best practice, proactive tree management program

Protect and maintain vegetation in the private realm

Goal 3: Improve

Improve the ecological function of urban areas through design which is diverse in form, connects urban and natural areas, improves water management and supports biodiversity.

Strategies include:

Improved urban design enhances the diversity and ecological function of urban areas

Urban areas will integrate and connect with natural areas where possible

Stormwater will be more effectively managed for urban greening

Goal 4: Engage

Engage the community, business, agencies and private landholders to inspire care and connection to our unique natural setting.

Strategies include:

Increase awareness about the high value and importance of the urban forest

Provide opportunities to actively participate in urban greening

Engage the whole community in designing and protecting urban landscapes.

Implementation

A Draft Implementation Plan identifies specific strategies and actions to support each of the four goals. These will be adaptive, based on Council's resources and priorities over time.

To move towards best-practice, Council will need to adopt a staged approach to implementing actions which address the following identified limitations:

1. Establish and implement discrete plans and targeted programs to maximise the benefit of street trees, which strategically identify what to plant and where.
2. Identifying resources for proactive public tree work, which is currently dominated by responding to immediate risks and requests for removal.
3. Collecting the data required for monitoring and planning tree and vegetation issues across the City, and proactively investing in condition monitoring and enhancement.
4. Coordinating tree and vegetation management within Council to better manage risks and ensure greater consistency in outcomes across all approval or decision-making pathways on both private and public land. Improve the consistency and follow-through with compliance.
5. Supporting tree planting and maintenance with dedicated budgets linked to a targeted program.
6. Capitalising on the immediate opportunity of vacant tree sites and reviewing tree replacement protocols.
7. Managing trees as assets, including measuring the economic value of trees, which unlike 'grey' assets, appreciate over time.

The necessary elements to support a consistent technical approach to managing all trees and vegetation, and a proactive, asset based approach to public tree management, are, in priority order:

- Adopt the Urban Greening Strategy and note the Implementation Plan
- Produce Technical Guidelines to provide clarity and consistency for urban vegetation management on all land types, including a range of policy and planning documents
- Commence Tree Inventory to reveal the condition and resource implications for the existing public tree assets
- Undertake pilot plantings in targeted areas of high priority, integrated within the capital assets program for roads and footpaths
- Formulate a Business Case outlining the true value of public tree assets, and the resources required to achieve a more effective management program for Wollongong
- Design a Tree Masterplan or 10 year planting program, targeting priority areas and using place-based design
- Develop and resource a scheduled Tree Maintenance program derived from tree inventory data
- Undertake ongoing community engagement to underpin our commitment to achieving better outcomes across the City

Existing operational and capital budgets allocated to street tree projects are adequate to commence those actions needed to obtain the data (tree inventory) and technical guidelines required to develop the business case for implementation.

It is currently premature to assess whether the Strategy's implementation can be fully funded from existing capital and operational budgets. Without further tree data and verification of budget requirements, assumptions about the adequacy of existing funding availability cannot be confirmed. It is possible to predict resource implications with higher confidence once an arborist substantially commences the tree inventory data collection process.

CONSULTATION AND COMMUNICATION

Strategy development has included collaboration and input from key internal and external stakeholders, and has been externally reviewed and supported by an urban forest consultant. Throughout the development of the Strategy there has been a high level of consultation and collaboration with Council staff across the organisation. This has helped to ensure that the issues and opportunities identified are a consistent, constructive and comprehensive reflection on current practice. The 2020Vision project team, other Councils, academics and key informants have provided invaluable insight into various aspects of the Strategy.

Consultation to date has included three internal workshops to build a picture of Council's existing assets, data, drivers, benefits, barriers, objectives and vision for urban greening. One external workshop involved consultation and input from the Environment and Sustainability Reference Group and a range of other expert stakeholders. Thirty (30) people attended, bringing significant local expertise, passion and insight to this complex strategy area, directly influencing the Strategy goals, strategies and priority actions for implementation. Those present included ecologists, botanists, arborists, landscape architects, educators, government employees (OEH, WCC), land managers, planning consultants, elected representatives, activists, academics, Bushcare volunteers, authors, Property Council members, neighbourhood forum representatives and motivated community members. Three primary school workshops have also been held, with children at Coniston, Unanderra and Corrimall Public Schools. Children aged 9 to 12 years were provided the opportunity to voice their opinions on the importance of trees and plants in the community, using mapping and other processes to offer suggestions on the greening Wollongong.

This report recommends the Draft Urban Greening Strategy be endorsed for public exhibition for a minimum of 28 days to offer the opportunity for further community engagement and following the public exhibition period, a further report be provided to Council recommending adoption of the draft Urban Greening Strategy 2017-37 which includes a summary of submissions received and amendments proposed.

PLANNING AND POLICY IMPACT

The Strategy contributes to the delivery of Wollongong 2022 goal "We value and protect our environment". It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2016-17
Strategy	5 Year Action	Annual Deliverables
1.3.3 Our community is proactively engaged in a range of initiatives that improve the sustainability of our environments	1.3.3.1 Develop and implement an Environmental Sustainability Policy and Strategy	Coordinate the Urban Greening Strategy

The Technical Guidelines action, once implemented, will include a review of Council's suite of existing tree and vegetation related planning and policy documents.

Ecological Sustainability

The Strategy delivers an identified action in the Environmental Sustainability Strategy and Action Plan: "Improving the sustainability of Wollongong's urban centres can be achieved through developing and promoting sustainable building policies and processes to facilitate sustainable building design for both Council and private buildings. Supporting green roofs and encouraging the use of light coloured building

and street materials can increase sustainability and aesthetics in urban areas. Developing an urban greening and street tree strategy will also improve visual amenity, provide shade and other environmental benefits (such as cooling, filtering pollutants and reducing stormwater flows)." (ESAP 2013)

RISK ASSESSMENT

The Strategy proposes a risk-averse approach to delivering core Council services in tree and vegetation management through better policy, planning and coordination. Risk, in the context of urban greening, includes: immediate hazards (such as tree safety, trip hazards), perceptions (views, safety, amenity, responses to illegal vegetation removal, development assessment), environmental risks (climate change adaptation and mitigation, ecosystem services), and capital asset management (species selection and location, reducing the conflict between trees and infrastructure, efficient use of Council resources).

In moving towards an evidence-based, proactive public tree program, and reviewing the overall approach to technical management of the 'urban forest' on all land types Council will achieve improved services and more efficient outcomes for the community.

FINANCIAL IMPLICATIONS

The Draft *Urban Greening Strategy 2017-2037* provides a vision for the future of urban greening in Wollongong. It sets the direction for future planning, including immediate and long-term priorities. The Implementation Plan will provide more detail on actions, including staging, targeted delivery dates and estimated costs. Future design work and investigations will inform more detailed costings.

It is currently premature as to whether the Strategy's implementation can be fully funded from existing capital and operational budgets. Without further tree data and verification of budget requirements, assumptions about the adequacy of existing funding availability cannot be confirmed. The short term priority actions described in the Strategy are required to determine the necessary elements to address limitations in our current approach, thereby establishing a tree program for which the costs are understood, based on asset data. The draft Implementation Plan will include indicative costings to complete a series of staged actions, including undertaking a full tree inventory and completing the necessary suite of technical guidelines and documents to support best practice.

Existing operational and capital budgets allocated to street tree projects are adequate to commence those actions identified as priorities in the Implementation section above. This includes actions required to yield the necessary data (tree inventory), technical guidelines, and testing (pilot plantings undertaken within the capital works program) to formulate the business case for implementation (masterplanning and programming phases).

Budget allocations include:

Year	Purpose	Budget allocation
2017-18	Street trees 2017-18 Pilot <i>Deliver pilot street tree plantings to accompany recent or planned capital works projects</i>	\$75,000
	Strategic tree program <i>Strategy implementation including inventory data collection</i>	\$138,000
	Street tree planning and strategy <i>Develop technical guidelines, finalise Strategy</i>	\$15,000
2018-19	Street trees 2018-19 Pilot – capital program	\$90,000
2019-20	Masterplan implementation	\$100,000
2020-21	Masterplan implementation	\$100,000

It will be possible to predict resource implications with higher confidence once an arborist substantially commences the tree inventory data collection process. 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 and clarify priorities, including Council's budgeting processes.

CONCLUSION

The Draft *Urban Greening Strategy 2017-2037* presents a vision and set of prioritised actions to achieve a world-class urban landscape. Our City's liveability and amenity is a key factor driving business and investment; our unique natural setting provides opportunity for ecological enhancement; and our people will be more prosperous, and healthy, with enhanced urban greening. Council has a leadership role in delivering quality streetscapes, improved public amenity and increased shade. Council also plays a significant role in protecting and enhancing urban vegetation on private land. Our City's future quality, success and performance can be cost-effectively and efficiently enhanced by well managed trees and vegetation. Wollongong will grow and nurture a healthy, diverse and well managed urban forest to deliver a renewed and resilient place for people, enterprise and the ecosystems that support us.

The Draft *Urban Greening Strategy 2017-2037* is a strategic document that will be used to shape the future of urban greening in Wollongong over the next 20 years. It sets the vision for a coordinated approach to managing urban vegetation and outlines the steps required to implement a program of planning and targeted investment in public urban greening. It is recommended that the Draft *Urban Greening Strategy 2017-2037* be endorsed for public exhibition.

Draft Urban Greening Strategy

July 2017



Acknowledgements

Wollongong City Council would like to show its respect and acknowledge the Traditional Custodians of the Land to which this Strategy applies, of Elders past and present, and extend that respect to other Aboriginal and Torres Strait Islander people.

Wollongong City Council would like to thank members of the community who contributed to this plan by providing feedback in engagement activities throughout 2015-17.

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Introduction

The role of the Urban Greening Strategy

This is the City of Wollongong's first Urban Greening Strategy. It is written at a time of significant urban renewal and growth. Wollongong's attraction as a location for business and investment is underpinned by superb liveability and a world-class natural setting.

The Strategy's key drivers include the City's current and emerging challenges along with the overarching goals set by our community. These include improved amenity and recreation, liveability, biodiversity, quality urban development, economic renewal, climate change, asset management and tree replacement. To achieve a world-class urban landscape to match our goals, we require investment in quality urban infrastructure.

Urban greening will deliver the following benefits to help achieve these priorities:

- Shade and cooling
- Storing and sequestering Carbon
- Reduced sun exposure
- Increased sense of local identity
- Encouraging outdoor activity
- Reconnecting people with nature
- Reduced infrastructure costs
- Increased property values
- Attracting investment

Urban greening is about strategically increasing the quality and quantity of all vegetation and open green space on all land types in an urban setting. A component of this is the 'urban forest', the sum of all of the trees, plants and green space across all land types.

Forward-thinking cities in Australia and around the world are measuring the health, diversity and extent of their urban forests, setting targets and realigning their operational programs to work towards improving greening cover.

Wollongong's average urban tree canopy cover of 17% is well below the national average of 39% (ISF Benchmarking report). Experts recommend optimal urban canopy cover of 35-40%. There is ample immediate opportunity to improve tree canopy cover on our streets and in our public spaces.

Our City's liveability and amenity is a key factor driving business and investment, our unique natural setting provides opportunity for ecological enhancement, and our people will be more prosperous and healthy with enhanced urban greening.

The Draft Urban Greening Strategy 2017-37 presents a vision for a coordinated approach to managing urban vegetation and outlines the steps required to implement a program of planning and targeted investment in public urban greening. It is a strategic document that will be used to shape the future of urban greening in Wollongong over the next 20 years.

Council has a leadership role in delivering quality streetscapes, improved public amenity and increased shade. Council also plays a significant role in protecting and enhancing urban vegetation on private land

Our City's future quality, success and performance can be cost-effectively and efficiently enhanced by well managed trees and vegetation.

As our City transforms and grows, Council recognises the importance of working in partnership with our community. Together, we will plan, protect and grow a thriving, diverse and efficient urban forest which will underpin our City's future health and prosperity.

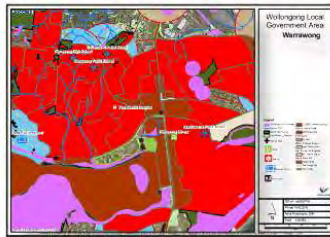
Vision and Principles

Wollongong will grow and nurture a healthy, diverse and well-managed urban forest to deliver a renewed and resilient place for people, enterprise, and the ecosystems that support us.

The following principles will inspire and inform Council's approach to Urban Greening in Wollongong



More strategic and targeted urban greening



Evidence-based decision making and programming



Enhanced amenity of public spaces



Maximisation of ecosystem services and biodiversity



Stronger leadership and partnerships with the community



Greater diversity of urban greening.

Background and Context

Scope

What is 'urban greening'?

Urban Greening is about strategically increasing the quality and quantity of all vegetation and open green space on all land types in an urban setting. A component of this is the 'urban forest', the sum of all of the trees, plants and green space across all land types.

Plants and trees cool our towns and cities, reduce pollution and attract investment. They also make us healthier, happier, and more productive. By recognising the value of the 'urban forest', we are able to plan to enhance and protect it in order to harness the benefits it provides for the whole City.

The urban forest is divided into the public and the private realm. Council manages the City's public spaces, street trees, parks, and natural areas. Privately owned and controlled property makes up the majority of the land area, and the majority of urban vegetation.

Council has an important influence on the whole urban forest, either through direct management, through planning controls and regulation, or providing opportunities for education and participation in greening initiatives.

Specific actions for natural areas and open space are outside of the scope of the Strategy, however those areas occurring within the study area do contribute to the analysis of tree canopy cover and opportunities for improved biodiversity connectivity and prioritisation of street tree planting.

Looking after and investing in our public trees and vegetation in a planned and coordinated way will maximise the benefits, reduce risks, and enable responsible and targeted long term financial investment for the whole community.

The Strategy will also discuss Council's ability to influence the protection of trees and enhancement of urban greening in the private realm and new developments.

The Strategy provides a snapshot analysis of the 'urban forest' as a whole.

It goes on to focus on the priority actions for greening our streets and public spaces.

Urban vegetation on public land includes street trees, trees and vegetation in parks, natural areas, public spaces and town centres.



Urban vegetation on private land includes trees and vegetation in residential backyards, shopping centre car parks, schools, university, and other privately controlled commercial and industrial places.



Drivers

Clear drivers for urban greening in Wollongong inform the priorities and opportunities outlined in the Strategy.

Why does Wollongong need an Urban Greening Strategy?

There is strong demand for a strategic approach to greening. Some common themes that emerged during initial consultation with Council staff and key external stakeholders include:



The Strategy's key drivers include the City's current and emerging challenges along with the overarching goals set by our community.

Amenity, Recreation and Liveability

Our community values above all else 'Wollongong's natural beauty, access to our beaches and the coastline, the escarpment backdrop and the lifestyle and amenity this affords us' (Wollongong 2022 Community Strategic Plan).

In 2014, Council partnered with internationally acclaimed Gehl Architects to undertake a Public Spaces Public Life study. This study echoes the community's vision of creating a city for people, focusing on creating high quality city streets and spaces to encourage people to rediscover and reinvent the possibilities for living in our unique and beautiful place.

A liveable city is one that offers a variety of attractions and opportunities for people to work, live, play, learn visit and invest. Public life is at the centre of planning for a liveable city. Achieving the liveliness, health, attractiveness, sustainability and safety of a City for People is not possible without quality urban greening.

'A City for People' (2015) sets a vision for the City Centre and the strategic direction to guide the delivery of Wollongong City Centre as a dynamic and vibrant regional city. Community feedback during the formulation of this plan consistently highlighted the importance of public space, and a desire to connect to our unique natural setting and foreshore.

Enhanced urban greening was identified as a key means of achieving a sense of place, liveability, and to increase shade and cooling.

Wollongong 2022 Community Strategic Plan (CSP) outlines high level goals relating to civic pride, meeting the needs of current and future communities, strengthening vulnerable communities, child-friendly and age-friendly design, and the creation of urban areas which provide a healthy living environment, which are all drivers for enhanced urban greening.

What does this mean for Urban Greening?

Trees and vegetation are critical to the amenity, recreation opportunities and liveability of our City - and the wellbeing of our residents. Without a planned and coordinated approach to urban greening, the quality of these attributes will decline. This will affect the success of Wollongong's economic transformation. The impacts will be borne by those most vulnerable.



Climate Change

The NSW Office of Environment and Heritage has published a snapshot summarising key climate projections for the Illawarra (pictured right). These projections indicate the need to plan for significant changes in temperature, rainfall and fire risk in both the near and far future.

To imagine what these living conditions might be like, CSIRO has modelled future climate scenarios. This modelling suggests that the future climate of Wollongong will be more like the current climate of the Gold Coast by the end of this century (see below).






Council has a commitment to investigate and utilise methods to mitigate and adapt to the impacts of climate change (Climate Change Adaptation Strategy 2007).

Urban trees can help mitigate the impacts of projected changes. Well maintained trees live for many decades as part of our urban infrastructure, yet the trees we plant in the coming years will need to thrive in a very different future climate by the end of this century.

What does this mean for urban greening?

Care will need to be taken to select species that will continue to perform under changed climatic conditions. Stormwater infiltration into soils must be prioritised in urban design to ensure water recharge.

Dangerous heatwaves will become more frequent. This prioritises the provision of shade to cool those areas where the most vulnerable - the very young and the elderly - gather.

  	Projected temperature changes	
	Maximum temperatures are projects to increase in the near future by 0.4 - 0.9 C	Maximum temperatures are projects to increase in the far future by 1.6 - 2.3 C
	Minimum temperatures are projects to increase in the near future by 0.4 - 0.7 C	Minimum temperatures are projects to increase in the far future by 1.5 - 2.4 C
 	Projected rainfall changes	
	Rainfall is projected to decrease in winter	Rainfall is projected to increase in summer and autumn
	Projected Forest Fire Danger Index (FFDI) changes	
	Average fire weather is projected to increase in spring	Severe fire weather is projected to increase in summer and spring in the far future



The future climate of Wollongong will be more like the current climate of the Gold Coast (under mid-range emissions modelling) or Rockhampton (high-range) by the end of this century

(CSIRO Climate Change in Australia Analogues Explorer 2015).

Asset Management

Council is the custodian of a huge range of physical assets worth over 3 billion dollars. These include roads, land, buildings, playgrounds, natural areas, ocean pools, waste facilities, BBQs, bridges - a myriad of assets which are used in the delivery of services to our community.

Significant effort over the past decade has been invested in establishing a policy framework and program of capital investment for the effective management of current and future assets to ensure that Council delivers safe, reliable and sustainable services to the community.

Trees and vegetation on public land form part of Council's physical assets portfolio.

However, Council does not currently hold the necessary data to make informed decisions about the required service levels or resource allocation for this asset class.

The Asset Management Policy (2017) outlines the objectives and procedures for ensuring effective ongoing management of Council assets, and over time will guide the incorporation of trees into planning and information systems.

What does this mean for urban greening?

Trees are important, and valuable, public assets. It is necessary to undertake immediate work to assess the condition and risks associated with the current urban forest, understand service level requirements, monitor and predict future demand based on canopy targets, prioritise capital for renewal, and to incorporate this data into Council's Asset Management Plans and Information Systems.

Condition assessment of existing urban trees will inform maintenance schedules, ongoing financial implications and future community service level decisions.

West Dapto Urban Release Area

The Wollongong 2022 CSP includes the goal that: Urban density and expansion, such as West Dapto are carefully planned and balance economic, social and environmental considerations.

Planning for future streetscapes which deliver best practice amenity, environmental performance, and associated benefits is a major challenge for the future.



55,000+

19,000+ New homes proposed in West Dapto Urban Release Area

55,000+ Additional people living in West Dapto Urban Release Area

Tree Replacement

A business as usual approach will see the quality of the urban forest decline over time.

Trees on all land types are removed due to a range of reasons including poor health, to prevent hazards, or to accommodate infrastructure or development.

Compliance monitoring of the proper implementation of controls or conditions imposed on tree removal and replacement on private land needs improvement.

Currently, there is not a strategic approach to replacing trees on public land. Species selection, specifications and site-specific design for new or replacement plantings across all land types require improvement.

Biodiversity

Wollongong has a unique natural environment, and Council has a clear commitment to protect and enhance local biodiversity. The CSP includes specific Goals to ensure that our urban environment minimises impacts on habitat and biodiversity and areas of high conservation value are protected; and that the community is actively involved in the expansion and improvement of our green corridors connecting the escarpment to the sea.

Council's extensive restoration works in natural areas can be supported by quality greening in the remainder of the public realm. Biodiversity connectivity, habitat conservation and community participation are clear drivers for urban greening in Wollongong.

Urban Development

Wollongong is experiencing significant urban renewal and growth. The City's attraction as a location for business and investment is underpinned by its liveability, and a world-class natural setting.

The CSP includes the goal that 'Development is functional, attractive and sympathetic with the environment, and avoids unnecessary use of energy, water or other resources'.

Urban development will deliver more positive social and economic outcomes through a proactive approach to greening.



Nature and green spaces increase workplace productivity.



Planning and Policy Context

Alignment with Wollongong 2022 Community Strategic Plan

The Strategy has been prepared to align with the community's 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.'

Implementation of the Strategy will specifically help to achieve a range of interconnected community goals and objectives. These include reducing Wollongong's ecological footprint (1.3), improving the sustainability of the urban environment (1.6), increasing the physical and mental wellbeing of residents (5.1), a high standard of public domain (5.3), and increasing participation in recreation and lifestyle (5.5).

The development of the Urban Greening Strategy was identified in the 2012-17 Delivery Program.

2020 Vision Approach

2020 Vision is a network of organisations collaborating to create a 20% increase in urban green space by 2020.

The network shares expertise from industry, business, academia, government and NGOs in achieving best practice urban greening.

Council has followed the 2020 Vision approach in preparing the Strategy, and definition of the 'urban forest':

'An urban forest comprises all trees and other vegetation within the municipality and the soil and water that supports it. It incorporates vegetation in streets, parks, gardens, plazas, campuses, river and creek embankments, wetlands, railway corridors, community gardens, balconies and roofs.'

2020 Vision

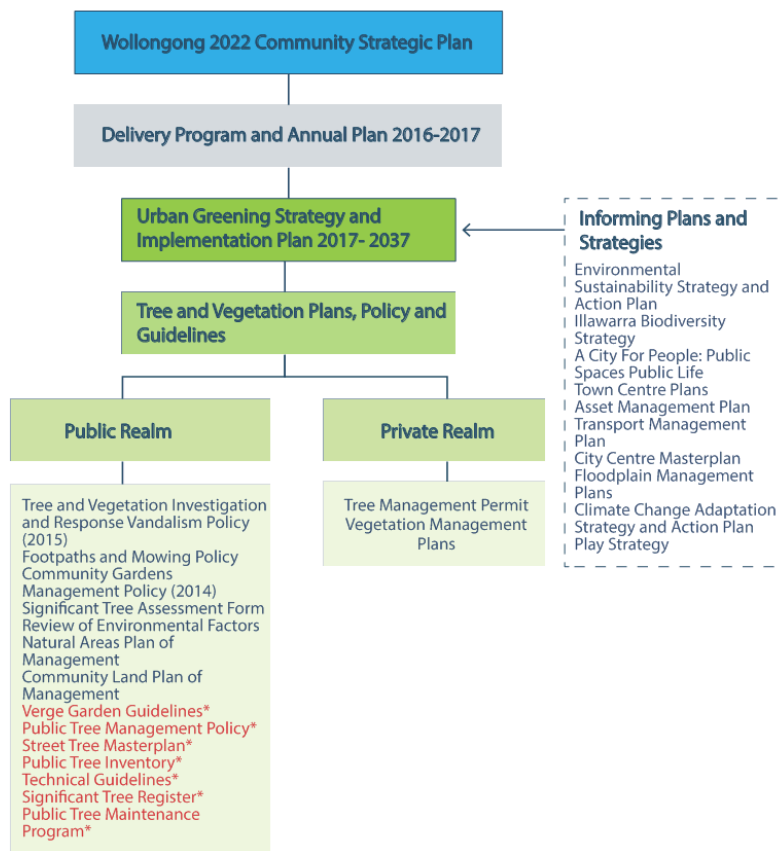
There are some key differences from the status quo approach to tree management:

- The urban forest is considered a continuous resource, regardless of ownership
- Trees are valued as essential infrastructure, and afforded equal status
- Trees are valuable assets, and managed with financial rigor and commitment
- There is a focus on holistic, integrated design
- Diversity and context is important, yet there is a focus on large canopy trees
- Consistency and coordination across the whole 'urban forest'

This diagram illustrates where the Strategy sits within Council's broader planning and policy context.

The Strategy proposes as a priority the review and establishment of consistent tree and vegetation plans, policy and guidelines for both the public and private realm as a priority action.

Those items listed in **red*** are proposed or new.



Benefits

Why is Urban Greening important for Wollongong?

Urban greening delivers a range of ongoing, long-term benefits to our City. Wollongong has the opportunity to establish an inspiring, innovative and more liveable City by harnessing the benefits of urban greening.

Research has quantified the dollar value of benefits delivered by urban greening. From reduced energy consumption and lower health costs to the boost to business, increased urban greening is a demonstrably good investment for our City. Environmental benefits include the relative efficiency of restoring natural ecosystem services, along with purifying air and water. Social benefits include a range of positive impacts on health and wellbeing. The following section cites interesting research demonstrating how proven benefits will deliver on Wollongong's identified drivers.

Street trees
can improve
retail spending
in commercial
areas by 20%

Amenity and Recreation

Trees and vegetation provide a sense of place and local identity

Trees and greenery play a key role in place making and defining the sense of place in a city (Arnold, 1980)

Well maintained urban green space has a positive effect on an area's image and the confidence of the community (Arnold, 1980)

Street trees are one of the most cost effective assets for improving quality and amenity of neighbourhood streets. (Jacobs, 1993)

Encourages outdoor activity

Environmental and lifestyle factors are major contributors to overweight and obesity. The Wollongong population has higher than NSW average rates of associated chronic health conditions, which have been steadily growing.

There is abundant evidence that community health and wellbeing improves with access to quality urban green spaces:

People walk and cycle more in greener, well-shaded places (Giles-Corti, et al., 2005; de Vries et al., 2003)

There are lower levels of obesity in greener neighbourhoods (Bell et al., 2008)

There is increased likelihood of increased physical exercise in parks with trees and shade (Timperio et al., 2008)

Liveability

Provides shade and cooling

Urban greening can provide natural shade and shelter for people. Shade trees reduce daytime temperatures between 5 and 20 degrees Celsius (Akbari et al., 1997; Livesley, 2010)

Reduces people's exposure to the sun and harmful radiation

Through their provision of natural shade, dense canopy trees can reduce the exposure to UVA and UVB rays from the sun during summer. (Grant et al., 2002)

Improves mental wellbeing

Urban green spaces provide attachment to nature (Ulrich, 1986)

Green urban spaces promote recovery from stress in urban environments with their restorative effects: (Velarde et al., 2007)

Greater productivity at work when workers were able to view green spaces and nature from their window (Kaplan, et al. 1988)

Children have improved cognitive function in greener neighbourhoods (Wells, 2000)

Urban Development

Reduces energy consumption, emissions and costs

By shading buildings in summer and allowing sunlight in during winter, trees can save energy use from heaters and airconditioners with buildings of up to 20% (Simpson and McPherson 1996)

Achieves higher residential property values

Many studies show the link between the presence of and access to well maintained urban greenery and residential house prices. Studies in Australia and Perth recently suggest that the presence of street trees can add significant value to a residential property. (Pandit, 2013; Plant, 2016)

Markets the City

Investment in high quality urban greening can encourage and attract high value industry, entrepreneurs and skilled workers to a region through the creation of high quality, environmentally friendly living and working environments, value adding to local economies (ECOTEC, 2008).

The presence of high quality urban green spaces within retail and commercial precincts improves vitality and increases consumer spending (Wolf, 2005)

Improves asset longevity

Through their shading capacity from the sun's UV rays, trees can improve the life span of asphalt, concrete and even paint on houses.

Why is Urban Greening important for Wollongong?

Biodiversity

Urban greening can improve connectivity between natural areas of biodiverse value (European Commission, 2012).

Street trees can provide habitat for local animal species (Fernandez-Juricic, 2000).



Climate Change

Reduces stormwater flows and nutrient loads

Tree canopies and permeable urban green space intercept and store rainfall, reducing stormwater flows and reducing the impact on stormwater infrastructure (Xiao, 1998).

Urban vegetation improves stormwater infiltration into urban soils increasing groundwater recharge (Xiao, 2002).

Vegetation and associated soil volumes remove nutrients and heavy metals from stormwater runoff (Read, 2008).

Reduces the Urban Heat Island Effect

Trees and vegetation can modify local microclimatic temperatures and reduce the urban heat island effect (McPherson, 1994).

Research has shown that a 20% increase in urban forest canopy cover can reduce ambient temperatures by 3-4 degrees Celsius (McPherson, 1993).

Shade, evapotranspiration and healthy urban green space directly reduces temperatures during heatwaves, helping to reduce heat related illness (Luber, G. 2008).

Reduces air-borne particulates and air pollution, including carbon

Trees and vegetation absorb and intercept polluting gases and particulate matter through their leaves including ozone, carbon and nitrous oxide (McPherson, 2010) (Nowak, 2006).

The role of public green space

We often think about the environmental benefits of trees, or how they provide habitat for birds and animals. However, there is now a growing awareness of the role that trees play in taking pollution from our air and water, or storing carbon from the atmosphere.

One of the important services Councils deliver is to provide safe and healthy environments for our people, regardless of their circumstances.

Access to quality public green space is critical to a person's wellbeing and health. Streets, town centres and parks are places where people can gather to connect with each other, and nature. They are places for celebration, for recreation, for activity and respite.

Ensuring that these shared spaces have great landscape attributes, are efficient and inspiring, is critical to achieving our City's vision. It's also good for business.

The Strategy will use spatial analysis of demographic and other attributes to prioritise urban greening in areas where it is most needed.



New York's
street trees return
\$5.60 for every \$1
invested in their street
tree program.

Motorists drive
slower down
tree-lined streets



Analysis

Overview

Good data is required to understand the context, challenges and opportunities for urban greening in Wollongong.

A Natural Areas Asset Management Plan is being prepared to prioritise investment in restoration projects and monitor improvement in condition and quality. However Council does not hold qualitative or quantitative data for individual trees or vegetation in streets, public spaces and parks.

Evidence-based decision making is challenging without appropriate data. Recognising this, Council has invested in creating a series of broad scale datasets to inform the Strategy.

Datasets created to inform this Strategy include:

1. An assessment of tree canopy cover across the urban area of Wollongong
2. Canopy cover distribution and land use categories across the City
3. Temporal land use analysis looking at vegetation cover changes in three sites
4. Desktop analysis of vacant tree sites on urban streets
5. Mapping of attributes including census-derived social vulnerability to determine areas of priority for tree planting and urban greening

Council holds data on biodiversity, transport, community facilities and other key attributes.

