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ITEM 1 WOLLONGONG CITY CENTRE PLANNING REVIEW

In May 2016, Council endorsed the Vision for Wollongong City Centre, defined by *A City for People*. The next stage of the project was a comprehensive City Centre Planning Review, reviewing the built form controls to guide development in the city centre aligned with its Vision.

In 2018 work commenced on the Planning Review, with an Urban Design Framework and Economic Analysis commissioned to understand how the current suite of planning policy aligns with the City Centre Vision. The objective of the project was to seek to undertake planning, urban design, open space and economic analysis to inform appropriate distribution of height and scale of buildings across the city centre, including refinement of the city centre boundary and associated planning policy amendments.

This report seeks Council resolution to engage with the community on the suite of technical investigations to inform final refinement of a draft Planning Proposal and Development Control Plan.

RECOMMENDATION

1 Community and stakeholder feedback be sought on the Wollongong City Centre Urban Design Framework and Economic Analysis.

2 Following the consultation period and review of submissions, the draft Planning Proposal and draft Development Control Plan amendments be finalised and reported to Council for consideration.

REPORT AUTHORISATIONS

Report of: Chris Stewart, Manager City Strategy
Authorised by: Linda Davis, Director Planning + Environment - Future City + Neighbourhoods

ATTACHMENTS

1 Site Identification Plan
2 Wollongong City Centre Urban Design Framework
3 Wollongong City Centre Economic Analysis

BACKGROUND

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

The 2007 Vision set a 25 year strategic framework for the City Centre aimed at attracting 6,000 new residents and 10,000 new jobs. In 2009, Council integrated the Wollongong City Centre LEP 2007 into the Wollongong LEP 2009 (WLEP). This was part of a comprehensive LEP Review for the Wollongong Local Government Area. This was a direct translation of controls into the Wollongong LEP 2009.

In 2010 Council prepared the Wollongong CBD Action Plan (retired in 2016).

Reviewing the City Centre Vision

In March 2014, Council engaged Gehl Architects to partner in developing Wollongong Public Spaces Public Life. The partnership enabled staff to learn the methodology developed by Jan Gehl over the past 40 years. Gehl Architects is based in Denmark and have extensive experience working with cities around the world to convert high level liveability aspirations to on-the-ground, practical and tangible City change. The Gehl philosophy is based on encouraging life in a City, improving the public spaces, which will lead to improved building stock. If more people are using the City, the economics and life of the City will increase.

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

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

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

Setting a renewed Vision for Wollongong City Centre - A City for People 2016

On 30 May 2016 Council endorsed A City for People, presenting an aspirational vision for the City Centre and key strategies and outcomes aspired to be achieved in the short, medium and long term.

Council also resolved to retire the Revitalising Wollongong City Centre Vision (2007), Civic Improvement Plan (2007) and Wollongong CBD Action Plan (2010) as policy documents.

The City Centre Vision

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

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

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

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

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

Implementing the Vision: City Centre Planning Review

A City for People identified a disconnect between our current City Centre planning controls and the Vision the community helped to define.

The next stage of the project was a comprehensive City Centre Planning Review. The purpose of this work was to test the building controls which guide development in the City Centre to establish alignment with A City for People.

The objective of the project was to undertake planning, urban design, open space and economic analysis to inform appropriate distribution of height and scale of buildings across the City Centre, including refinement of the City Centre boundary and associated planning policy amendments.

Wollongong City Centre Urban Design Framework

In 2018, Architectus and Andrew Burns Architects were commissioned to prepare an Urban Design Framework, as the next step in implementing A City for People. The objectives of the urban design framework are to -

- Provide Council with strong recommendations in order to develop a suite of clear and consistent planning controls and guidelines that facilitate better design outcomes as well as economically feasible development in the City Centre
- Strengthen the way that design excellence is taken into account when Council examines places and reviews proposals
- Set the foundations that enable council to develop a stronger design culture within Council and the community.

The Urban Design Framework undertakes detailed testing of existing planning policy and urban design analysis of the City to precinct scale. This work is supported by economic analysis and forecasting prepared by SGS Economics and Planning.

Key findings include -

Land Use:

- Current land use controls could result in a City filled with residential development, compromising long term employment growth
- The retail core is spread out too far, which results in empty shopfronts and creates inactive streets
- The City's cultural identity is diversifying to support City life.

Built Form:

- General development controls don't respond to the character and historic qualities of places in the City
- The planning controls do not provide clear guidance for development to deliver the intended built outcomes for the city.
- The city's development controls do not promote development that defines a city skyline or enhances the unique natural setting
- Developments favour maximising building development controls over design quality, producing a less attractive City

Public Domain and Connections:

- The City lacks clear physical and visual connections to key places which makes wayfinding difficult and discourages walking.
- Arrival into the City Centre is confusing and provides an underwhelming first impression of Wollongong
- Public open spaces are valued but do not yet realise their full potential.
- Key public spaces are at risk of overshadowing by surrounding buildings
- Tree canopy cover in the city centre is inadequate

The Urban Design Framework defines clear Objectives for policy change across the themes of Land Use, Built Form and City Structure. These objectives are supported by Directions and Strategies which start to detail how policy can change to deliver A City for People.

PROPOSAL

A refreshed Planning Strategy

Wollongong City Centre is the economic and cultural heart of the Region. Future economic prosperity of the Region will be built on the potential for the City Centre to generate more jobs and to establish itself as a diverse city with a unique offer.

The City Centre Planning Strategy aims to deliver -

- **Jobs** – Defining a CBD that prioritises jobs growth by safe-guarding appropriate land for commercial development; and defining key retail streets that support a range of uses both day and night
- **Housing** – Promoting a variety of housing types in the right locations to support the City Core and improve affordability
- **Lifestyle** - Strengthening the structure of the City through a permeable grid that prioritises pedestrians; Creating a green network of open spaces for a sustainable, healthy and attractive city; and Protecting sunlight to key public spaces
- **Planning Controls** – Undertaking the right analysis to inform how we strengthen and simplify planning controls to ensure they respond to precinct character and future desired built form outcomes; and Improve clarity processes give clear expectations to the development industry
- **Good Design** - Elevating our design culture and commitment to delivering good design outcomes in the built environment

The Urban Design Framework, accompanied by detailed Economic Analysis, defines clear Objectives for policy change across the themes of Land Use, built form and City Structure. These objectives are supported by Strategies and Directions which start to detail how policy can change to deliver A City for People.

Land Use Strategy - To deliver a vibrant and growing Regional City

Planning controls promote land-use diversity to encourage a vibrant mix of offers throughout the City Centre, day and night. Jobs and population growth support Wollongong's role as a Regional City. Wollongong is an attractive place to live, work, visit and invest. Directions are -

1 Prioritise employment growth and establish a resilient commercial core

2 Define a thriving retail network that responds to character and supports a range of offers

3 Plan for a variety of housing to support a vibrant city.

Built Form Strategy - An attractive and diverse city in a unique natural setting

Clear planning controls preserve the unique character of Wollongong's precincts. Renewal at all scales is encouraged and this creates an interesting built fabric. Built form variety creates a recognisable city skyline that celebrates the natural setting and responds to human scale. Directions are -

1 Strengthen and simplify planning controls to promote built form diversity in response to people and place

2 Grow a legible city that supports a distinctive and evolving character

3 Elevate the importance of design quality in the City Centre.

The Public Domain and connections Strategy - A green and walkable city

A significant increase to the City's tree canopy contributes to a green, walkable and sustainable city. Attractive and revitalised public spaces support an active and healthy community and are a catalyst for growth in the city. The city grid is clear and permeable and facilitates walkability. Directions are -

1 Strengthen the structure of the City through a permeable grid that prioritises pedestrians

2 Create a green network of open spaces for a sustainable, healthy and attractive city

3 Improve the functionality and amenity of the street for pedestrians.

Implementation – draft Planning Controls

To implement the recommendations of the Urban Design Framework, a draft Planning Proposal and draft Development Control Plan chapter are being prepared. A review of Affordable Housing opportunities is also in preparation.

On 14 June 2019, the draft Planning Proposal was reviewed by the Wollongong Local Planning Panel, for strategic merit. The Panel concluded that:

> *The Wollongong Local Planning Panel has reviewed and supports the proposed Planning Proposal for the Wollongong City Centre. The Planning Proposal has strategic merit as it is supported by an Urban Design Framework, an Economic Study, a 3D model and thorough analysis, and implements Council's 2016 Vision for the City.*

The draft DCP chapter has also been reviewed by Council's Urban Design Panel.

To assist with the finalisation of the draft Planning Proposal and draft DCP chapter, it is proposed that community feedback be sought on the overall strategies and directions contained in the Urban Design Framework and Economic Analysis. The community and stakeholder input will enable the draft planning controls to be confirmed and finalised, prior to being considered by Council. If endorsed by Council, the draft Planning Proposal will be submitted to the NSW Department of Planning, Industry and Environment for the issuing of Gateway Determination, and formal exhibition.

CONSULTATION AND COMMUNICATION

Community Consultation

The Urban Design Framework is underpinned by the approved strategic direction developed by A City for People which was heavily influence by community engagement. It is with this comprehensive backing that the planning proposal amendments are made.

The draft report "A City for People, Wollongong Public Spaces Public Life 2015" was exhibited between 14 November 2015 to 11 March 2016. A comprehensive engagement program gathered thousands of ideas from the community across a broad range of forums with 1,060 survey responses, 19 submissions and over 100 online comments received from a range of students, community groups, business, residents, government agencies and visitors.

This feedback was overwhelmingly positive with the community indicating a readiness for action.

Commentary received informed the refinement of the final report A City for People 2016, and influenced priorities in accompanying Implementation Plan.

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

Highlights from the engagement included -

- Hundreds of conversations about the draft Plan (with community members, businesses, land owners and school students)
- 9,000 promotional postcards distributed in hard copy and sent to residents and landowners in the Wollongong suburb

- 1,060 people completed the online survey
- 1,120 views of the online project page
- 14 participants posting on the online discussion forum, producing 18 forum posts
- 19 written submissions received from 15 residents and agencies
- 150 students offered comments and ideas for the future of Wollongong City Centre.
- 1,200 people reached through Social Media (Facebook, Instagram & twitter) and online forum.

Community and stakeholder feedback expressed support for the Vision, revitalisation and investment in the City's public spaces and streets. Significantly, there were no submissions that directly opposed A City for People.

The Community are invited to inform the process by way of providing comment on the Urban Design Framework during the exhibition period.

Councillor Input

Councillor workshops have been held to keep Councillors informed and communicate key findings and to hear Councillor Commentary.

- Councillor Workshop – 23 August 2018
- Councillor Workshop – 13 September 2018
- Ward 2 Councillor Briefing – 3 June 2019
- Councillor Briefing – 7 November 2019
- Councillor Briefing – 10 February 2020

Department of Planning and Environment Engagement

An open dialogue has been maintained with the Department of Planning, Industry and Environment (Regional Office) with a series of working sessions / meetings held.

Public Consultation arrangements

The initial non-statutory community consultation of the strategy documents is proposed to occur over 5 weeks, concluding prior to Easter / School Holidays. The exhibition will include -

- Mail-outs
- Council Website – Have your say page
- Social media
- Stakeholder forum, meetings
- Hard copies will be available at Customer Service and the libraries
- Hold a Shop-front (or Mall market) stand
- Release a Video.

Following the consultation period, submissions will be reviewed and any required amendments will be made to the strategy documents. The implementation draft planning documents will be finalised and the Planning Proposal package reported to Council. If endorsed by Council, the draft Planning Proposal will be referred to the NSW Department of Planning, Industry and Environment for a Gateway Determination, which will enable formal exhibition.

PLANNING AND POLICY IMPACT

This report contributes to the delivery of Our Wollongong 2028 goal "We have an innovative and sustainable economy". It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2018-2021	Operational Plan 2019-20
Strategy	**3 Year Action**	**Operational Plan Actions**
2.1.2 Grow the national competitiveness of Metro Wollongong to drive economic growth, employment and diversification of the region's economy	2.1.2.2 Progress implementation of a City for People and its accompanying Implementation Plan	Undertake the City Centre Planning Review and Design Review arising from the Wollongong City Centre – Public Spaces Public Life Implementation Plan

This work is a direct delivery of A City for People, aligning directly with Council's Operational Plan.

Economic Development Strategy (2019-2029)

On 23 September 2019 Council adopted the draft Economic Development Strategy following exhibition. The draft City Centre Planning and Economic Review is consistent with the Economic Development Strategy. Importantly, strategies such as the Jobs Target are aligned to strategies such as identifying commercial only precincts.

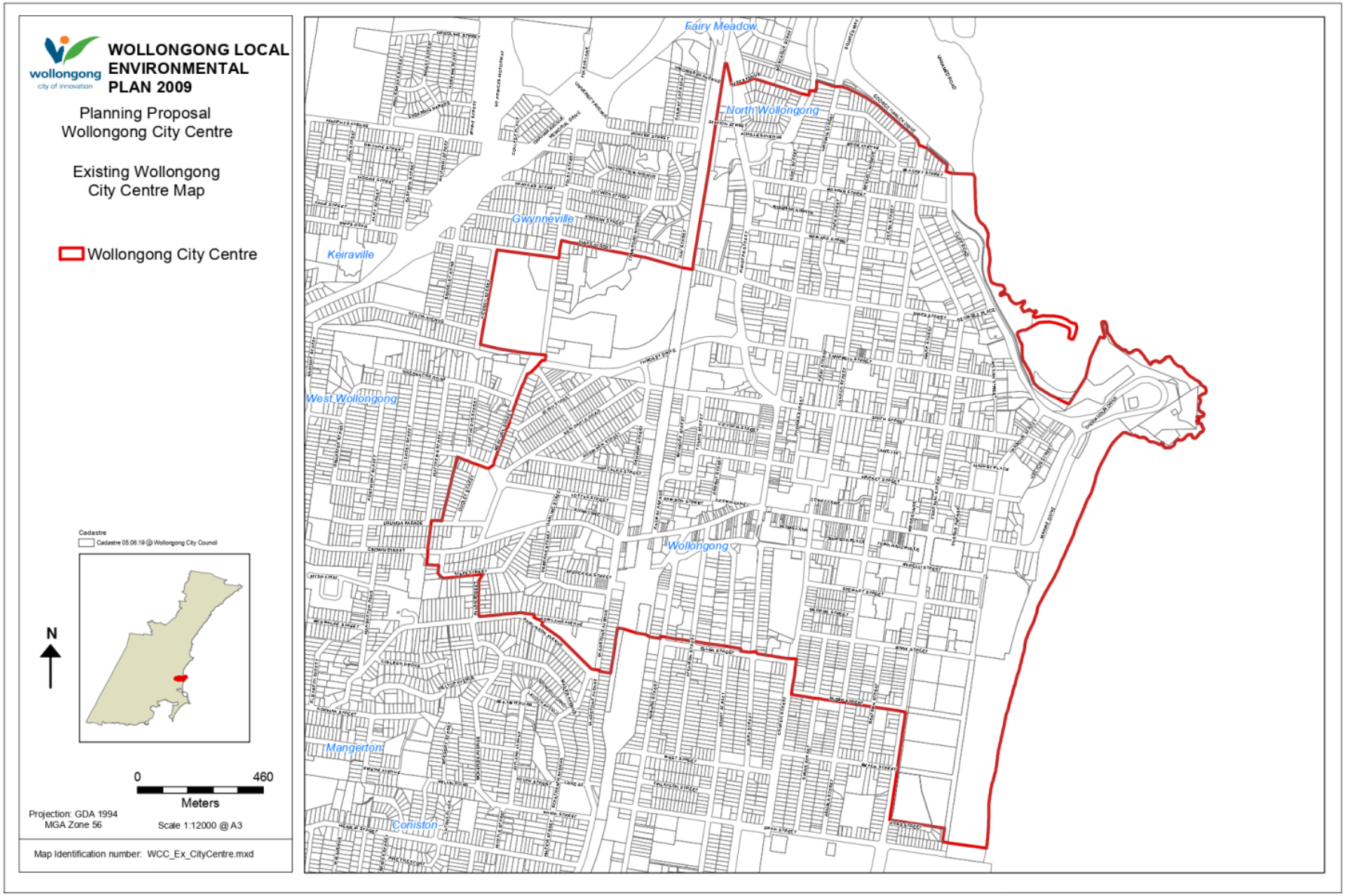
Draft Wollongong City Centre Access and Movement Strategy

The preparation of the draft Wollongong City Centre Access and Movement Strategy will commence community engagement in February 2020, aligned with the exhibition of the Urban Design Framework. Some preliminary traffic and parking data has been used to inform the Urban Design Framework, however, the development of the Access and Movement Strategy will continue to inform future planning policy.

CONCLUSION

The Vision for Wollongong City Centre, defined by *A City for People*, was endorsed by Council in May 2016. Based on community input and the direction of this Vision, Council has developed an Urban Design Framework and Economic Analysis to understand how the current suite of planning policy aligns with the City Centre Vision.

The Urban Design Framework provides recommended Objectives and Directions to inform policy recommendations across land use, built form and City Structure. Council is seeking community feedback on the Wollongong City Centre Urban Design Framework, and Economic Analysis. Community and Stakeholder feedback will be used to finalise the preparation of the draft Planning Proposal and draft DCP chapter, prior to those documents being reported to Council and exhibited.


WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009
Planning Proposal
Wollongong City Centre
Existing Wollongong City Centre Map
Wollongong City Centre
Cadastre
Cadastre 05.06.19 @ Wollongong City Council
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Fairy Meadow
North Wollongong
Gwynneville
Keiraville
West Wollongong
Wollongong
Mangerton
Coniston

wollongong city of innovation
architectus™ Andrew Burns Architecture

Wollongong City Centre Urban Design Framework

Draft

Project and report	Wollongong City Centre Urban Design Framework
Version and date issued	February 2020 - Draft reported to Council

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 of innovation

architectus™
Andrew Burns Architecture

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Executive Summary

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

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

A City for People

In 2014, Council committed to commence a review of the Re*vitalising Wollongong City Centre Strategy (2007)* and its associated suite of planning controls. The resulting study, *A City for People* by Gehl Architects and McGregor Coxall, sets a vision for the future - a people-oriented, sustainable and liveable city.

A City for People identified four themes to support growth towards this vision:

1. Celebrate the uniqueness
2. Develop a human scale city
3. Grow a living city
4. Create an accessible, pedestrian friendly city

A key action of A City for People was to undertake a City Centre Planning & Design Review. Two key elements of the Review were Economics and Urban Design analysis and recommendations. The Urban Design Framework brings these two pieces of work together to take the next step in implementing *A City for People*.

The Urban Design Framework is a tool for decision making. It provides a detailed analysis of the current City Centre planning policy and seeks to provide a set of Objectives, Directions and Strategies to inform Planning Policy Change to realign with *A City for People*.

The purpose of the framework is to:

- Provide Council with strong recommendations in order to develop a suite of clear and consistent planning controls and guidelines that facilitate better design outcomes and economically feasible development in the City Centre.
- Strengthen the way that design excellence is taken into account when Council examines places and reviews proposals.
- Set the foundations that enable council to develop a stronger design culture within council and the community

The Urban Design Framework document is broadly divided into two parts:

1. Analysis
2. Urban Design Recommendations

The analysis includes urban design studies and testing by Architectus and Andrew Burns Architects. This is supported by economic analysis and forecasting by SGS Economics and Planning. The outcomes of this analysis work are summarised into 12 key findings.

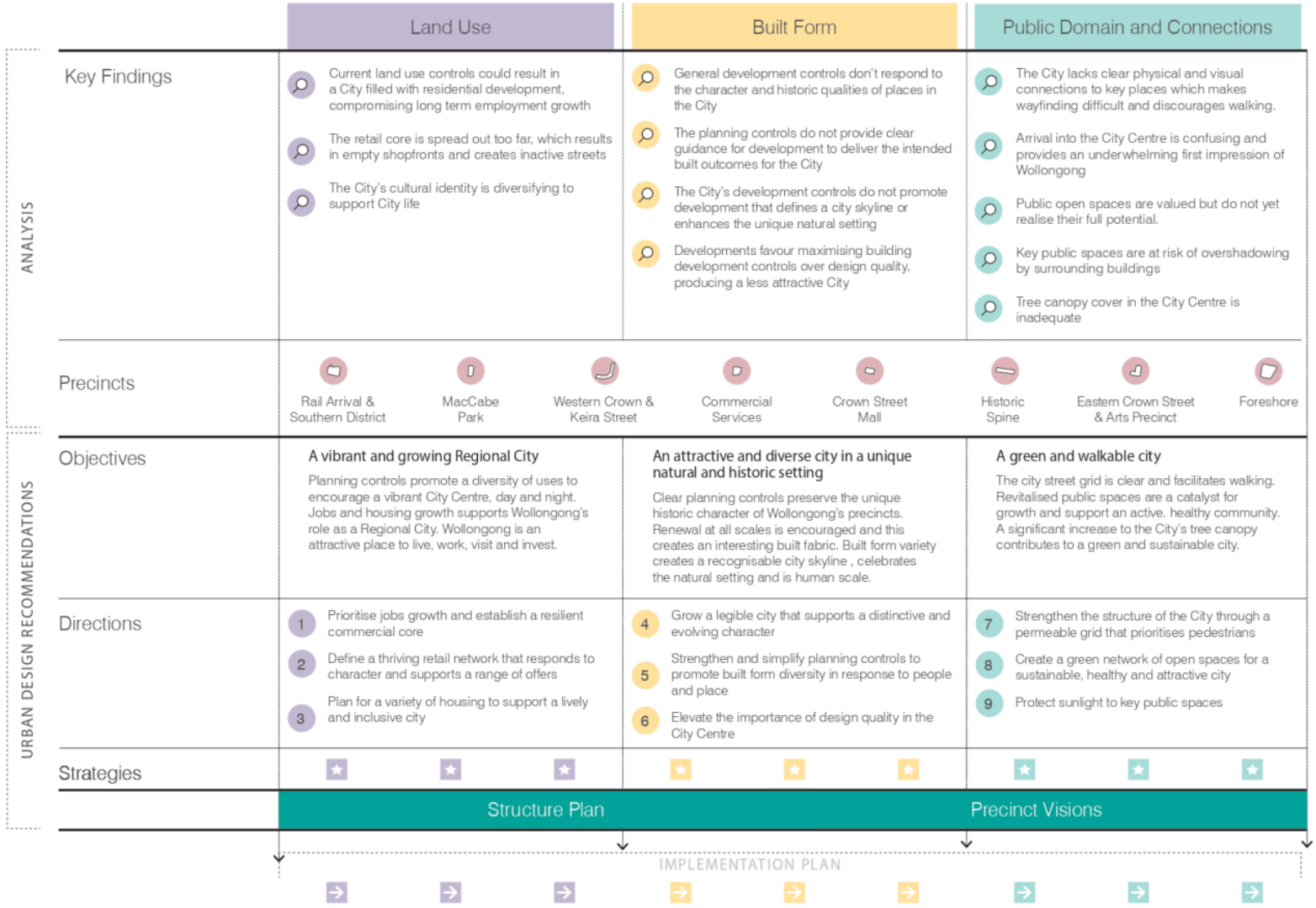
The Objectives, Directions and Strategies which make up the Urban Design Recommendations respond to the challenges raised in the 12 findings. These, along with the key findings, are illustrated in the diagram on the facing page.

Detailed recommendations under each strategy will be refined following public consultation, in order to inform an implementation plan detailing changes to planning and design controls and processes.

A design framework for people and places

Proposed Structure Plan

Proposed desire future character of precincts


ANALYSIS
URBAN DESIGN RECOMMENDATIONS
Land Use
Built Form
Public Domain and Connections
Key Findings
Current land use controls could result in a City filled with residential development, compromising long term employment growth
The retail core is spread out too far, which results in empty shopfronts and creates inactive streets
The City's cultural identity is diversifying to support City life
General development controls don't respond to the character and historic qualities of places in the City
The planning controls do not provide clear guidance for development to deliver the intended built outcomes for the City
The City's development controls do not promote development that defines a city skyline or enhances the unique natural setting
Developments favour maximising building development controls over design quality, producing a less attractive City
The City lacks clear physical and visual connections to key places which makes wayfinding difficult and discourages walking.
Arrival into the City Centre is confusing and provides an underwhelming first impression of Wollongong
Public open spaces are valued but do not yet realise their full potential.
Key public spaces are at risk of overshadowing by surrounding buildings
Tree canopy cover in the City Centre is inadequate
Precincts
Rail Arrival & Southern District
MacCabe Park
Western Crown & Keira Street
Commercial Services
Crown Street Mall
Historic Spine
Eastern Crown Street & Arts Precinct
Foreshore
Objectives
A vibrant and growing Regional City
Planning controls promote a diversity of uses to encourage a vibrant City Centre, day and night. Jobs and housing growth supports Wollongong's role as a Regional City. Wollongong is an attractive place to live, work, visit and invest.
An attractive and diverse city in a unique natural and historic setting
Clear planning controls preserve the unique historic character of Wollongong's precincts. Renewal at all scales is encouraged and this creates an interesting built fabric. Built form variety creates a recognisable city skyline , celebrates the natural setting and is human scale.
A green and walkable city
The city street grid is clear and facilitates walking. Revitalised public spaces are a catalyst for growth and support an active. healthy community. A significant increase to the City's tree canopy contributes to a green and sustainable city.
Directions
1 Prioritise jobs growth and establish a resilient commercial core
2 Define a thriving retail network that responds to character and supports a range of offers
3 Plan for a variety of housing to support a lively and inclusive city
4 Grow a legible city that supports a distinctive and evolving character
5 Strengthen and simplify planning controls to promote built form diversity in response to people and place
6 Elevate the importance of design quality in the City Centre
7 Strengthen the structure of the City through a permeable grid that prioritises pedestrians
8 Create a green network of open spaces for a sustainable, healthy and attractive city
9 Protect sunlight to key public spaces
Strategies
Structure Plan
Precinct Visions
IMPLEMENTATION PLAN


Wollongong City has initiated a visionary process that marks a paradigm shift in the planning culture of the city…putting people at the centre of planning in order to strengthen city life, vibrancy, sustainability and active mobility
A City for People

01 Introduction

This section introduces the Wollongong City Centre Planning and Design Review, the purpose of the Urban Design Framework, and why changes are needed to achieve the Vision as set out in *A City for People*


"In the 21st century Wollongong City Centre will be a people-orientated, sustainable and liveable city."
8
Draft | Wollongong City Centre Urban Design Framework |

A City for People

In 2014 Wollongong City Council partnered with Gehl Architects to deliver a renewed and reframed vision for the Wollongong City Centre - *A City for People.*

The planning approach of *A City for People* focusses on the importance of people and place. It gives priority to the delivery of high-quality streets, buildings and public spaces to support the 'public life' of our community to deliver an extraordinary City Centre.

A City for People was the result of detailed, observation-based analysis of the way our city centre works. It involved intensive community engagement and resulted in a clear vision for the future of our city.

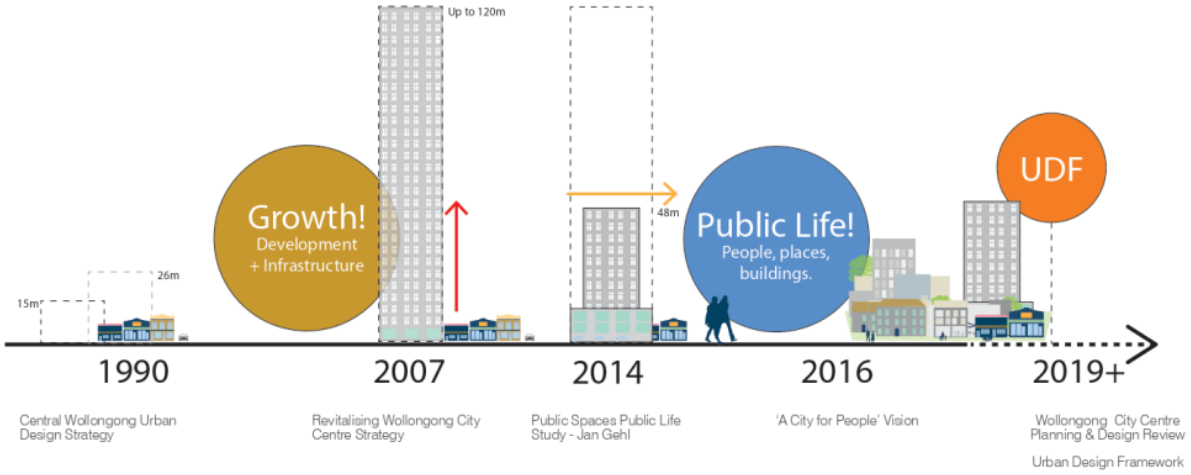
"In the 21st century Wollongong City Centre will be a people-orientated, sustainable and liveable city.