These datasets feed into the Strategy's over-arching goals, and assist in communicating an appropriate and relevant business case for future urban forest management.

They also provide a benchmark against which implementation can be monitored and evaluated.

Some ways in which this data can be used is illustrated on pages 21 - 23.

The Study Area

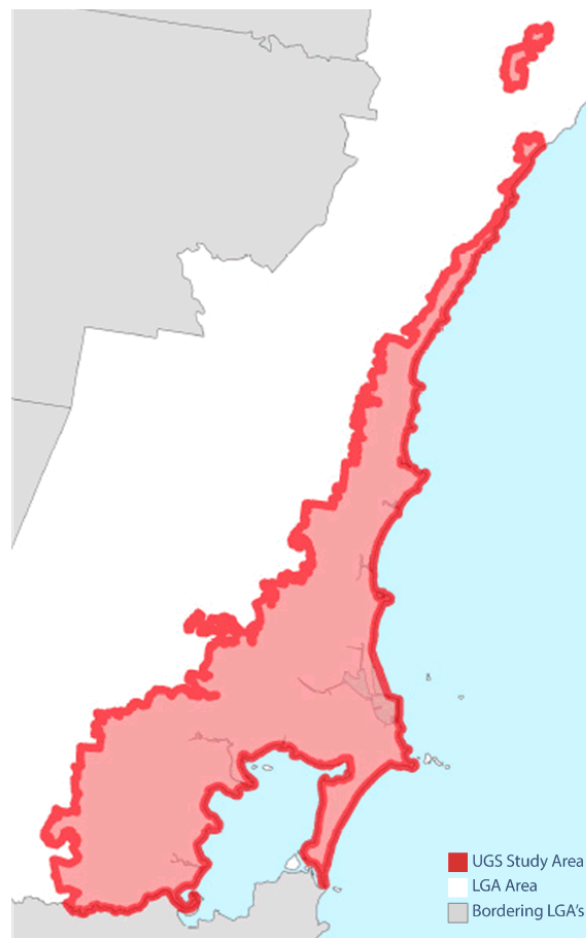
Wollongong's stunning natural setting is defined by the Illawarra Escarpment, which rises sharply above a coastal plain fringed by iconic long sandy beaches and prominent headlands.

The naturally occurring soils give rise to unique vegetation types across the City's coastal dunes, coastal plain and Escarpment foothills.

The Strategy has defined a study area which focuses broadly on trees and vegetation on all land types within the 'urban' setting. It excludes the rainforests and tall eucalypt forests occurring along the Illawarra Escarpment boundary.

The study area includes land across a range of zonings, public and private land. It comprises a total of around 178 km² including 59 separate suburbs.

Specific actions for natural areas are outside of the scope of the Strategy, however those natural areas occurring within the study areas do contribute to the analysis of tree canopy cover and opportunities for improved biodiversity connectivity and prioritisation of street tree planting.



Historic Context

Wollongong's current urban landscape has a rich Aboriginal, cultural, farming and industrial history

For at least 30,000 years before white settlement, the Illawarra Aboriginal people, the Wodi Wodi, lived around Wollongong, making use of natural resources from the variety of habitats that stretch from the beaches, along the coastal plain, to the sharp slopes of the escarpment and the Hawkesbury Sandstone plateau.

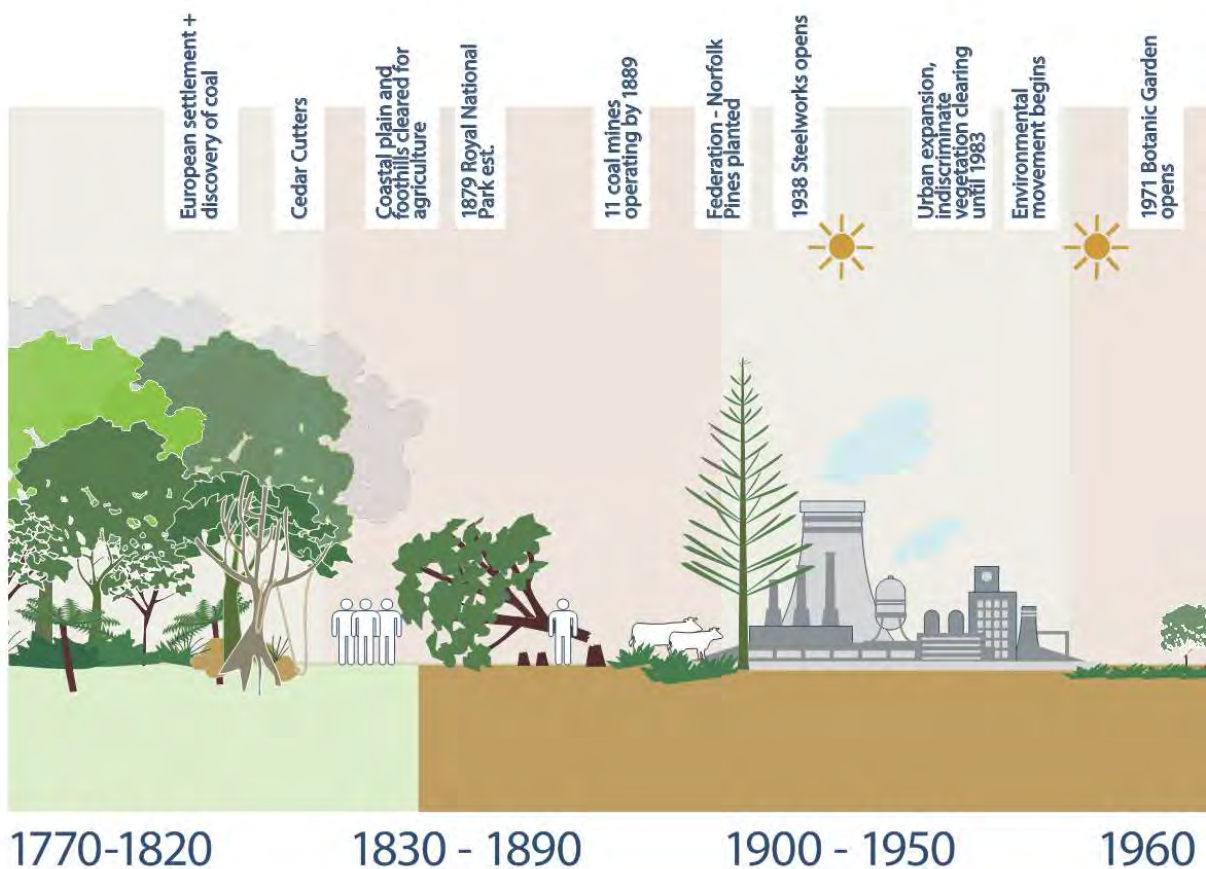
Apart from fauna – fish and shells from the ocean, or kangaroos and wombats in the woodlands – the flora, the original forest, provided much of value. They roasted mangrove seedlings to eat, made boomerangs from the Swamp Oak, ate many berries and made fishing lines from the Illawarra Flame Tree's bark.

Natural resources have continued to underpin our region's prosperity. Cedar cutters profited from the colony's demand for timber in the early 19th Century. Grazing and dairy were followed by the commencement of the local steelworks, supporting a growing population of people from a diverse range of community and cultural backgrounds.

Wollongong remains strongly identified with mining and manufacturing industries, yet is in the process of diversifying its economic base. Lifestyle-based industries including tourism, health services, telecommunications, hospitality, education and information technology will play an increasing role in the City's future.

In 1821 an early Cedar cutter remarked that "...there was scarcely a creek or stream, valley, ravine or gorge, between Bulli and Broughton Creek, between the sea and the mountains, that was not dotted with cedar trees, many of them of great size and beauty...".

By the 1840s the Illawarra forests had been cleared, and few of these once common giants remained.



Towards a greener Wollongong

Promoting a clean, green City was a key strategy emerging in the 1970s to combat Wollongong's reputation as a polluted, unattractive industrial City.

At that time Council had a simple nursery operating out of Central Depot. Plants were grown in old tin cans, salvaged from the tip. Two plants per resident were available to be planted on verges in an effort to revegetate the City.

Political support, along with the funding and profile brought by national environmental initiatives from the late 1960s, is widely credited with providing the impetus for Wollongong to grow a civic greening program.

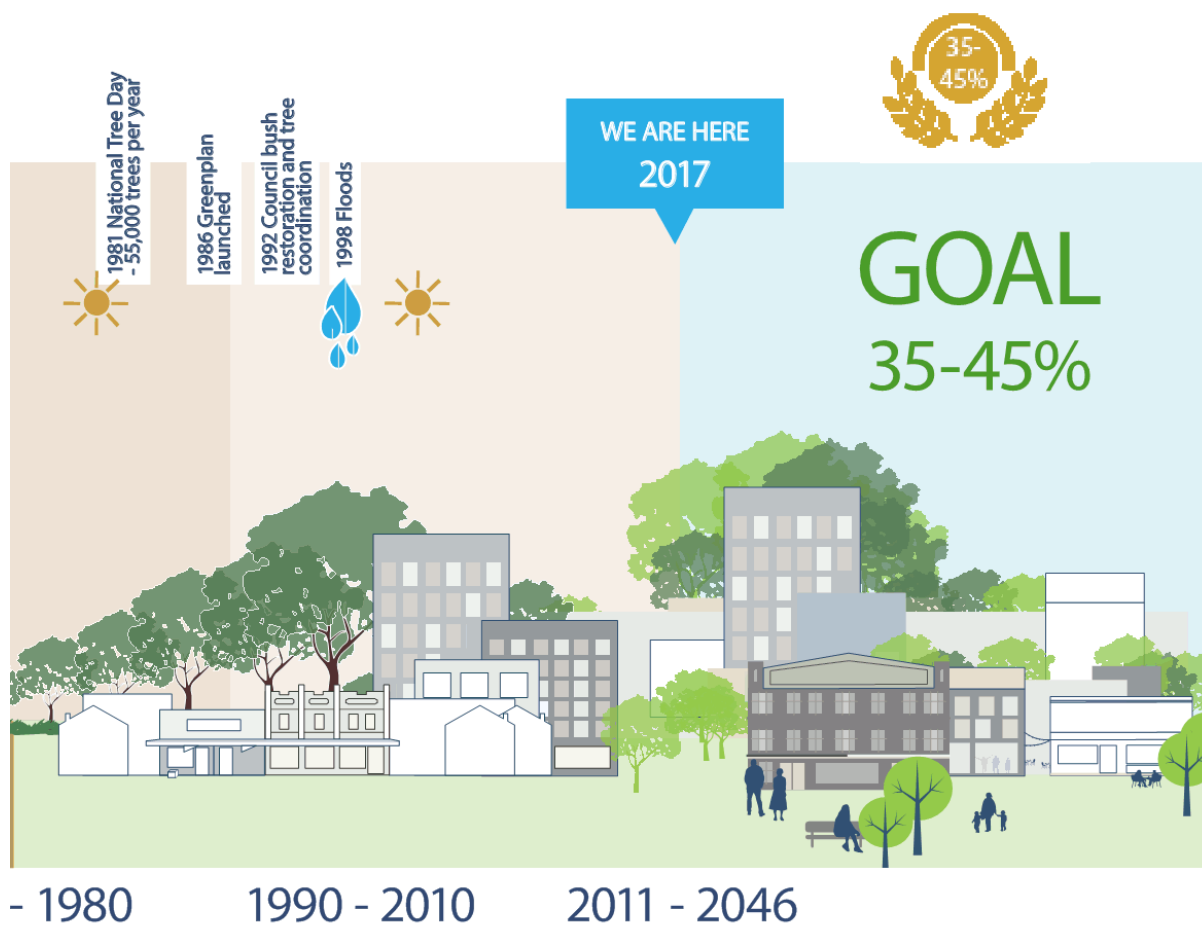
Wollongong's Botanic Garden was established in 1971, and a well-equipped Nursery facility was built in 1981. Council's Greenplan was introduced in 1986, offering residents 20 plants per year. The Nursery continues to support greening programs, providing plants to residents, schools and ecological restoration programs.

Since 1986, the Wollongong Botanic Garden has been distinguished by the technical collection, study, conservation and propagation of local native plant species.

Efforts to regenerate natural areas, with a particular focus on remnant vegetation and riparian areas, have evolved over the years to become major Council services in collaboration with other agencies and the

community. Key milestones in Wollongong's management of trees and vegetation are illustrated below.

Council's Bushcare and Rise and Shine programs have been supporting volunteer action to green Wollongong for over 30 years



The Urban Forest Today

The public realm today is dominated by a relatively small palette of species, planted according to chance, fashion, street hierarchy and design. Water Gums, Melaleucas, Callistemon, Crepe Myrtle, Tuckeroos, Flame Trees, Planes and Palms tend to dominate. Large Eucalypts in suburban areas provoke the most calls for removal. Verges maintained by residents range from bare grass to dense plantings, and present a key opportunity for well-manged community greening.

Historical photographs (see page 21) reveal the vegetation on the coastal plain changing over time. Land that was thoroughly cleared for timber, grazing and residential development has changed significantly, with a higher proportion of hard surfaces a key feature. Riparian areas have been slowly restored over time, with efforts to connect areas of biodiverse value through natural area restoration.

Council manages
natural area restoration
contracts worth
approximately \$1.2million
per year



New plantings with footpath upgrades



Town, Village and City Centres



Established eucalypts, 50-60 years old



Public spaces



Significant Trees in the urban realm



Parks and Natural Areas

Where are all the trees?

Canopy Cover

Tree canopy cover is the measure of the area of tree canopy when viewed from above, and is recorded as a percentage of total land area.

Canopy cover is important to understand for strategic goal setting. It can be used to benchmark, manage and evaluate the urban forest as a whole.

Two approaches have been used in developing the Strategy. The online tool iTree Canopy was used to give a broad overview of baseline canopy cover, grass, shrubs and hard surfaces.

A more accurate and detailed analysis was commissioned using LiDAR and aerial imagery. Together, this gives a 'big picture' of the height, density and distribution of canopy across the local government area.

It is worth noting that neither of these techniques can determine the species or condition of each tree.

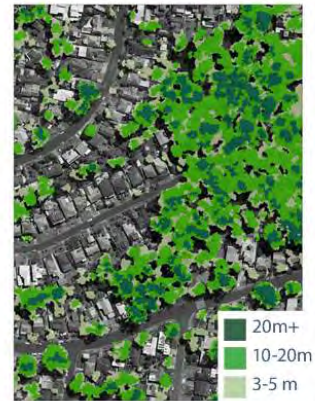
A 'canopy' tree is measured as one over 3 metres in height. There is considerable variation in canopy cover at suburb level, from 3% - 52%.

How does Wollongong compare?

Wollongong's average urban canopy cover of 17% is well below the national average of 39% (ISF Benchmarking report).

Experts recommend an **optimal urban canopy cover of 35-40%***. Working towards an enhanced canopy goal will require significant commitment and investment over time.

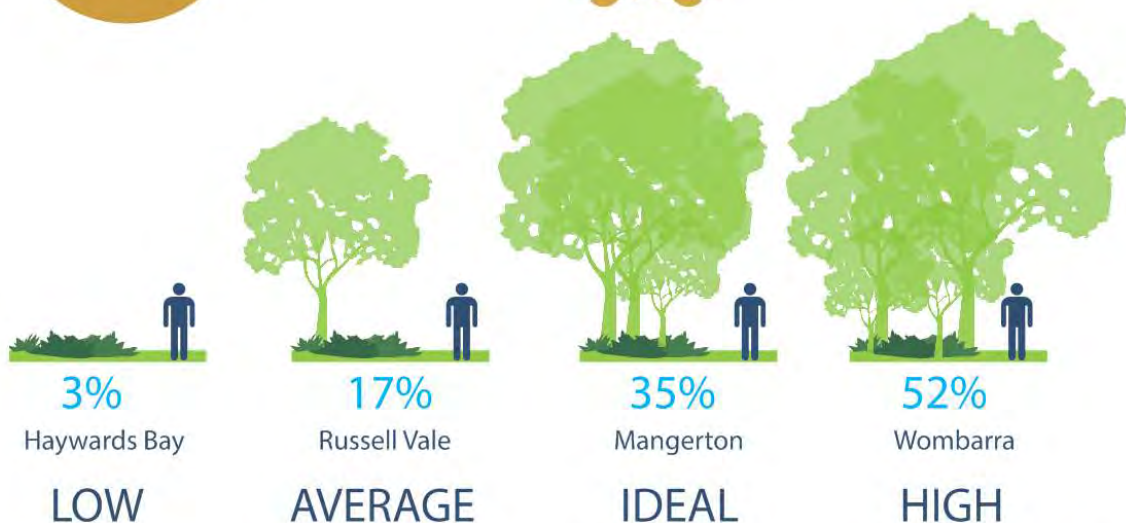
Wollongong's tree canopy cover measures 17% across the City. However there is considerable variation when looking at finer scales such as suburb or land use. There are interesting correlations between high canopy cover and high median property prices in Wollongong. See image below.



Example of LiDAR tree canopy imagery.

***canopy cover targets are recommended to be set at levels that are achievable. The Strategy will work towards increasing current cover by 20% by 2020**

The tallest tree in the study area is in Coledale, standing at 45m in height

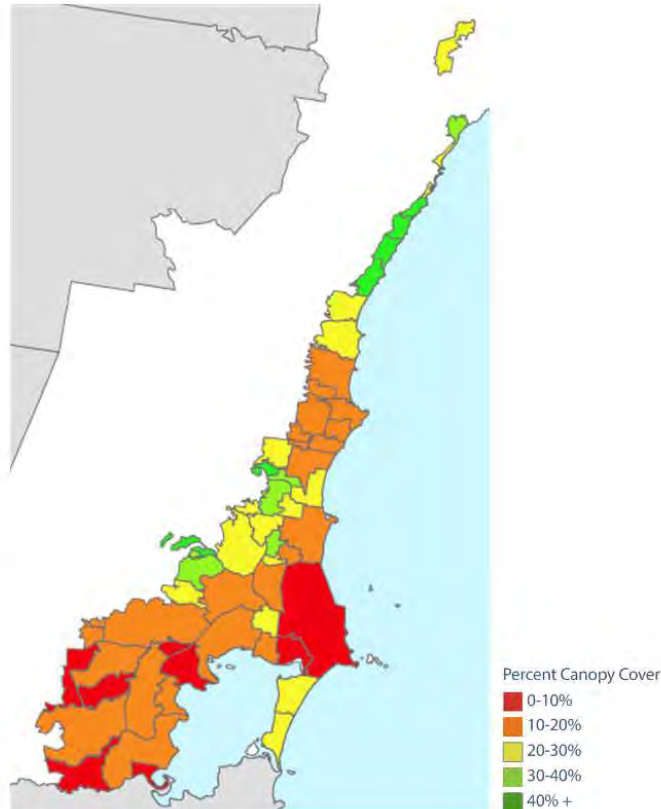


Canopy Cover by Suburb

There are **eight suburbs with existing optimal canopy cover**: Wombarra, Kembla Heights, Scarborough, Coledale, Mount Pleasant, Austinmer, Mount Kembla and Stanwell Park. These suburbs are all adjacent to the Illawarra Escarpment, with development historically occurring in areas of extant or regenerating forest, with environmental or development constraints on larger lot sizes. Urban forest management in this context would focus on zero net reduction in existing canopy, balancing bush fire risks, minimising threats to biodiversity through weed management and appropriate species selection.

There are **eight suburbs with less than 10% existing canopy cover**, which is exceptionally low. There are a variety of factors influencing low canopy cover - agricultural history in areas such as Huntley, Marshall Mount and Cleveland. Intensive industry partly explains low canopy in Port Kembla.

Warrawong is an important town centre exhibiting low canopy cover across all land use areas. In the decade or so since the establishment of the new residential development of Haywards Bay, which is surrounded by reserve with a long waterfront, only 3% canopy cover has been achieved.



Variation in canopy cover across the City



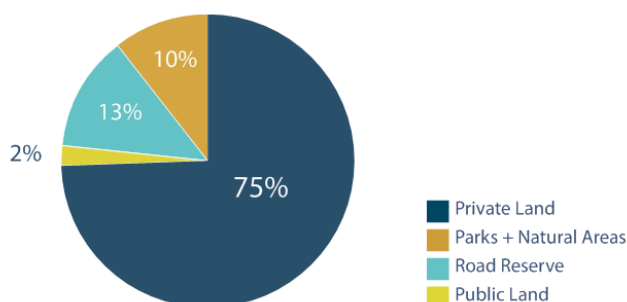
Land Use Analysis

What are the land uses in the Study Area?

The pie chart illustrates the breakdown of land uses in the private and public realm by percentage of total area.

Three quarters of all land in the study area is privately owned and controlled.

Public land is broken down into Parks and Natural Areas, Road Reserves, and other Public Land such as vacant lots and town centres.

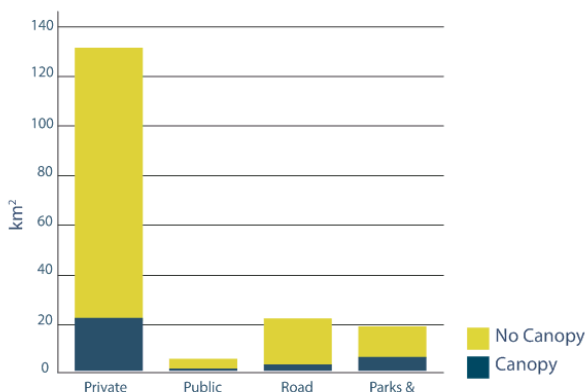


Canopy vs. No Canopy

The bar chart shows the relative proportion of canopy and no canopy cover by area within each of these land uses.

It illustrates that due to the high proportion of land area involved, both gains and losses in percentage canopy cover on private land have a major impact on overall canopy area.

The opportunity to avoid net loss on private land, whilst increasing canopy cover in the public realm, is clear.



Where is the canopy by land use category?

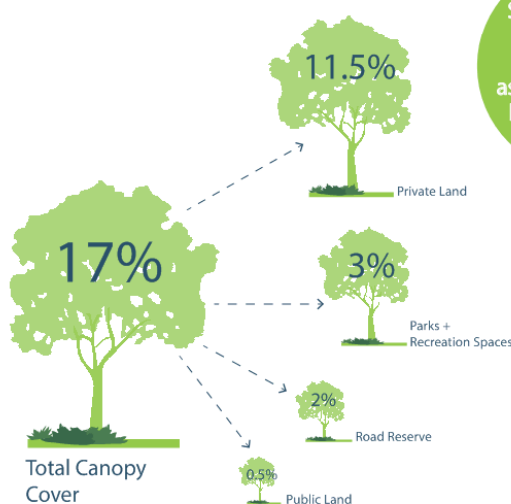
This picture illustrates the distribution of existing tree canopy over 3 metres across each of the land use categories.

Of the total 17% canopy cover in Wollongong, only 5.5% occurs on public land.

There are clear drivers for a new, asset based approach to public tree management and the priority actions for this Strategy must be those which are within Council's direct care and control.

However, as the majority of the existing canopy occurs on private land, the Strategy must provide a framework for a consistent approach to protecting and managing the urban forest as a whole.

The following section analyses the factors influencing canopy distribution across the City in order to identify opportunities for Council to increase canopy cover.



Shady trees can increase the useful life of asphalt pavement by at least 30%

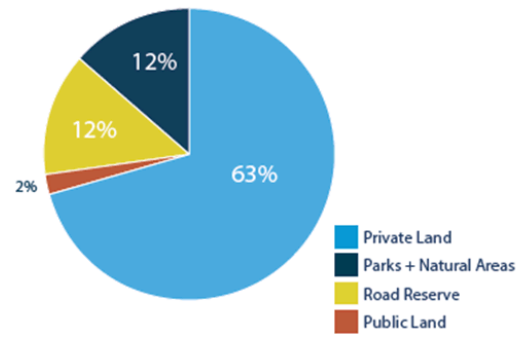
A Closer Look at Ten Suburbs

Ten suburbs were selected for further analysis to more closely understand the distribution of canopy on public versus private land. These suburbs were selected to illustrate a range of identified strategic priorities, canopy covers, demographics, size and geographical distribution.

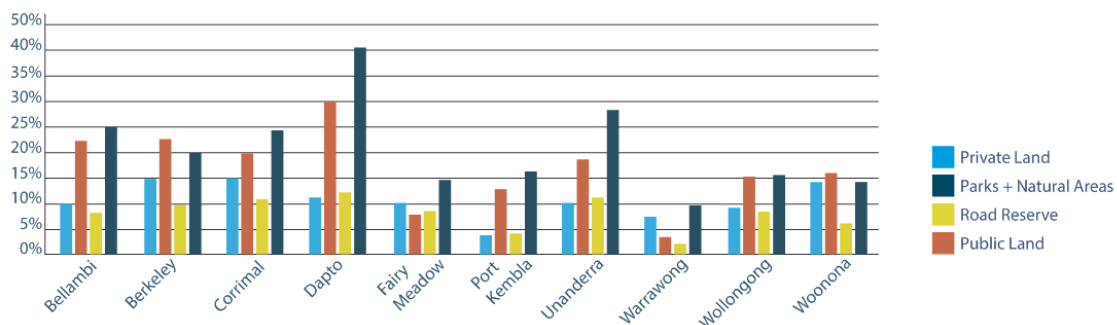
The majority of land area within each suburb is private. The road network consistently makes up between around 13% - 19% of the suburb area. Parks and natural areas comprise between 5% and 25%, with the public realm only a very small percentage of the total suburb area.

The pie chart shows the division of the entire tree canopy area for the ten suburbs into the different land use types. 63% of the tree canopy area occurs in the private realm, 23% in parks and natural areas, 12% from road reserves and 2% in public space.

The total area of canopy held in parks is only around a third of the area of private land canopy.



Tree canopy area by land use across all ten suburbs



Percentage of total tree canopy cover broken down by land use in each of the ten suburbs

The Public Realm

The chart above illustrates the canopy cover percentages for each of the land use types. This reveals that despite the relative size, both parks and natural areas and the public realm have much higher tree canopy coverage rates per square metre than the private realm. This is to be expected given that development is more likely to occur in the private realm.

This demonstrates firstly the long term importance of the public realm (the total of public, parks and road reserves) in providing canopy cover for the community. Secondly, it highlights the clear opportunity to increase canopy cover over the road network.

The Private Realm

Tree canopy cover percentages for the private realm range from 4% in Port Kembla to 15% in Berkeley and whilst these are well below optimum rates of 40%, the sheer size of these land areas and corresponding tree canopies remain the largest portion of the total urban canopy.

For example, in Unanderra, private tree canopy cover is only 10% and parks tree canopy cover is 28%. Yet, the total area of private tree canopy is 480,541m² and parks is 148,660m².

Analysis of these 10 suburbs reveals:

- Private tree canopy remains an important and majority contributor to the entire urban forest.
- Private tree canopy is probably not at optimum levels, given the large amount of land area categorised as private.
- Council should consider the planning and regulatory mechanisms required to protect the private realm tree canopy from diminishing in the face of urban renewal.
- There is ample opportunity for increasing tree canopy cover across the road network.

Changes in vegetation over time

Aerial photography from 1948 - 2016 is available on Council's website and provides an interesting tool to compare changes in morphology, land use and other attributes over time. The following examples illustrate significant changes in vegetation in three sites. Evidence of Council, agency and community efforts in greening natural areas along creeklines and public parks can be seen. The legacy of the major tree planting efforts coinciding with the commencement of Greenplan can also be seen.



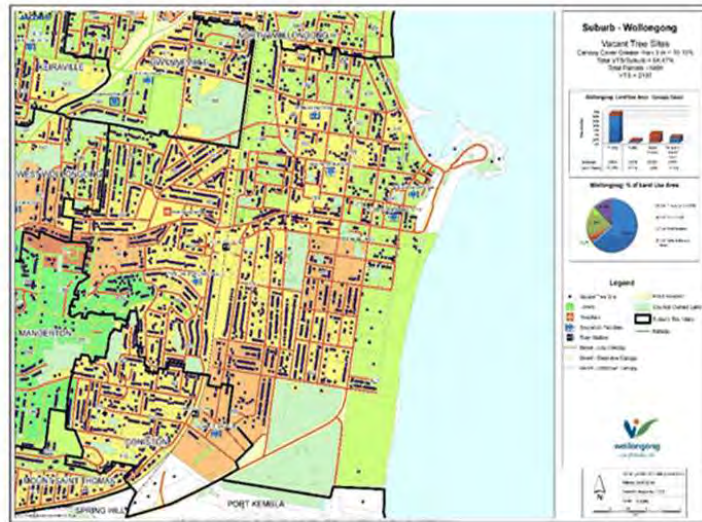
Vacant Tree Sites

A desktop study has revealed that Wollongong has potentially over 42,000 'missing' trees on road reserves in the study area.

On ground assessment has not been undertaken to determine the suitability of each site for planting. However, if we're to assume that every site were safe and amenable to planting, GIS analysis of existing canopy shows that there are over 42,000 parcels of land in the study area without trees in the adjacent road reserve.

As Council does not hold detailed tree inventory data, this analysis helps paint a picture of immediate opportunity to bring the City to full street tree stocking rate of one tree per property and likely costs.

Investment in urban greening needs to be targeted towards achieving the maximum public benefit. Using new technical guidelines and spatial analysis to ensure we're planting the right trees in the right place, well located vacant tree sites are potential 'windfalls' for planting in the short term.



Social Vulnerability

We work in partnership to build on opportunities to strengthen vulnerable communities (CSP). Weather and health risks, such as heatwaves, storms, obesity and diabetes are all factors to consider in planning for urban greening.

Urban greening has been shown to provide shade and cooling, whilst greener streetscapes increase the likelihood of physical activity.

Locations where there are concentrations of vulnerable people should be a priority for Council for urban greening.

Indicators of vulnerability include socio-economic disadvantage, age, and cultural background. Council has used Census data to spatially map these attributes, which can be analysed in conjunction with vacant sites and pedestrian usage data to target priority streetscapes for urban greening.

Priority Areas

To responsibly allocate budget and resources, it is important to make decisions about urban greening on public land which deliver maximum benefit to the community.

Priority areas include those with low canopy cover (high planting opportunity) high human activity (need for shade and amenity), and high levels of social vulnerability (need for shade and quality streetscapes).

The Strategy outlines an approach to prioritisation which uses spatial analysis to overlay the various data sets collected.

Spatial datasets which can be used to inform priority areas include:

- Tree Canopy Cover
- Vacant Tree Sites
- Census data
- Land use
- Transport routes
- Pedestrian activity
- Natural areas and biodiversity values
- Points of interest (schools, community facilities, sportsgrounds)
- Retail areas

Small, concentrated pilot plantings in priority areas will focus on establishing the capacity across Council to plan and deliver a broader, long-term program.