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

This study establishes 12 vision statements under 4 themes to support growth towards this vision:

1. Celebrate the uniqueness
2. Develop a human scale city
3. Grow a living city
4. Create an accessible, pedestrian-friendly city

Key to the delivery of this Vision is our planning framework. *A City for People* identified a disconnect between our current City Centre planning controls and the vision, identifying a key action to undertake the City Centre Planning Review (Action 1.1) and the City Centre Design Review (Action 1.6). The objective of these reviews is to establish the basis on which to recommend changes to the existing Wollongong City Centre planning controls, including the Wollongong Local Environmental Plan 2009 (LEP) and the Wollongong Development Control Plan 2009 - Wollongong City Centre Precinct (DCP).



Introducing the Urban Design Framework

The City Centre Planning Review and Design Review (Review) aims to recalibrate the planning controls and processes governing city centre development to align with the vision set out in *A City for People*. Critical to this aim is the desire to enable and require better design in our City.

Although the Review's focus is on planning and design policy, it acknowledges that multiple factors are contributing to poor design outcomes across Wollongong's city centre. Multiple levers must be engaged to enable better outcomes, spanning across policy, process and culture.

The Review's critical supporting document is the Urban Design Framework (UDF). The aim of the UDF is to be the basis for a new suite of planning controls and physical interventions that set clear objectives and enable feasible, high quality development. Its development has involved extensive analysis and testing of the built environment and public spaces of our city.

A focus of this analysis has been to understand and communicate the character precincts that make up the city centre, and develop policy recommendations that encourage a design response to place. In some cases this draws heavily on the existing fabric, and in others, provides guidance towards a new character for the place.

The UDF will inform changes to the planning controls (LEP + DCP) that shape the form and function of the Wollongong City Centre, in order to bring them into alignment with the vision set out in *A City for People*.

The objectives of the urban design framework are to:

- Provide Council with strong recommendations in order to develop a suite of clear and consistent planning controls and guidelines that facilitate better design outcomes as well as economically feasible development in the City Centre
- Strengthen the way that design excellence is taken into account when Council examines places and reviews proposals
- Set the foundations that enable Council to develop a stronger design culture within Council and the community

The UDF provides a detailed analysis of the current state of the city and a design framework that will facilitate:

- a thriving commercial core that attracts investment and maintains Wollongong's role as a regional city;
- vibrant retail streets supported by housing in the right places;
- an improved human experience of the built environment and public open spaces.

Study Area

The focus area for this project is the central business zones in the Wollongong City Centre. These include the entire Commercial Core (B3) and Mixed Use (B4) zones.

Generally speaking the area is defined by the Coast to the East, Ellen street to the South, Denison Street to the West and Smith Street to the North.

What has informed the Urban Design Framework?

The Urban Design Framework document is broadly divided into two parts, Analysis and Urban Design Recommendations:

1. Analysis

The Analysis has been informed by a range of inputs as described below.

Community and Industry engagement sourced primarily through *A City for People (2016)*, the Community Strategic Plan (*Our Wollongong 2028*), the Urban Greening Strategy (2017), and the *Economic Development Strategy* (2019).

A City for People Review to identify the challenges faced in delivering the 12 statements defined under the vision.

Internal Specialist Stakeholders to determine the current issues impacting design quality and the development process. These included Council specialists in traffic, flooding, landscape design, architecture, economic development and development assessment, as well as independant groups such as the Design Review Panel.

Economic analysis by SGS Economics & Planning covering employment patterns, sector growth and decline, floor-space capacity under current controls, impacts on development feasibility and ability to meet forecast growth projection.This economics analysis has been a fundamental piece in informing proposed changes to land use and development envelopes. The method and findings of this analysis are detailed in 02 Analysis.

Urban Design Analysis was undertaken by Architectus and Andrew Burns Architects. An understanding of the physical attributes of the city was established through a series of site visits, photographic recording, desktop review and research and the development of a 3D City Centre model. This analysis included: existing movement activity; environmental conditions; detailed character precinct studies; and built form site studies to determine key design quality issues.

Testing of the existing controls was undertaken to better understand the impact of the existing planning controls (LEP and DCP) on delivering the vision and facilitiating the expected growth of the city. The 3D model was critical to this process. The model excluded sites which were identified as constrained and less likely to redevelop, including recently constructed (within 5 years), heritage and character items, existing residential subject to strata over 5 storeys, existing commercial over 10 storeys, special uses and recreational land, and isolated lots. Remaining lots were modelled under an amalgamated scenario (common ownership) to achieve minimum lot frontage and lot size dimensions.

The detailed character precinct studies defined 8 precincts, which expand on the 6 identified in *A City for People*. Detailed analysis, observation and research was used to establish the unique character of each precinct. Strengths and weaknesses in the current land use, built form and public domain were identified, and the capacity of the existing controls to support the character of each precinct were determined.

Key findings summarise the outcomes of the testing and analysis, and identifiy a series of land use, built form and public domain and connections challenges.

2. Urban Design Recommendations

The recommendations of the UDF are a response to the challenges defined through the analysis. Recommendations are defined through:

Objectives: The Framework is built on three key objectives relating to land use, built form and public domain and connections. These objectives were identified following the analysis and act as a benchmark against which to evaluate actions moving forward.

Directions and strategies: The Framework presents directions to achieve the objectives. The directions are designed to be overarching statements that describe the broad moves made by the Framework. To achieve the directions, the framework outlines a series of strategies which explain in detail the proposed approach to delivering the directions.

Structure plan: A structure plan has been developed for the City which incorporates the strategies for land use, built form and public domain and connections.

Precinct Visions: These proposed future desired character statement and principles for different precincts across the city centre. They seek to celebrate the unique qualities of our city centre and guide future development in line with community values and our role as a Regional City Centre.

Implementation Plan: Following public engagement and exhibition of the UDF, draft recommendations will be refined into an Implementation Plan which will set out the full set of proposed changes to planning and design controls and processes. This will be exhibited with a draft Planning Proposal (proposed changes to LEP controls) and a revised DCP Chapter D13- Wollongong City Centre.

Precincts identified based on character and function

Example of a Precinct Vision sketch. Rail Arrival + Southern District. Looking East from the Station

By guiding city design to reflect a comfortable human scale, priority is given to the delivery of high quality city streets and spaces, inviting people to explore their city and to appreciate the unique and beautiful qualities offered in the City Centre.

A City for People

02 Analysis

This section outlines key findings and opportunities which have been defined as a result of comprehensive analysis of the City Centre

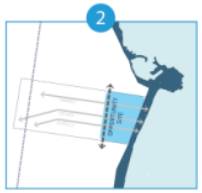
A City for People Learnings

Theme 1 Celebrate the uniqueness

- The natural beauty of the escarpment is seen from City streets and in-between City buildings.
- Nature is an important part of the City street character, providing comfort and connection to the escarpment setting.

Key challenges:

- The need to achieve a seamless transition between the core City and the foreshore, where there are a range of things to see and do.
- Ensure that Wollongong's heritage is reflected in buildings and spaces in between, telling the City's Indigenous, European and industrial story.



- Offering a seamless journey between the City and the sand, the coastal setting underpins city experience and attracts a diverse range of people.
- The foreshore is exciting and there are a range of things to do, see and enjoy.

Key challenges:

- The foreshore feels disconnected from the City Centre.
- Building on the existing entertainment uses and knitting the foreshore back into the centre will be critical.
- Opening up this part of the City at all times of the day, not just for events, will help to activate the foreshore.
- Corrimal Street is a clear delineation between the City core and foreshore - and a new approach to street activation and land uses is required.

- The nostalgia of our past shapes the City identity and tells a story of our rich Indigenous, European and industrial history.
- Heritage is revealed in buildings , street grid and the spaces that exist in-between.

Key challenges:

- Integrating the old with the new is always a challenge.
- Heritage is an important component of the City's character but there must be appropriate controls that balance redevelopment and heritage protection.
- Heritage is just as much about the City's structure, with the history and character of streets, such as Crown Street, having a significant historical influence on the city.
- The structure of the City should reinforce and build on the historic grid that developed in the early 1800's.
- Achieveing conservation of heritage items, appropriate settings and reinforcing aspects of local character in a high-density environment.

Theme 2 Develop a human scale city

- The City Centre is tightly defined, guiding priorities for investment and a growing economy.
- A compact City Centre delivers a more connected CBD, bringing efficiencies and enhancing its regional role.

Key challenges:

- The extent of the commercial core is too large to enable a compact, urban City Centre.
- The B3 area needs to be redefined as a key employment area that prioritises jobs, and is supported by high quality public spaces.
- Allowing shop top housing across the City Centre compromises the commercial core - recent mixed use developments have resulted in high residential yields but limited employment outcomes.

- Buildings are designed to relate to City streets, delivering a comfortable scale and connecting people with street life.
- The character and form of buildings responds to and respects the City's natural setting and spread public life across the City.

Key challenges:

- The current height controls are excessive and do not give sufficient consideration to the streetscape/public domain.
- There is little variation in the built form outcomes being delivered across the City
- The built form should respond to the historic and existing street character and function - this means some streets may have much lower heights than currently permitted.
- Establishing a strong and consistent street wall height for the City Centre will be key.
- There must be a diversity of built form and also a diversity of uses to create a fine grain, human scale City.

- Architectural design excellence is celebrated, and a culture of high quality design is evident in the look and feel of the City.
- Street presentation is exceptional, with high quality building edges interacting with the street.

Key challenges:

- High quality design that provides excellent public amenity and addresses the public domain should be the norm - not best practice.
- Design excellence must extend beyond the built form to deliver buildings that provide an excellent street interface, respond to local character and build on local identity.
- The public domain must also exhibit design excellence - a refocus on the public domain and the street edge condition is required.
- The challenge is how to deliver the best design outcomes when physical constraints such as flooding, noise and traffic must be addressed.

Theme 3 Grow a living city

- The City Centre has a strong, growing residential population who enjoy the lifestyle offered by a cosmopolitan City.
- A diverse community that is socially connected and has a shared sense of pride.

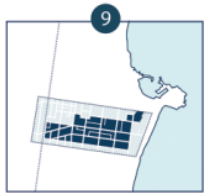
Key challenges:

- There has been a significant increase in the number of people living in the centre over the past 5 years, and this trend it set to continue.
- The challenge now is how to balance increasing residential and mixed use development with more diverse jobs and improved public spaces.
- More people in the centre brings more activity, but residential growth must not compromise the ability of the centre to grow as a major employment centre.

- The City Centre delivers a network of intuitively connected paths and open spaces.
- Unique in character and role, the spaces are well designed offering flexibility in the way they support city life.

Key challenges:

- Further from the City Centre, there are less connections, with a lack of north-south connections particularly along western Crown Street.
- There is a need for new connections, especially between the station and the foreshore, to improve pedestrian access.
- The City has some great open spaces on the edges (MacCabe, Lang), but these parks are underutilised, with inactive edge conditions and don't provide the amenity/ facilities required to support a young, urban population.



- City blocks, streets and sites provide opportunities to live, work, learn and play.
- A range of uses engage with the street deliver vibrancy day and night.

Key challenges:

- The challenge is how to achieve a genuine mix, with a diversity of uses and fine grain streets.
- The dilution of the City Centre with ground floor retail uses on all streets is a real challenge for the City Centre.
- There is currently an oversupply of retail floorspace, with high vacancy rates and empty shop-fronts, compromising the ability to create an active, safe and vibrant streets.

Theme 4 Create an accessible, pedestrian-friendly city

- Streets prioritise walking and cycling, enticing people to weave through the City and discover its offerings.
- Streets are comfortable, enjoyable and safe places. Inviting people of all ages and abilities to meet and socialise, attracting city life day and night.

Key challenges:

- Wollongong suburb has a walk score of 76/100. This means the City is very walkable but is not a "walkers' paradise".
- The walk score increases the closer you get to the centre - the challenge is how to expand the fine grain structure in the core to all of the City Centre.
- Streets that are great for walking have a fine grain structure and have high pedestrian amenity with visual interest, seating and shade.
- The City needs to build on the existing network of lanes, and create additional secondary street connections that are less about cars and more about people.

- Public Transport is the preferred way of accessing the City, seamlessly linking with the pedestrian and cycle network.
- Regular and reliable, bus and train trips conveniently connect to key destinations (e.g., hospital and university).

Key challenges:

- Despite high active transport and public transport use in the centre, private car remains the dominant form of transport.
- Improving direct, safe and attractive connections to the station is required.
- The City did not initially develop around the station - although Crown Street remains the key spine connecting the City and the station, the station feels disconnected from the City Centre.
- The challenge is how to activate the area around the station - improved public space around the station, a direct high quality pedestrian connection, along with improved way-finding is required.

- Vehicle movements and car parking support City Centre functions while prioritising pedestrian comfort.
- There is a sense of pedestrian priority on City streets with through traffic redirected and cars encouraged to slow down.

Key challenges:

- Crown Street and Keira Street carry high traffic volumes, creating a barrier through the centre.
- The challenge is how to create a more pedestrian friendly environment along an arterial road.
- The challenge with Gehl's vision is that is relies on a City Centre bypass - this is a long term vision.
- Until such time as there is a bypass, or the declassification of Crown and Keira Streets, the pedestrianisation of these streets will remain a challenge.

Economic Analysis

Wollongong - A Regional City

The UDF recognises the Wollongong City Centre's role as the vibrant capital of the Illawarra-Shoalhaven, with diverse employment, services and recreational uses. Metro Wollongong is the economic and cultural core of that region and is a nationally significant city.

There are several regionally significant economic clusters within, or in close proximity to the Wollongong City Centre. These clusters, including Wollongong Hospital and health precinct, University of Wollongong and Wollongong Innovation Campus, exert a substantial influence on the LGA's economy, and represent key growth areas which could be leveraged to create continued growth across the Wollongong LGA.

The City Centre has intrinsic assets that offer significant potential to stimulate economic growth, however, with excellent proximity to Sydney, a key issue for jobs growth in the City Centre is significant job leakage with residents commuting to Sydney for highly skilled jobs. As Wollongong transitions to a higher order knowledge-based centre, there is a need to prioritise office and commercial jobs in the City Centre.

Wollongong City Centre has all the foundations for a successful regional city: Economic analysis by SGS Economics and Planning supports the UDF. Wollongong City Council engaged SGS to undertake an economic analysis of the City Centre including theoretical capacity testing, development feasibility testing, forecasting and testing of potential feasibility levers.

The economic assessment undertaken by SGS highlights that the Wollongong City Centre has all the foundations for a successful regional city, however these need to be better leveraged to attract commercial development and employment.

Wollongong has much to offer: The amenity and lifestyle of Wollongong City Centre are part of its unique offer, and its nearby hospitals and university campuses are seen as key economic assets. 27% of jobs in the Local Government Area are found in the City Centre. Health Care, Social Assistance.Public Administration and Safety continue to be our largest established industries.

Our jobs growth is not occurring across the full spectrum of sectors expected for a regional city: Recent employment growth in emerging industries has been mainly linked to population serving industries including accommodation and food services and education and training. These industries tend to grow when a population grows. As a Regional City, we are aspiring for growth in jobs across a full range of business, government, retail, cultural, entertainment and recreational industries. However, Wollongong is experiencing a decline in key 'city' sectors including professional services, administrative services, retail and information management and technology.

Wollongong continues to lose skilled labour to Sydney: The number of the Local Government Areas 2016 working population employed outside the LGA continues to increase (30% in 2016 up from 26% 2011). Of those who have moved to the LGA from Sydney in the last 5 years, more than 50% are still employed in Sydney. The lack of employment in professional services in comparison with Sydney will continue to draw employment away from the City Centre. Our employment offer is not increasing in line with population growth.

Commercial development needs to be more feasible if we are to meet the demand for commercial floorspace and contribute to the economic development of the city: Key to delivering a regional city is attracting commercial investment and improving amenity. More needs to be done to focus jobs and employment growth in these key industries now and into the future. Upgrades to infrastructure, public domain and planning processes will assist in meeting growth projections.

The UDF looks at how the city can physically support this growth and explores levers to unlock commercial feasibility in the City.

2,000 new residents

There are over 19,000 people living within the City Centre. It is forecast an additional 2,000 people will live in the City Centre over the next 20 years. This will result in an additional 1,200 dwellings in the City Centre over the next 20 years. (SGS 2019)

21,290 jobs

Of the 83,730 jobs in the LGA, 27% of jobs are located within, or adjacent to the City Centre. There has been an increase of 2,200 additional jobs over the past 10 years. SGS forecast an additional 5,300 jobs will need to be accommodated in the City Centre over the next 20 years.

40% of jobs in top 3

Jobs in health care and social assistance (16%), education and training (13%), and accommodation and food services (12%) comprise 40% of jobs in the city centre and immediate surrounds.

29% travel outside the

Job numbers in the City Centre are increasing, but the proportion of residents working outside the LGA remains significant. The largest proportion of workers who leave the LGA for work travel to Greater Sydney (21%)

15% walk or cycle

Within the City Centre 14% of residents walk and 1.2% cycle to work. Combined with 11% of residents who catch public transport to work, there is a much lower reliance on private vehicles in the city centre than in the outer suburbs of the LGA.

32% lone person

One third of households are lone person households in the City Centre. This is a much higher proportion than the Wollongong LGA at 24%.

2.1 average household size

The average household size is relatively small at 2.1 people per household. This reflects the high number of lone person households and low proportion of family households in the City Centre. Only 12.5% of households comprise couples with children.

37% aged 20-34 yrs

There is a very young population with over a third of residents aged 20-34 years. The median age of 34 years is much younger than that of the Wollongong LGA at 39 years.

20% currently studying

There is a high proportion of university students living in the centre (18%). Combined with TAFE students this number increases to almost 20% of the population.

29% have a university

The population is young, and highly educated with almost a third of residents having a Bachelor's degree. This correlates with a high number of professionals (30%), and managers (10%) who live in the City Centre. (source: ABS)

Key findings

Under the existing planning controls there is significant capacity (1.3 million sqm) for development within the City Centre. However, limited feasibility of commercial development is a significant barrier for commercial growth. Based on SGS findings, forecast demand for commercial floor space significantly exceeds feasible capacity.

Over the next 20 years, SGS has projected demand for:

- An additional 120,000 sqm of commercial floor space
- An additional 195,000 sqm of residential floor space
- An additional 3,000 – 18,000 sqm of retail floor space

Currently only 34,000sqm of commercial floor space in the City Centre is feasible. This is likely to result in an estimated shortfall of 86,000 sqm of commercial floor space by 2036 (based on forecast demand for 120,000 sqm floor space). Conversely, the capacity for residential development significantly exceeds projected demand.

Using the residual land value (RLV) model to test feasibility, SGS found that residential shop top housing is the most feasible development type in the City Centre business zones. This results in residential and mixed use development being the predominant development type in the City Centre, which has potential to constrain future commercial development.

RLV modelling showed that commercial development requires a significant (70%) cross subsidation with residential to become feasible. SGS found that barriers to feasibility include a lack of market depth, increased construction cost associated with taller buildings, estimated land acquisition costs, high construction costs associated with basement car-parking and the risk in the development approval process.

SGS has determined that if the dominant mixed use development scenario was to continue unheeded, there would be a net loss of 45,000 sqm of commercial floor space in the City Centre by 2036. This is under the assumption that existing commercial would be redeveloped to shop-top housing, in line with the dominant trend and permissibility of shop top housing in the B3 Commercial Core and B4 Mixed Use zones. This is a significant issue as commercial floor space is required to support the economic role and employment offer of Wollongong.

SGS identified that retail demand is relatively low in the City Centre. The requirement for active ground floor uses across the City Centre has the potential to result in an oversupply of retail floorspace.

Recommendationed Actions

The feasibility of commercial development is a significant barrier for Wollongong City Centre to realise its full economic potential as the regional city for the Illawarra Region. There are a number of potential actions that could be introduced to address this issue. The objective of implementing any actions is to:

- promote commercial development in the City Centre in line with the vision
- support economic potential of the City Centre
- address feasibility issues

Recommended Actions

1. Introduce a commercial core precinct where residential development is prohibited.
2. Develop an economic vision for the Wollongong City Centre through the economic development strategy update.
3. Continue to implement the bike lane program and investigate opportunities to expand the Wollongong Shuttle network.
4. Continue to implement existing public domain investment projects which increase the amenity of the Wollongong City Centre.
5. Advocate for improvements to Wollongong railway station to improve physical connectivity between the railway station and commercial core.
6. Undertake an assessment of the value that existing industry and industry targets place on public domain improvements and use these to prioritise investment.
7. Investigate alternative development contribution rates or mechanisms to fund future public domain investment in the Wollongong City Centre.
8. Market test a reduced on-site car parking rate with developers and prospective commercial tenants to understand market for this and potential impact on rents.
9. Reduce risk for developers and increase certainty for development by providing clearer guidance to commercial landowners and developers across key sites within the commercial core of the City Centre. This includes a consistent process, speed of response and clearer planning controls.
10. Undertake an updated LGA-wide retail centres study to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in retail floorspace.

Urban Design Analysis

Finding: *Current land use controls could result in a City filled with residential development, compromising long term employment growth*

The existing Commercial Core is not well defined and does not have sufficient protection or incentives to support the development of commercial land.

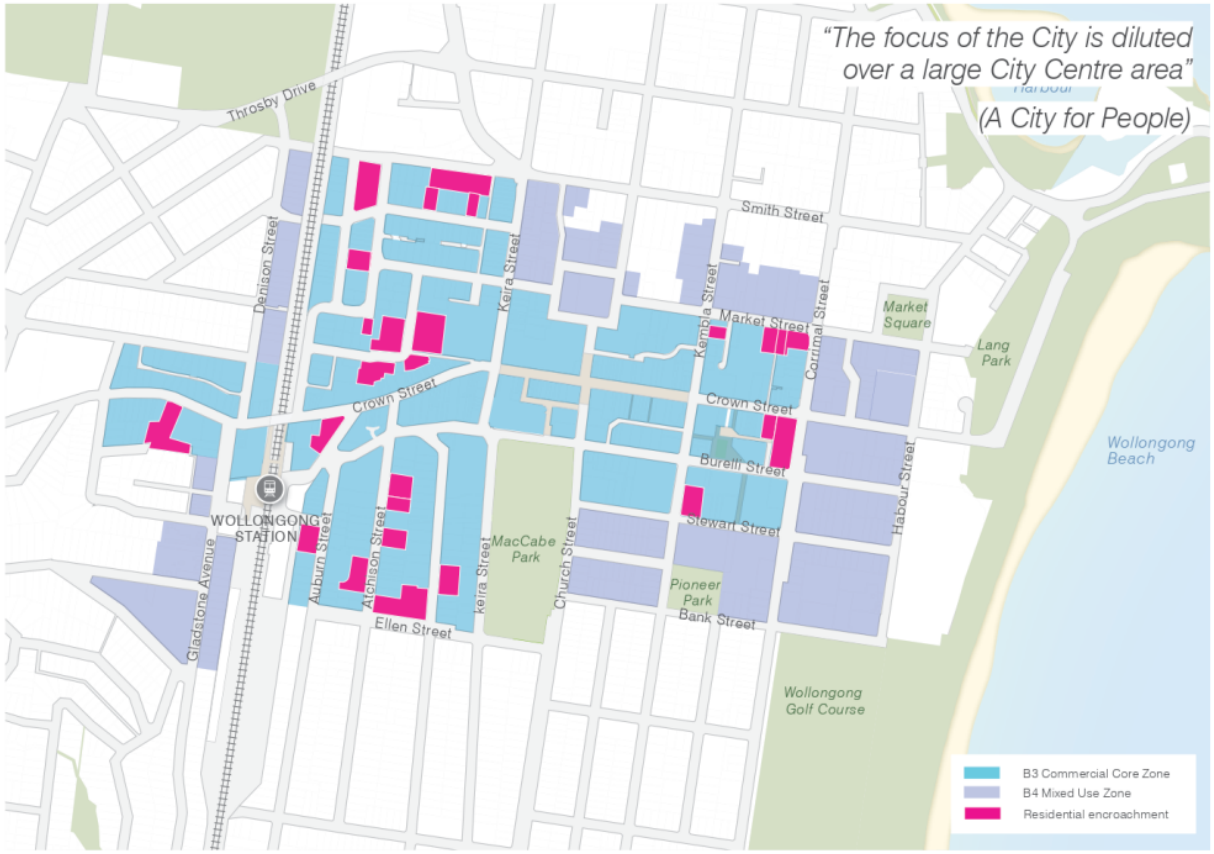
The current permissibility and feasibility of residential shop-top development across the centre threatens its role as a Regional City.

There is no clear Commercial Core

- There is no clear guidance on the preferred or appropriate land use, and the B3 Commercial Core and B4 mixed use zones permit very similar uses and built form outcomes.
- The City lacks diversity. Controls do not stipulate a land use mix. This is resulting in minimal commercial development and maximum residential development.
- The current B3 Commercial Core zone is too large, lacks definition, and does not provide sufficient protection for commercial land, by allowing residential development throughout the city centre.

The existing land use zoning discourages commercial development because:

- The B3 zone which permits shop top housing raises the land value and impacts feasibility for commercial uses.
- There is no concentrated core with a commercial street address.
- A-grade office tenants prefer to locate in commercial-only zones where large land parcels are available.



Existing and potential future developments that would resulting in residential encroachment in the B3 Commercial Core (As of December 2018)

Land Use

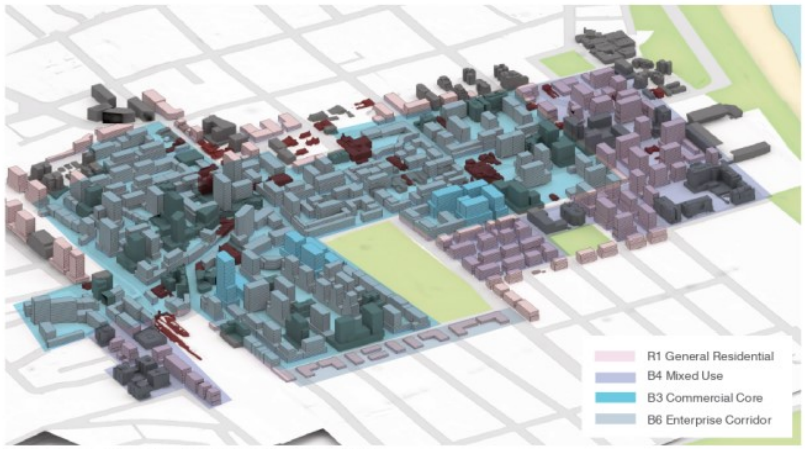
Residential encroachment is a threat to long term employment growth in the City

- Residential development adds significant vibrancy to the City Centre, however it must be balanced with commercial growth. Under the current 'business as usual' development scenario, there could be a loss of commercial floorspace in the city centre.
- Permissibility of residential uses in all land use zones in the centre (including the B3 Commercial Core which is non-standard) is resulting in a homogeneous outcome for the centre. As developments with residential uses are currently the most feasible and therefore the most likely development outcome.
- Encroachment of shop top housing throughout the centre is a risk for availability of commercial space in the future.