Where possible, new plantings will be integrated into the design phase of the capital program of road and footpath renewal on priority streets.

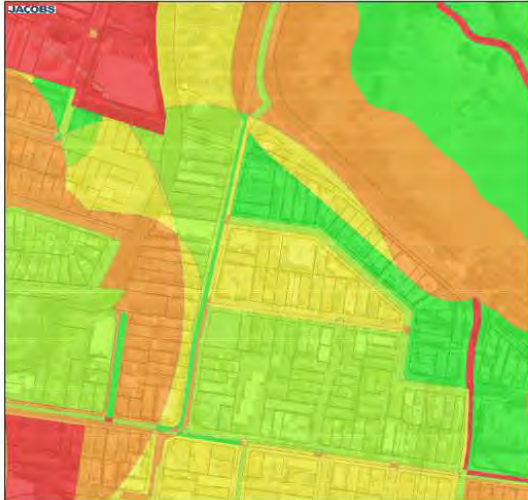
This process can be used in the short-term for new plantings to establish and test new guidelines, processes and systems.

Longer term, tree inventory data will inform priorities and resources required to deliver a program of planned maintenance and renewal of existing public tree assets.

Vulnerable people die during extreme heatwaves. Urban vegetation can reduce heat-related mortality and is a key preventative health measure.

Spatial Analysis

The following maps illustrate the use of spatially mapped attributes to undertake desktop analysis of factors influencing the prioritisation of urban greening.



Census data highlights areas of social vulnerability, where there is a higher need for shade and streetscape quality.



Biodiversity values and existing natural area work sites illustrate opportunities for connectivity.



Vacant tree sites highlight potential 'windfalls' for immediate planting.



LiDAR imagery illustrates existing canopy density, height and distribution.

Council's Role

Council delivers services and decisions which impact on the quality of urban greening in our city every day.



Council's Role

Urban greening depends on best-practice management of the tree canopy and other vegetation as a whole.

Initial feedback from stakeholders has identified a range of opportunities to improve current practice. To move towards best-practice, Council will need to adopt a staged approach to implementing actions which address the following identified limitations:

1. Establish and implement discrete plans and targeted programs to maximise the benefit of street trees, which strategically identify what to plant and where.
2. Identifying resources for proactive public tree work, which is currently is dominated by responding to immediate risks and requests for removal.
3. Collecting the data required for monitoring and planning tree and vegetation issues across the City, and proactively investing in condition monitoring and enhancement.
4. Coordinating tree and vegetation management within Council to better manage risks and ensure greater consistency in outcomes across all approval or decision-making pathways on both private and public land. Improve the consistency and follow-through with compliance.
5. Supporting tree planting and maintenance with dedicated budgets linked to a targeted program.
6. Capitalising on the immediate opportunity of vacant tree sites and reviewing tree replacement protocols.
7. Managing trees as assets, including measuring the economic value of trees, which unlike 'grey' assets, appreciate over time.

See page 38-39 for details of a staged approach to delivering priority actions for Council.

Council
received almost
2500 enquiries
relating to public
trees in 2016/17

Council
received 1497
applications to prune
or remove private
trees in 2016/17

Data is not
available on trees
removed as a result of
development approval
or unauthorised
removal

What else do we need to know?

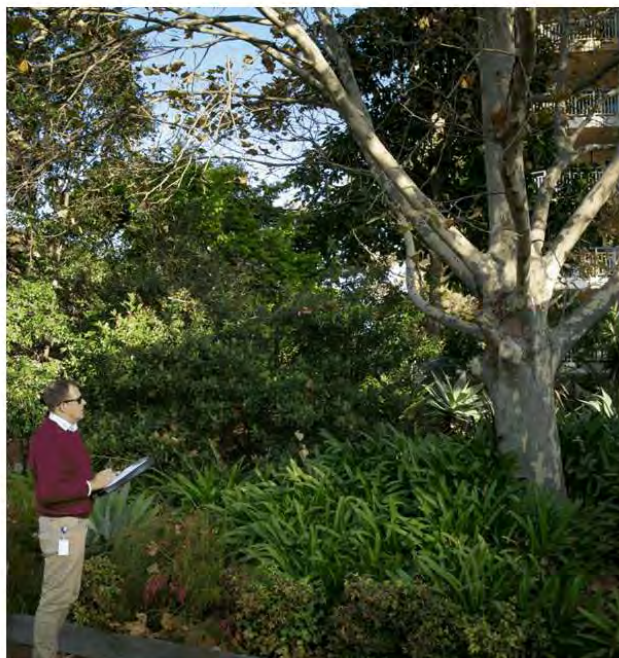
Public trees, on streets and in parks, largely fall within the care and control of Council. Council bears the risk, responsibility and cost of caring for these resources on behalf of the community.

Whilst canopy mapping is a valuable tool to understand spatial characteristics, it doesn't provide the qualitative data required to develop, budget for, and implement a robust public tree asset management plan.

Data such as species, age, structure, health, useful life expectancy and pruning requirements of individual trees is needed to ensure Council understands the quality and health of our tree assets.

This information, as well as the documented risk profile of each tree, helps to make evidence-based decisions for tree removal and replacement programs, pruning and maintenance scheduling as well as tree planting programs.

The data is collected in the form of a full public tree inventory which is undertaken by a qualified arborist. It is intended to be integrated, over time, into Council's asset register.



Issues

Issues for urban greening in Wollongong include the following:

Site Constraints

Our urban streets have highly variable scales and site constraints, yet must all be safe, accessible, and functional. They need to house an array of infrastructure that can be easily accessed for maintenance and upgrade purposes.

Trees and vegetation must be compatible with the topography and context of the site. They must also accommodate overhead powerlines, stormwater drains, and underground services.

City and Town Centres

Our City and Town Centres drive the local economy, attract new business and provide places for people to connect. The amenity, environmental performance, business confidence and quality of urban centres is compromised by a lack of shade and greening.

Legacy plantings

During the 1980's a strong push for native street tree plantings saw a flush of Eucalypts, Melaleucas and Callistemons planted in our streets. Many of these trees only have a limited life span and, anecdotally, are triggering requests for removal across the City. There is no consistent or agreed approach to tree replacement.

Conflicts with infrastructure

There is a significant population of trees that have outgrown their location and are causing damage or interference to infrastructure including footpaths, stormwater and sewer. Many trees under powerlines are being heavily pruned by contractors working for utilities, risking damage to their root systems. Compromised tree health from savage pruning limit a tree's ability to provide benefits.

Urban Renewal and Development

Current planning schemes for urban areas across Australia prioritise increasing urban density to cope with population growth and housing shortages. Wollongong's CBD will see a significant increase in residents over the next five years, bringing both renewed vibrancy and demand for improved amenity.

Subdividing traditional residential blocks is another means to accommodate urban growth, increasing housing density within the existing land parcel. This will decrease the amount of private tree canopy over time as larger lot sizes are cleared to make way for multi dwellings.

Compliance and enforcement, auditing of DCP controls, and ongoing administration of development and tree applications is likely to lead to increased resourcing costs for Council.

Public Perceptions

There continue to be challenges in managing the expectations of private residents around urban trees. Illegal tree clearing and vegetation vandalism are issues in many coastal areas. Wollongong has a spectacular natural setting, which has contributed to a prestige market for views. Conflicts arise around vegetation growth and views. Other issues include perceptions around coexisting with birds and animals, solar access, leaf and seed drop.

Education, consultation, good design, regulation, and clear guidelines will help to optimise the City's private and public vegetation for the benefit of all.

Council's Asset Management Programming

Currently street trees are not integrated with other capital asset management programming such as new or upgraded roadworks, footpaths and drainage works. Streamlining decision making for priority areas to integrate all relevant infrastructure - including trees - is an important step in gaining efficiencies and maximising the community benefit from financial resources.

101
breaches of Tree
Management Orders
were reported in
2016/17



Managing risks, including fire hazard



Pruning for powerlines



Vegetation vandalism



1980's era Melaleucas

Opportunities

Key opportunities for urban greening in Wollongong include:

More Urban Greening

The vacant sites data, canopy cover data and social vulnerability data all point to the need for more urban greening within Wollongong. Increased greening will help to deliver a range of priorities in the Community Strategic Plan, and is consistent with the objectives of A City for People.

Highlight Wollongong's World-Class Location and Setting

Wollongong is exceptional in many ways. The urban realm provides an opportunity not only to create a world-class urban landscape defined by our unique natural setting, but also to support local biodiversity.

Achieving canopy targets does require a focus on proven performers - those species which will integrate with existing infrastructure, provide deep shade, and be resilient in changing conditions. Quality trees on major arterial roads can define and 'announce' the quality of our City via enhanced entranceways.

Many of Wollongong's backyards already provide sanctuary for native birds, reptiles and frogs. They are stepping stones between our urban and natural areas, and help to provide important links for the City's biodiversity. There is potential to increase the representation of local native species through promoting biodiverse plantings in backyards, reviewing the overall species palette as part of the Technical Guidelines action, and also piloting cultivation and planting of endemic species with horticultural potential in the public realm.

Connectivity between urban and natural areas can be achieved by promoting appropriate local native species and avoiding weedy species across all land types - particularly those spatially identified as biodiversity corridors.

Gaining better knowledge

In obtaining a public tree inventory, Council will gain a baseline understanding of the asset, its deficiencies and opportunities. Investment can be targeted and prioritised towards locations that are in need of shade, amenity and

neighbourhood character through a Street Tree Management Plan or 10 Year Tree Planting Program. Adequate maintenance budgets can be secured to ensure risk profiles of the tree assets are at acceptable levels for community safety, transitioning from a reactive to a proactive management approach.

Tree inventory data has far reaching uses, making it a necessary and worthwhile investment. From this data, Council can measure performance of the urban forest over time and its ability to provide the required benefits. It is also the basis of the business case to attract greater funding towards urban greening.

Coordination

There is a clear opportunity to review responsibilities for tree and vegetation issues across Council. A coordinated approach will ensure consistency across key areas of responsibility in both the public and private realm, as well as between divisions, through a multi-disciplinary approach to planning and implementation.

Public tree data can be used to inform other asset management programs, strategic plans and urban development and renewal by centralisation within the existing asset management system.

Align with Wollongong's Land Use Planning

Given that urban renewal is considered both a major driver and an issue for Wollongong's Urban Forest, there is a clear opportunity to align outcomes from the Strategy with Wollongong's planning instruments to ensure that trees, both public and private, are considered in all development. This includes a review of DCP controls relating to urban greening.

New residential developments provide a 'blank slate'. This is an opportunity to integrate a full stocking rate of quality street trees and vegetation at the build stage of future road reserves; reestablish connectivity in fragmented existing green or riparian corridors; and to ensure natural areas and parks are transferred to Council with high quality urban greening values.

Review Programs, Processes and Technical Guidelines

Developing a suite of policy and process documentation for urban tree management, including technical guidelines, will address a range of issues. Street tree issues, for example, include: selecting the right species for the right position; compatibility with powerlines and underground services; safety; pruning, maintenance and removal; replacement of mature trees; shade and solar access; pedestrian access; and habitat.

Once completed, guidelines will provide clear and consistent standards which will not only inform public tree work, but can be included within specifications for contractors, guidelines for developers or to help negotiate better tree outcomes with utility service providers.

Community


The provision of clear and documented information regarding Wollongong's urban forest is an important first step in building awareness and recognition of its value. This will include engaging in constructive dialogue around the impacts of illegal tree removal, vegetation clearing and vandalism.

Our community values our natural environment above all else, and our City benefits from ongoing participation of our people in existing greening programs. Ensuring there are well-resourced opportunities for collaboration in decision making and programming is critical to the success of the Strategy.



Public and private carparks offer clear opportunity for greening.

Vision



Wollongong will grow and nurture a healthy, diverse and well-managed urban forest to deliver a renewed and resilient place for people, enterprise, and the ecosystems that support us.

Goals

The Strategy has identified these FOUR goals for Urban Greening in Wollongong. Each goal is supported by a series of strategies and actions, described in the following section.

01 Grow

Green the City - Increase Canopy Cover

Grow the City's canopy cover through a targeted planting program to harness the economic, social and natural benefits of trees and urban greening.

02 Manage

Protect and Maintain Existing Vegetation

Manage existing vegetation through a coordinated regulatory, planning, design and maintenance program to deliver a quality, world-class urban landscape.

03 Improve

Diversify planting and improve urban ecology

Improve the ecological function of urban areas through design which is diverse in form, connects urban and natural areas, improves water management and supports biodiversity.

04 Engage

Educate and Partner with our community

Engage the community, business, agencies and private landholders to inspire care and connection to our unique natural setting.

01 Grow

Green the City - Increase Canopy Cover

Grow the City's canopy cover through a targeted planting program to harness the economic, social and natural benefits of trees and urban greening.



Objectives

- Increase Canopy Cover from 17% to 35% by 2046 through a targeted tree planting program
- Reduce the number of vacant tree sites in priority areas to zero by 2046
- Increase tree numbers in industrial areas, public carparks, arterial and collector routes
- All new developments will have full tree stocking rates prior to handover to Council
- 20% increase in existing canopy cover by 2020

Strategies

The following strategies illustrate key opportunities and guide priorities in achieving the outcomes of Goal 1.

1.1 Establish baseline data and monitoring systems

Build our knowledge of the existing urban forest in order to make informed decisions about future goals, and monitor progress.

1.2 Invest in a targeted tree planting program to maximise the benefits of urban greening

A business case will support a ten year planting program which is supported by data and focuses on priority areas for greening.

1.3 Integrate tree planting into existing Council programs and works

Actively pursue opportunities to integrate new planting into the capital works program and Council facilities, across the whole cycle from planning to renewal.

1.4 Pursue a range of opportunities to increase canopy cover in the private realm

Opportunities and incentives to increase canopy cover on private land are identified and promoted.

Key Actions

The following actions provide examples of detailed steps, linked to the above strategies.

- **1.1 Establish baseline data and monitoring systems**
 - 1.1.1 Establish a cross-disciplinary Urban Greening advisory group to coordinate short to medium-term decision-making
 - 1.1.2 Collect street and park tree inventory
 - 1.1.3 Report annually on trees planted and trees removed
 - 1.1.4 Conduct periodic baseline data assessments to establish the performance of assets
- **1.2 Invest in a targeted tree planting program to maximise the benefits of urban greening**
 - 1.2.1 Use existing data to develop a ten year tree planting program, targeting priority areas including those with low canopy cover, high human activity, high levels of social vulnerability and high opportunity for biodiversity connectivity
 - 1.2.2 Allocate ongoing budget and resources to adequately fund and coordinate a ten year tree planting program
- **1.3 Integrate tree planting into existing Council programs and works**
 - 1.3.1 Spatially map all road reserves
 - 1.3.2 Embed urban greening (new and renewed planting) and water sensitive urban design into Council works and programs
- **1.4 Pursue a range of opportunities to increase canopy cover in the private realm**
 - 1.4.1 Develop a set of urban greening guidelines for developers which includes tree stocking rates and auditing processes
 - 1.4.2 Investigate and promote all opportunities to incentivise and promote increased canopy cover in the private realm

02 Manage

Protect and Maintain Existing Vegetation

Manage existing vegetation through a coordinated regulatory, planning, design and maintenance program to deliver a quality, world-class urban landscape.



Objectives

- Council programs implement best practice urban tree and vegetation management
- New planted tree mortality is below 10%
- No net loss of vegetation on private land
- Consistent and clear management of trees and vegetation across all land types

Strategies

The following strategies illustrate key opportunities and guide priorities in achieving the outcomes of Goal 2.

2.1 Establish clear policies and guidelines for urban vegetation management

A complete set of urban tree guidelines will provide an ongoing approach to resolve current management issues.

2.2 Implement a program of cost-effective, best practice, proactive tree management

A business case will support an ongoing, scheduled program of street and park tree maintenance.

2.3 Collect and use high quality asset data to inform decision-making

Tree data will link to Council's asset register, and be used to inform budget and resourcing requirements for an ongoing tree program.

2.4 Protect and maintain vegetation in the private realm

Opportunities and incentives to protect and maintain canopy cover on private land are identified and promoted.

Key Actions

The following actions provide examples of detailed steps, linked to the above strategies.

2.1 Establish clear policies and guidelines for urban vegetation management

- 2.1.1 Develop a full suite of Technical Guidelines to inform tree selection, species, procurement, planting, replacement, maintenance, removal, risk management, habitat and best practice management.
- 2.1.2 Promote and provide opportunities for Technical Guidelines to be integrated across the public and private realm
- 2.1.3 Use existing data to develop an approach to renewal of existing vegetation; and a program of works to achieve it

2.2 Implement a program of cost-effective, best practice, proactive tree management

- 2.2.1 Develop an ongoing, scheduled street and park tree maintenance program based on asset data and Technical Guidelines
- 2.2.2 Allocate ongoing budget and resources to adequately fund and coordinate a proactive tree program

2.3 Collect and use high quality asset data to inform decision-making

- 2.3.1 Develop a significant tree register
- 2.3.2 Use data to allocate ongoing budget and resources to adequately fund and coordinate a tree program

2.4 Protect and maintain vegetation in the private realm

- 2.4.1 Develop a set of urban greening guidelines for developers which includes tree stocking rates and auditing processes
- 2.4.2 Investigate and review existing mechanisms for tree protection in the private realm, including opportunities to incentivise permeable space for future vegetation

03 Improve

Diversify planting and improve urban ecology

Improve the ecological function of urban areas through design which is diverse in form, connects urban and natural areas, improves water management and supports biodiversity.



Objectives

- Increase tree corridors along urban streets linking areas of biodiversity value
- Increase the amount of stormwater passively filtered into the urban landscape
- Increase permeability across all urban areas, particularly the CBD

Strategies

The following strategies illustrate key opportunities and guide priorities in achieving the outcomes of Goal 3.

3.1 Improved urban design enhances the diversity and ecological function of urban areas

Using great design, supported by good guidelines, the public realm will play host to a healthier, more diverse urban ecology.

3.2 Urban areas will integrate and connect with natural areas where possible

Council's investment in our natural areas will be enhanced and supported by a thoughtful, integrated approach to greening nearby urban areas.

3.3 Stormwater will be more effectively managed for urban greening

Soil, waterway and vegetation health will be improved by incorporating water sensitive urban design.

Key Actions

The following actions provide examples of detailed steps, linked to the above strategies.

- **3.1 Improved urban design enhances the diversity and ecological function of urban areas**
 - 3.1.1 Develop design guidelines for green roofs, green walls and facades, rain gardens and other structural vegetation
 - 3.1.2 Through the ten year planting program (action 1.2.2) identify and prioritise areas with ecological connection at the planning and design phase to be planted with local native species
 - 3.1.3 Through the pilot planting and ten year planting program (action 1.2.2) identify opportunities to initiate greening within the program of build and renewal of community facilities
- **3.2 Urban areas will integrate and connect with natural areas where possible**
 - 3.2.1 Logs, hollows, nesting boxes and other habitat in urban areas will be managed as per Technical Guidelines (action 2.1.1), with the opportunity to retain and relocate felled sections of tree hollows and logs pursued
 - 3.2.2 Investigate and promote all opportunities to incentivise and promote integration and connectivity with natural areas in the private realm
- **3.3 Stormwater will be more effectively managed for urban greening**
 - 3.3.1 Review Water Sensitive Urban Design (WSUD) guidelines as part of Technical Guidelines (action 2.1.1)
 - 3.3.2 Pursue opportunities to incorporate WSUD principles in public works, and also in private development

04 Engage

Educate and Partner with our community

Engage the community, business, agencies and private landholders to inspire care and connection to our unique natural setting.



Objectives

- Increase in resident requests to plant more trees
- Increase in resident satisfaction with the amenity of streets and green spaces
- Increased engagement of private landholders in biodiversity
- Increased participation in community greening initiatives

Did you know? Volunteers actively manage 65 Bushcare sites across the City.

Strategies

The following strategies illustrate key opportunities and guide priorities in achieving the outcomes of Goal 4.

4.1 Increase awareness about the high value and importance of the urban forest

Trees and vegetation are valuable assets which underpin the health, wellbeing, prosperity and amenity of our City.

4.2 Provide opportunities to actively participate in urban greening.

The community is inspired and skilled up to care for, enhance, and connect with our unique natural setting.

4.3 Engage the whole community in designing and protecting urban landscapes

Genuine engagement will ensure that the community is actively involved in planning for quality green spaces.

Key Actions

The following actions provide examples of detailed steps, linked to the above strategies.

- **4.1 Increase awareness about the high value and importance of the urban forest**
 - 4.1.1 Review past and existing environmental education programs, policy and strategy to ensure potential to improve and enhance UGS objectives
 - 4.1.2 Deliver a diverse range of engagement opportunities across all platforms and targeting people across a range of clearly identified demographics
 - 4.1.3 Create a targeted communications campaign to highlight the benefits and contextualise the perceived issues with urban trees
- **4.2 Provide opportunities to actively participate in urban greening.**
 - 4.2.1 Support, enhance and resource existing hands-on community programs (Bushcare, Dunecare, Fiready, Landcare, community gardens) and enable community greening initiatives on public land
 - 4.2.2 Provide incentives and mechanisms to facilitate urban greening outcomes on private land including planting of appropriate canopy trees, riparian corridors, habitat enhancement and retention, and weed management
 - 4.2.3 Adopt proactive Verge Garden Guidelines consistent with tree technical guidelines and precinct plans
- **4.3 Engage the whole community in designing and protecting urban landscapes**
 - 4.3.1 Establish relationships with land owners, utilities, service providers and asset managers (including the road network) to negotiate better planning and management outcomes for trees
 - 4.3.2 Develop and maintain partnerships with external agencies
 - 4.3.3 Directly engage local residents and stakeholders in design and planning processes for urban landscapes (Street Tree Master-plans, Precinct Plans)

Implementation

The role of an Implementation Plan

A Draft Implementation Plan identifies specific strategies and actions to support each of the four goals. Currently, many actions require funding through the annual planning process – the role of the Strategy is to align actions to strategic aspirations and clarify priorities. It will be a key supporting document to inform annual planning priorities and budgeting processes.

There are clear drivers and an emerging business case for a new, asset-based approach to public tree management, and priority actions are definitely those within Council's direct care and control. However as the majority of the existing canopy occurs on private land, the Strategy also provides a framework for a consistent approach to managing the urban forest as a whole.

Short term priorities will clarify overall vegetation and tree management guidelines, whilst supporting an ongoing, coordinated approach to tree management on Council land in the future.

Existing 2017-21 operational and capital budget is adequate to commence targeted actions to yield the necessary data and guidelines to support this approach.

It's currently premature as to whether the Strategy's implementation can be fully funded from existing capital and operational budgets. It will be possible to predict resource implications with higher confidence once an arborist substantially commences the tree inventory data collection process.

An Implementation Plan provides a refined list of action-based projects reviewed annually as part of the Council's business planning cycle.

To move towards best-practice, Council will need to adopt a staged approach to implementing actions which address the following identified limitations:

1. Establish and implement discrete plans and targeted programs to maximise the benefit of street trees, which strategically identify what to plant and where.
2. Identifying resources for proactive public tree work, which is currently dominated by responding to immediate risks and requests for removal.
3. Collecting the data required for monitoring and planning tree and vegetation issues across the City, and proactively investing in condition monitoring and enhancement.
4. Coordinating tree and vegetation management within Council to better manage risks and ensure greater consistency in outcomes across all approval or decision-making pathways on both private and public land. Improve the consistency and follow-through with compliance.
5. Supporting tree planting and maintenance with dedicated budgets linked to a targeted program.
6. Capitalising on the immediate opportunity of vacant tree sites and reviewing tree replacement protocols.
7. Managing trees as assets, including measuring the economic value of trees, which unlike 'grey' assets, appreciate over time.

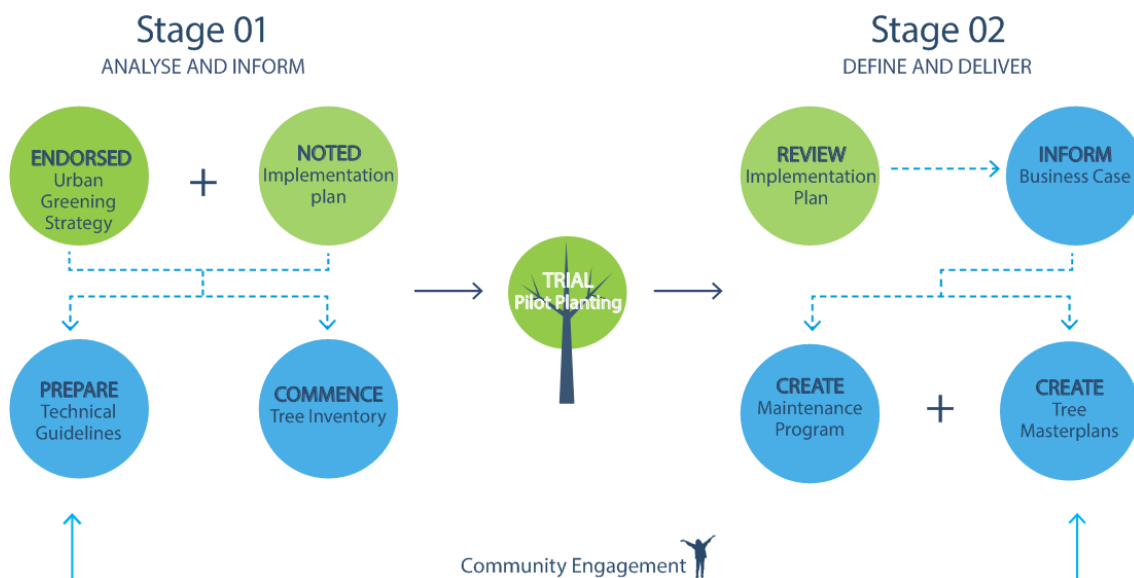


Local native White Aspen *Acronychia oblongifolia* used as a street tree in Fairy Meadow

Priority Actions

A description of immediate actions forming part of the staged approach to implementation.

The diagram below outlines the process and sequence of actions to put in place the elements required for Council to deliver improved urban greening outcomes:



Urban Greening Strategy

This Strategy includes an endorsed vision and set of objectives, strategies, targets and actions for improving urban greening in Wollongong, particularly focussed on the urban forest. It provides the over-arching framework for strategic management of urban trees and vegetation in Wollongong.

Implementation Plan

This internal working document includes a detailed suite of actions for Council to work towards achieving the outcomes identified in the Strategy. It includes timeframes, costings, performance indicators and responsibilities for individual actions in a prioritised, staged format. Key actions against each of the four Goals are included on pp 30-37.

Technical Guidelines

Technical Guidelines will provide clarity and consistency for urban vegetation management on all land types. This body of work forms the 'how-to' guide for urban forest management. It may include a range of policy documents such as a Tree Management Policy, reviews of existing planning tools, including the DCP, and processes. It may result in a centralised source of tree information, ensuring a consistent approach which is well publicised and creates clarity around compliance and reporting.

Guidelines for application across the public and private realm (including new developments) will specify: site selection, ground preparation, tree planting, maintenance, pruning, risk assessment, removals, tree protection, tree replacement and infrastructure conflict management.

It will include a comprehensive review of the preferred suite of tree species for selection in various urban settings.

Tree Inventory

Tree Inventory data will reveal the condition and resource implications for the existing public tree asset. **Together with the Technical Guidelines, it will** lay the groundwork to pilot, and put in place, an holistic public tree program. It will generate a complete set of data pertaining to every urban street and park tree in Wollongong. Data collected will include: species, height, health, age, useful life expectancy, hazards and pruning requirements.

Data will be integrated into Council's asset management system over time.

Pilot Plantings

Trial the Strategy approach to site selection, design, planting and maintenance across a range of contexts. This includes opportunities to integrate quality canopy-focused street tree planting within scheduled capital works, to immediately take advantage of suitable vacant sites, and to trial the feasibility of an expanded palette of local native species in a measured way.

Business Case

The Strategy, Implementation Plan, Council and executive reports together form a Business Case outlining the true value of the public tree asset, identifying resourcing and funding required to achieve a more effective public tree management program for Wollongong.

Tree Masterplan

Potentially in the form of a 10 year Tree Planting Program, a Tree Masterplan includes what type of tree will be planted in what numbers where and when. This action is closely linked to place, and will be developed in close consultation with the community to ensure desired neighbourhood characters and amenity are met through appropriate species selection and design.

Maintenance Program

As Tree Inventory data is collected, a maintenance program can be planned to transition towards proactive, risk-averse tree work. It specifies replacement and renewal protocols based on inventory data. Scheduled works include regular hazard assessments for relevant trees, cyclic pruning programs to ensure sightlines, road safety and visibility are maintained in streets and parks, pest and disease monitoring, plus reducing the conflicts between trees in infrastructure (canopy pruning, root pruning).

Community Engagement

A serious commitment to community participation underpins the entire approach to urban greening in Wollongong. This includes input into higher level strategy, providing inspiring opportunities to be involved and supported in greening programs, all the way down to involvement in the detail of precinct and street tree planning.

Join the conversation

We want to work with you to understand what you think is important for the future of Wollongong's urban greening.

A public exhibition period will be scheduled, following the endorsement of the Draft Urban Greening Strategy by Council.

In the meantime, you can share your thoughts:



Emailing:

records@wollongong.nsw.gov.au



Writing a letter to:

The General Manager,
Wollongong City Council,
Locked Bag 8821
WOLLONGONG NSW 2500.

If you have any questions regarding the draft Strategy call Council's Environmental Strategy team on 4227 7111.

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ITEM 7 PORT KEMBLA TOWN CENTRE FACADE PROGRAM

Council was awarded \$300,000 under the Port Kembla Community Investment Fund (PKCIF) to administer a Port Kembla Town Centre Façade Program. This program will improve the appearance of the streetscape by activating street frontages whilst celebrating the heritage and character of the town centre. Applications for the program opened on 20 April 2017 and closed on 18 May 2017.

In accordance with section 356(2) of the *Local Government Act 1993*, Council publically exhibited the proposed recipients to receive funding under the program from 17 June 2017 to 14 July 2017. No submissions were received during this time.

RECOMMENDATION

Council provide funding to the proposed recipients shown in Attachment 1 for the Port Kembla Town Centre Façade Program.

REPORT AUTHORISATIONS

Report of: Susan Wardle, Manager Community Cultural and Economic Development (Acting)
Authorised by: Kerry Hunt, Director Community Services (Acting)

ATTACHMENTS

- 1 Proposed Recipients Port Kembla Town Centre Facade Program
- 2 Port Kembla Town Centre

BACKGROUND

The NSW Government established the Port Kembla Community Investment Fund (PKCIF) to fund projects that reactivate, enhance or build community amenity in Port Kembla using funds from the Port leasing arrangement. Council applied for and was successful in receiving \$300,000 funding from the NSW Government to administer a Port Kembla Town Centre Façade Program. This program aims to improve the appearance of the streetscape by activating street frontages whilst celebrating the heritage and character of the town centre. The upgrade of facades/shopfronts will activate, enhance and build community amenity in Port Kembla and provide an economic benefit to the Port Kembla Town Centre.