Economics

- SGS' Economic Study (2019) has found that commercial development in the city centre is only marginally feasible, requiring significant cross subsidisation with residential development (70%) to achieve a viable development outcome. Residential is currently permissible within the B3 Commercial Core, and as a result there is a high proportion of residential development in the City.
- Over the last 10 years the number of jobs in the city centre has increased, however, job leakage to Sydney has remained significant.
- Without intervention, there is a risk that Wollongong will not be able to improve prospects for commercial development or achieve its status as a major regional city. A new direction for the city centre is required.
- If the current land use controls are maintained, there is not likely to be capacity for the forecast demand of 120,000sqm of additional commercial floorspace that will be required by 2036.

The same land use outcome in both the B3 and B4 zones either side of Corrimal Street with similar shop-top housing developments



Complying scenario model view of the centre (land use overlay)

The Opportunity

Creating distinct land use areas in the City will enable specific character areas to develop, get the balance right and enable the City to grow at a human scale.

Safeguarding space in the centre for commercial only development will ensure residential development does not compete with commercial development and will assist in making commercial development more feasible.

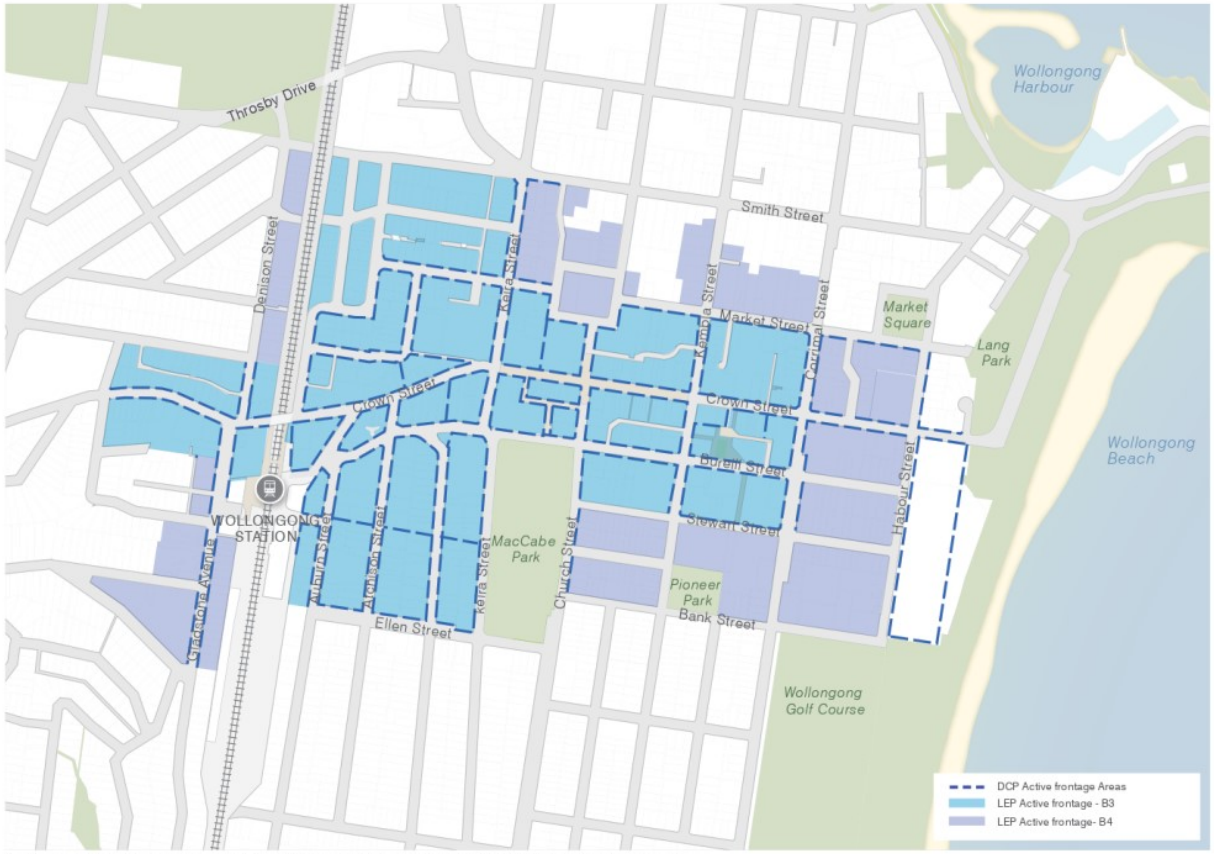
Key drivers of economic growth are located outside the City Centre – including the University of Wollongong, TAFE, Innovation Campus and the hospitals. Connecting and integrating these precincts will be important, but the key focus will be to build on these assets and encourage the location of supporting health, education and business uses within the City Centre.

Urban Design Analysis

Finding: *The retail core is spread out too far, which results in empty shopfronts and creates inactive streets*

Current policy requires non-residential ground floors throughout the B3 and B4 zones. This results in an oversupply of shopfronts and erodes the significant high-street character and traditional retail of Crown and Keira Streets.

- Crown and Keira Streets are unique in their scale and character. The majority of frontages along Western Crown, Lower Crown Street Mall and Keira Street have a width less than 7 metres and a 2-storey street wall. This results in fine grain streets flanked by relatively narrow, low scale buildings. This should be preserved where possible.
- There is not enough depth in the retail market to support retail offers across the extent of this area, especially with the growth of 'big box' retail centres on Crown and Keira Streets. Numerous ground floor vacancies across the City Centre are evidence fo this.
- Over time the spread of retail has eroded Crown Street's significance as Wollongong's retail high street. While Crown Street continues as the main retail spine, a noticeable increase in ground floor vacancies on the western end of Crown suggests that the retail core is too dispersed across the city.
- Although developments with commercial at ground and residential above protect commercial land use at ground, they do not deliver the built form outcome required by many commercial tenants.
- There is a discrepancy between the LEP and DCP definition of active frontage. The LEP requires non-residential uses at ground (WLEP 7.13) while the DCP Clause 3.3 suggests that residential can also activate the street.



Active frontages required by Wollongong DCP (2009) and Wollongong LEP (2009) results in a diluted retail precinct

Land Use


01

02


03

04


05

The Opportunity

There is a need to establish current and future retail demand in the City, and encourage a vibrant, compact retail core, which reinforces the important role of Crown Street.

The oversupply of retail space in the City Centre suggests a need to re-consider ground floor uses across the City Centre.

Alternative uses such as well-designed ground floor residential apartments and terrace style accommodation at ground floor should be explored as a means of activating streets with uses other than retail.

01 Globe Lane Precinct is an attractive intimate scale retail area
02 An example of a building in the B4 Mixed Use zone with a poor interface between ground floor tenancy and streetscape
03 Cafe culture is successful on Lower Crown Street
04 Crown Street Mall is the primary retail strip
05 The West Keira shopping centre extension has absorbed retail from Crown Street Mall

Urban Design Analysis

Finding: *The City's cultural identity is diversifying to support City life*

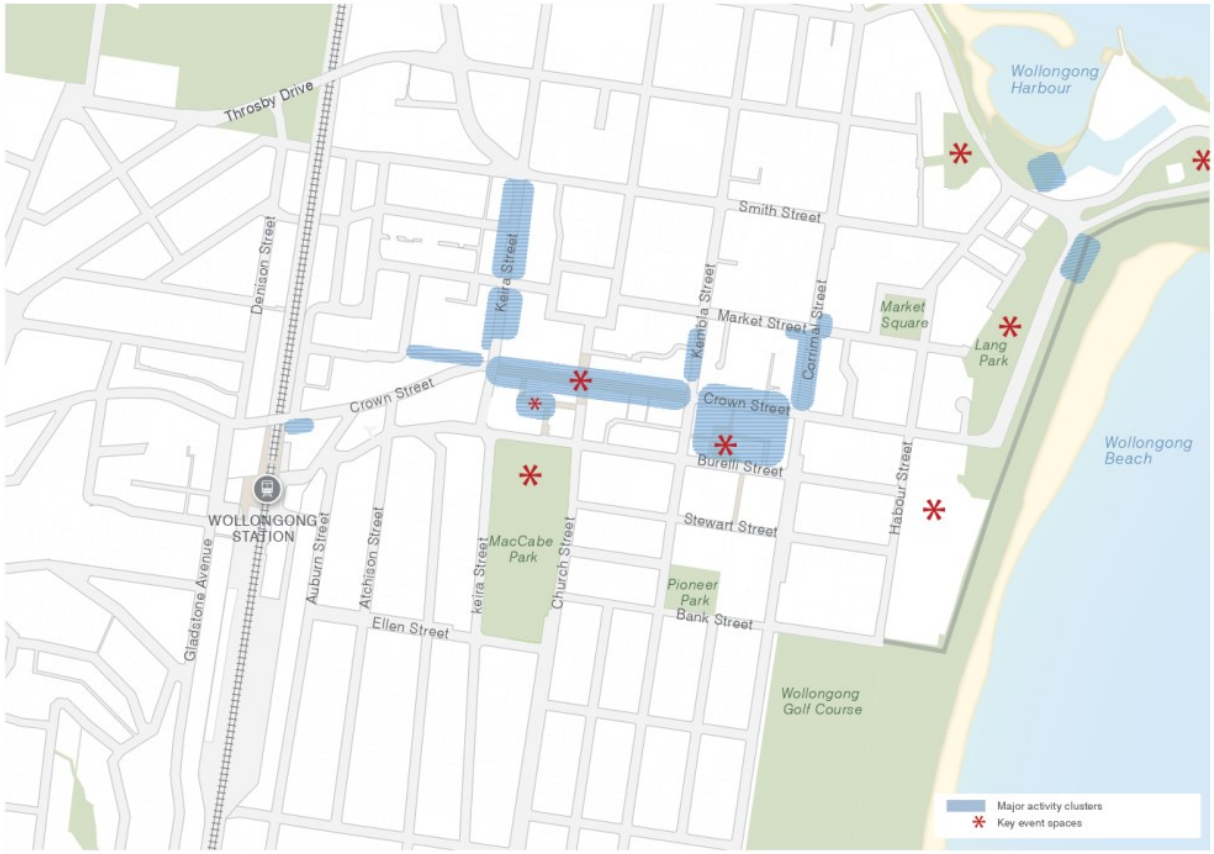
Wollongong's historic and cultural diversity coupled with an increasing young and entrepreneurial population provides a rich foundation for a vibrant city. The City Centre is an attractive place to visit with an array of small bars and cafés, art and culture and pristine recreation areas to enjoy.

In recent years, Wollongong has grown its café, small bar and live music scene. With an influx of new small bars and cafés opening in the past 5 years, the City Centre is well populated with places to eat and drink at most hours of the day.

Wollongong's reputation as a regional live music destination has been strengthened through festivals such as Yours & Owls, Corona Sunsets, and the Wollongong Fringe as well as high profile concerts like Elton John . These attract significant interest from around the Illawarra and beyond.

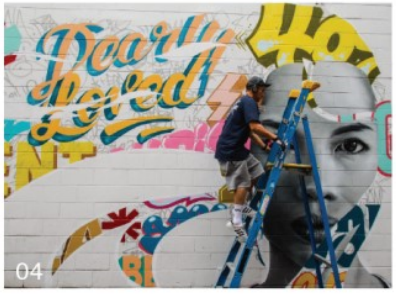
Wollongong is also known for its outdoor and recreational activities for individuals and families. Surrounded by bushland and sea, it is a destination for fans of water sports, sky diving, cycling and hiking.

Wollongong's historic cultural diversity coupled with an ever increasing student and entrepreneurial population is a rich foundation for a vibrant city.



Major activity clusters

Land Use



The Opportunity

Although a popular spot for day trippers, Wollongong is often overlooked by overnight visitors in favour of smaller towns along the coast. With its growing cultural identity as a creative and diverse city, Wollongong is in a unique position to re-define itself.

The City is emerging as both a vibrant regional destination known for its arts, music and food scene and a hotspot for outdoor recreation. There is the opportunity to continue to build on the provision of a wide range of tourist accommodation and entertainment types to support the culture of the city.

Policy provisions to assist in mitigating conflicts between residents, businesses and event spaces will support a strong evening economy in the City.

01 Hey Day on Western Crown
02 Wollongong Art Gallery in the Arts Precinct
03 Live music at the former Rad Bar
04 Street art and murals are prominent on walls throughout the centre
05 Performers in Crown Street Mall
06 Water activities in Wollongong Harbour

Urban Design Analysis

Finding: *General development controls don't respond to the character and historic qualities of places in the City*

The City is fortunate to have a network of heritage and character buildings and places throughout, some which have undergone successful adaptation. However, general built form controls are often in conflict with heritage controls and fail to consider the broader context of heritage items. Stronger guidance is needed to improve development outcomes in the context of heritage items and character precincts.

The City Centre has many notable character buildings and places - some are already protected through a Heritage Listing - others that are not. These form part of our communities memory and experience of the City Centre and it's important that we find a balance between development of new buildings and the preservation of those showcase our cities evolution and history.

Analysis has identified additional character buildings that play an important role in demonstrating Wollongong's history that should be investigated for potential heritage listings.

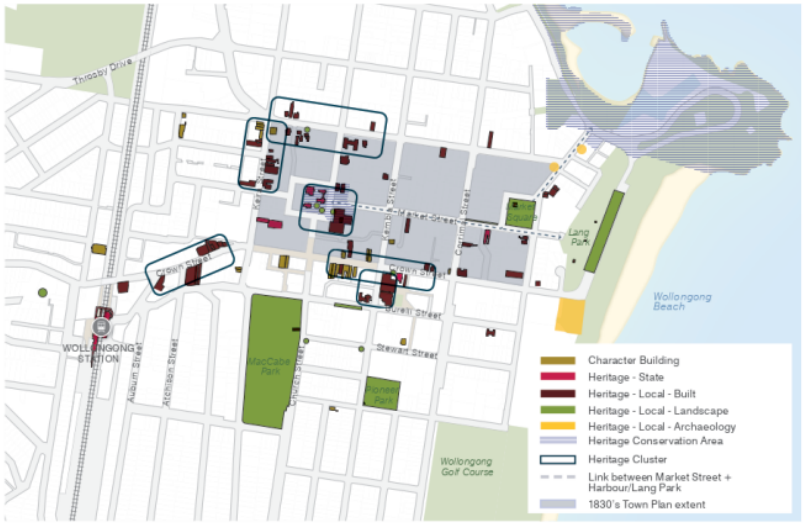
As outlined, existing planning controls do not respond to place, or consider the relationship between new buildings and existing heritage and character items. Controls should be improved to protect items where necessary and to always enhance our historic built fabric so it can be enjoyed by generations to come.

The adaptive re-use and re-development of heritage buildings do not always involve full scale re-development. Most works undertaken in the City Centre have involved low scale modifications and additions that facilitate the gradual adaptation of the building to accommodate changes in existing uses or more extensive modifications to accommodate new ones.

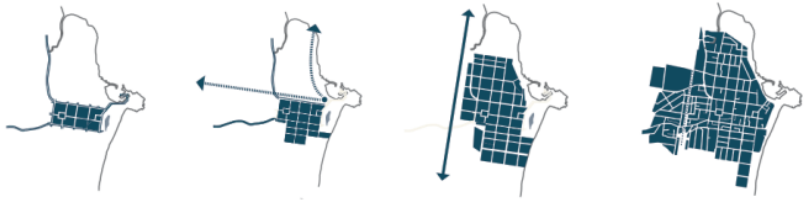
Good examples of recent adaptive re-use projects in heritage buildings within the City Centre include (but are not limited to):

- 87 Crown Street (a former shop) which has undergone sensitive alterations to accommodate two popular and much loved cafés fronting both Crown St and the Arts Precinct. Similarly, 91 Crown Street (the former Wollongong East Post Office) has also been successfully adapted to a commercial office use.

- The re-development of larger, more complex heritage sites such as the University of Wollongong Student Accommodation Building (formerly the Ibis Hotel) on the St. Michael's Cathedral site is a positive example of development within heritage precincts. The development is structured around a 99 year lease agreement with a percentage of the income from the lease being dedicated to the ongoing conservation of the cathedral building and included the removal of several unsympathetic building elements on its grounds to achieve a better urban outcome for the precinct.



Map of Heritage and Character buildings and places (2019)



c. 1830s

Original town plan centred on the Harbour

c. 1860s

The city grows to the south, and mine tramlines are introduced

c. 1880s

Rail link to Sydney. Rapid expansion of the city around Crown Street

c. 1900+

By early 1900 the city has spread to the area recognised today

Built Form

The Opportunity

The provision of a specific design guideline could greatly strengthen council's approach to development in heritage precincts provide land owners with a clear understanding of council's objectives for re-development.

The guidelines may address broad issues such as preferred use and appropriate built form, to more specific issues such as materials selection and façade treatment. The document may also be an opportunity for council to showcase exemplar projects from other regional cities which clearly demonstrate good examples of adaptive re-use of heritage buildings.

The adaptation of the Design Guide for Heritage prepared by Government Architect NSW may be a starting point for the development of such a guideline

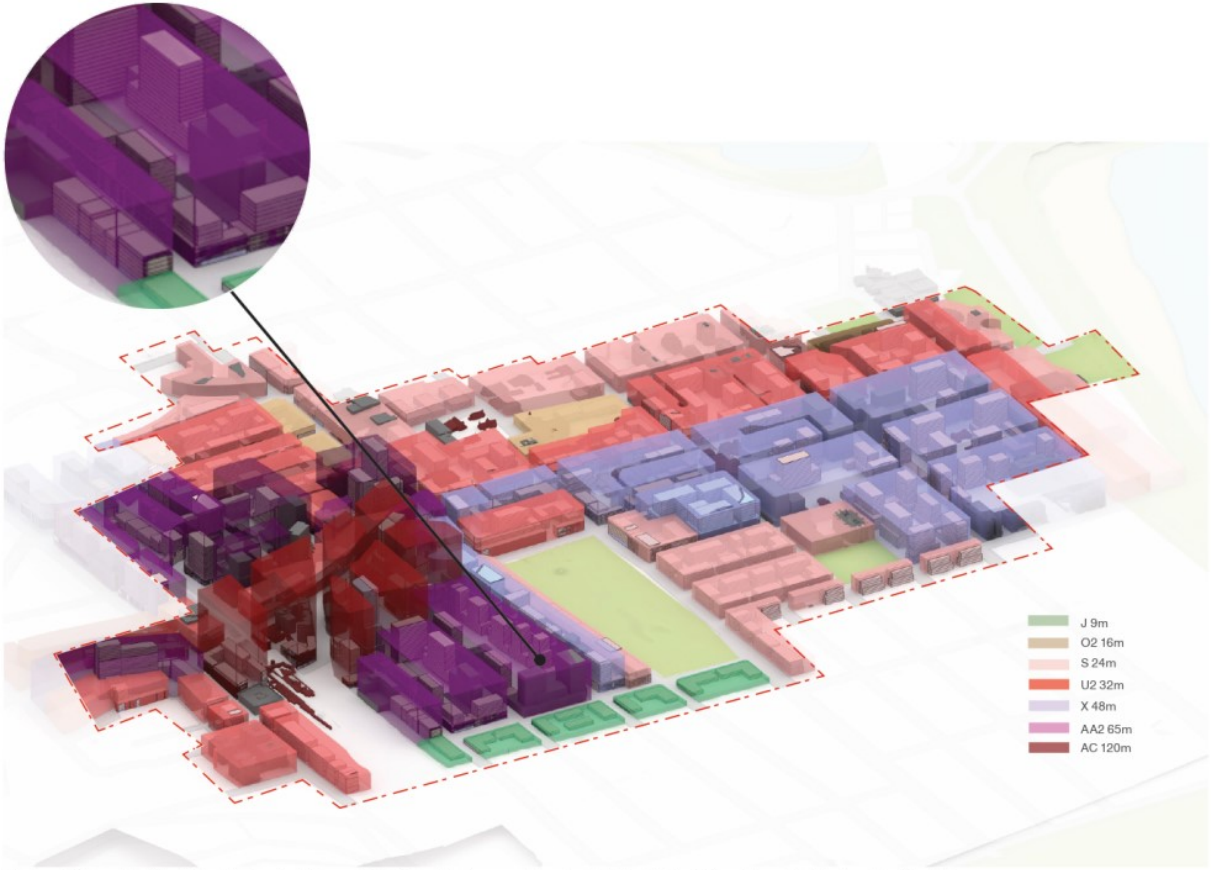
01 Heritage listed former Marcus Clark building that has been stripped of detailing and painted over and is in need of revitalisation.
02 St Michael's Anglican Cathedral marks the historic centre of Wollongong, its steeple is a significant landmark in the city. The University of Wollongong Market View student housing behind St Michael's
03 Wollongong Court House recently upgraded with a sympathetic new extension
04 87 Crown Street, Heritage buildings on Crown Street create a unique character.
05 Masonic Hall adapted into apartments with residential tower set behind.

Urban Design Analysis

Finding: *The planning controls do not provide clear guidance for development to deliver the intended built outcomes for the city.*

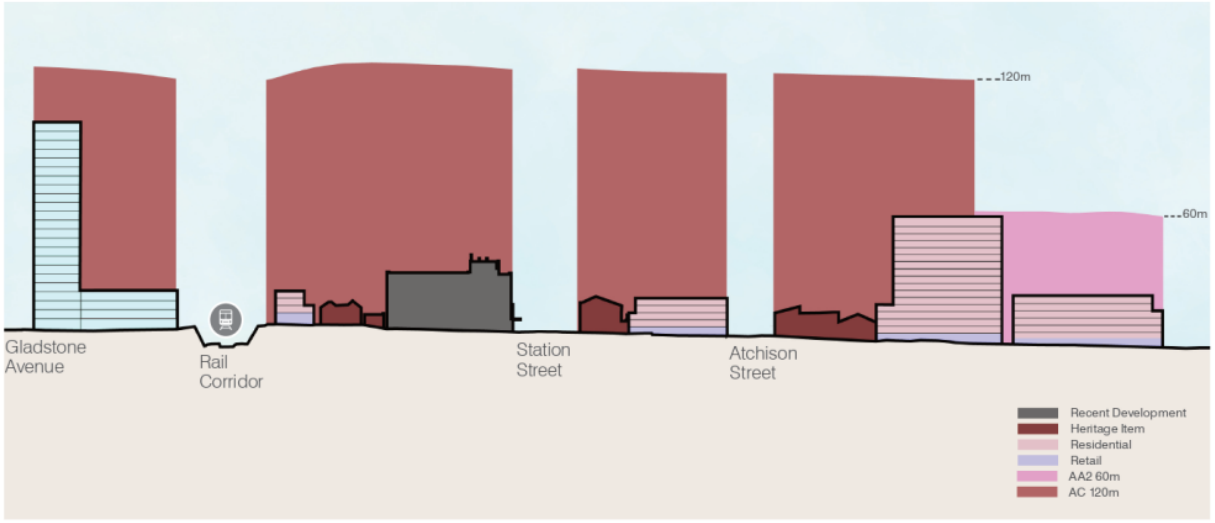
LEP height and floor space controls are at odds with the intended outcomes of the DCP - for a permeable, legible city of distinct precincts. In many cases, permissible height controls are unachievable due to a misalignment with the amount of floor-space permitted. This is confusing for land owners and means that the intended form of the City will not be realised.

- Controls don't respond to the specific place, context or character within the City
- The outcomes permissible under the controls can result in very different buildings, depending on land-use, which results in uncertainty. There are also cases where building envelope controls are not able to be realised, leading to false expectations and inflated land values.
- FSR is confusing to calculate. The current sliding scale FSR is dependent on land use and site size.
- FSR is calculated solely on site area and land uses, rather than being spatially distributed with regard to height controls and character.
- The sliding scale does not incentivise development on small sites, which could provide valuable infill opportunities and create fine grain streets.
- The incentives for commercial including as an increased FSR of up to 6:1 for large sites, have had limited take-up. Shop-top housing continues to be the preferred development outcome.
- There are inconsistencies between built form controls in the LEP and DCP, such as continuous street walls versus side setback controls in the B4 Mixed Use zone.



Maximum FSR overlaid with existing height controls demonstrates that not all sites can achieve their height within the FSR control, particularly above the 48m limit.

Built Form



East-west section through the City showing maximum developable FSR within permissible height controls.
On a range of sites the maximum FSR is reached before height limits are achieved.

The Opportunity

There is an opportunity to simplify FSR calculations to better align the character, land use, typology and heights with the achievable FSR.

Revised controls should consider design quality and the character of specific precincts within the city.

Urban Design Analysis

Finding: *Developments favour maximising building development controls over design quality, producing a less attractive City*

Some planning controls contribute to poorly designed buildings and streetscapes which do not respond to a precinct's character or human scale principles. Design quality is compromised by buildings that seek to maximise yield with little consideration to the broader impact or quality of the development

In looking at the City Centre as a whole, a number of streets were at risk from the development of large, bulky street wall buildings of varying heights.

1. This is particularly true of areas within the B3 commercial core where testing of the existing controls resulted in street walls that exceeded 100 metres in length with no provision for through site links.

   The 12-24 metre range in heights for the B3 commercial core creates ambiguity in the controls and an inconsistency of built form across the zone.

2. In addition, side setbacks, when applied to the same B3 commercial core for towers in the DCP, when combined with the Apartment Design Guideline setbacks resulted in an undesirable 'wedding cake' effect.

3. There was found to be no designated street wall height in the B4 mixed use zone and R1 general residential zone resulting in a lack of consistency in streets where buildings varied greatly in height without due consideration for a transition in scale.

Built Form

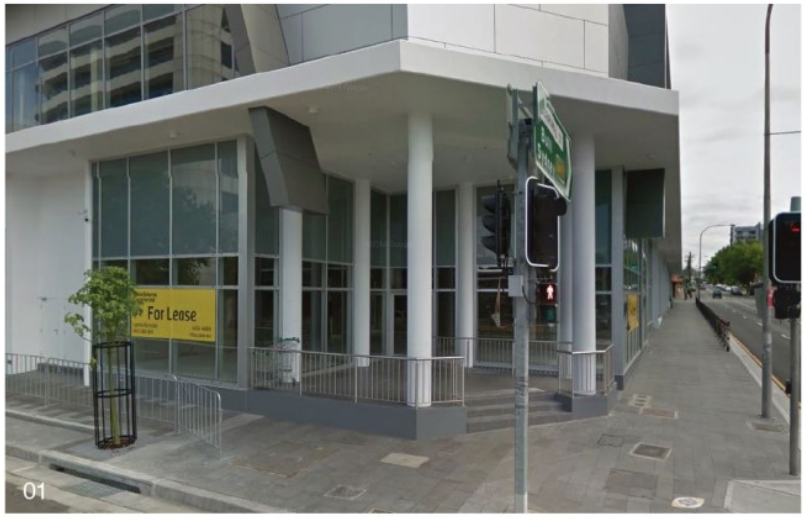
The Wollongong LEP currently includes design excellence provisions which apply to the whole city centre and to key sites. There is no distinction between the provisions applied to the Centre as a whole and to the specific sites. While these provide good principles, they give little guidance to outcomes for specific character precincts and result in an over-reliance on Council's design review panel.

In looking at recently completed projects within the City Centre, it is clear that the existing built form controls create a street interface which is difficult to navigate and detracts from the public domain.

An example of this may be seen in photograph 01 which applies both the 6x6m corner splay control at ground floor and raises the ground floor level of the development approximately 600mm above street level to mitigate the risk of flood.

Without specific design based controls within the Council's DCP to address the issues of flooding and access, prominent corner sites (for example Corrimal and Crown Streets) become compromised resulting in a poor urban design and aesthetic outcome.

It is important to recognise the value of good design outcomes, by prioritising the human experience, both in flood and non-flood conditions. Through a more considered integration of engineered flooding solutions with built form it will be possible to create interfaces that are both functional and liveable.