In December 2016, Council entered into a Funding Deed with the NSW Government for a Port Kembla Town Centre Façade Program. Under this Funding Deed, all façade works under the program must be complete by 30 June 2018. Council will partner with individual landowners who choose to participate in the program. Upon agreement of the works to be undertaken, Council will enter into an agreement with individual landowners, which will clearly outline the works to be undertaken, Council's financial contribution and the timeframes for work to be completed.

The objectives of the Façade Program include:

1. Assist in re-establishing Port Kembla as an attractive place to live, work and play.
2. Raise the profile of the Port Kembla Town Centre and encourage owners to look after and improve their shopfronts, filling vacant tenancies and raise the economic profile.
3. To conserve and celebrate the history and built heritage of the main street of Port Kembla.
4. Enhance the appearance of Port Kembla Town Centre's streetscape and showcase good design outcomes.
5. Encourage shopfront improvements that activate Port Kembla Town Centre's streets and public spaces.
6. Encourage shopfront improvements that will increase the lifespan of buildings and allow for conservation of existing buildings and character.
7. Address issues of illegal and non-compliant and/or dangerous awnings.

8. Council to work in partnership with private landowners and business operators to support and enhance Port Kembla's Town Centre.

The Port Kembla Façade Program offers eligible applicants a rebate of up to 50% of eligible costs to a maximum of \$20,000. Eligible works under the program include (but not limited to):

- Restoration, repair and cleaning of exterior finishes
- Tiling and painting to the façade
- Lighting
- New shopfront windows
- Removal/relocation of air conditioning units, roller shutters/security grills and signage; and
- Repair or replace awning structure.

Council engaged consultants to undertake audits of eligible buildings to provide recommendations and ideas of how to improve the building facades to inform the basis for any work funded under the program. Physical inspections were carried out on all properties in the town centre during February-March 2017. These inspections focused on the physical condition, streetscape activation and character of each building, with a rating provided on each of these elements.

Following this evaluation, the consultants recommended potential improvements to the building facades, with an emphasis on upgrades that will enhance the street as a whole, improve the pedestrian experience and support the unique heritage character of the area. A Design Guide was also developed to assist applications in understanding how best to upgrade their façade.

Council held an information session on 11 April 2017 at Red Point Artists Workshop 10, Port Kembla. The session provided detailed information on the consultant's findings and further detail on the scheme, including eligibility, works funded, timeframes and the application process. Information packs were distributed which included the individual building audits; design guidelines and the application forms to apply for funds. Additional information was also provided online.

Applications for the program opened on 20 April 2017 and closed on 18 May 2017. Local businesses and landowners were able to apply for funding, through a matched financial incentive up to a maximum of \$20,000.

In total, Council received 25 applications for funding under the program. An Assessment Panel established by the Manager Community Cultural and Economic Development (Acting) reviewed all applications received in accordance with the following assessment criteria:

1. The extent to which the project is consistent with the recommendations of the Audit Recommendations Report and the Design Guide (50%)
2. The extent to which the proposal contributes to the broader heritage conservation and character of the Port Kembla Town Centre (15%)
3. The extent to which the project presents a shopfront that is physically and visually linked to the street, encouraging more pedestrian activity (10%)
4. The extent to which the proposal contributes to a cluster of eligible properties committing to undertaking improvements (20%)
5. The extent to which the application supports local small businesses (5%).

Based on the assessment and subsequent ranking of compliant applications, it was determined by the Panel that 20 applicants would be recommended for Council endorsement to receive funding.

PROPOSAL

It is proposed Council resolve to provide funding to the proposed recipients listed on Attachment 1 under the Port Kembla Town Centre Façade Program.

CONSULTATION AND COMMUNICATION

Under section 356 of the *Local Government Act 1993*, Council is required to give 28 days' public notice before funding is endorsed. Public exhibition opened on 17 June 2017 and closed 14 July 2017. During the notification, no submissions were received by Council on the Program.

Communication with the Port Kembla Community

Council has established an internal communications group that meets regularly to discuss progress of projects funded under the PKCIF, including the Port Kembla Town Centre Façade Program. This group ensures all communication going out to Port Kembla residents and businesses is consistent and regular updates are provided.

- 1 A new website PK2505 <https://pk2505.com.au> has been established and will be regularly updated by Council's Community Engagement team. This website provides an overview of all projects funded under the PKCIF and will provide the community with updated information on the status of the projects.
- 2 A newsletter *The Port Kembla Community Update* has also been established as another way to keep local residents updated on key projects funded under the PKCIF.

A Council officer attends the Port Kembla Chamber of Commerce meetings to provide an update on Council projects funded under the PKCIF.

PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 Goal 5: *"We are a healthy community in a liveable city"*.

Economic Impacts

On the recommendation of the Assessment Panel, the Port Kembla Town Centre Façade Program will provide funding for 20 properties. The table below outlines the breakdown between Council and the private sector on investment in the Port Kembla Town Centre under the program.

	Total Works
Wollongong City Council Contribution [PKCIF]	\$256,733
Private Investment	\$367,401
TOTAL	\$624,134

The program will enhance the attractiveness of the Port Kembla Town Centre to investors, business operators, local residents, tourists, visitors and shoppers. It will support and promote businesses and provide an economic benefit to the town centre.

Research suggests that high quality facades and shopfronts encourage people to spend more time in attractive surrounds and directly and indirectly improve perceptions of safety. Studies from around the world have demonstrated that improved streetscapes have a strong correlation with low vacancy rates.

Social/Cultural Impacts

Façade improvements have the capacity to enable rapid change for a city's perception as it creates a more social environment and is a highly visible element of a city to passersby. Building facades and shopfronts immediately affect the perceptions one has of a city. Spaces that appear living are proven to stimulate perceptions of safety. Improvements to facades and streetscapes have the capacity to enable rapid change to the liveability factor and how inviting a city feels.

RISK ASSESSMENT

Under the Funding Deed entered into with the NSW Government, all works under the Façade Program must be complete by 30 June 2018. There is a risk that the individual building owners will not have their

building works completed under the timeframes, however, this has been clearly communicated to all applicants in both the application Terms and Conditions, as well as the Funding Deed with Council.

FINANCIAL IMPLICATIONS

Under the Funding Deed entered into with the NSW Government, Council received \$300,000 to undertake a Port Kembla Town Centre Façade Program.

The total cost of successful applications under this program is \$256,733.

CONCLUSION

It is proposed Council resolve to provide funding to the proposed recipients outlined in Attachment 1 under the Port Kembla Town Centre Façade Program.

Attachment 1

Port Kembla Town Centre Façade Program: Proposed Recipients

At the meeting of 31 July 2017, Council proposes to pass a resolution to provide funding under the Port Kembla Town Centre Program.

Port Kembla Address	Applicant Name	Recommended Reimbursement	Heritage Item
28 Wentworth Street	Despotovski Holdings Pty Ltd	\$6,289	N
30 Wentworth Street	Mr G Jonovski & Mrs A Jonovski	\$11,944	N
39-41 Wentworth Street	Ms S Del Sherwood & Mr T Goulder	\$18,750	N
40 Wentworth Street	Mr A Robinson & Mrs L Robinson	\$17,848	N
42-52 Wentworth Street	Despotovski Holdings Pty Ltd	\$5,390	N
53 Wentworth Street	Xilokastro Holdings Pty Ltd	\$2,970	N
54-58 Wentworth Street	Mr Z Despotovski	\$13,937	Y
55 Wentworth Street	Ms J Hunter	\$5,400	N
63 Wentworth Street	Ms D Early	\$11,375	N
64-66 Wentworth Street	Mateska Pty Ltd	\$20,000	N
68-70 Wentworth Street	Mateska Holdings Pty Ltd	\$11,495	N
72-74 Wentworth Street	Mr J Gorr	\$12,629	N
77-79 Wentworth Street	Mrs P Kapsimalis & Est Late P Kapsimalis	\$16,150	N
80-82 Wentworth Street	Mr K Fulford & Mrs L Fulford	\$8,134	N
81-83 Wentworth Street	Port Properties Pty Ltd	\$11,325	N
108-110 Wentworth Street	Mrs D Porcella	\$20,000	N
117-119 Wentworth Street	Donna Porcella Holdings Pty Ltd	\$20,000	N
129-131 Wentworth Street	Heragu Pty Ltd	\$20,000	N
133-139 Wentworth Street	VIVO Enterprises Pty Ltd	\$20,000	N
141-147 Wentworth Street	Pipduck Pty Ltd	\$3,097	N

Attachment 2

Port Kembla Town Centre



ITEM 8

DELEGATIONS TO THE GENERAL MANAGER, LORD MAYOR AND DEPUTY LORD MAYOR - CARETAKER PROVISIONS

The Local Government (General) Regulation 2005 contains provisions regarding the exercise of council functions during caretaker period. This report recommends a temporary amendment to the General Manager's delegations to allow for the acceptance of tenders satisfying the necessary legislative criteria during the caretaker period through to the first ordinary meeting of the Council following the 9 September 2017 election.

RECOMMENDATIONS

- 1 Council note the report on Delegations to the General Manager – Caretaker Provisions.
- 2 Council delegate the authority to accept, or otherwise, tenders up to the value of \$1.57 million to the General Manager, Lord Mayor and Deputy Lord Mayor, by a majority determination, between 1 August 2017 and 8 September 2017; and to the General Manager and Lord Mayor, between 9 September 2017, by unanimous determination, and the date of the first Ordinary Meeting of Council following the 9 September 2017 election; with a report on the exercise of such delegation to be provided to the second Ordinary Meeting of Council following elections.

REPORT AUTHORISATIONS

Authorised by: Brian Jenkins, Director Corporate Services (Acting)

ATTACHMENTS

There are no attachments for this report.

BACKGROUND

Clause 393B of the Local Government (General) Regulation 2005 (the Regulation) contains provisions regarding the exercise of council functions during caretaker period. It provides that:

- (1) *The following functions of a council must not be exercised by the council, or the general manager or any other delegate of the council (other than a Joint Regional Planning Panel or the Central Sydney Planning Committee), during a caretaker period:*
 - (a) *entering a contract or undertaking involving the expenditure or receipt by the council of an amount equal to or greater than \$150,000 or 1% of the council's revenue from rates in the preceding financial year (whichever is the larger),*
 - (b) *determining a controversial development application, except where:*
 - (i) *a failure to make such a determination would give rise to a deemed refusal under section 82 of the [Environmental Planning and Assessment Act 1979](#), or*
 - (ii) *such a deemed refusal arose before the commencement of the caretaker period,*
 - (c) *the appointment or reappointment of a person as the council's general manager (or the removal of a person from that position), other than:*
 - (i) *an appointment of a person to act as general manager under section 336 (1) of the Act, or*
 - (ii) *a temporary appointment of a person as general manager under section 351 (1) of the Act.*
- (2) *Despite subclause (1), such a function may be exercised in a particular case with the consent of the Minister.*

(3) *In this clause:*

"caretaker period" means the period of four weeks preceding the date of an ordinary election.

"controversial development application" means a development application under the [Environmental Planning and Assessment Act 1979](#) for which at least 25 persons have made submissions under section 79 (5) of that Act by way of objection.

With reference to 393B(1)(a), applying the 1% to Council's 2016-17 rates, results in a maximum tender delegation threshold of \$1.57 million.

The General Manager's delegations as adopted by the Council on 12 December 2016 are currently:

1. *Council delegate to the General Manager all of the delegable functions of the Council, but excluding:*
 - a. *Those functions specified in clauses (a) to (u) of section 377(1) of the Local Government Act 1993.*
 - b. *The granting of leases of Council property where the total lease rental payable to Council for the term of the lease is more than \$1 million (including GST).*
 - c. *The granting of leases of Council property where the term of the lease is for 10 years or more.*
 - d. *The acceptance of tenders required to be invited pursuant to section 55 of the Local Government Act 1993 as at the date of this delegation.*
2. *Council fix the amount of \$3,000 as the amount above which any individual rate charge or debt owed to the Council may be written off only by resolution of the Council pursuant to clauses 131(1) and 213(2) of the Local Government (General) Regulation 2005.*
3. *Council delegate to the General Manager the determination of certain Development Applications in accordance with the Independent Hearing and Assessment Panel Charter.*

As the delegations currently stand, the General Manager does not have the authority to accept tenders greater than \$150,000 and such tenders are reported to Council for resolution. Note, section 377(1)(i) precludes the granting of delegation to accept a tender to provide services currently provided by members of staff of the council.

PROPOSAL

The final ordinary meeting for this term of Council is 31 July 2017. The caretaker period for the September 2017 local government elections commences on Friday, 11 August 2017 and ends on Saturday, 9 September 2017. Council has traditionally not scheduled ordinary meetings across school holiday periods. Taking into consideration likely timeframes for the declaration of the poll and then Term 3 of the school holidays (23 September – 8 October), there is the potential the first ordinary meeting for the newly elected Council may not occur until October 2017. This is a potential gap of some 10 weeks between ordinary meeting, across which Council is obliged to ensure continuity of services to the community.

Given the significant increase in Council's annual capital works program, effective utilisation of this 10 week period minimises risk of not achieving stated objectives. As such, it is recommended that a temporary increased level of delegation for acceptance of tenders (up to the maximum permitted under clause 393B of the Regulation) be provided to the General Manager to be exercised in conjunction with the Lord Mayor and Deputy Lord Mayor (whilst in-situ), in the event that a tender satisfying the necessary criteria falls across that period. There are a range of Request for Tender processes currently underway, and some in the preliminary planning stages. The exact dates for awarding of tenders can vary, and some fall within the 10-week period between Ordinary Meetings of Council.

Because of the dollar threshold being 1% of Council's revenue from rates in 2016/17 (\$1.57 million), a number of tender processes will be precluded from being determined under delegation, and will hold

over to the next available meeting of Council. However, granting the delegation is a prudent course of action.

Information on the exercise of any such delegation will be reported to elected members, similar to the process for reporting on the exercise of temporary tender delegations which was employed across the Christmas/New Year period.

CONSULTATION AND COMMUNICATION

In considering potential options available to Council, the matter of delegations, specifically tenders, has been canvassed with Executive Management, Infrastructure & Works Directorate, Finance, Executive Strategy, and Legal.

Communications relating to determination of controversial development applications as defined in the Regulation have been circulated to appropriate officers.

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 core business activities as detailed in the Governance and Administration Service Plan 2017-18.

CONCLUSION

The impending commencement of caretaker provisions in the lead up to 2017 elections and the period of time likely to lapse between declaration of poll and the first ordinary meeting of the new Council, make it timely for Council to review the current delegations to the General Manager, and consider a temporary amendment, specifically in relation to the acceptance of tenders.

ITEM 9

PROPOSED DEDICATION OF COMMUNITY LAND AS PUBLIC ROAD –
CORDEAUX ROAD, CORDEAUX HEIGHTS

Council has recently completed the Mount Kembla Pathway Project which involved the construction of a shared pathway, the reconstruction and refurbishment of two bridges and road improvement works along Cordeaux Road through to the foothills of Mount Kembla.

Due to the constraints on site, part of those road works had to be constructed on portions of the adjoining Community Land along Cordeaux Road and this report seeks approval for the dedication of those portions of Community Land as public road.

RECOMMENDATION

- 1 In accordance with Section 47(f)(2)(a) of the Local Government Act 1993, authority be granted for the portions of Lots 24 and 25 DP 737238 Cordeaux Road, Cordeaux Heights, shown shaded dark grey on the attached plan, to be dedicated as public road by the placement of a notice in the NSW Government Gazette under Section 10 of the Roads Act 1993.
- 2 Authority be granted to affix the Common Seal of Council to the survey documents and any other documentation required to give effect to this resolution.

REPORT AUTHORISATIONS

Report of: Jenny Towers, Manager Property and Recreation (Acting)
Authorised by: Kerry Hunt, Director Community Services (Acting)

ATTACHMENTS

- 1 Plan of portions of Lots 24 and 25 DP 737238 Cordeaux Road, Cordeaux Heights proposed to be dedicated as public road

BACKGROUND

Council has completed the Mount Kembla Pathway Project which involved the construction of a shared pathway, the reconstruction and refurbishment of two bridges and road improvement works along Cordeaux Road through to the foothills of Mount Kembla.

As the site was severely constrained due to the topography and the adjoining Dendrobium Mine rail line, the road works could not be wholly contained within the existing road reserve and had to be partly constructed on the adjoining Council owned Community land known as Lots 24 and 25 DP 737238.

Under Section 47(f)(2)(a) of the Local Government Act 1993, Community Land can be dedicated as public road for the purpose of widening an existing public road.

Therefore, it is proposed that the subject land be dedicated as public road by the placement of a notice in the NSW Government Gazette under Section 10 of the Roads Act 1993.

PROPOSAL

It is proposed that a notice be placed in the NSW Government Gazette to dedicate the portions of Community Land known as Lots 24 and 25 DP 737238 under Section 10 of the Roads Act 1993.

CONSULTATION AND COMMUNICATION

Council's Project Delivery Division was consulted with no objections raised.

PLANNING AND POLICY IMPACT

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 2017-18.

FINANCIAL IMPLICATIONS

The costs incurred in this matter include survey costs and the cost of placing the notice in the NSW Government Gazette. These costs will be covered in the current budget.

CONCLUSION

The dedication of the subject land as public road will formalise the construction of the road on the Community Land. Therefore, it is recommended that the dedication be approved.



ITEM 10 EXPRESSION OF INTEREST: PANEL OF CONDUCT REVIEWERS

The Model Code of Conduct framework requires Council to establish a panel of Conduct Reviewers, for a term of up to four years, following a prescribed Expression of Interest process.

The Panel was last established by Council in July 2013, through the then Southern Councils Group. A new Expression of Interest process was recently undertaken by the Illawarra Pilot Joint Organisation on behalf of its four member Councils: Wollongong; Shellharbour; Kiama; and Shoalhaven Councils.

RECOMMENDATION

Council establish a panel of Conduct Reviewers, for a term of four years, comprising:

- Centium Group Pty Ltd
- O'Connell Workplace Relations Pty Ltd
- O'Connor Marsden & Associates Pty Ltd
- SINC Solutions Pty Ltd
- TressCox Lawyers
- Williams Love & Nicol Pty Ltd T/as Bradley Allen Love Lawyers
- Workplace Investigations Services P/L T/as WISE Workplace.

REPORT AUTHORISATIONS

Authorised by: David Farmer, General Manager

ATTACHMENTS

There are no attachments for this report.

BACKGROUND

The Office of Local Government's Procedure for the Administration of the Model Code of Conduct requires all councils to establish a panel of Conduct Reviewers by resolution of Council, following a prescribed Expression of Interest (EOI) process. The Procedure allows councils to share a panel with other councils.

The Procedure provides for all Code of Conduct complaints made against Councillors, where an initial assessment by the General Manager is that the complaint cannot be resolved by negotiation or other means, to be referred by the General Manager to the Complaints Coordinator for referral to a Conduct Reviewer for assessment, investigation and report in accordance with the Procedure.

The Illawarra Pilot Joint Organisation was engaged, at no cost to its member councils, to conduct an Expression of Interest process for the establishment of a shared panel of Conduct Reviewers.

Expressions of interest were invited by newspaper advertisement and Tenderlink and a total of 10 expressions of interest were received and evaluated against the following criteria:

Mandatory criteria:

- 1 Compliance with the minimum eligibility requirements as set out in clause 3.5 of the OLG Procedures for the Administration of the Model Code of Conduct
- 2 Compliance with Insurance Requirements
- 3 Completed Conflict of Interest and Fair Dealing Declaration
- 4 Agreement with Key Performance Indicators.

Assessable criteria:

- 5 Demonstrated knowledge and experience of:
 - a) Local government
 - b) Public administration
 - c) Investigations
 - d) Alternative dispute resolution
 - e) Code of Conduct reviews - references provided
- 6 Resources, Capacity and Capability
 - a) Number of nominated personnel - qualifications, specialist skills
 - b) Responsiveness and reporting.

A total of ten Expressions of Interest were received, (in alphabetical order) from:

- Austrace Investigations Qld P/L
- BDM Independent Consultants
- Centium Group Pty Ltd
- O'Connell Workplace Relations Pty Ltd
- O'Connor Marsden & Associates Pty Ltd
- PKF Forensic and Risk Services (Melbourne & Sydney) Pty Ltd
- SINC Solutions Pty Ltd
- TressCox Lawyers
- Williams Love & Nicol Pty Ltd T/as Bradley Allen Love Lawyers
- Workplace Investigations Services P/L T/as WISE Workplace

PROPOSAL

Following the scoring of mandatory and assessable criteria, Expressions of Interest were ranked utilising a value for money calculation. It is recommended that a Panel of the top ranked seven Reviewers be established for a period of four years.

CONSULTATION AND COMMUNICATION

Representatives of the four Illawarra Pilot Joint Organisation member Councils participated in the assessment of submissions received during the Expression of Interest Process.

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 2017-18.

FINANCIAL IMPLICATIONS

Conduct Reviewers will be engaged, as the need arises, on a fee for service basis.

CONCLUSION

The appointment of a shared Panel of Conduct Reviewers for a term of four years is submitted for adoption by Council.

ITEM 11 TENDER T17/25 - BOTANIC GARDENS SHADE STRUCTURE

This report recommends that Council decline to accept any of the tenders submitted for the construction of the Botanic Gardens Shade Structure, in accordance with clause 178(1)(b) of the Local Government (General) Regulation 2005.

This recommendation is being made as a result of the formal withdrawal of the highest ranked contractors tender on 27 July 2017 and the consequent necessity to negotiate with and further consider the offers of other suitable contractors, particularly in relation to their financial and resource capacity to undertake the works.

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 Botanic Gardens Shade Structure 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 contractors 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 current tenderers and, in the event of failure of negotiations with those tenderers, any other contractor, 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.

REPORT AUTHORISATIONS

Report of: Glenn Whittaker, Manager Project Delivery

Authorised by: Greg Doyle, Director Infrastructure and Works - Connectivity Assets and Liveable City

ATTACHMENTS

- 1 Location Plan

BACKGROUND

The shade house structure is located at the Botanic Gardens Nursery, Keiraville. As part of Council's asset management program, a structural assessment was conducted and identified that approximately one third of the roof system has failed or is at risk of failure with the remainder no longer in a serviceable condition. A scope of works was prepared to rectify the works including:

- Design and construction of a new galvanised steel frame and cabling system
- Construction of a new reinforced slab to improve the collection of water for recycling
- Replace and renew underground services
- Supply and fix a new shade cloth to roof and walls
- Supply and commission new irrigation system.

Tenders were invited from four contractors by the selective tender method with a close of tenders of 10.00 am on 4 July 2017.

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 Governance + Information, Finance, Project Delivery and Property + Recreation 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 Criteria

Reference check to confirm previous performance against assessable criteria.

Financial Capacity - Tenderers may be required to provide the information required by an independent financial assessment provider engaged by Council to provide an assessment of the financial capacity of the tenderer.

Assessable Criteria and Weightings

- 1 Cost to Council – 40%
- 2 Appreciation of scope of works and construction methodology – 15%
- 3 Experience and satisfactory performance in undertaking projects of similar size, scope and risk profile - 10%
- 4 Staff qualifications and experience – 5%
- 5 Proposed Sub-contractors – 10%
- 6 Project Schedule – 5%
- 7 Demonstrated strengthening of local economic capacity - 5%
- 8 Workplace Health and Safety Management System – 5%
- 9 Environmental Management Policies and Procedures – 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 lists the tenders received.

TABLE 1 – LIST OF TENDERS RECEIVED

Name of Tenderer
Edwards Constructions (NSW) Pty Ltd
Project Coordination (Australia) Pty Ltd
Zauner Constructions Pty Ltd

Subsequent to the Tender Assessment Panel's recommendation that Edwards Constructions (NSW) Pty Ltd be engaged to construct the shade house structure at the Botanic Gardens Nursery, on 27 July 2017, Edwards Construction (NSW) Pty Ltd notified Council of the withdrawal of its tender due to an unforeseen unavailability of resources for the project.

PROPOSAL

As a result of the withdrawal of the highest ranked tender, Council should authorise that negotiations be entered into, firstly with the other tenderers, and in the event of the failure of negotiations with those tenderer/s, negotiations be entered into with any other suitable contractor, with a view to entering into a contract in relation to 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

Consultation has been undertaken with Botanic Gardens staff and management regarding the construction works and time frames.

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

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 2017-18
Strategy	5 Year Action	Annual Deliverables
5.5.2 A variety of quality public spaces and opportunities for sport, leisure, recreation, learning and cultural activities in the community	5.5.2.3 Develop a Regional Botanic Garden of Excellence	Enhance Botanic Garden visitor experience via programs, interpretation, education and events

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 and the negotiation process will be undertaken in accordance with Council's Procurement Policies and Procedures.

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 Annual Plan –

2017/18 Capital Budget

CONCLUSION

Council should endorse the recommendations of this report to decline to accept any of the tenders submitted and authorise the General Manager to undertake and finalise negotiations with a suitable contractor to undertake the works.



While every effort has been made to ensure the highest possible quality of data, no liability will be accepted for any inaccuracy of the information shown.
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ITEM 12

TENDER T17/29 - WOLLONGONG MEMORIAL GARDENS FRONT QUADRANT GARDEN STAGE 3

Council has sought tenders for the construction of an extension to the Front Quadrant Gardens at the Wollongong Memorial Gardens. This report recommends that Council decline to accept any of the tenders submitted for Wollongong Memorial Gardens Front Quadrant Garden Stage 3 in accordance with clause 178(1)(b) of the Local Government (General) Regulation 2005.

The Tender Assessment Panel has concluded the tender received is not acceptable for the reason that pricing of the project from the tenderer is significantly more than estimates provided during the design process and it is anticipated that negotiations with the tenderer or any other party in relation to a revised scope of works will not result in a satisfactory outcome being achieved.

RECOMMENDATION

- 1 In accordance with clause 178(1)(b) of the Local Government (General) Regulation 2005, Council decline to accept any of the tenders received for Wollongong Memorial Gardens Front Quadrant Garden Stage 3.
- 2 In accordance with clause 178(3)(b) of the Local Government (General) Regulation 2005, Council invite fresh open tenders for the Wollongong Memorial Gardens Front Quadrant Garden Stage 3.

REPORT AUTHORISATIONS

Report of: Jenny Towers, Manager Property and Recreation (Acting)

Authorised by: Kerry Hunt, Director Community Services (Acting)

ATTACHMENTS

There are no attachments for this report.

BACKGROUND

Tenders were required to be invited for the construction of the Wollongong Memorial Gardens Front Quadrant Garden Stage 3. The works, located at Wollongong Memorial Gardens, were an extension of previous works at the site to provide memorialisation sites for the public to purchase. Stage 3 is part of an overall concept plan for the gardens. A design estimate was internally provided with works estimated at \$243,000.

Tenders were invited by the selective tender method from Council's pre-qualified trade panel with a close of tenders of 10 am on Thursday, 29 June 2017.

One tender was received by the close of tenders and has 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 and City Works Divisions.

The Tender Assessment Panel assessed the tender 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 - 5%
- 3 Experience and satisfactory performance in undertaking projects of similar size, scope and risk profile - 5%
- 4 Staff Qualifications & Experience – 5%
- 5 Proposed Sub-Contractors – 5%
- 6 Project Schedule - 5%
- 7 Demonstrated strengthening of local economic capacity - 5%

- 8 Workplace health and safety management system - 5%
- 9 Environmental management policies and procedures - 5%

PROPOSAL

The Tender Assessment Panel has concluded that the tender is not acceptable and has recommended that the tender be declined and a fresh open tender process be conducted for the identified works.

CONSULTATION AND COMMUNICATION

Members of the Tender Assessment Panel

PLANNING AND POLICY IMPACT

This report contributes to the delivery of Wollongong 2022 goal “We have an innovative and sustainable economy” and “We are a healthy community in a liveable city”. It specifically delivers on the following

Community Strategic Plan	Delivery Program 2012-2017	Annual Plan 2017-18
Strategy	5 Year Action	Annual Deliverables
5.1.5 The long term needs of the community, including our people and our places, are effectively planned for	5.1.5.2 Carry out commercial business management of Council's operational lands	Manage council's commercial businesses to maximise return

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.

CONCLUSION

The selective tender undertaken resulted in just one response which was not considered to provide value for money. It would therefore be appropriate to go to an open tender in order to seek greater participation and a competitive outcome.

ITEM 13 END OF TERM REPORT 2012-2017

In accordance with the Integrated Planning and Reporting requirements of the *Local Government Act, 1993*, Council is required to produce an End of Term Report detailing progress and significant achievements in the implementation of the Community Strategic Plan during its Term.

Our End of Term Report measures achievements against the six interconnected community goals identified in the Wollongong 2022 - Community Strategic Plan, and provide an update to the community on how effective Council has been in facilitating and delivering the Plans goals and objectives.

In addition to the End of Term Report, Council has collated a Community Indicator Report. This document details objectives from the Community Strategic Plan and compares baseline data with subsequent years' performances. This report demonstrates that Wollongong, as a whole, is progressing toward achieving the community vision, goals and objectives in the Wollongong 2022 - Community Strategic Plan.

RECOMMENDATION

The End of Term Report 2012-2017 be adopted.

REPORT AUTHORISATIONS

Authorised by: David Farmer, General Manager

ATTACHMENTS

- 1 End of Term Report 2012-2017 (*Under Separate Cover*)
- 2 Community Indicator Report (*Under Separate Cover*)

BACKGROUND

In accordance with the Integrated Planning and Reporting requirements of the *Local Government Act, 1993*, Council is required to produce an End of Term Report documenting progress in implementing the Community Strategic Plan during its Term.

As Council approached its initial end of term, and with the uncertainty of the merger proposal, a preliminary End of Term Report was presented at the 26 June 2016 Council meeting.

On 30 August 2016 the Office of Local Government issued Circular 16-28 *Annual and end-of-term reporting requirements for councils with deferred elections*, which stated – *the requirement under the Integrated Planning and Reporting Guidelines (IP&R) to table an end-of-term report is deferred for councils with deferred elections and that the report must be tabled at the meeting immediately prior to the deferred election date.*

The End of Term Report has been updated from the 2016 version to reflect further progress achieved during the extended Term of the existing Council.

End of Term Report

The End of Term Report provides the community with a status update of how the Council is progressing toward achieving the goals established in the Wollongong 2022 - Community Strategic Plan. These achievements have been implemented via the Delivery Program and Annual Plans from 2012 through to 2017.

The six interconnected Community Goals of the Plan are:

- 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

Overall, Wollongong City Council is on track to achieve the objectives in Wollongong 2022. Some of the key highlights from the Term include:

- Achieving the Securing our Future Financial Sustainability Targets
- Progressing the major infrastructure works in the West Dapto Urban Release project
- Securing landfill capacity for the community through strategic planning and major infrastructure works at the Wollongong Waste and Resource Recovery Park (Whytes Gully)
- Revitalising the City Centre, including the Crown Street Mall refurbishment
- Connecting the city through the significant investment in our footpath and cycle network.

The End of Term Report should be read in conjunction with Attachment A - Resourcing Strategy Update and Attachment B - Community Indicator Report [enclosed within the Report].

Attachment A – Resourcing Strategy Update

Whilst the Community Strategic Plan and Delivery Program express the community's long term aspirations, the Resourcing Strategy outlines Council's responsibilities and how these will be achieved through the allocation of our resources (finances, assets and people).

The Resourcing Strategy is a long term plan spanning ten years, with the exception of the Workforce Strategy (4 years only). It consists of three components: Long Term Financial Plan; Asset Management Planning and the Workforce Management Strategy.

This Resource Strategy Update provides a status report in relation to our allocation of resources.

Attachment B – Community Indicator Report

The Community Indicator Report brings together data from a range of sources to report on how we, as a community, are working toward achieving the community vision, goals and objectives as identified in Wollongong 2022.

Each Community Goal contained in Wollongong 2022 identifies where we want to be in 2022, and the indicators reflect the whole of community efforts to achieve these Goals. The indicators are high level and outcome driven rather than program based and support us in understanding whether our collective efforts are making a difference to the community in which we work, play and learn. These indicators are also crucial tools for planning and ensuring policies implemented by Council, State Government and educational institutions are grounded in evidence.

The report details the baseline year data for each indicator and the subsequent years following, and where possible, data prior to the baseline year has also been provided. There are some limitations to the data, as a significant portion is sought from secondary sources and the frequency of data collection is out of Councils control.

CONSULTATION AND COMMUNICATION

The End of Term Report was compiled utilising quarterly review and annual report data supplied by each division, and a range of divisional and middle managers were also consulted. Attachment A was a collaboration of Manager Finance, Manager Infrastructure, Strategy and Planning and Manager Human Resources. Attachment B was derived from the works undertaken by University of Technology: Centre for Local Government in 2013; with data sourced from a wide range of internal staff and external agencies.

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 core business activities as detailed in the Corporate Strategy Service Plan 2017-18.

CONCLUSION

Council has prepared its End of Term Report in accordance with legislative requirements. The report highlights that Wollongong City Council is on track to achieve the objectives in Wollongong 2022 – Community Strategic Plan, and that during the term Council has made some significant achievements in securing financial sustainability targets and implementing major infrastructure to support growth, community services and to revitalise our city.

ITEM 14 JUNE 2017 FINANCIALS - PRELIMINARY AND PRE AUDIT RESULT

This report presents the preliminary and pre audit results for the year ending 30 June 2017. This result is subject to change pending receipt of the insurance pool valuation, workers' compensation actuarial report, finalisation of the asset capitalisation and disposal process and completion of the annual independent audit.

The June 2017 financial results are positive compared to budget across the key indicators. The Operating Result [pre capital] shows a favourable result compared to budget of \$19.5M. This includes the early payment of the 2017-18 Financial Assistance Grant of \$9.0M and any variation in restricted income and expenditure which creates a timing issue. The Funds Available from Operations result shows a variation of \$14.7M which excludes timing issues other than the early payment of FAG and, therefore, is more indicative of operating performance over the period.

The overall Funds Result variance is slightly lower at \$13.8M as it includes the additional \$1.2M of general revenue applied to fund an increased capital works program and a slightly lower than budgeted debt repayment.

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

Council has expended \$91.2M on its capital works program representing 102.5% of the annual budget. Council has recognised additional capital contributions in addition to this amounting to \$29.5M.

RECOMMENDATION

The financials be received and noted.

REPORT AUTHORISATIONS

Report of: Tana Ramsden, Manager Finance (Acting)

Authorised by: Tom Tyrpenou, Director Corporate Services (Acting)

ATTACHMENTS

- 1 Income and Expense Statement - June 2017
- 2 Capital Project Report - June 2017
- 3 Balance Sheet - June 2017

BACKGROUND

This report presents the Income and Expense Statement and Balance Sheet for June 2017. The preliminary and pre audit result for the year ending 30 June 2017 indicates Operating Surplus [pre capital] of \$30.8M and a Total Funds Surplus of \$11.9M.

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 Actual	Variation
KEY MOVEMENTS		1-Jul	30-Jun	30-Jun	
Operating Revenue	\$M	262.0	267.3	281.6	14.3
Operating Costs	\$M	(262.1)	(256.0)	(250.8)	5.2
Operating Result [Pre Capital]	\$M	(0.0)	11.3	30.8	19.5
Capital Grants & Contributions	\$M	32.9	12.0	42.0	30.0
Operating Result	\$M	32.9	23.4	72.9	49.5
Funds Available from Operations	\$M	61.8	65.4	80.1	14.7
Capital Works		101.6	89.0	91.2	(2.2)
Contributed Assets		-	-	29.5	(29.5)
Transfer to Restricted Cash		-	9.7	9.7	-
Borrowings Repaid	\$M	7.3	7.3	7.2	0.1
Funded from:					
- Operational Funds	\$M	61.8	58.1	80.1	14.7
- Other Funding	\$M	47.1	38.7	69.3	30.6
Total Funds Surplus/(Deficit)	\$M	(0.1)	(1.9)	11.9	13.8

Financial Performance

The end of year preliminary and pre audit Operating Result [pre capital] shows a positive variance compared to budget of \$19.5M. This result includes a number of large adjustments that are related to timing of grant receipts and project completion and non-cash adjustments related to employee leave and carbon tax provisions. The following is a summary of impacts:

- Early payment 2017-18 Financial Assistance Grant **\$9.0M (F)**. Councils received a preliminary payment of the first two quarters of the 2017-18 allocation during June 2017.
- Non cash variation **\$3.1M (F)**. Major positive variations include the elimination of remaining Carbon Tax provision (\$1.9M), revaluation of employee entitlements (\$0.9M) that is mainly due to application of current discount rates and depreciation (\$0.8M). These are offset by loss on asset disposal (\$0.6M). These items do not affect the funds result.
- Projects in progress **\$2.0M (F)**. This improvement is due to timing in delivery of a number of projects that are expected to be finalised in 2017-18. These projects are supported by funding of \$1.5M from restricted cash and as such the impact on the Fund Result is reduced to \$0.5M.
- Additional internal services used in the delivery of capital works **\$0.9M (F)**.
- Improvements relating to prior year matters **\$0.6M (F)**. This included final payment of \$0.4M for the Independent Insurance Company insolvency settlement as well as recovery of legal costs and adjustment for prior year insurance accruals.
- Other operational variations **\$3.9M (F)**. Other operational savings include lower than budgeted employee costs of \$1.6M that are associated with increased level of vacancies through the potential merger period and a range of other positive variances across the organisation.

The Operating Result, inclusive of capital contributions, shows a positive variance compared to budget of \$49.5M. As well as the items discussed above, this result includes the recognition of contributed assets of \$29.5M and improvements in developer cash contributions. Neither of these transactions impacts the Fund Result.

Funds Result

The Total Funds Result includes a positive variance of \$13.8M. This result excludes non-cash variances, timing of grant receipts and progress of funded projects discussed above but includes the net increase in capital expenditure of \$1.1M.

Capital Budget

As at 30 June 2017, Council had expended \$91.2M or 102.5% of the approved annual capital program of \$89.0M. This over expenditure has been partially offset by increased funding (\$1.0M) leaving an impact of \$1.2M to the funds result.

Liquidity

Council's cash and investments increased during June 2017 to holdings of \$167.3M compared to \$163.0M at the end of May 2017. This is largely due to the early payment of instalments relating to the 2017-18 Financial Assistance Grant.

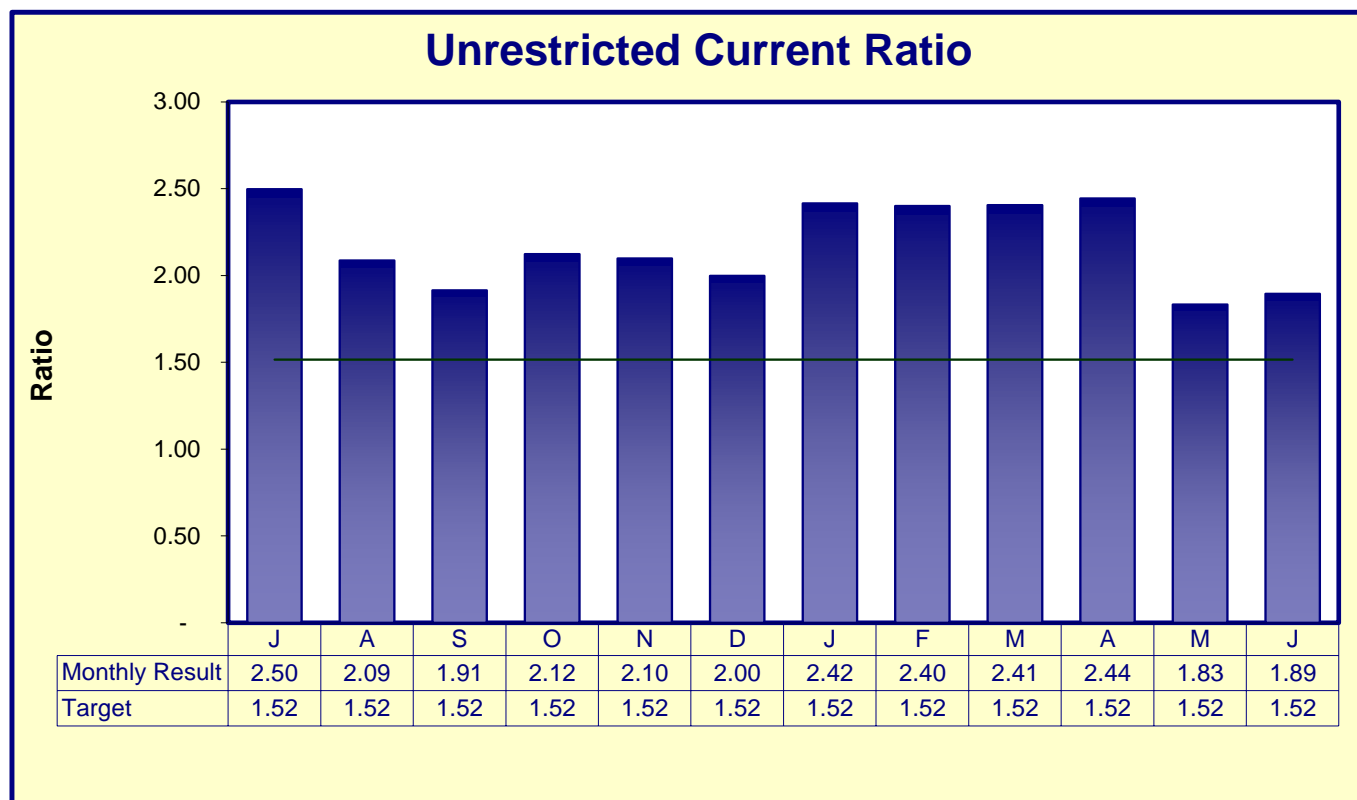
Income and Expenses

CASH, INVESTMENTS & AVAILABLE FUNDS					
	Actual 2015/16 \$M	Original Budget 2016/17 \$M	December QR 2016/17 \$M	March QR 2016/17 \$M	Actual Ytd June 2017 \$M
Total Cash and Investments	154.0	133.7	137.8	143.6	167.3
Less Restrictions:					
External	75.3	88.8	74.5	75.0	75.0
Internal	55.3	37.6	52.2	57.9	58.3
Total Restrictions	130.6	126.4	126.7	132.9	133.2
Available Cash	23.5	7.3	11.1	10.7	34.0
Adjusted for :					
Current payables	(34.9)	(23.6)	(23.5)	(23.0)	(41.7)
Receivables	22.9	23.0	25.3	25.1	23.6
Other	2.9	4.6	-	-	10.7
Net Payables & Receivables	(9.1)	4.0	1.8	2.0	(7.5)
Available Funds	14.4	11.3	12.9	12.8	26.5

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 that was revised during the March Quarterly Review is within Council's Financial Strategy target of 3.5% to 5.5% of Operational Revenue [pre capital] and is between \$9.2M and \$14.4M for the year ending 30 June 2017. The actual Available Funds at 30 June 2017 are impacted by the early payment of the Financial Assistance Grant, progress of planned expenditure and increased revenue 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 below 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.



Receivables

Receivables are the amount of money owed to Council or funds that Council has paid in advance. At June 2017, receivables totalled \$23.6M, compared to receivables of \$22.9M at June 2016. Fluctuations relate to the timing of rates payments which are accrued before the actual payments are due.

Payables

Payables (the amount of money owed to suppliers) of \$41.7M were owed at June 2017 compared to payables of \$34.9M in June 2016. The difference in payables relate to goods and services and capital projects delivered but not yet paid for, timing of the receipt of rating income 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. Council currently has borrowings through an interest free loan and the subsidised Local Government Infrastructure Renewal Scheme (LIRS). 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 subsidies for loans under the three rounds of the LIRS program and has entered into loans of \$20M in 2012-13 for Round 1, \$4.3M in 2013-14 for Round 2 and \$15M for Round 3. The LIRS program provides a loan subsidy of 4% for Round 1 and 3% for the subsequent rounds. Loan funds have been used to accelerate the Citywide Footpaths, Shared Path Renewal, Missing Links Construction Program, building refurbishment works for Berkeley Community Centre, Corrimal Library and Community Centre, Thirroul Pavilion and Kiosk and to support the West Dapto Access – Fowlers Road project respectively. Council was advised of eligibility for further subsidy under Round 3 and an additional amount of \$5.5M was drawn down earlier this year that will also be used to support the West Dapto Access – Fowlers Road project.

Council's Debt Service Ratio forecast for 2016-17 is approximately 3.5%, 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 30 June 2017. The 2016-17 capital works program includes projects such as the West Dapto Access strategy, civil asset renewals including roads, car parks and buildings and purchase of library books. As at 30 June 2017, Council has expended \$91.2M on its capital works program representing 102.5% of the annual budget. Council has recognised additional capital contributions in addition to this amounting to \$29.5M.

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 2017-18
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

While the preliminary, pre audit result for the year ended 30 June 2017 is distorted by the early payment of the first two instalments of the 2017-18 Financial Assistance Grant of \$9.0M, the results show a significant improvement compared to budget. Consistent with the treatment of prior period improvements, this will provide Council with the opportunity to consider moving surplus funds into the Strategic Projects Restriction for future requirements of the organisation.

WOLLONGONG CITY COUNCIL				
1 July 2016 to 30 June 2017				
	2016/17 Original Budget \$'000	2016/17 Current Budget \$'000	2016/17 Actual YTD \$'000	2016/17 Variation \$'000
Income Statement				
Income From Continuing Operations				
Revenue:				
Rates and Annual Charges	184,035	184,540	184,531	(8)
User Charges and Fees	33,594	36,874	37,355	481
Interest and Investment Revenues	4,253	5,448	5,600	152
Other Revenues	10,205	12,164	14,353	2,189
Grants & Contributions provided for Operating Purposes	29,961	30,521	39,774	9,253
Grants & Contributions provided for Capital Purposes	32,947	12,049	42,028	29,980
Total Income from Continuing Operations	294,994	281,595	323,642	42,046
Expenses From Continuing Operations				
Employee Costs	117,960	119,762	117,500	2,261
Borrowing Costs	4,131	4,082	4,072	10
Materials, Contracts & Other Expenses	89,066	87,126	83,083	4,043
Depreciation & Amortisation	64,840	61,839	61,018	821
Internal Charges (labour)	(12,352)	(12,935)	(14,142)	1,206
Internal Charges (not labour)	(1,566)	(1,566)	(1,270)	(296)
Profit/Loss on Disposal of Assets	0	(52)	523	(576)
Total Expenses From Continuing Operations	262,079	258,255	250,785	7,470
Operating Results From Continuing Operations	32,916	23,340	72,857	49,517
Net Operating Result for the Year	32,916	23,340	72,857	49,517
Net Operating Result for the Year before Grants & Contributions provided for Capital Purposes	(31)	11,292	30,829	19,537
NET SURPLUS (DEFICIT) [Pre capital] %	11.2%	8.3%	22.5%	117.8%
Funding Statement				
Net Operating Result for the Year	32,916	23,340	72,857	49,517
Add back:				
- Non-cash Operating Transactions	78,451	76,002	72,880	(3,123)
- Restricted cash used for operations	15,013	15,050	13,514	(1,536)
- Income transferred to Restricted Cash	(52,636)	(36,906)	(67,028)	(30,122)
- Payment of Accrued Leave Entitlements	(11,943)	(12,082)	(12,103)	(21)
Funds Available from Operations	61,801	65,404	80,119	14,715
Advances (made by) / repaid to Council	0	0	0	0
Borrowings repaid	(7,285)	(7,285)	(7,160)	125
Operational Funds Available for Capital Budget	54,516	58,119	72,960	14,841
CAPITAL BUDGET				
Assets Acquired	(101,627)	(89,019)	(91,243)	(2,224)
Contributed Assets	0	0	(29,456)	(29,456)
Transfers to Restricted Cash	0	(9,654)	(9,654)	0
Funded From :-				
- Operational Funds	54,516	58,119	72,960	14,841
- Sale of Assets	1,743	3,297	3,239	(58)
- Internally Restricted Cash	21,770	11,808	11,987	178
- Borrowings	0	5,500	5,500	0
- Capital Grants	11,065	7,387	8,208	821
- Developer Contributions (Section 94)	6,008	4,549	4,444	(105)
- Other Externally Restricted Cash	5,620	5,072	5,153	81
- Other Capital Contributions	850	1,090	30,777	29,688
TOTAL FUNDS SURPLUS / (DEFICIT)	(55)	(1,852)	11,914	13,765

Manager Project Delivery Division**Commentary on June 2017 Capital Budget Report**

As at 30 June 2017, Council had expended \$91.2M or 102.5% of the approved annual capital program of \$89.0M. This over expenditure has been partially offset by increased funding (\$1.0M) leaving an impact of \$1.2M to the funds result.

The over expenditures occurred across a number of program areas with the largest five listed below:

- Cycle Shared Paths – Council commenced a number of shared paths near the end of the financial year and was able to achieve better progress than previously expected on multiyear projects. A typical example of this is the Tramway project where additional cliff scaling work was able to be implemented prior to end of year as the heritage approval was issued early than expected.
- Roadworks – On a number of projects in this category it was found that the scope of work was increased as work progressed due to uncovering additional areas requiring road reconstruction rather than just resealing. Examples of this were found at Carrington Street Bulli and works on the Princes Highway in the northern suburbs at various locations.
- Whytes Gully New Cells – The contractor working on the construction of the new landfill cell was able to achieve greater than predicted progress on this multiyear project.
- West Dapto Infrastructure – The contractor working on the Fowlers Road project achieved a quicker start on the Stage 1 works than was originally envisaged.
- Information Technology – A hardware and services project was able to be finalized ahead of program while an individual large piece of equipment was delivered early than expected.

CAPITAL PROJECT REPORT						
Year Ended 30 June 2017						
ASSET CLASS PROGRAMME	\$'000		\$'000		\$'000	
	CURRENT BUDGET		Actual		VARIATION	
	EXPENDITURE	OTHER FUNDING	EXPENDITURE	Funding	EXPENDITURE	OTHER FUNDING
Roads And Related Assets						
Traffic Facilities	1,107	(699)	1,126	(629)	18	70
Public Transport Facilities	242	(20)	336	(19)	94	1
Roadworks	16,870	(3,122)	17,316	(3,855)	446	(733)
Bridges, Boardwalks and Jetties	2,145	(112)	2,080	(111)	(65)	1
TOTAL Roads And Related Assets	20,364	(3,952)	20,857	(4,614)	493	(661)
West Dapto						
West Dapto Infrastructure Expansion	3,834	(3,619)	4,086	(3,900)	252	(281)
TOTAL West Dapto	3,834	(3,619)	4,086	(3,900)	252	(281)
Footpaths And Cycleways						
Footpaths	4,490	(1,591)	4,549	(1,717)	59	(127)
Cycle/Shared Paths	5,912	(2,523)	7,042	(2,708)	1,130	(185)
Commercial Centre Upgrades - Footpaths and Cycleways	3,784	(795)	3,922	(773)	138	22
TOTAL Footpaths And Cycleways	14,185	(4,908)	15,513	(5,198)	1,328	(290)
Carparks						
Carpark Construction/Formalising	170	0	177	0	7	0
Carpark Reconstruction or Upgrading	2,032	0	1,936	0	(96)	0
TOTAL Carparks	2,202	0	2,113	0	(89)	0
Stormwater And Floodplain Management						
Floodplain Management	1,966	(905)	1,616	(898)	(350)	7
Stormwater Management	2,296	(418)	2,290	(393)	(6)	25
Stormwater Treatment Devices	358	(130)	377	(106)	18	24
TOTAL Stormwater And Floodplain Management	4,620	(1,453)	4,282	(1,397)	(338)	56
Buildings						
Cultural Centres (IPAC, Gallery, Townhall)	1,117	0	1,054	0	(63)	0
Administration Buildings	1,565	0	1,646	0	81	0
Community Buildings	11,573	(1,801)	11,684	(1,767)	111	34
Public Facilities (Shelters, Toilets etc.)	2,423	(170)	2,435	(170)	12	(0)
Carbon Abatement	1,211	(1,000)	1,166	(992)	(45)	8
TOTAL Buildings	17,889	(2,971)	17,985	(2,929)	96	42
Commercial Operations						
Tourist Park - Upgrades and Renewal	1,081	0	1,104	0	23	0
Crematorium/Cemetery - Upgrades and Renewal	212	0	217	0	5	0
Leisure Centres & RVGC	157	0	157	0	0	0
TOTAL Commercial Operations	1,450	0	1,478	0	28	0
Parks Gardens And Sportfields						
Play Facilities	1,314	(10)	1,332	(13)	19	(3)
Recreation Facilities	1,846	(246)	1,768	(201)	(78)	45
Sporting Facilities (Shelters, Toilets etc.)	1,374	(580)	1,335	(556)	(39)	24
Lake Illawarra Foreshore	(0)	0	0	0	0	0
TOTAL Parks Gardens And Sportfields	4,534	(836)	4,435	(769)	(99)	66
Beaches And Pools						
Beach Facilities	427	0	432	0	5	0
Rock/Tidal Pools	1,262	0	1,280	0	17	0
Treated Water Pools	979	(9)	1,121	(9)	142	0
TOTAL Beaches And Pools	2,668	(9)	2,832	(9)	165	0

CAPITAL PROJECT REPORT						
Year Ended 30 June 2017						
ASSET CLASS PROGRAMME	\$'000		\$'000		\$'000	
	CURRENT BUDGET		Actual		VARIATION	
	EXPENDITURE	OTHER FUNDING	EXPENDITURE	Funding	EXPENDITURE	OTHER FUNDING
Natural Areas						
Environmental Management Program	0	0	0	0	(0)	0
Natural Area Management and Rehabilitation	165	0	155	0	(10)	0
TOTAL Natural Areas	165	0	155	0	(10)	0
Waste Facilities						
Whytes Gully New Cells	7,302	(7,302)	7,681	(7,681)	378	(378)
Whytes Gully Renewal Works	395	(395)	325	(325)	(70)	70
Helensburgh Rehabilitation	49	(49)	49	(49)	(0)	0
TOTAL Waste Facilities	7,746	(7,746)	8,054	(8,054)	308	(308)
Fleet						
Motor Vehicles	1,843	(940)	1,868	(1,088)	25	(149)
TOTAL Fleet	1,843	(940)	1,868	(1,088)	25	(149)
Plant And Equipment						
Portable Equipment (Mowers etc.)	442	(53)	189	(92)	(253)	(39)
Mobile Plant (trucks, backhoes etc.)	3,686	(1,436)	4,198	(874)	512	562
Fixed Equipment	320	0	0	0	(320)	0
TOTAL Plant And Equipment	4,448	(1,489)	4,387	(966)	(61)	523
Information Technology						
Information Technology	1,335	(165)	1,565	(155)	230	10
TOTAL Information Technology	1,335	(165)	1,565	(155)	230	10
Library Books						
Library Books	1,193	(66)	1,195	(6)	1	60
TOTAL Library Books	1,193	(66)	1,195	(6)	1	60
Public Art						
Public Art Works	200	0	35	0	(165)	0
Art Gallery Acquisitions	110	0	103	0	(7)	0
TOTAL Public Art	310	0	138	0	(172)	0
Emergency Services						
Emergency Services Plant and Equipment	80	0	100	0	20	0
TOTAL Emergency Services	80	0	100	0	20	0
Land Acquisitions						
Land Acquisitions	84	0	138	(57)	54	(57)
TOTAL Land Acquisitions	84	0	138	(57)	54	(57)
Non-Project Allocations						
Capital Project Contingency	0	0	0	0	(0)	0
Capital Project Plan	69	0	66	0	(3)	0
TOTAL Non-Project Allocations	69	0	66	0	(3)	0
GRAND TOTAL	89,019	(28,154)	91,248	(29,143)	2,229	(989)

WOLLONGONG CITY COUNCIL		
	Actual 2016/17 \$'000	Actual 2015/16 \$'000
Balance Sheet		
Current Assets		
Cash Assets	8,513	17,746
Investment Securities	134,170	126,193
Receivables	23,579	21,280
Inventories	6,146	6,028
Other	10,680	3,207
Assets classified as held for sale	6,381	0
Total Current Assets	189,467	174,453
Non-Current Assets		
Non Current Cash Assets	24,585	10,085
Property, Plant and Equipment	2,317,000	2,265,362
Investment Properties	4,775	4,775
Westpool Equity Contribution	1,310	1,310
Intangible Assets	443	1,042
Total Non-Current Assets	2,348,113	2,282,574
TOTAL ASSETS	2,537,580	2,457,027
Current Liabilities		
Current Payables	41,744	33,258
Current Provisions payable < 12 months	13,468	16,998
Current Provisions payable > 12 months	37,538	37,858
Current Interest Bearing Liabilities	7,513	6,690
Total Current Liabilities	100,262	94,804
Non-Current Liabilities		
Non Current Interest Bearing Liabilities	32,188	33,940
Non Current Provisions	46,046	44,031
Total Non-Current Liabilities	78,234	77,970
TOTAL LIABILITIES	178,496	172,774
NET ASSETS	2,359,084	2,284,253
Equity		
Accumulated Surplus	1,253,306	1,167,459
Asset Revaluation Reserve	972,532	986,148
Restricted Assets	133,246	130,647
TOTAL EQUITY	2,359,084	2,284,253

ITEM 15 STATEMENTS OF INVESTMENTS - JUNE 2017

This report provides an overview of Council's investment portfolio performance for the month of June 2017.

Council's average weighted return for June 2017 was 2.57% which was above the benchmark return of 1.75%. The result was primarily due to good returns received on term deposits and the positive marked to market valuation of the CBA Zero Coupon Bond and the aggregated Floating Rate Notes in Council's portfolio. The remainder of Council's portfolio continues to provide a high level of consistency in income and a high degree credit quality and liquidity.

RECOMMENDATION

Council receive the Statements of Investments for June 2017.

REPORT AUTHORISATIONS

Report of: Tana Ramsden, Manager Finance (Acting)
Authorised by: Tom Tyrenou, Director Corporate Services (Acting)

ATTACHMENTS

- 1 Statements of Investments - June 2017
- 2 Investment Income Compared to Budget 2016-2017

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 30 June 2017 were \$167,292,849 (Statement of Investments attached) [30 June 2016 \$153,526,480].

Council's average weighted return for June 2017 was 2.57% which was above the benchmark return of 1.75%. The result was primarily due to good returns received on the term deposits and the positive marked to market valuation of the CBA Zero Coupon Bond and the aggregated Floating Rate Notes in Council's portfolio. The remainder of Council's portfolio continues to provide a high level of consistency in income and a high degree credit quality and liquidity.

At 30 June 2017, year to date interest and investment revenue of \$5,003,229 was recognised compared to the year to date budget of \$4,949,131 (as revised in the March Quarterly Review).

Council's CBA Zero Coupon Bond experienced an increase in valuation for June 2017 of \$12,906. 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. Council's 17 floating rate notes had a net increase in value of \$19,195 for June 2017.

Council holds two Mortgaged Backed Securities (MBS) that recorded a net decrease in value of \$20,390 for June 2017. 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 TCorp Long-Term Growth Facility recorded a net decrease in value of \$19,152 in June, which represented a positive annual distribution of \$124,062 and a downward valuation for June of \$143,214. The fluctuation is a reflection of the current share market volatility both domestically and internationally. During the month, Council made a \$15M investment in the NSW TCorpIM Cash Fund. The fund provides relatively stable returns with low potential for capital loss while maintaining high levels of liquidity, similar to an 11am, at call account. The fund only invests in Australian cash and fixed interests. The NSW TCorpIM Cash Fund recorded a net increase in value of \$20,823 in June, which represented a positive annual distribution of \$37,291 and a downward valuation for June of \$16,468.

At the June 2017 RBA meeting, the official cash rate remained unchanged at 1.50%. 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 quite low and below 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 2017-18
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 investments for June 2017 have performed favourably compared to the year to date budget and the portfolio recorded an average weighted return above the annualised Bloomberg Bank Bill Index Benchmark.