The Opportunity

A new design-lead approach to built form and streetscape needs to be developed to enable more positive urban outcomes to be realised.

The approach should seek to balance development to locate density appropriately across different precincts and consider particular urban conditions such as heritage areas, environmental areas or other prevailing factors.

In addition, the new approach to building controls should achieve the best possible design quality for the City. Controls should enable built form which responds to human scale while addressing the impacts of climate change, including improved built form responses to flooding in low lying areas, while also celebrating the City's unique coastal climate.

01 Long ramps and stairs provide universal accessibility but lack access legibility and compromise safety. Railing associated with level changes at thresholds and on footpaths detract from the street experience,
02 Some overland flow grates have an open appearance and detract from streets.
03 Crown Wollongong Development has an unnecessarily raised entry off Crown Street and a street wall exceeding 70 metres, with no break for through site linkages.

Urban Design Analysis

Finding: *The city's development controls do not promote development that defines a city skyline or enhances the unique natural setting*

Wollongong's natural setting is an identifiable part of its character. Views connecting the City to the escarpment and foreshore are not well protected and are under threat of being lost. Tall residential buildings and areas of blanket height limits do not give reference to important precincts within the City. Development controls that influence building height and bulk need to change to improve the design quality and legibility of the city.

Topography plays an important role in Wollongong. The City Centre is located on an undulating plane between the ocean and the Illawarra escarpment. These natural features offer a striking and distinctive backdrop to the city and are key to Wollongong's identity as a truly coastal city as well as being critical to wayfinding.

The challenge for Wollongong is to balance the effects of growth with the need to retain the existing character of its place. This includes the need to establish a scale of development which is appropriate to its existing environmental context, in particular to its views to the coast and escarpment.

A number of developments both approved and constructed impact on the surrounding natural and urban context, leading to the partial or complete loss of views to the escarpment, coast or key vistas in the City Centre.

This loss of amenity, coupled with poorly designed and constructed buildings actively detracts from the qualities that give Wollongong its original appeal making it a less desirable place to live and visit.

01 Distant view to the steelworks from Church Street
02 Market Street provides a great vista to the ocean flanked by large trees. (protected view under current controls)
03 View up Church Street to St Michael's is obstructed by the shade structures in Crown Street Mall
04 The view of the escarpment from Flagstaff Hill is compromised by the height limits allowed by the Local Environmental Plan

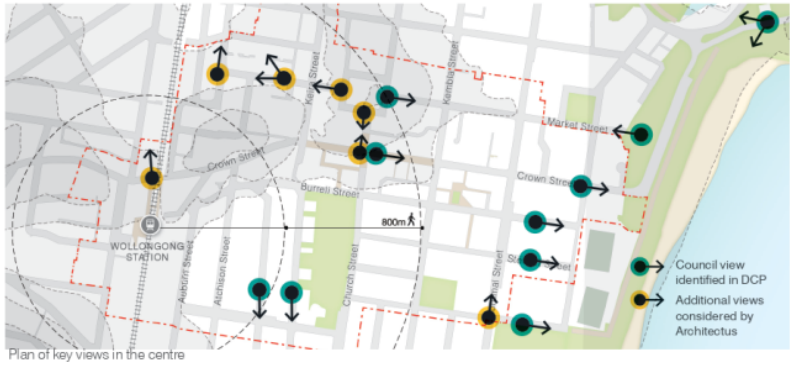
Built Form

Permitted building heights and bulk have the potential to impact views to the escarpment and ocean.

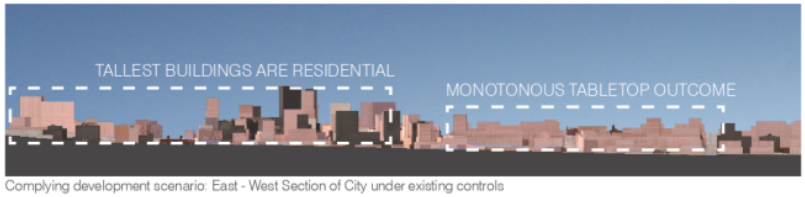
- Controls promote low wide bulky forms which don't respond to the character of particular precincts, or to the topography.
- The monotonous' table-top' outcome, seen in the image of a complying City development scenario, does not provide legibility about uses, character or precincts within the City, and does not assist with way-finding in the way that a varied city skyline with towers in key locations, slender towers, and appropriate building separation can.
- Sleeved podium parking is creating bulky podiums, limiting through site permeability and resulting in poor built form relationships with adjacent sites.
- Height controls do not consider and protect the fine grain low scale character of Keira and Crown Streets.
- Height is concentrated west of Keira Street around the station and height is limited in the existing office core. The City's highest buildings are located on highest topographic point, impacting views to the escarpment and giving the impression that these buildings are the centre of the city, rather than the existing office or retail core.

Testing built form controls using the 3D model of the City revealed the following potential impacts on views within the city and to the natural setting:

- Current protected views are being compromised by poor compliance with and enforcement of view controls.
- Several significant views are not protected under the current planning controls
- The panoramic view from the lighthouse provides views to the escarpment and should be protected.
- Views along streets are easier to protect than oblique views, however, even these are obstructed in key locations. For instance, the ocean views along Market Street and Crown Street are retained. However the vista along Burelli Street and Stewart Street terminates at the existing entertainment uses, which prevent views to the foreshore.
- Western views to and from St Michael's are not considered a protected view in the DCP and while special area controls protect the immediate surrounds, they do not protect views outside this area.
- Recently approved DAs negatively impact the view of the sky against the St Michael's spire.



Plan of key views in the centre



Complying development scenario: East - West Section of City under existing controls

The Opportunity

Revisions to land-use and built form controls provide the opportunity to plan for a variety of precincts within the City. Each can develop with its unique character and a built form that will provide variety and legibility to the City skyline.

New vistas to the foreshore can be considered in conjunction with redevelopment opportunities in the entertainment precinct. Vistas to the escarpment can be protected with the right built form controls.

Views along key streets can be preserved to enhance character and protect significant natural and built heritage.

Urban Design Analysis

Finding: *The City lacks clear physical and visual connections to key places which makes wayfinding difficult and discourages walking.*

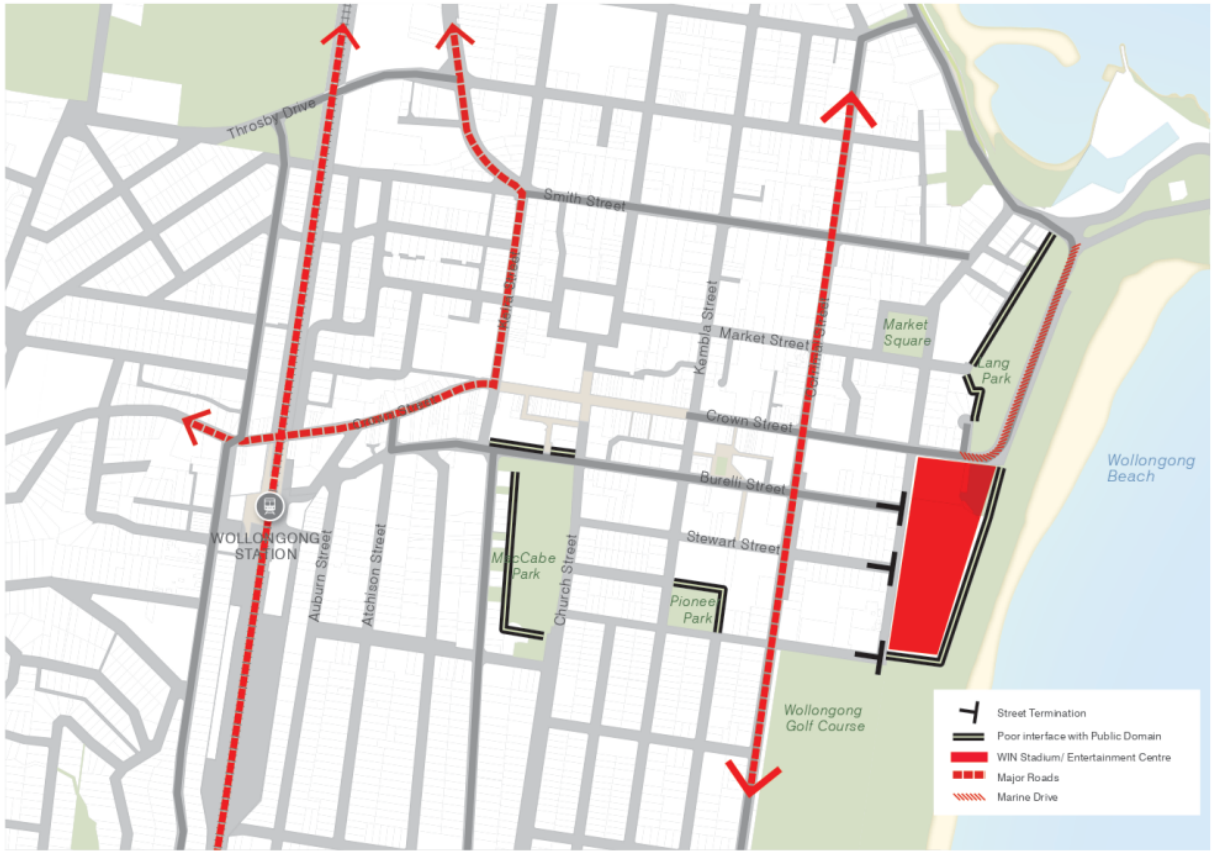
Long street blocks and major infrastructure barriers limit permeability by prioritising vehicles over pedestrians. The City Centre is divided by the Railway line and State Roads. Direct access to the foreshore is limited, the interfacing built form is inactive and key views are blocked by bulky buildings.

Major infrastructure barriers slice the city and offer limited paths of travel for pedestrians.

- The rail line creates a significant disconnect between the western side of the railway and the eastern City side.
- Keira and Western Crown Street are currently State goverened roads, linking to the Princes Highway. This limits public space opportunities such as outdoor fining and planting and results in cars using City Core streets as a bypass, rather than a destination.

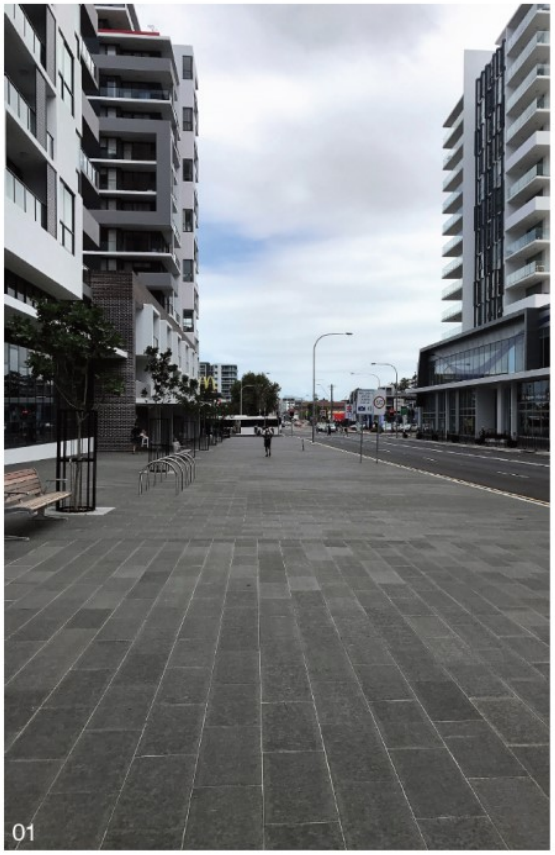
As identified in A City for People, the foreshore feels disconnected from the City Centre. Factors which have weakened the connection between the City and the coast, include local public domain factors as well as structural city-wide challenges:

- The WIN Stadium and Entertainment Centre and the Wollongong well golf course acts as barriers
- Marine Drive severs Langs Park's connection with the foreshore
- Corrimal Street is a clear point of delineation between the City core and foreshore
- Smith, Market, Burelli, Stewart, Bank, Glebe, and Beach Streets do not connect with the foreshore
- The Crown Street link to the foreshore is underwhelming



Main infrastructure barriers

Public Domain and Connections



The Opportunity

There is an opportunity to plan for multiple connections from the City to the Beach- not only via Crown Street- providing a permeable network of vistas and links.

Consider the interface of built form with the foreshore and public domain to ensure active frontages and passive surveillance to improve the safety and attractiveness of the precinct.

Treat the coastal protection zone sensitively to protect and enhance Wollongong's natural coastal heritage as the City grows.

There is an opportunity to renew the station precinct to better connect with Crown Street up to the hospital and city core.

The introduction of the Denison-Throsby by-pass would minimise the use of Western Crown and Keira Sts as major thoroughfares for through traffic.

01 Future road widening on Corrimal Street results in excessively wide footpaths. Spaces need to be desegned for comfort and activation.
02 The Souther end of the Blue Mile walking track is currently isolated by the WIN stadium and entertainment centre and lacks surveillance
03 Andrew Lysaght Park (former cemetery) is fenced off and has a limited public interface
04 There is a poor sense of arrival at the foreshore

Urban Design Analysis

Finding: *Arrival into the City Centre is confusing and provides an underwhelming first impression of Wollongong*

Arrival by car, bus and train provides a poor first impression of Wollongong. A lack of transition between surrounding residential and the CBD gives little sense that you have entered a Regional City.

For those arriving by rail, views of the spectacular coastline are suddenly replaced by an inland urban interface. This leaves visitors disoriented and struggling to identify whether they have arrived in Wollongong, and whether the City is to the east or west.
There are a number of issues which are common across all points of entries into the City. These include:

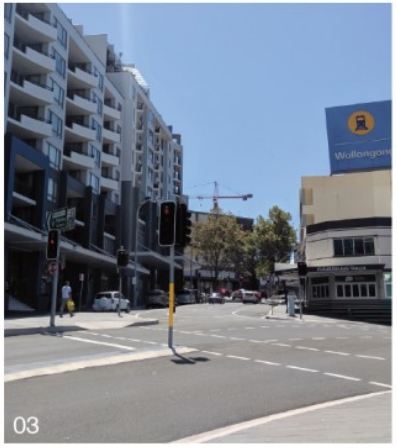
1. No clear point of transition marking the edge of the City Centre from the periphery making it unclear to visitors whether they have arrived.
2. A poor public domain interface which fails to promote walkability into the City Centre.
3. A lack of way-finding and visual connections making it difficult for visitors to orientate themselves in relation to the City Centre, coast and escarpment.
4. Lack of a legible skyline or built form to signal precincts and hubs within the city.
5. Sunken topography and poor connectivity of train station.