WOLLONGONG CITY COUNCIL STATEMENT OF INVESTMENTS 30 June 2017							
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+	-	7,625,799	Ilam	30/06/2017	30/06/2017	1.90%
NAB General Fund	A-1+	-	688,631	General A/c	30/06/2017	30/06/2017	
ME	A2	2,500,000	2,500,000	T/Deposit	22/08/2016	24/07/2017	2.70%
SUN	A-	2,000,000	2,000,000	T/Deposit	29/09/2016	26/07/2017	2.60%
CBA	A1+	2,000,000	2,000,000	T/Deposit	29/09/2016	26/07/2017	2.58%
BEN	Fitch A-	2,000,000	2,000,000	T/Deposit	31/07/2015	31/07/2017	3.00%
ANZ	A1+	2,500,000	2,500,000	T/Deposit	06/08/2016	07/08/2017	2.64%
BWest	A1+	2,000,000	2,000,000	T/Deposit	10/03/2017	08/08/2017	2.60%
BOQ	Fitch A-	3,000,000	3,000,000	T/Deposit	28/08/2015	28/08/2017	2.90%
CBA	AA-	2,000,000	2,000,000	T/Deposit	09/09/2016	08/09/2017	2.61%
IMB	A2	2,000,000	2,000,000	T/Deposit	10/03/2017	08/09/2017	2.55%
BEN	Fitch A-	1,000,000	1,000,000	T/Deposit	11/09/2015	11/09/2017	2.95%
BEN	A2	1,000,000	1,000,000	T/Deposit	29/09/2016	29/09/2017	2.80%
ME	A2	2,000,000	2,000,000	T/Deposit	29/09/2016	29/09/2017	2.65%
SUN	A-	2,000,000	2,000,000	T/Deposit	10/03/2017	06/10/2017	2.60%
ME	A2	1,000,000	1,000,000	T/Deposit	14/09/2016	13/10/2017	2.65%
CBA	AA-	1,000,000	1,000,000	T/Deposit	19/09/2016	19/10/2017	2.58%
VBC	A1+	2,000,000	2,000,000	T/Deposit	19/10/2016	19/10/2017	2.56%
SUN	A1	2,000,000	2,000,000	T/Deposit	29/09/2016	30/10/2017	2.65%
IMB	BBB	3,000,000	3,000,000	T/Deposit	30/09/2016	30/10/2017	2.50%
BOQ	A2	2,000,000	2,000,000	T/Deposit	10/03/2017	10/11/2017	2.65%
SUN	A-	2,000,000	2,000,000	T/Deposit	24/05/2016	24/11/2017	2.85%
CBA	AA-	2,000,000	2,000,000	T/Deposit	27/05/2016	27/11/2017	2.71%
IMB	A2	2,000,000	2,000,000	T/Deposit	31/05/2017	01/12/2017	2.65%
CBA	A1+	1,000,000	1,000,000	T/Deposit	10/03/2017	05/12/2017	2.68%
BOQ	Fitch A-	2,000,000	2,000,000	T/Deposit	29/09/2016	28/12/2017	2.60%
BEN	Fitch A-	3,000,000	3,000,000	T/Deposit	08/12/2016	08/10/2018	2.70%
ME	BBB	1,500,000	1,500,000	T/Deposit	08/12/2016	08/10/2018	2.70%
CBA	A1+	2,000,000	2,000,000	T/Deposit	10/03/2017	05/02/2018	2.72%
BOQ	A2	2,000,000	2,000,000	T/Deposit	22/06/2017	19/02/2018	2.65%
IMB	A-	3,000,000	3,000,000	T/Deposit	08/12/2016	08/03/2018	2.63%
ME	BBB	1,000,000	1,000,000	T/Deposit	14/09/2016	14/03/2018	2.65%
STG	AA-	1,000,000	1,000,000	T/Deposit	16/02/2017	16/03/2018	2.62%
NAB	AA-	1,500,000	1,500,000	T/Deposit	28/02/2017	28/03/2018	2.63%
IMB	BBB	2,000,000	2,000,000	T/Deposit	28/02/2017	29/03/2018	2.61%
CBA	AA-	2,000,000	2,000,000	T/Deposit	10/03/2017	10/04/2018	2.74%
IMB	A2	3,000,000	3,000,000	T/Deposit	22/06/2017	20/04/2018	2.60%
NAB	AA-	2,000,000	2,000,000	T/Deposit	18/11/2016	18/05/2018	2.85%
BOQ	Fitch A-	3,000,000	3,000,000	T/Deposit	23/02/2017	23/05/2018	2.80%
NAB	Fitch A-	1,030,000	1,030,000	T/Deposit	19/12/2016	19/06/2018	2.79%
VBC	A1+	2,000,000	2,000,000	T/Deposit	26/06/2017	26/06/2018	2.52%
BEN	Fitch A-	5,000,000	5,000,000	T/Deposit	22/06/2017	23/07/2018	2.75%
BOQ	Fitch A-	2,000,000	2,000,000	T/Deposit	09/09/2016	10/09/2018	2.65%
IMB	BBB	2,000,000	2,000,000	T/Deposit	12/09/2016	12/09/2018	2.60%
ME	BBB	2,000,000	2,000,000	T/Deposit	14/09/2016	14/09/2018	2.65%
BEN	A-	2,000,000	2,000,000	T/Deposit	29/09/2016	28/09/2018	2.90%
VBC	AA-	3,000,000	3,000,000	T/Deposit	23/02/2017	23/11/2018	2.80%
BOQ	Fitch A-	1,500,000	1,500,000	T/Deposit	08/12/2016	07/12/2018	2.95%
SUN	A-	3,000,000	3,000,000	T/Deposit	08/12/2016	07/12/2018	2.76%
VBC	AA-	3,000,000	3,000,000	T/Deposit	31/01/2017	31/01/2019	2.90%
BEN	Fitch A-	1,000,000	1,000,000	T/Deposit	13/03/2017	13/03/2019	2.90%
Total			108,844,430				

WOLLONGONG CITY COUNCIL
STATEMENT OF INVESTMENTS
30 June 2017 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
Commonwealth Bank Australia zero coupon bond with a \$4M face value	AA-	2,000,000	3,317,600	BOND	21/01/2008	22/01/2018	
CBA	AA-	1,000,000	1,010,580	FRN	19/10/2015	19/10/2018	2.53%
CUA	BBB	3,000,000	3,044,040	FRN	01/04/2016	01/04/2019	3.40%
Vestpac	AA-	3,000,000	3,035,030	FRN	11/03/2016	10/05/2019	2.74%
Greater Bank Ltd	BBB	2,000,000	2,016,780	FRN	07/06/2016	07/06/2019	3.34%
Bendigo Bank	Fitch A-	1,000,000	1,000,640	FRN	16/09/2015	17/09/2019	2.65%
Bendigo Bank	Fitch A-	2,000,000	2,010,820	FRN	21/11/2016	21/02/2020	2.84%
CUA	BBB	2,000,000	2,000,720	FRN	20/03/2017	20/03/2020	3.02%
ME Bank	BBB	2,000,000	2,013,160	FRN	06/04/2017	06/04/2020	3.04%
NAB	AA-	3,000,000	3,018,120	FRN	24/06/2015	03/06/2020	2.53%
Bendigo Bank	Fitch A-	2,000,000	2,003,260	FRN	18/08/2015	18/08/2020	2.84%
SUN Corp	A-	1,500,000	1,525,320	FRN	20/10/2015	20/10/2020	3.00%
NAB	AA-	1,000,000	1,016,220	FRN	05/11/2015	05/11/2020	2.82%
SUN	A-	2,000,000	2,044,360	FRN	12/04/2016	12/04/2021	3.14%
AMP	A	2,000,000	2,031,980	FRN	24/05/2016	24/05/2021	3.08%
Vestpac	AA-	3,000,000	3,043,410	FRN	03/06/2016	03/06/2021	2.90%
ANZ	AA-	2,000,000	2,034,300	FRN	16/08/2016	16/08/2021	2.86%
AMP	A	3,000,000	3,002,640	FRN	30/03/2017	30/03/2022	2.76%
EMERALD A Mortgage Backed Security *	AAA	653,644	476,683	M/Bac	17/07/2006	21/08/2022	2.18%
EMERALD B Mortgage Backed Security *	Fitch AA	2,000,000	1,235,320	M/Bac	17/07/2006	21/08/2056	2.43%
Total			41,499,563				

Managed Funds & Other

Investment Body	Rating	Purchase Price \$	Fair Value of Holding \$	Purchase Date	Monthly Return (Actual)	Annualised % p.a.	FYTD (Actual)
ToopIM Cash Fund Facility	N/A	15,000,000	15,020,823	01/06/2017	0.00%	0.00%	0.00%
Toop Long Term Growth Facility Trust	N/A	1,131,841	1,928,031	13/08/2007	-0.38%	-10.26%	11.05%
Total			16,948,854				

Investment Body	Face Value	Security
Southern Phone Company	N/A	2 shares

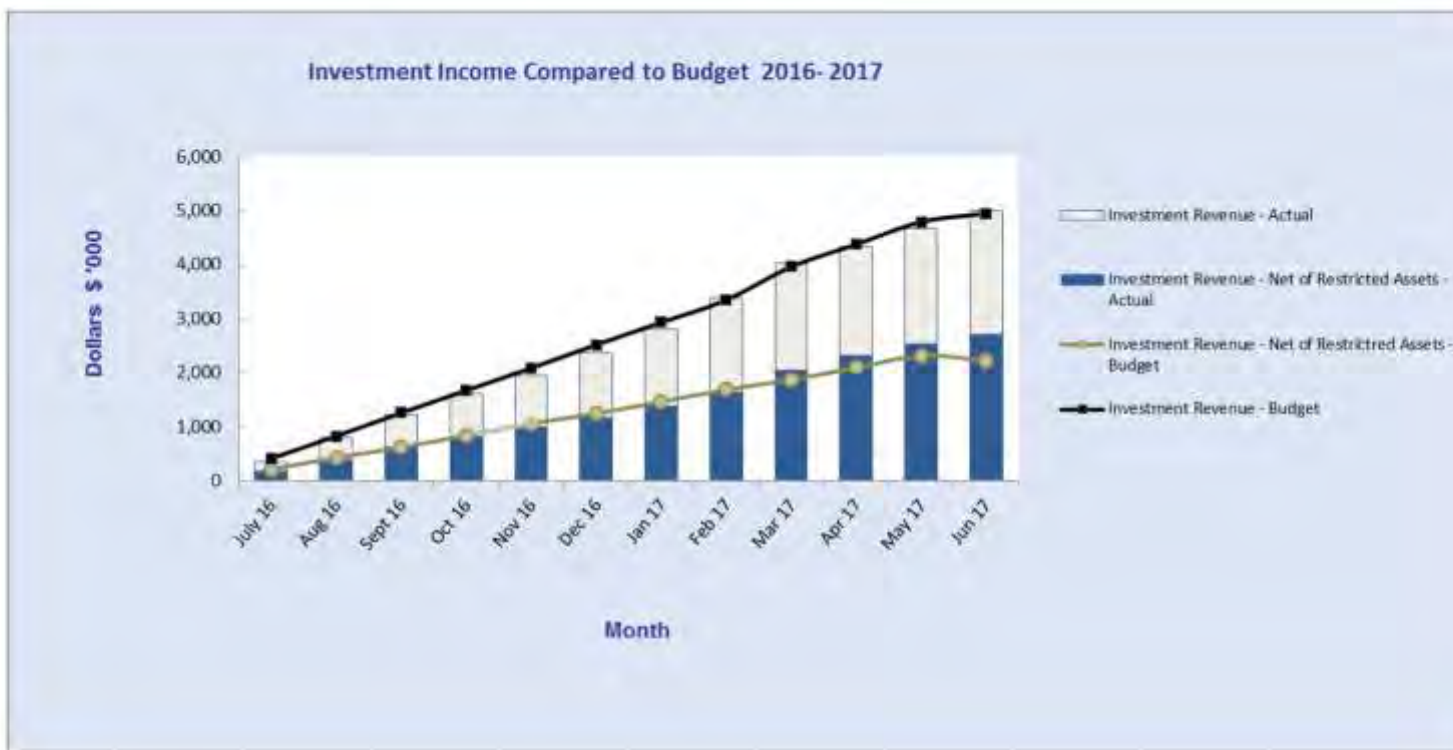
TOTAL INVESTMENTS	\$ 167,292,849
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* The maturity date provided is the weighted-average life of the security. This is the average amount of time that will elapse from the date of security's issuance until each dollar is repaid based on an actuarial assessment. Assessments are carried out on a regular basis which can potentially extend the life of the investment. Current assessments anticipate an extension of life of the investment.

This is to certify that all of the above investments have been placed in accordance with the Act, the regulations and Council's Investment Policies.

Brian Jenkins

RESPONSIBLE ACCOUNTING OFFICER



ITEM 12

CITY OF WOLLONGONG TRAFFIC COMMITTEE - MINUTES OF ELECTRONIC MEETINGS HELD ON 5 AND 26 JULY AND MEETING HELD ON 12 JULY 2017

Electronic meetings of the City of Wollongong Traffic Committee were held on 5 and 26 July 2017 and the normal Traffic Committee meeting held on 12 July 2017. Late items considered at the 12 and 26 July meetings have been included as Items 10, 11 and 12.

Item 1 submitted for information.

Items 2 – 12 of the respective meetings must be determined by Council and are recommended to Council for approval for the temporary regulation of traffic on public roads for works or events by independent parties.

RECOMMENDATION

In accordance with the powers delegated to Council, the Minutes and recommendations of the City of Wollongong Traffic Committee Meeting held on 12 July 2017 and the electronic meetings on 5 and 26 July 2017 in relation to the Regulation of Traffic be adopted.

REPORT AUTHORISATIONS

Report of: Mike Dowd, Manager Infrastructure Strategy and Planning

Authorised by: Greg Doyle, Director Infrastructure and Works – Connectivity Assets and Liveable City

ATTACHMENTS

- 1 Standard Conditions for Road Closures
- 2 Standard Conditions for Road Closures for Street Parties
- 3 Sydney to the Gong Bike Ride
- 4 HMAS Street March
- 5 New Year's Eve Road Closures
- 6 Australia Day Road Closures
- 7 Rawson Street - Assembly of Tower Crane
- 8 Southern Stars
- 9 Elton John Concert
- 10 Dapto Street Fair
- 11 Allan Street, Port Kembla Proposed Street makeover and temporary road closure
- 12 Proposed Road Closure 28-30 Church Street Tower Crane Dismantle
- 13 Illawarra Triathlon Race Series for 2017/18 - Traffic Management Plan

BACKGROUND

INFORMATION ONLY

1 STANWELL TOPS TO WOLLONGONG WARD 2

Various Streets – Sydney to the Gong Bike Ride – Sunday 5 November 2017

Background

As in previous years the MS Sydney to Gong bike ride is being managed by NSW RMS and NSW Police for most of the route. The road closures and regulation of traffic associated with this event will be approved under the major events procedure at a State Government level, rather than approvals through the individual councils.

The event enters the Wollongong LGA at Stanwell Tops and proceeds on Lawrence Hargrave Drive to Thirroul and then via the shared path to Stewart Park. There is a family friendly extension from Stuart Park around Flagstaff Hill and the City Beach area.

The TCP's for the area around Flagstaff Hill and City Beach are attached as for information as it is the area where bus services are most affected. It is understood that bus services will be permitted to access the Marine Drive Terminus during the closures however the Gong Shuttle will need to divert via Corrimal Street.

Consultation

Consultation regarding this Agenda item is a condition of approval as required under the State Government Policy for Special Events

REGULATION OF TRAFFIC

2 GWYNNEVILLE WARD 2

Vickery Street – St Brigids Primary School Annual Fair – Saturday 16 September 6.00am – 4.00pm

Background

The St Brigids School has proposed a road closure in Vickery Street on the school frontage to permit the annual school fair to be held. The road closures will take effect from the edge of the roundabout at the intersection of Gipps Street and Vickery Street and in line with the school boundary on the southern side in Vickery Street. The roadway at this location is wide and permits adequate space for drivers to make a U turn at the southernmost closure point.

The road closure can be effected using Council's Standard Street Party Traffic Control Plan. Traffic will be diverted via Berkeley Road and Acacia Avenue, Gwynneville.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to Council's Standard Conditions for Street Parties (Attachment 2).

3 WOLLONGONG WARD 2

Church Street – HMAS Street March – 27 August 2017

Background

Council is sponsoring a parade for the ship's company of HMAS Wollongong on Sunday 27 August to permit the commander to receive the Freedom of the City. The event involves short road closures for Burelli and Church Streets from 10am - 12 midday on the day, with the presentation taking place in McCabe Park.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 4) and Council's Standard Conditions for Road Closures (Attachment 1)

4 WOLLONGONG WARD 2

Cliff Road – New Year's Eve Saturday 31 December 2017 4pm – 10.30pm

Background

Council has prepared Traffic Management Plans for the annual celebration for New Year's Eve 2017. The road closure involves Cliff Road between Endeavour Drive and Georges Place and takes

effect from 4.00pm until 10.30pm on Saturday 31 December 2017. The program of events is centred at Wollongong Harbour and is completed with fireworks at around 9.30pm; consistent with the family orientation of the celebrations. The Gong Shuttle will be diverted via Georges Place and Corrimal Street during the closure.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 5) and Council's Standard Conditions for Road Closures (Attachment 1).

5 WOLLONGONG WARD 2

Bourke Street, Cliff Road, Harbour Street, Endeavour Drive, Marine Drive
Australia Day 26 January 2018

Background

Council has prepared Traffic Management Plans for the annual celebration for Australia Day 2018. It is proposed that a temporary bus zone be installed on Springhill Road adjacent to the JJ Kelly car park to permit the operation of a park and ride service throughout the day. The road closures involve the closures of Bourke Street, Cliff Road, Harbour Street, Endeavour Drive and Marine Drive. The closures take effect from 5am until 11.00pm on the day.

The Gong Shuttle will be diverted by Corrimal Street throughout the day but regular route service buses will be permitted to use the Marine Drive Terminus.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 6) and Council's Standard Conditions for Road Closures (Attachment 1).

6 WOLLONGONG WARD 2

Rawson Street – Assembly of Tower Crane – Wednesday 16 August 2017

Background

Council has received an application for a closure of Rawson Street between Railway Parade and Regent Street to permit the assembly of a tower crane on the construction site on the corner of Regent and Rawson Streets. The contractor has nominated Wednesday 16 August as the preferred date but should the weather not be suitable alternative dates are 17, 18, 21 to 25, and 28 to 30 August 2017. The crane assembly should be completed within one of these days, where the closure will take effect from 7am until 5pm.

The Traffic Management Plan indicates that access to adjoin properties will be permitted during the closure, including Council's Rawson's Street carpark. Access to Regent Street and Crown Lane will not be affected however comprehensive detour signs around the closure will be in place.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 7) and Council's Standard Conditions for Road Closures (Attachment 1).

7 WOLLONGONG WARD 2

Harbour Street, Crown Street – Southern Stars – August 2017

Background

The WIN Entertainment Centre is hosting the annual Southern Stars music festival during the week 24 – 26 August 2017 as in previous years. Road closure plans A and B have been submitted to cover the range of requirements for safe conduct of the event during dress rehearsals, school matinee performances and the final public performances. The road closures can be summarised as follows:

1. **Rehearsals Thursday 24 August.** Plan B will be used during the hours 5.30pm – 7pm at the completion of the rehearsals. It involves the closure of Crown Street between Harbour Street and Marine Drive. During this closure buses and residents will be permitted to pass through.
2. **Matinee performances Friday 25 August.** Plan A will be in place and involves the closure of Crown Street and Marine Drive between Harbour Street and Cliff Road. The closure will be in place between 8.30am – 5.00pm. Buses and residents will also be permitted to pass through the road closure and buses used for audiences and participants will then be parked on the closed section of Marine Drive during each performance.
3. **Evening Public Performance Friday 25 August.** Plan B will be used at the end of this public performance between 9.30pm – 11.00pm.
4. **Evening Public performance Saturday 26 August.** Plan B will be used prior to the beginning from 4.00pm until 5.30pm and at the conclusion of the performance from 9.30pm to 11.00pm

The WIN Entertainment Centre have arranged to access Council car parks in the vicinity – Quilkey Place and Stewart Street Carpark. As in previous years the buses used to transport students to and from the facility will be managed by an experienced volunteer. Parents will be advised of the arrangements to drop off and pick up students away from the WIN Entertainment Centre in order to reduce traffic congestion.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 8) and Council's Standard Conditions for Road Closures (Attachment 1).

8 WOLLONGONG WARD 2

Harbour Street – Elton John Concert- 24 September 2017 4pm to 12 midnight.

Background

The Elton John concert for Sunday 24 September will involve the use of the major event Type 3 Traffic Control Plan (for audiences in excess of 15,000), which is part of the development consent for WIN Stadium. This TCP involves the closure of Harbour Street between Stewart and Crown Streets and Burelli between Corrimal and Harbour Streets, and the closure will take effect from 4pm – 12 Midnight on the day.

Prior to and after the event the organisers have included in the TCP traffic controls on a hold and release basis for the heavy vehicles accessing the site. Traffic controls will be in place in Harbour Street 19 to 23/9/2017 and 25 and 26/9/2017.

Temporary drop off zones will be established in Burelli Street, Stewart Street and in Crown Street adjacent to the Entertainment Centre. Bus services will have access to the Marine Drive bus terminus but need to be diverted via Crown and Corrimal Streets. It is understood the organisers intend to install variable message board signs on the main entry roads to guide motorists to and from the venue.

This Traffic Control Plan does not restrict entry to any residences in the area and the organisers will lease car parking in Quilkey Place and the Stewart Street car park.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 9) and Council's Standard Conditions for Road Closures (Attachment 1).

9 DAPTO WARD 3

Princes Highway – Dapto Street Fair – Sunday 3 September 2017 6am – 6.30pm

Background

The annual Dapto Street Fair is to be held on Sunday 3 September with road closures to take effect from 6am to 6.30pm, for the Princes Highway between Moombara Street and Baan Baan Street. It will also involve a closure of

Baan Baan Street and Bong Bong Road, between Osborne Street and the Princes Highway.

Bus services will be detoured via McGrath Street, Marshall Street, Station Street and Unara Road, and general traffic will have the option of diverting via Moombara Street and Byamee Street.

Consultation

Consultation regarding this Agenda item is a condition of approval.

Proposal Supported Unanimously

The road closures be approved subject to the submitted Traffic Management Plans (Attachment 10) and Council's Standard Conditions for Road Closures (Attachment 1).

LATE ITEM CITY OF WOLLONGONG TRAFFIC COMMITTEE 12 JULY 2017 - REGULATION OF TRAFFIC

10 PORT KEMBLA WARD 3

Allan Street, Port Kembla – Proposed public space makeover and temporary road closure

Background

Council in consultation with the Port Kembla community have prepared plans for a makeover of the public spaces either side of Allan Street Port Kembla. It is proposed to improve pedestrian connectivity between these several pieces of public land for the benefit of regular visitors to the area. The area affected in Allan Street is between the southbound section of Wentworth Lane and Kembra Street. Council has engaged a facilitator to work with the community so that from the 31 July 2017 this section of Allan Street can be incorporated into the adjoining public spaces to create an attractive Town Centre environment.

From the perspective of this use of public road, the work and the status of the restyled section of Allan Street needs to be formalised. The construction work will take place over seven days under a full road closure as permitted under the Roads Act. Following completion of the work Council prefers this space to become a shared zone where pedestrians have priority under a ten kilometre per hour speed limit. After consultation with NSW RMS it was recommended that Council consider a temporary road closure rather than a shared zone at the present time.

As indicated in attachment 11 a road closure can be effected without significant inconvenience to members of the public. A temporary closure will allow the space to be trialled and subject to review by the new Council following the upcoming elections.

Consultation

Council has undertaken full community consultation for the makeover and the project has wide support. Detailed discussions have also been held with NSW RMS with respect to the status of the road and the traffic arrangements proposed.

Proposal Supported Unanimously

The traffic control plan which will be put in place for the street makeover construction works in Allan Street to be maintained on a temporary basis following completion of the work and that the temporary closure to be monitored and formally reviewed early in 2018. (Attachment 11)

11 WOLLONGONG WARD 2

Proposed Road Closure 28-30 Church Street Wollongong – Dismantling of Tower Crane
Monday 4 September 2017 from 7am to 5pm

Background

Subsequent to the Traffic Committee meeting held on 12 July 2017 this additional late item has now been circulated to members for comment and for which no objections were received.

The builders of a multiple dwelling complex at 28-30 Church Street Wollongong have asked for a road closure to permit the dismantling of the tower crane. The Traffic Management Plans submitted are similar to the TMP used for the assembly of the tower crane in early 2017. The previous road closure proceeded without incident.

There is a risk of adverse weather conditions and therefore the builder has asked for permission to use one of the following days should the preferred date be unworkable:

6, 8, 11, 13 and 15 September 2017.

Consultation

Consultation with affected residents in relation to this item is a condition of approval.

Proposal Supported Unanimously

The proposed road closure be approved for one of the nominated dates, weather permitting, and the closure be in accordance with the submitted Traffic Management Plans (Attachment 12) and Council's Standard Conditions for Road Closures (Attachment 1).

ELECTRONIC MEETING 26 JULY 2017 - REGULATION OF TRAFFIC

12 PORT KEMBLA WARD 3

Gloucester Boulevard – Illawarra Triathlon Race Series for 2017/18 on Selected Sundays from 7.30 am to 10.30 am.

Background

The Illawarra Triathlon Club has lodged an application for the 2017/18 Race Series which involves the closure of Gloucester Boulevard between Darcy Road and Reservoir Street on the following Sundays:

Sunday 8th October 2017

Sunday 12th November 2017

Sunday 17th December 2017

Sunday 14th January 2018

Sunday 11th February 2018

Sunday 4th March 2018

Sunday 15th April 2018

The Club has decided to increase the length of Gloucester Boulevard affected by the closure to include the section between Reservoir and Gallipoli Streets. It is understood that when safe to do so the residents of the small number of homes in the closed section of Gloucester Boulevard will be permitted access during the closure.

The Triathlon Club have conducted these events over a number of years without incident and have worked at ensuring the events have minimal impact on the wider community.

The details of the application and the Traffic Management Plans were circulated to members and positive responses have been received from NSW Police, NSW Roads & Maritime Services and the bus operators, with no objections being received from other members.

Consultation

Consultation with residents and other community groups regarding this Agenda item is a condition of approval.

Proposal (supported unanimously)

The road closures be approved for the dates proposed, subject to Council's Standard Conditions for Road Closures (Attachment 1) and the submitted Traffic Management Plan Attachment 13).

Attachment 1 – WCC Standard Conditions

Standard Conditions for Road Closures

For Special Events and Work Related activities Within Council Road Reserves.

Following approval by Wollongong City Council, road closures are subject to the additional Council conditions:

1. **The Applicant must complete the Council form** 'Application to Open and Occupy or Underbore a Roadway or Footpath' (Refer to Checklist below – relates to Section 138 of the Roads Act.)
2. **NSW Police Approval:** The Applicant must obtain written approval from NSW Police, where required under the Roads Act.
3. **If the Road Closure is within 100m of any traffic control signals or on a 'State Classified Road'** the Applicant must obtain a Road Occupancy Licence (ROL) from NSW Roads & Maritime Services (RMS).
4. **The Applicant must advise all affected residents and business owners** within the closure area of the date/s and times for the closure, at least 7 days prior to the intended date of works.
5. **The Applicant must advise Emergency Services:** Ambulance, Fire Brigade and Police, Taxi and Bus Companies of the closure dates and times in writing, 7 days prior to the intended date of works. The Applicant must endeavour to minimise the impact on bus services during the closure.
6. **Traffic Management Plan:** The closure must be set up in accordance with the approved **Traffic Management Plan (TMP)** prepared by an appropriately qualified traffic controller; a copy of whose qualifications must be included with the submitted TMP.
7. **Traffic Management Plan Setup:** The Traffic Management Plan must be set up by appropriately qualified traffic control persons or the NSW Police.
8. **Access to properties affected by the road closure must be maintained where possible.** Where direct access cannot be achieved, an alternative arrangement must be agreed to by both the applicant and the affected person/s.
9. **Public Notice Advertisement:** The Applicant must advertise the road closure in the Public Notices section of the local paper, detailing closure date/s and times at least 7 days prior to the closure.
10. **Public Liability Policy:** The Applicant must provide Council with a copy of their current insurance policy to a value of no less than \$20 million dollars to cover Wollongong City Council from any claims arising from the closure.

Checklist:

- ☒ **Completed Council Form:**
'Application to Open and Occupy or Underbore a Roadway or Footpath'.

Required information as shown below MUST be attached:

- ☒ A copy of the letter from the Traffic Committee authorising the closure
- ☒ The Traffic Management Plan (TMP)
- ☒ The Road Occupancy Licence (ROL) *if required*
- ☒ Written approval from NSW Police
- ☒ Public Liability Insurance

Applications may be lodged in the Customer Service Centre located on the Ground Floor of Council's Administration Building, 41 Burelli Street Wollongong between 8.30am and 5pm Monday to Friday.

Z16/135267

Attachment 2 – Standard Conditions for Street Parties 1 of 2

STANDARD CONDITIONS FOR ROAD CLOSURES FOR STREET PARTIES

- 1 Each road affected by the closure approval shall be restored to full and uninterrupted traffic flow prior to the end of the closure.
- 2 The road shall be cleared sufficiently to allow an emergency vehicle access to a property within the closure area. For this reason, no barbeques, heavy tables or other heavy equipment is to be set up on the road pavement.
- 3 You are required to advertise the road closure in the local newspaper

E.g. Temporary Road Closure – Larkins Lane, Yallah
Date: 18 December 2015
Time: 2 pm – 7 pm
Event: Street Party
- 4 Council will notify emergency services and the Police Service.
- 5 NSW Police Service directions are to be strictly adhered to.
- 6 Council will endeavour to make available to you the following equipment for the closure

Regular Street Equipment Requirements	Cul - De - Sac Street Equipment Requirements
6 Barrier legs	3 Barrier legs
12 Road Barriers	6 Road Barriers
2 Road Closed Signs	1 Road Closed Signs
4 Flashing Lights	2 Flashing Lights

It should be noted that Council does not supply 9 volt batteries for flashing lights, however batteries can be made available for approximately \$3.40 each.

The flashing lights must be fixed to the barriers and operating prior to sunset.

It is your responsibility to collect this equipment from Council's Works Depot Store, Montague Street, North Wollongong, prior to 2.00 pm on the last working day prior to your proposed road closure, and return same on the next working day following the closure. Please ensure you sign a receipt when collecting and returning this equipment.

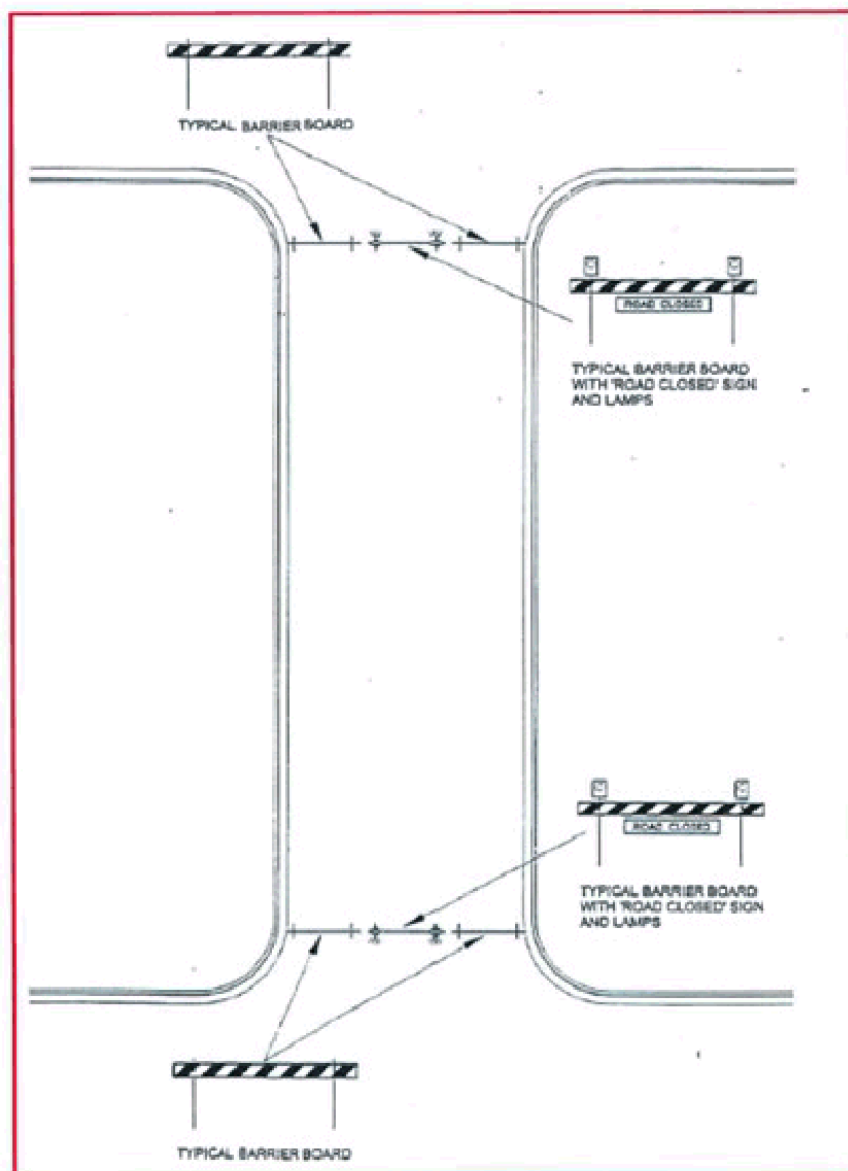
Equipment, which is returned damaged beyond use or not returned at all, will be replaced at your cost.

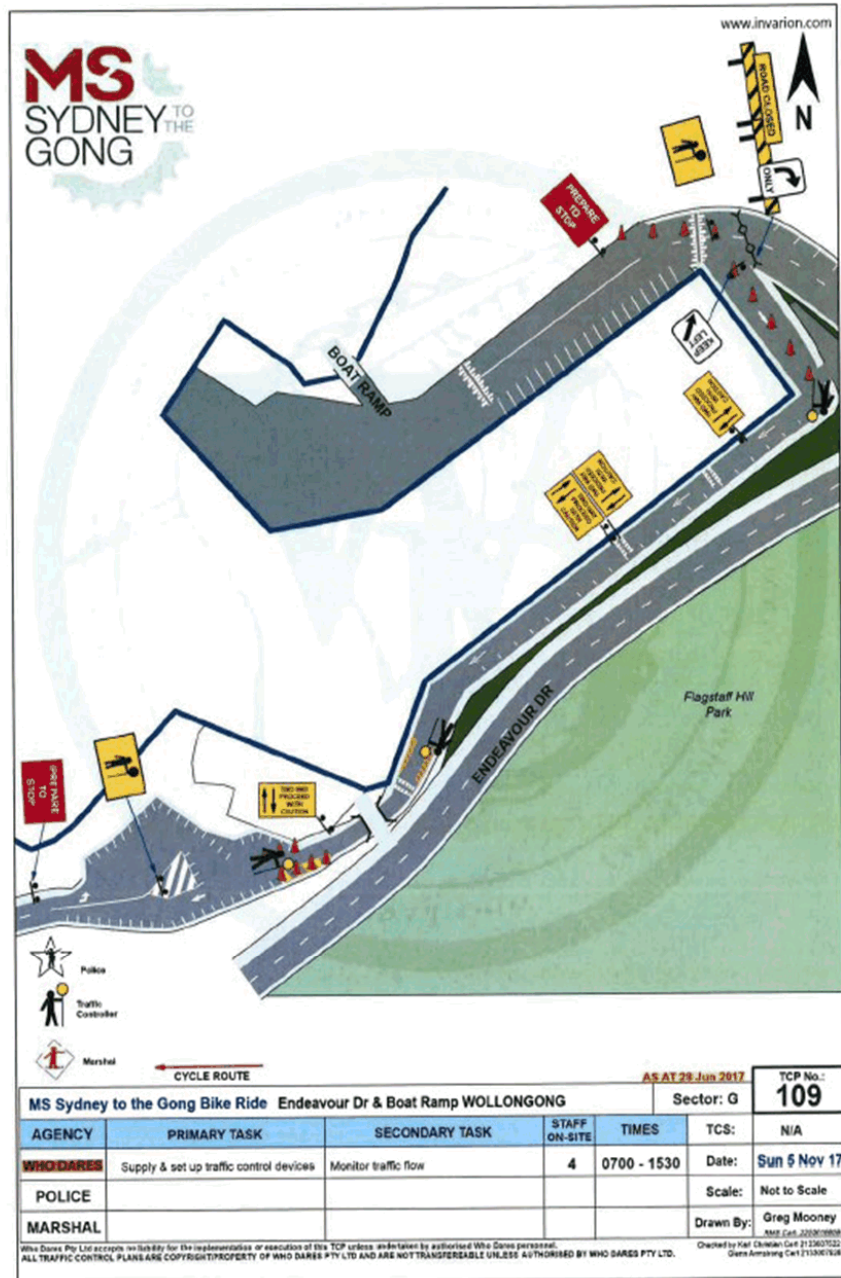
A sufficient number of people (at least 2), together with a vehicle suitable for the purpose of transporting the relevant equipment, are to be provided by the organisers for the loading and unloading of this equipment at the Depot.

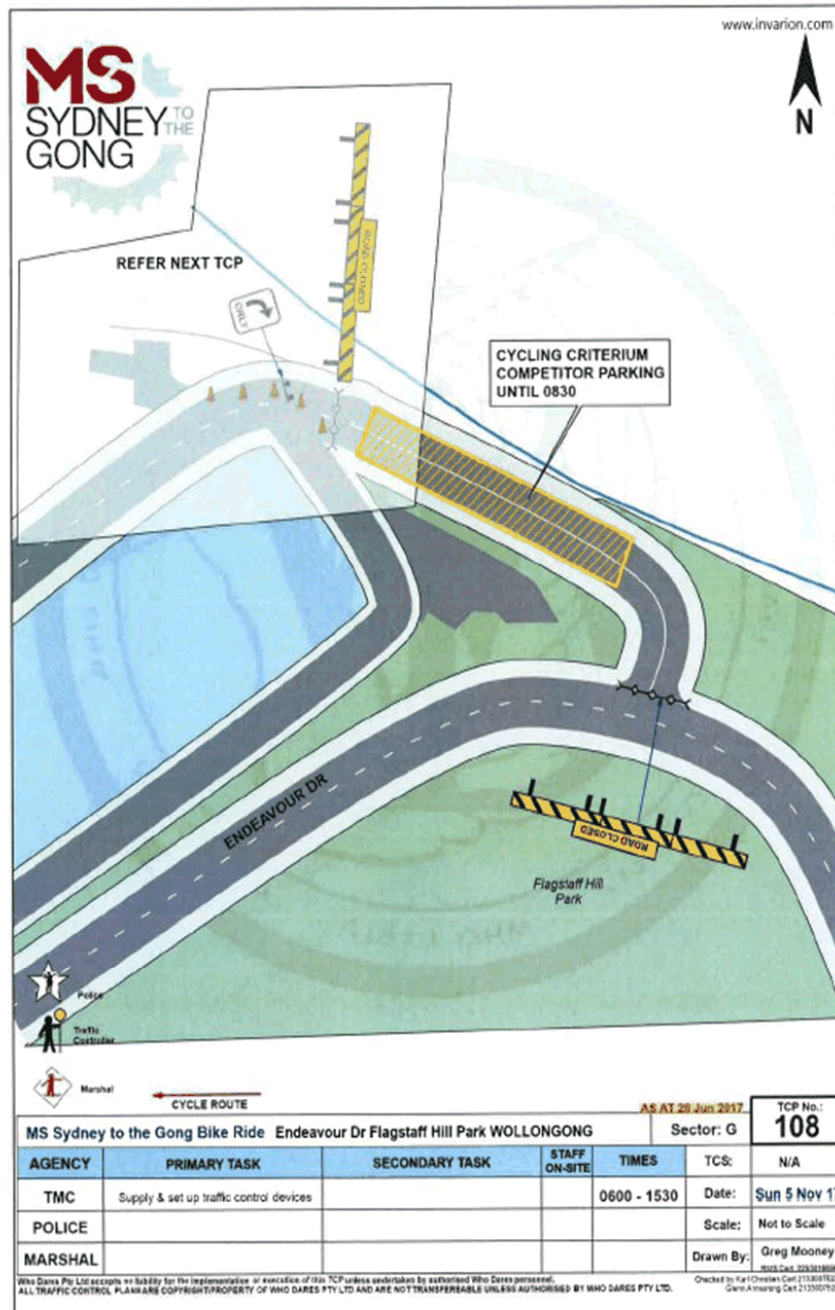
- 7 You are requested to email Council's Events and Functions Coordinator events@wollongong.nsw.gov.au **two weeks prior to pick-up** to ensure availability of the equipment.
- 8 If Council's Store does not have sufficient equipment to lend, you are to obtain equipment from another source (e.g. hire firm), at your expense.

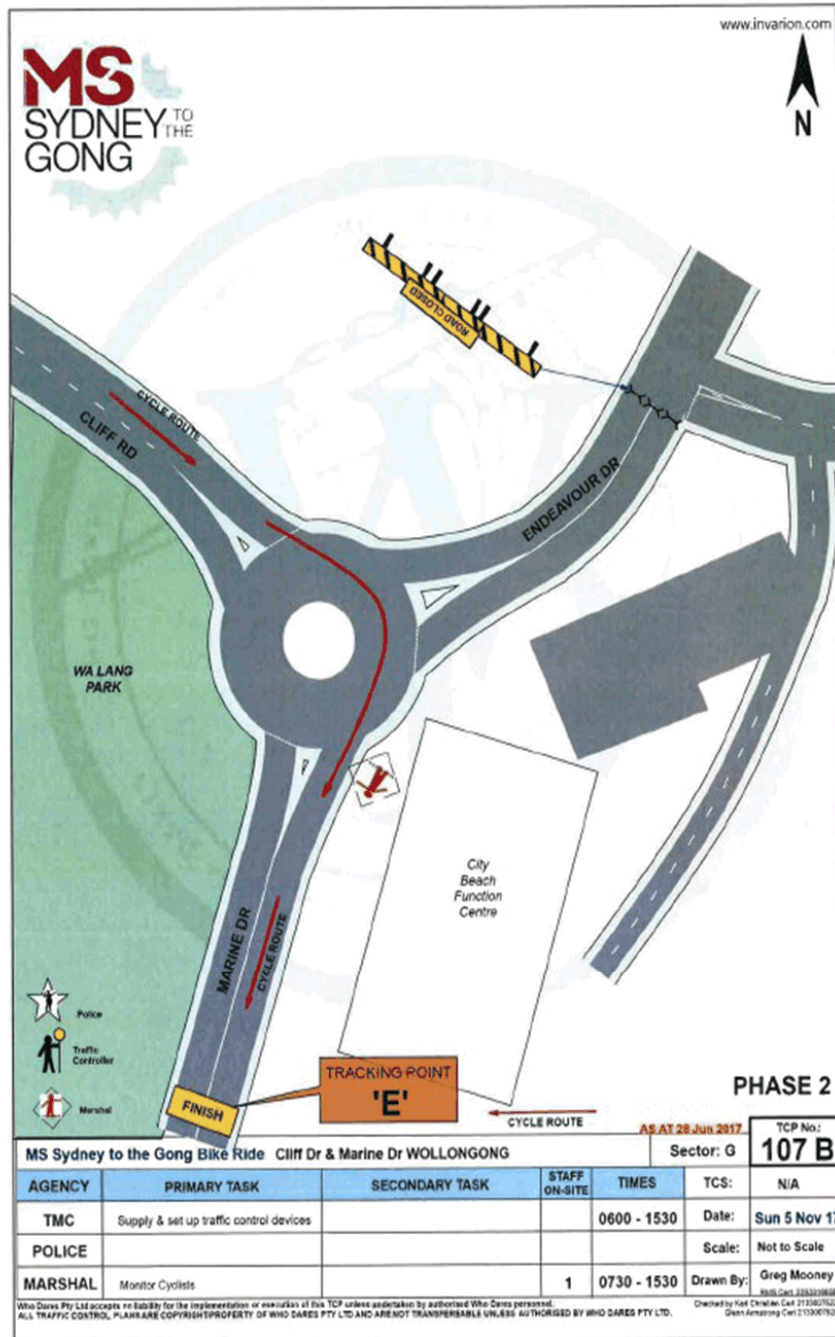
Attachment 2 – Standard Conditions for Street Parties – 2 of 2

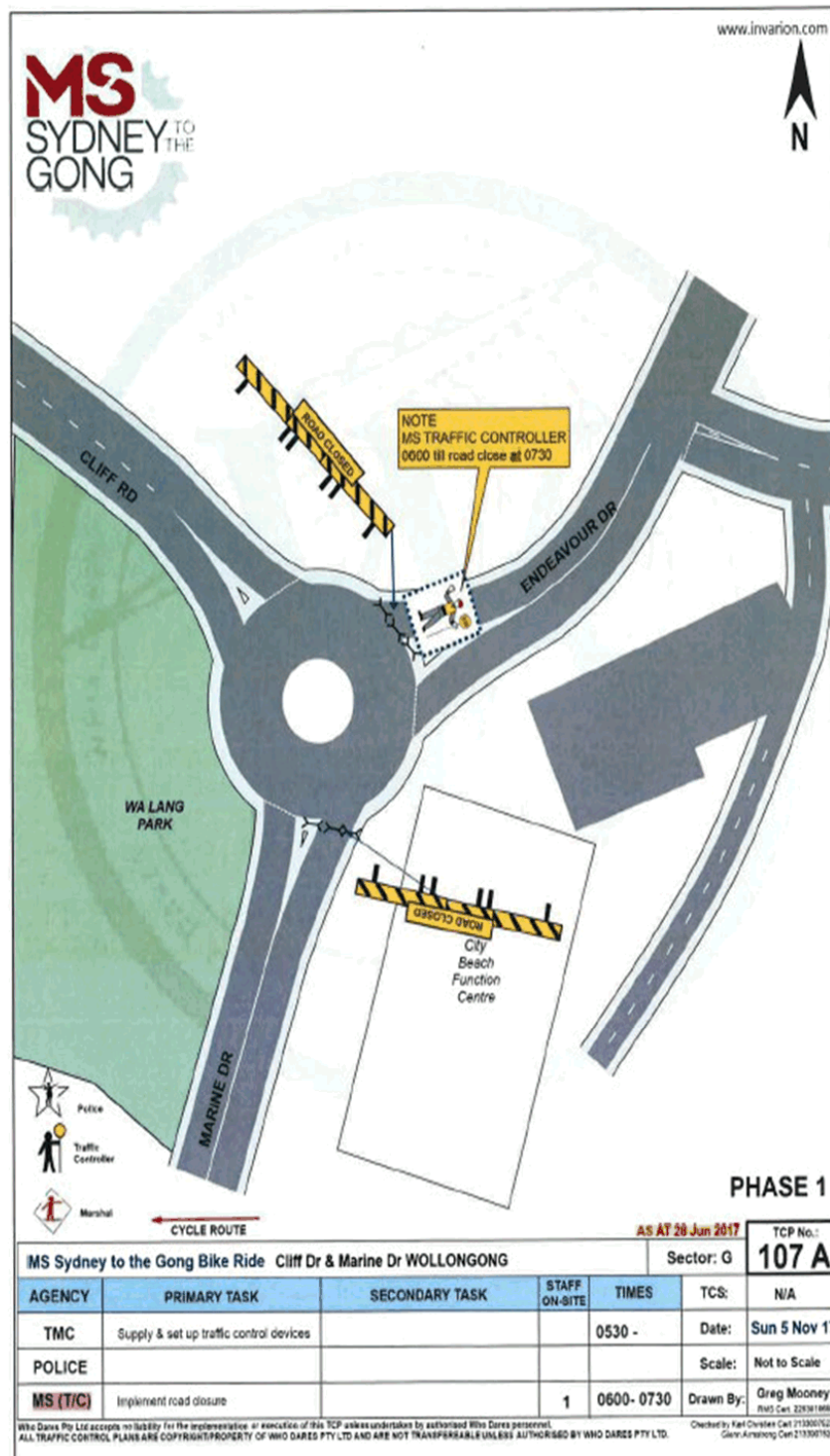
TYPICAL ROAD CLOSURE SET UP FOR STREET PARTIES

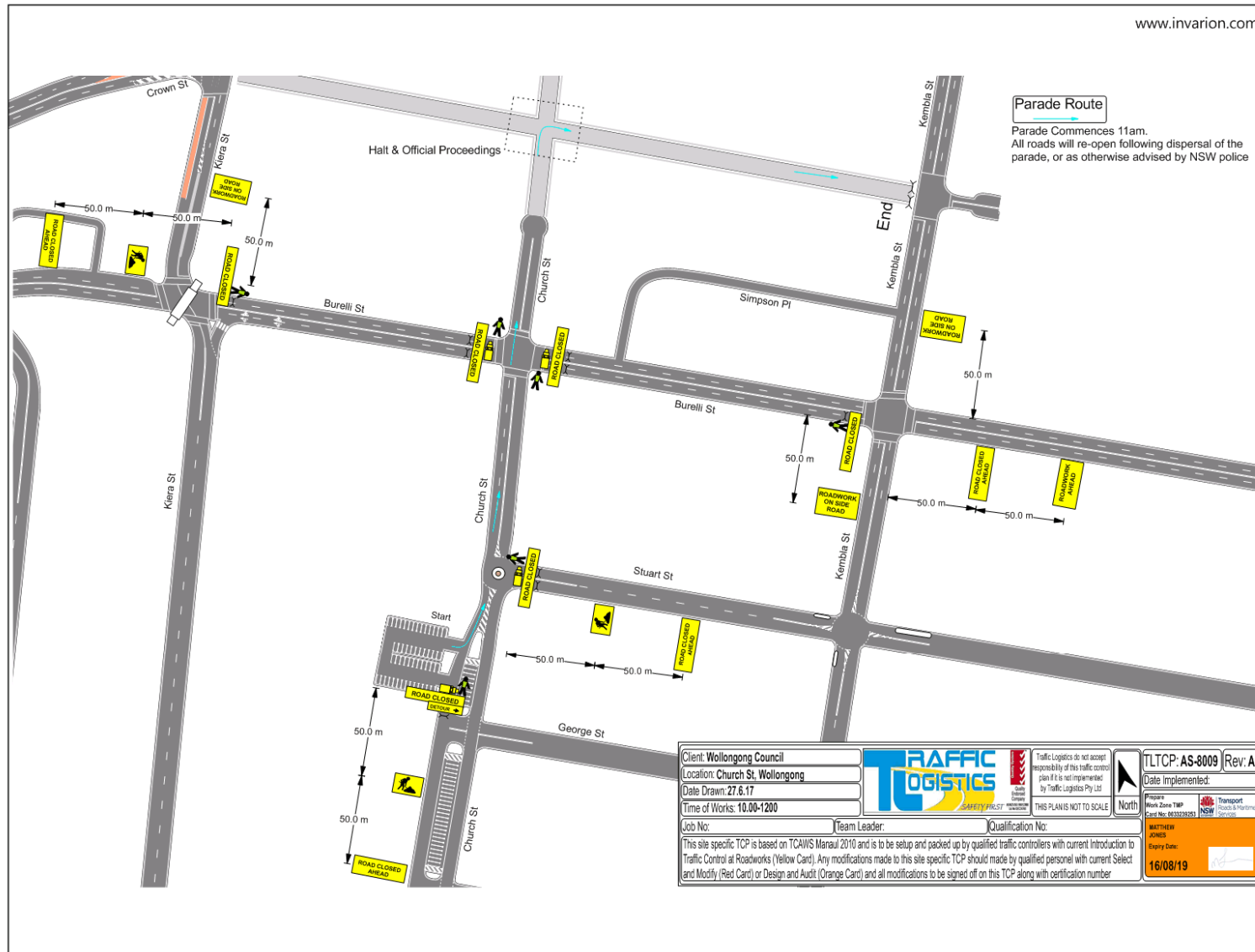


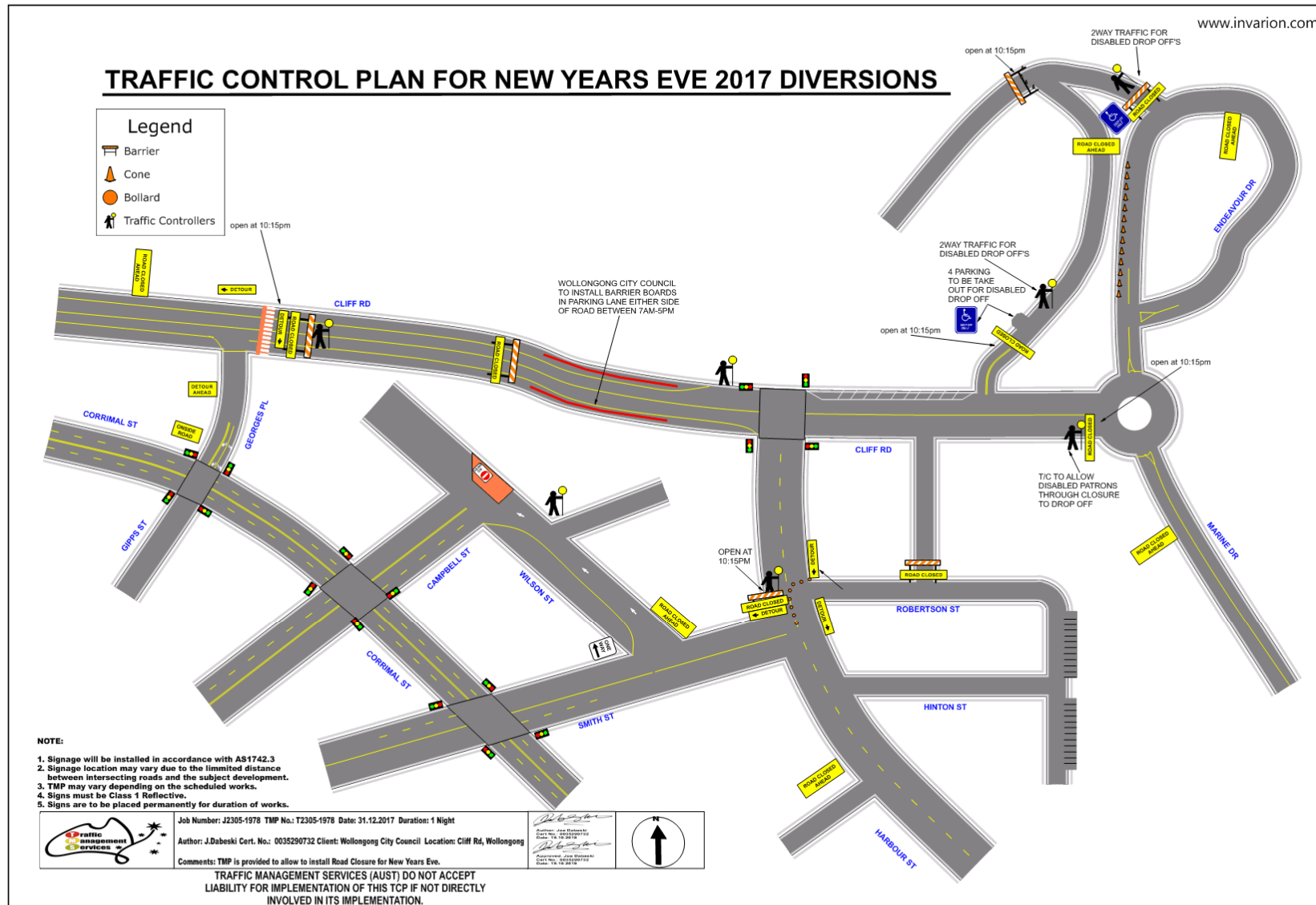


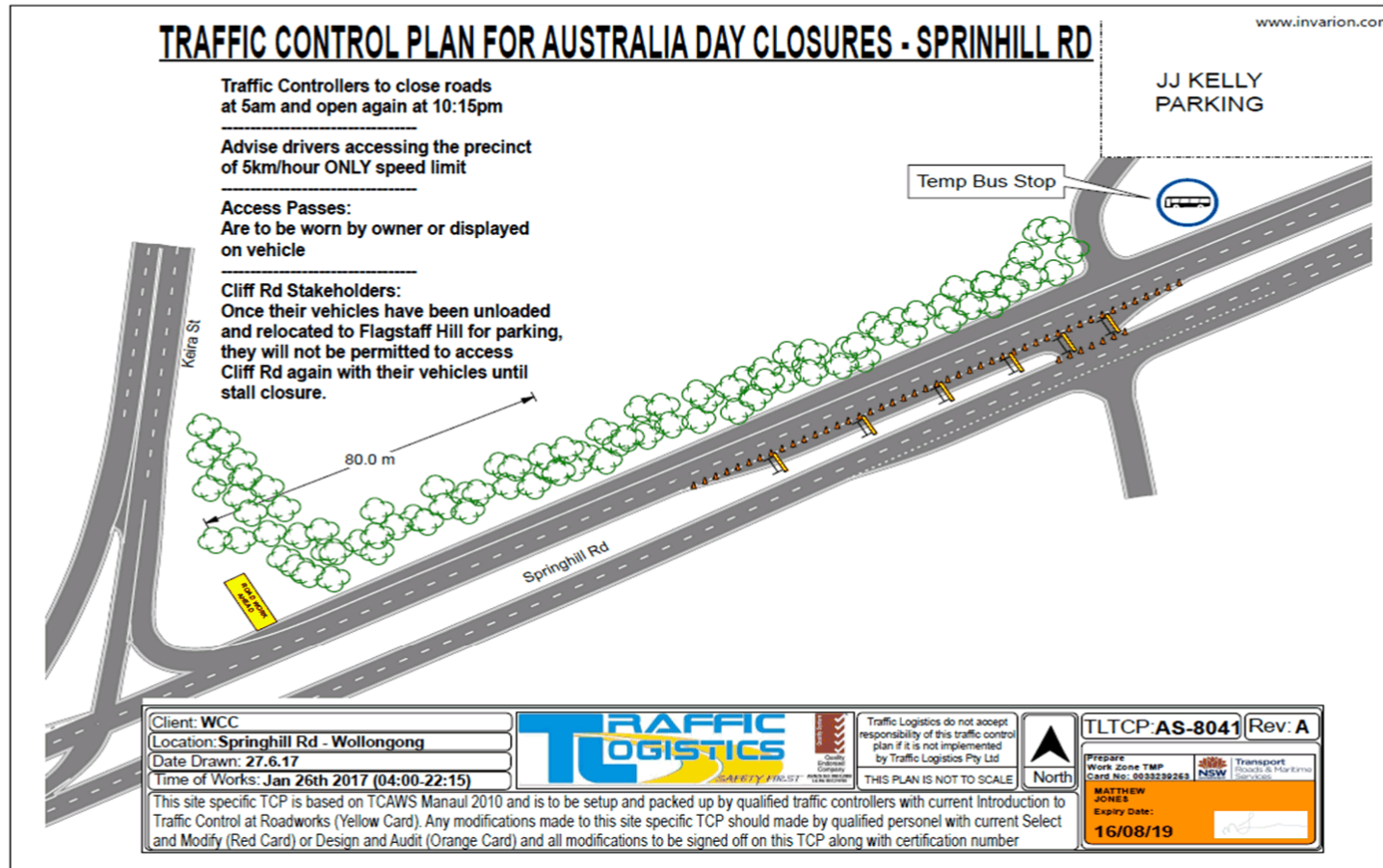


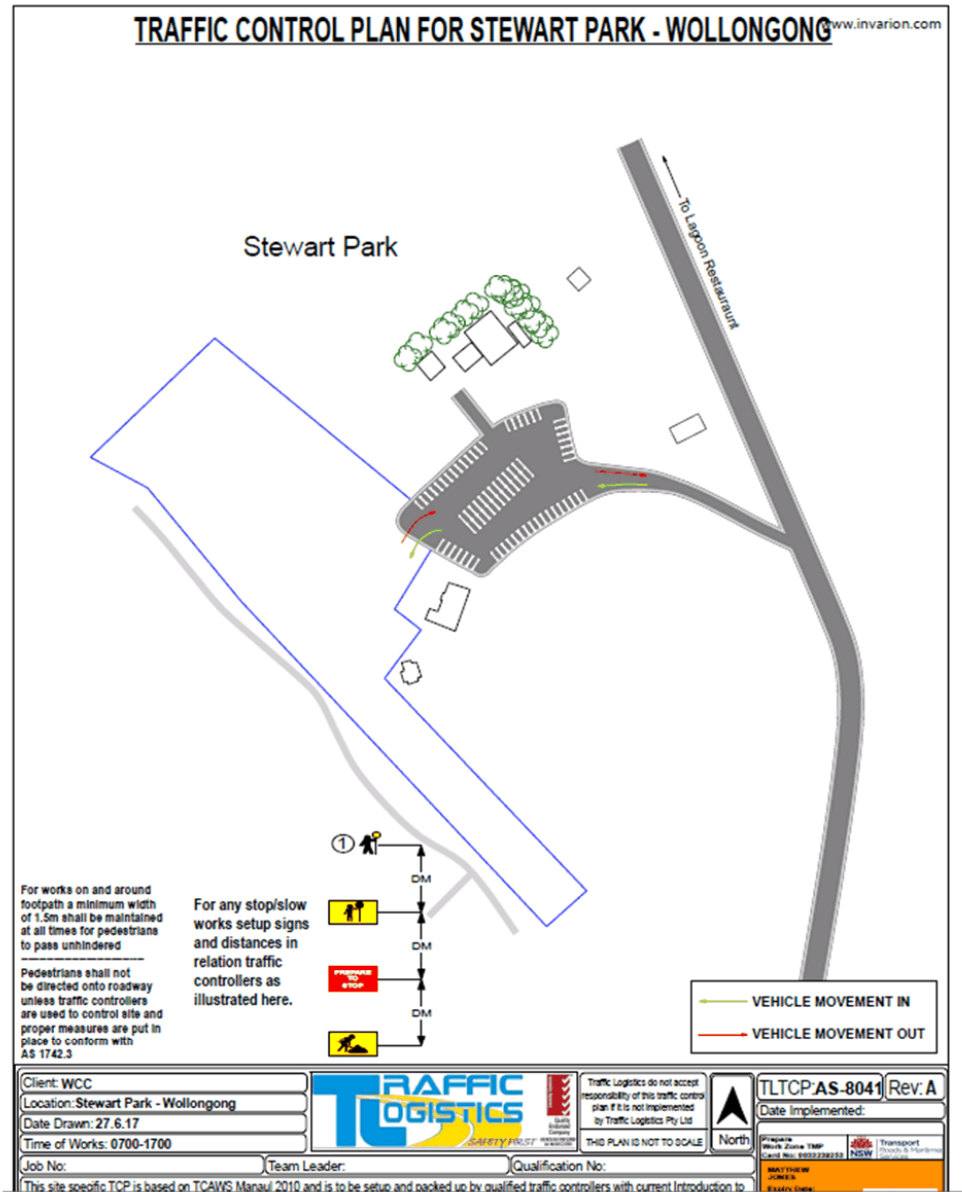


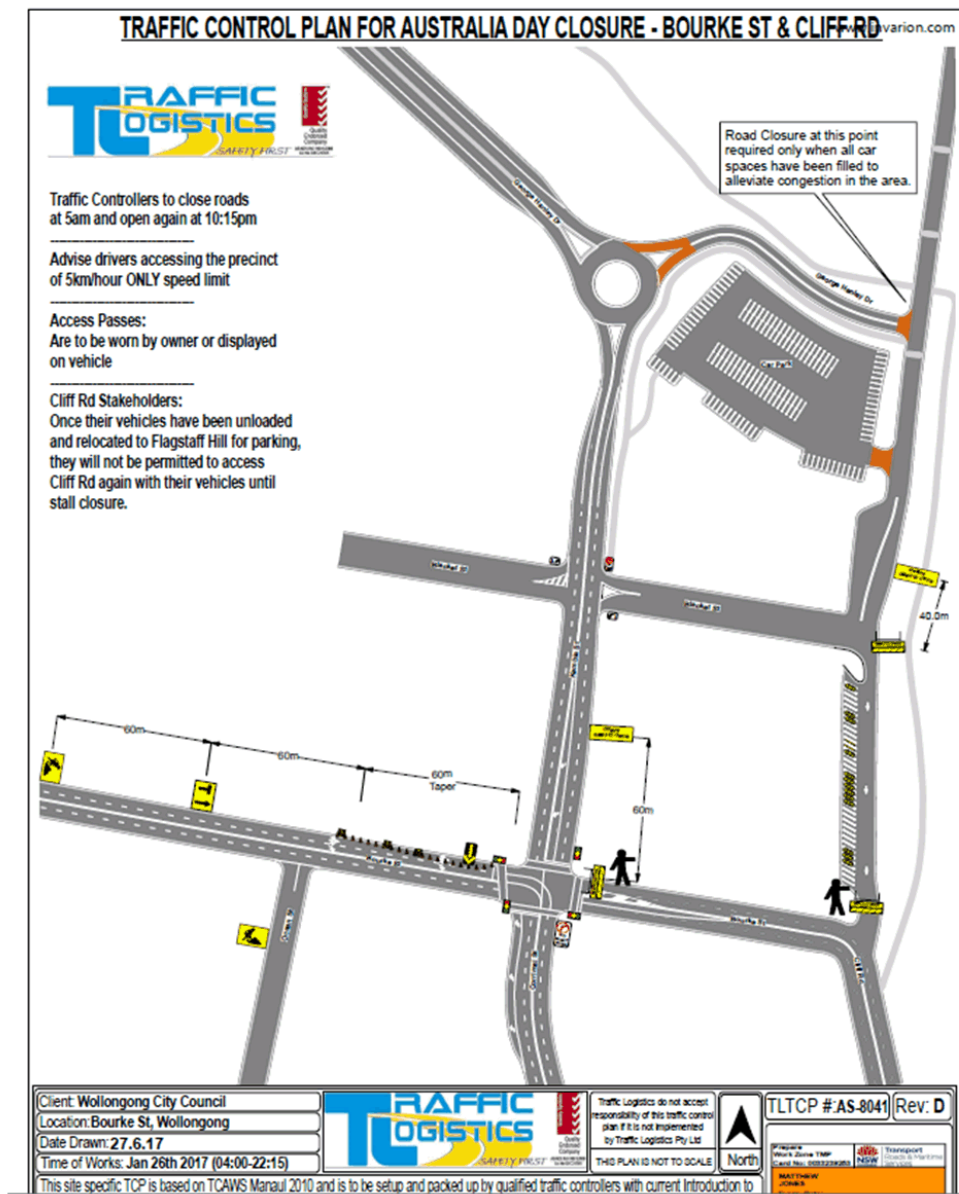


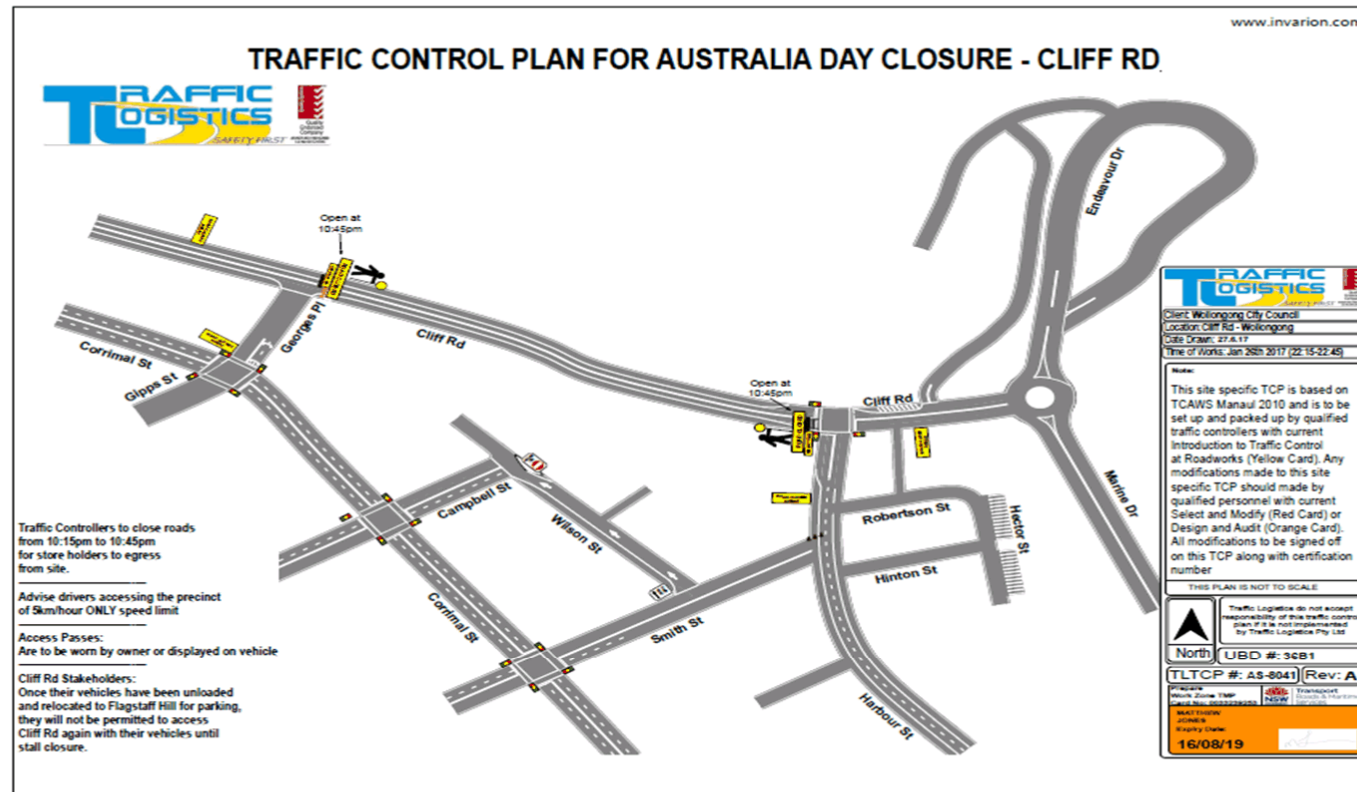


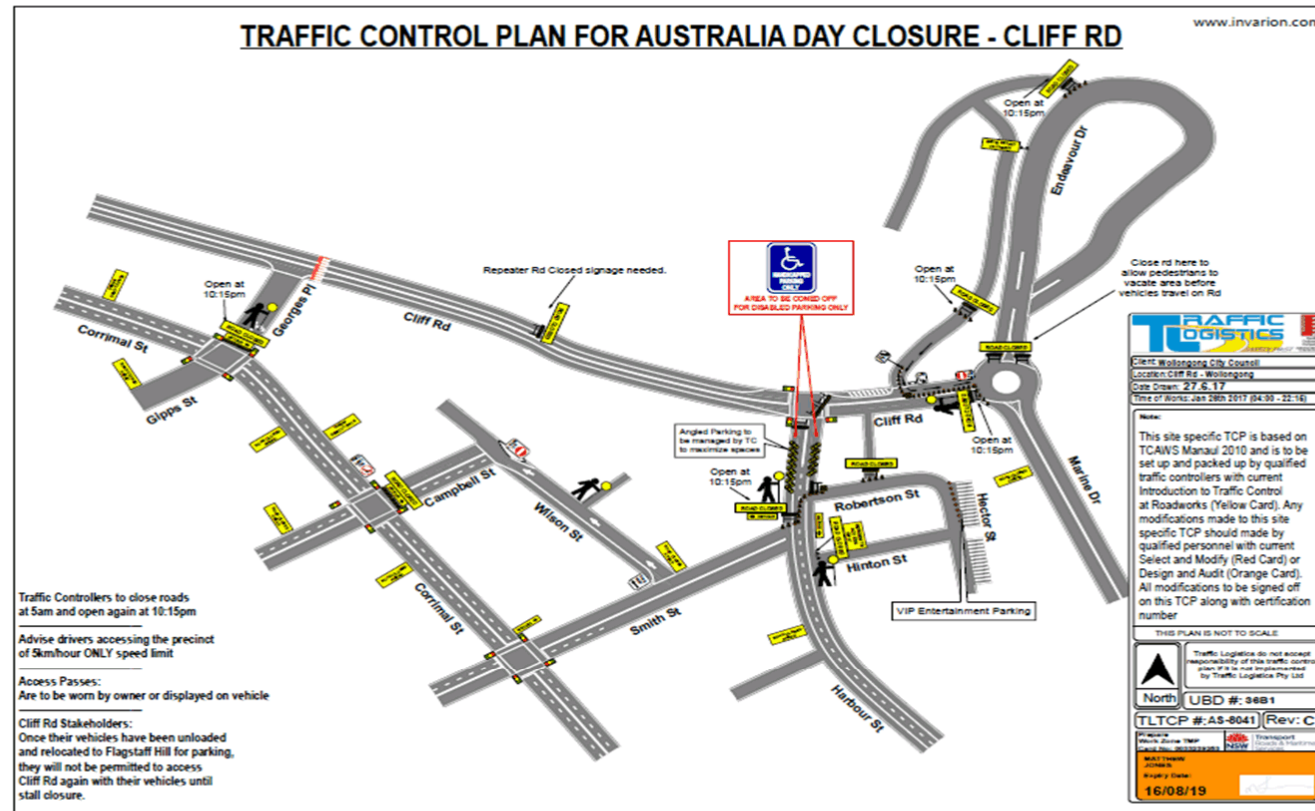


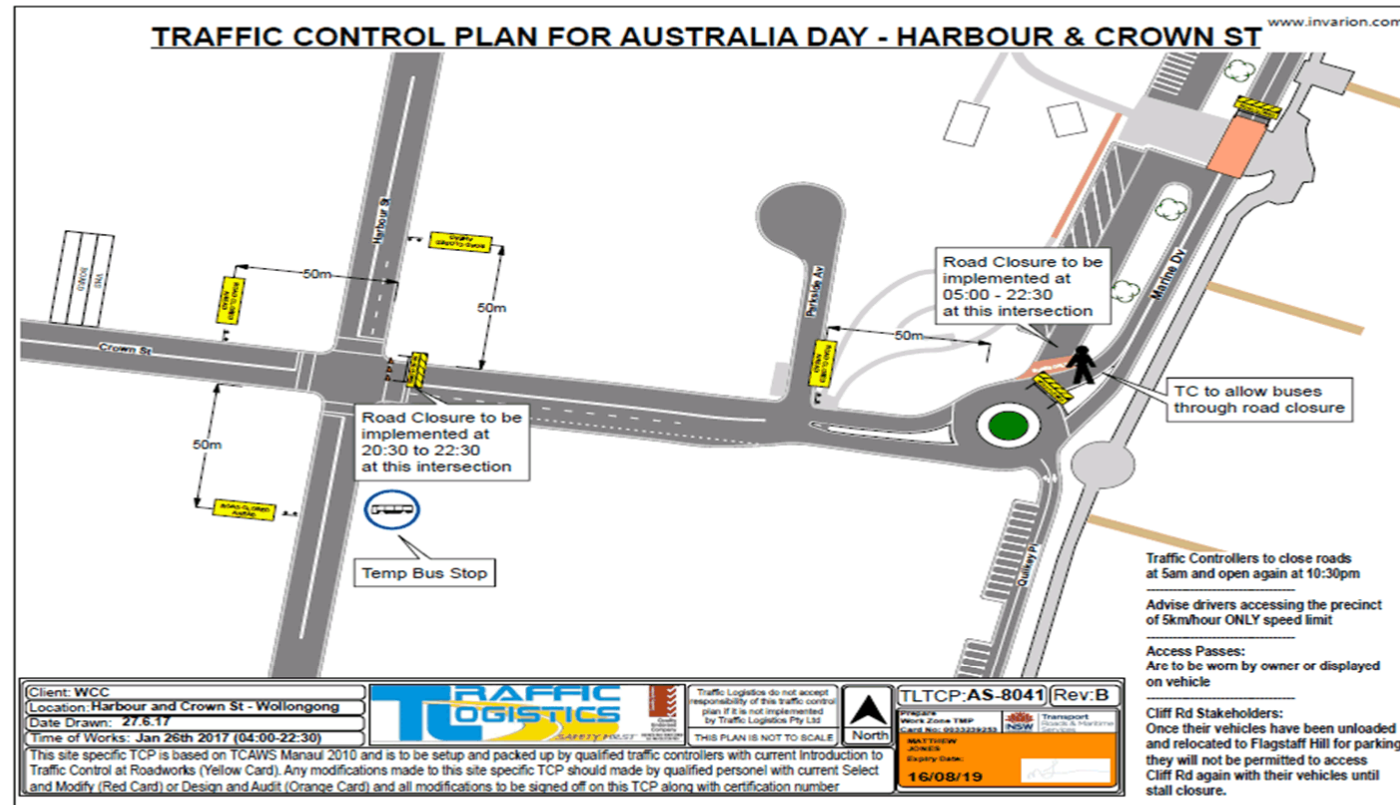


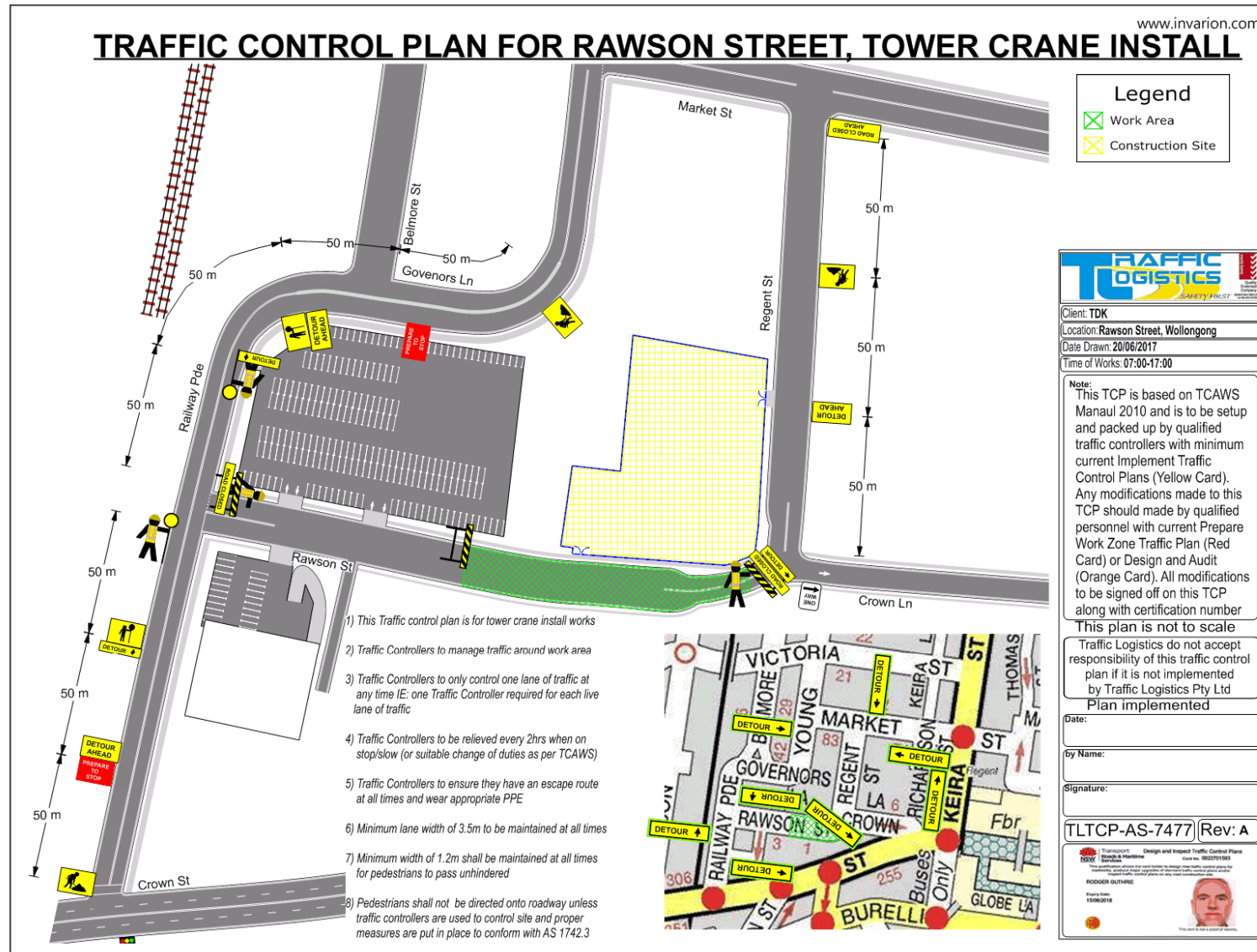




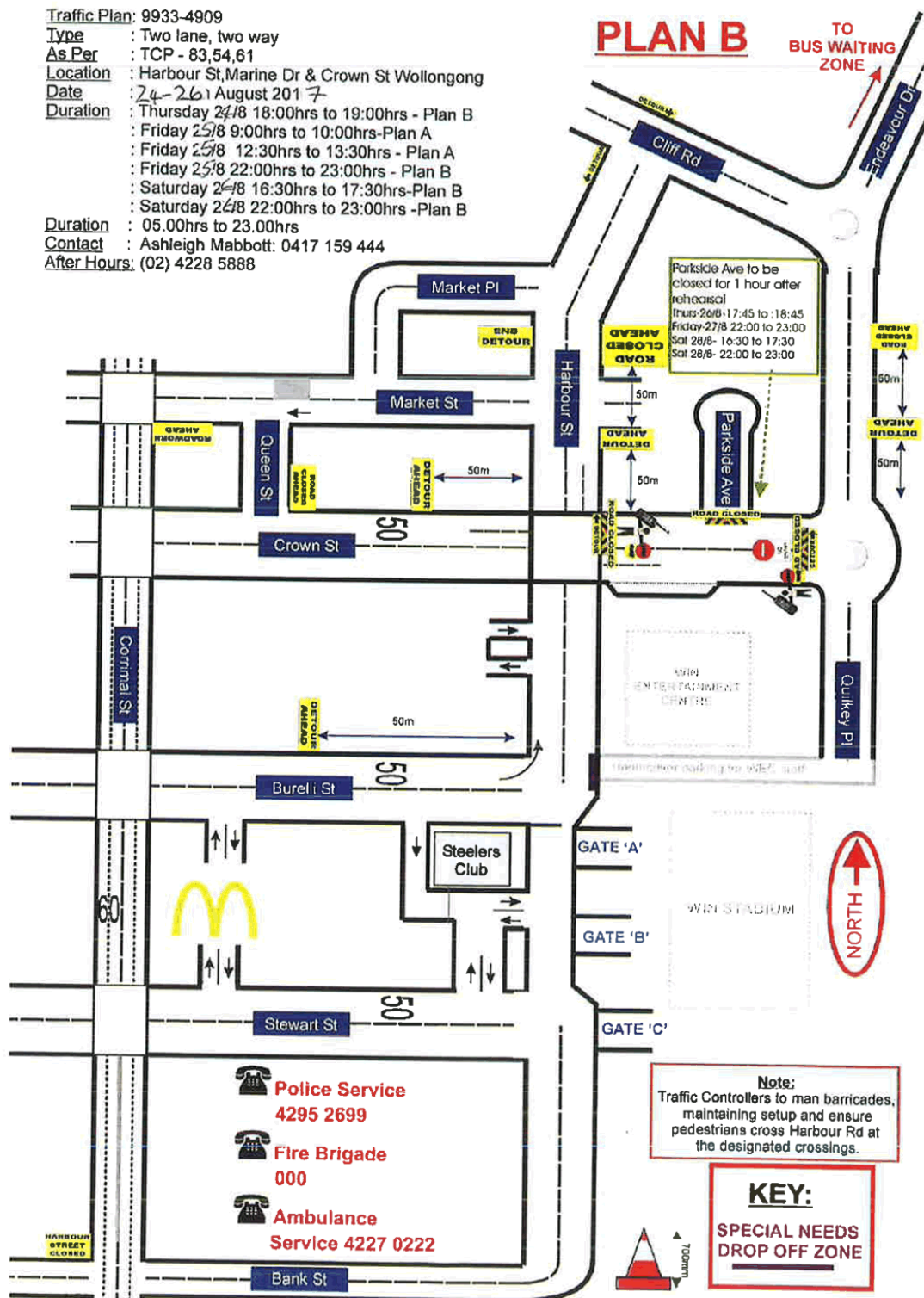




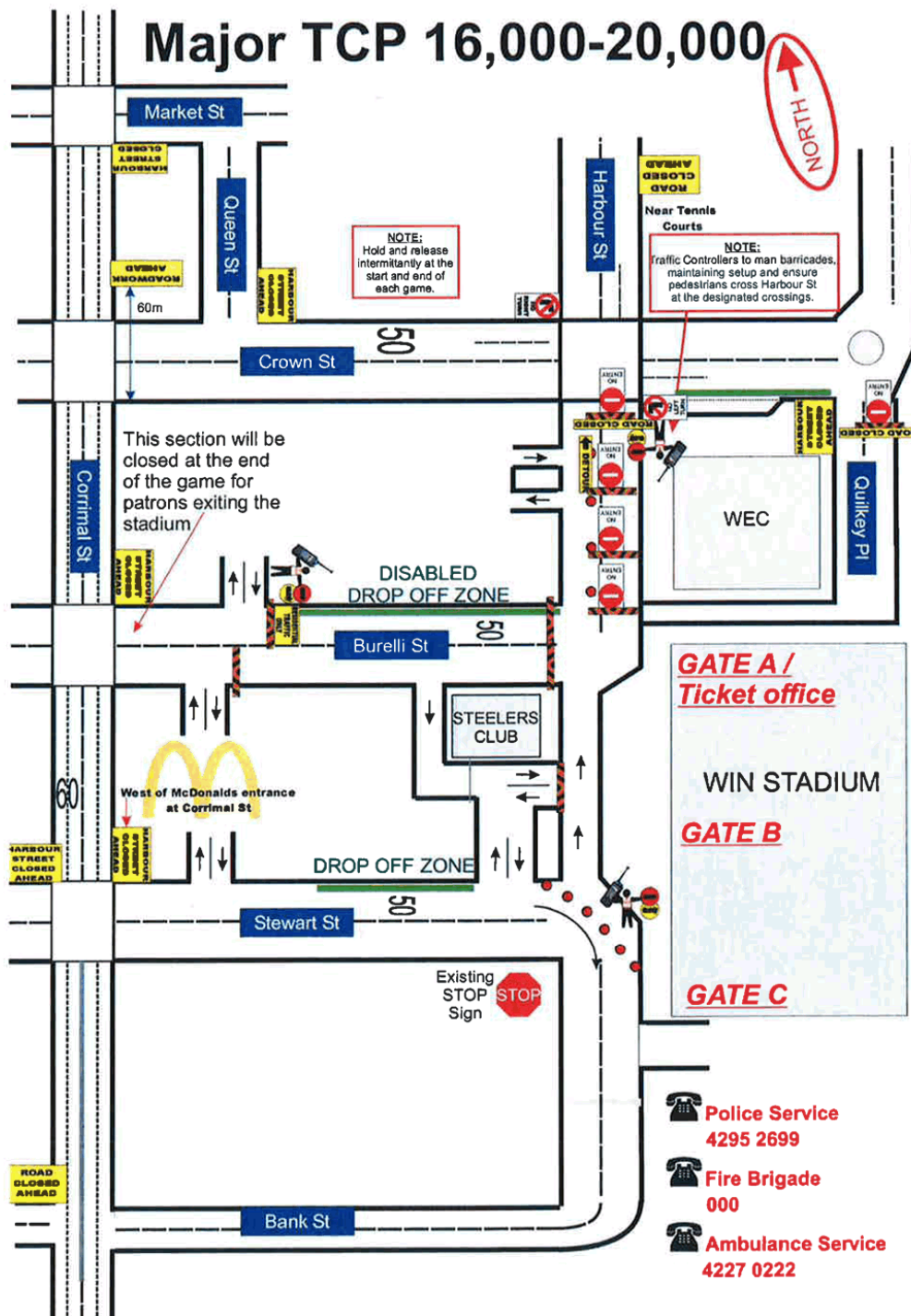




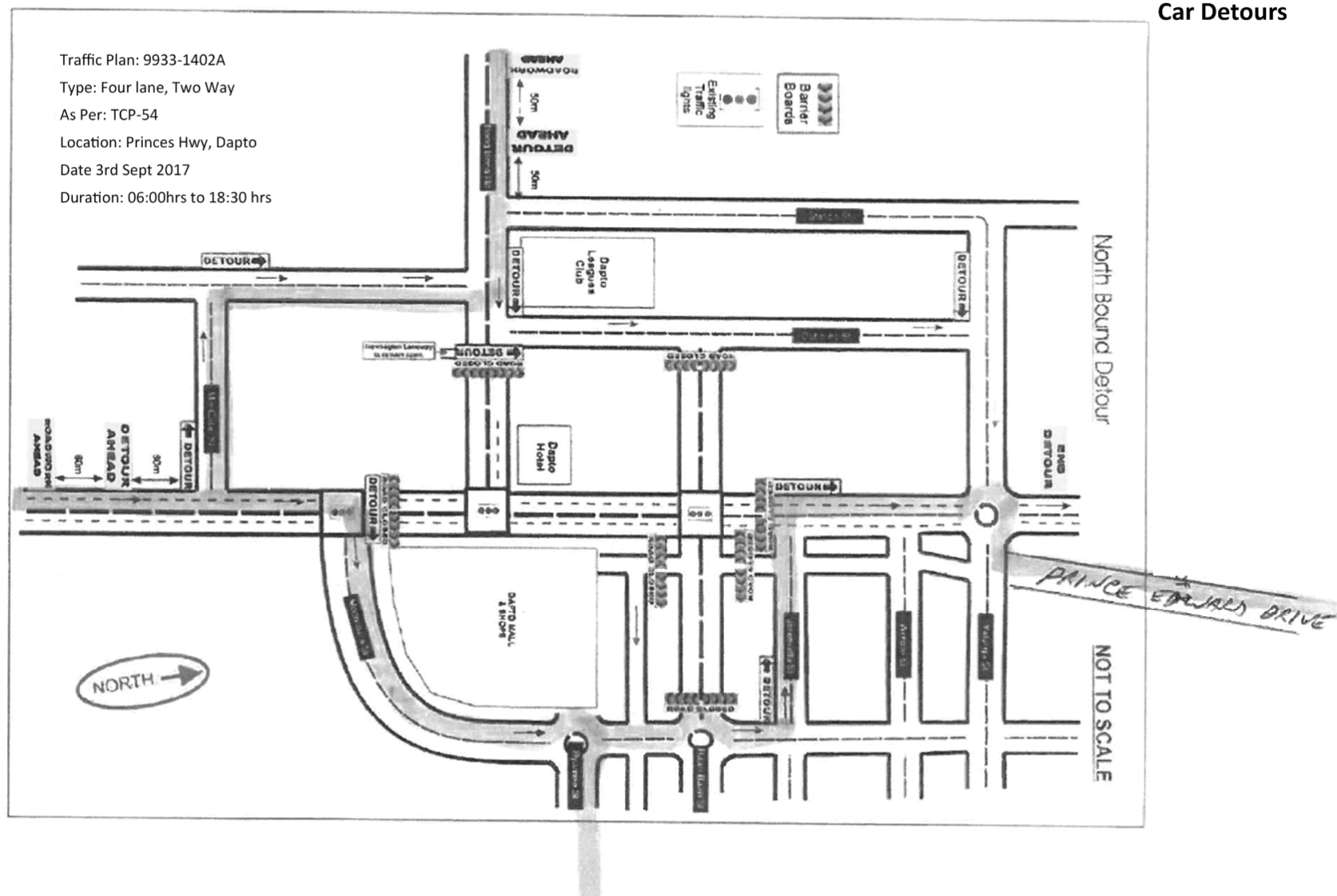
Traffic Plan: 9933-4909
Type : Two lane, two way
As Per : TCP - 83,54,61
Location : Harbour St, Marine Dr & Crown St Wollongong
Date : 24-26 August 2017
Duration : Thursday 24/8 18:00hrs to 19:00hrs - Plan B
 Friday 25/8 9:00hrs to 10:00hrs-Plan A
 Friday 25/8 12:30hrs to 13:30hrs - Plan A
 Friday 25/8 22:00hrs to 23:00hrs - Plan B
 Saturday 26/8 16:30hrs to 17:30hrs-Plan B
 Saturday 26/8 22:00hrs to 23:00hrs -Plan B
Duration : 05.00hrs to 23.00hrs
Contact : Ashleigh Mabbott: 0417 159 444
After Hours: (02) 4228 5888



ELTON John



Car Detours



Bus Detours