Approach and arrival to the Wollongong City Centre.

Public Domain and Connections


01

02



03


04

The Opportunity

An opportunity exists to develop strategies which draw on potential circulation and public domain improvements. These include street re-alignment to maximise access and visibility and take advantage of flatter topography and public domain improvements such as way finding, footpath upgrades and street planting. The intent should be to mark a clear point of arrival into the City and enhance the visual appeal of these key gateways.

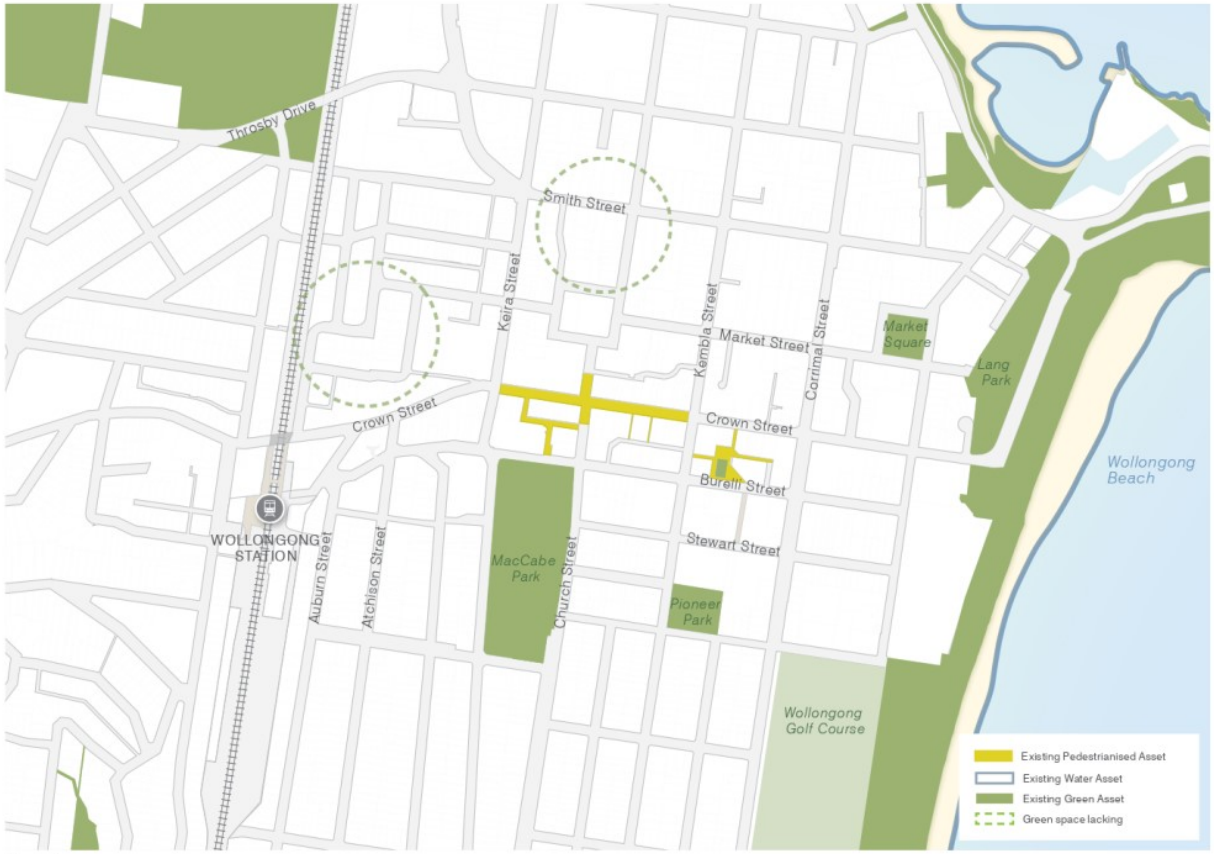
01 Corrimal Street is a heavily trafficked gateway to the City.
02 The Flinders Street arrival experience, approaching Keira Street provides a sudden transition from a Highway character to a City Centre character
03 Way finding to the centre from Station Street is not legible
04 Station Street prioritises vehicles and buses over pedestrian connections with winding and narrow footpaths.

Urban Design Analysis

Finding: *Public open spaces are valued but do not yet realise their full potential*

Public spaces are generally well located, however they are underutilised and lack a clear identity. As the city's population increases, high quality green spaces are needed to deliver a healthy and liveable city and support community well-being.

There has been significant investment in the Crown St Mall upgrade and the Blue Mile, as the City densifies the need for further investment in key spaces will be a catalyst for change.



City Centre open space assets

Public Domain and Connections

- **Lang park** hosts large festivals, gatherings and passive recreation. A number of physical limitations include, Marine Drive which inhibits pedestrian access between Lang Park and the beach-front; the bus terminus and roundabout are an impediment to pedestrians. Boundaries adjoining the park often present back fences; and topography and vegetation limit the opportunity for views of the ocean from the park.
- **MacCabe Park** is centrally located however under-utilised, largely due to the poor interface with surrounding streets and built form. Existing buildings in the park limit views and access to and from the park, as well as impacting on passive surveillance and the sense of safety.
- **Crown Street Mall** and surrounding laneways provide paved pedestrian-only space in the City Centre. The mall provides a venue for weekly markets and laneways provide important pedestrian cross-block connections and currently cultivate a creative City culture with vibrant public art murals and emerging retail and food and beverage operators.
- **The Arts Precinct** enables a creative City culture with vibrant public art murals, cultural venues and intimate spaces for retail and food and beverage operators.

The Opportunity

Investment in public domain will signal renewal for the City. Not only will it offer benefits to residents and visitors to the City, but will also encourage commercial tenants who desire a high quality public domain.

Recent investment in the public domain in Crown Street Mall and the Blue Mile foreshore walk signals positive renewal for the Centre. Improvements to other existing open space assets including MacCabe Park, Lang Park and the Arts Precinct will increase the amenity the Centre has to offer to workers, residents and visitors. Infrastructure investment in the public domain also sends a clear signal to the investor market that a place is highly valued.

As the population of City Centre densifies and diversifies, quality public green space within walking distance to peoples' homes and workplaces will be needed.

01 Existing buildings along western edge of MacCabe Park provide cluttered and unsafe interface.
02 Crown Street Mall has recently been upgraded
03 Residential properties with fences fronting Lang Park do not provide a public interface
04 Street art in the laneways off the Arts Precinct.

Urban Design Analysis

Finding: *Key public spaces are at risk of overshadowing by surrounding buildings*

Although solar protection controls exist for selected open spaces in the City, there is no protection for Crown Street Mall or the Arts Precinct Lawn. Without strong and clear controls, these key public spaces are at risk of losing their natural sunlight and being overshadowed by new developments.

Sun access controls currently protect these spaces between 11-3pm:

1. MacCabe Park
2. Market Square
3. Civic Square
4. Pioneer Park has solar-access controls over lots to the North, however existing and recent developments are not compliant with these controls, resulting in overshadowing of the open space between 12-2pm.

There are no sun access controls for key east west streets (Burelli Street, Crown Street, Market Street) or for the following key public spaces:

5. Crown Street Mall
6. Arts Precinct lawn

Public Domain and Connections


01


02

The Opportunity

Delivery and protection of high quality public domain should be supported by appropriate sun access controls. This will become increasingly important as the City redevelops and density intensifies.

Built form controls should encourage slender towers and physical breaks in form to minimise overshadowing and maximise views to the sky.


03


04

01 Civic Square is currently protected by LEP solar protection controls on site to the north only
02 Existing overshadowing of Crown Street Mall by Wollongong Central Shopping Centre
03 The Arts Precinct Lawn is an important public space to be considered for future solar protection
04 Existing solar access protection of MacCabe Park offers amenity to users

Urban Design Analysis

Finding: *Tree canopy cover in the City Centre is inadequate*

The overall canopy coverage in the City Centre is minimal. This results in increased urban heat, poor streetscapes and a loss in amenity. Mature trees are part of the City's character and should be preserved and increased with new plantings along key walking routes. Canopy cover and vegetation supports ecosystem services, trees provide other health, social, economic, and aesthetic benefits.

A City for People sets out a clear vision for the City Centre which places a specific emphasis on the importance of public spaces and a desire to connect the natural setting and foreshore to the city.

Urban tree canopy is important in the City Centre to mitigate the urban heat island effect, support cleaner air and water and provide local habitat. Trees remove fine particles from the air and help insulate against urban noise pollution, particularly along busy roads. Trees are valued by residents and contribute to the streetscapes, character and amenity of the City, so preserving and expanding the urban tree canopy in public places will become even more important for supporting a sustainable and liveable City into the future.

The City's first Urban Greening Strategy builds on this ambition, targeting an overall increase in canopy cover to 35% by 2046 across the entire LGA. The City Centre is currently one of eight suburbs with less than 10% existing canopy cover, with 63% of total canopy on private land.

The absence of tree canopy cover within the City Centre is most evident at street level, where the frequency and density of street planting can best be described as sparse. While most major streets such as Corrimal, Stewart and Burelli all have areas of street planting, the density and frequency of planting varies greatly from one street block to the next. This is due to the limited opportunity for street tree planting in the current road reserves due to relatively narrow road reserves, and extensive services located under footpaths meaning that the only opportunities for increased tree planting are currently on setbacks to private land or between kerbs, which is problematic for traffic and parking movements.

Less than 10%
Canopy Cover

Existing tree canopy (Source: LIDAR image supplied by Wollongong City Council, 2013)

Public Domain and Connections

The Opportunity

As the most densely populated urban area in the Wollongong LGA, the City Centre has a unique opportunity to make a significant contribution to achieving the targets outlined in the Urban Greening Strategy, while connecting the City with its beach and escarpment setting.

New public domain projects will address some of the need for additional tree canopy, to provide increased amenity and liveability to residents now and into the future. There are opportunities to alter setbacks and footpath alignments in coordination with existing services locations to identify locations for new street trees. Where there is limited space to plant new trees there may be opportunities to plant other forms of vegetation such as garden beds and hedges, that can help improve amenity and air quality.

Green cover can also include rain gardens, green roofs and green walls, all of which can help slow and store storm water and improve water quality, filtering pollution before it reaches waterways.

01 There is a lack of tree coverage on streets around the station south of Burelli Street.
02 Market Street is flanked by large trees which frame the view to the ocean.
03 Crown Street has narrow footpaths and awnings with no space for trees resulting in a harsh pedestrian environment.
04 Eastern Crown Street has great tree coverage and is a very successful outdoor dining area.
05 Large trees exist in MacCabe Park and provide good shade for this public space
06 Corrimal Street and Crown Street, towards the foreshore, have limited tree coverage and little shade, reducing the amenity of the walk to the beach.

Precinct Analysis

In order for the City to develop richness and diversity, key public domain moves and built form controls need to enable the existing character of the City to emerge and strengthen. The City was divided into 8 precincts, which expand on the 6 identified in A City for People.

Each precinct was examined through detailed analysis, observation and research into place, environment, land use, movement, heritage, open space, and public domain to establish its unique character. Strengths and weaknesses were identified, and the capacity of the existing controls to support the character of each precinct as it renews were determined.

Precinct Analysis

Precinct *Rail Arrival and Southern District*

Start your day at the gym, have breakfast at a trendy café, drop your car at the mechanics, drop your kids at childcare, donate unwanted clothes to charity, do your grocery shopping, learn martial arts, window shop expensive bicycles, and furnish your house…all within a stone's throw of each other.

What characterises this precinct?

- **Arrival:** This precinct is part of the entry to the City. The built form and the placement of the station are important in the history of the City and the shifting focus of the City Centre.
- **Topography:** Crown Street follows the ridge line and crosses the rail line in this precinct.
- **Proximity:** The light industrial area is located close to the City Centre and commercial core in the low-lying flood prone area south of the station.
- **Mixed commercial on large lots:** The area is characterised by large lots which run east-west on long, north-south streets. These lots generally feature a diverse mix of low density industrial warehouses and commercial shop-front buildings 1-2 storeys in height.
- **Distinct character:** The combination of low and high densities in the area along with a patchwork of inconsistent building types make it a place which is distinct from other precincts within the City Centre.

01 The approach into the City Centre from Station Street is an underwhelming experience.
02 Long blocks running north-south make east-west circulation between rail and city difficult
03 The grain of the rail arrival precinct is characterised by low rise, single storey semi-industrial buildings on large lots.

What's great about it now?

- **A key Transport Hub:** The station and bus services are an important point of arrival and a hub for travel mode shift.
- **An important midway point:** There is significant pedestrian traffic along Western Crown Street traveling between the hospital, station and retail core.
- **Services for the people:** Owing to its location between the City Centre and the hospital, a range of services including medical, food and retail uses and services are well patronised.
- **Opportunities for renewal:** To the south of Station Street and west of the rail line there are sites which provide opportunities for significant renewal.
- **Ease of access:** The land area to the east of the station precinct is relatively flat, offering accessible opportunities for active transport along Burelli Street and through MacCabe Park.

What's missing?

- **Finding your way is difficult:** For passengers arriving at Wollongong Train station, orientation to the City Centre is unclear. There is no direct line of sight to Crown Street from Station Street, so it is not immediately apparent where the City Centre is, nor how to get there.
- **An underwhelming public domain:** Station Street is the main connection to the civic and retail core, but has poor public domain. Station Street is wide and barren with the street radius and kerbs designed for traffic rather than pedestrians. The footpaths are narrow, there is no consistent street wall edge, there are very few trees or shade, and the gradient is steep.
- **A station disconnected from its city:** The City did not initially develop around the station. Although Crown Street remains the key spine connecting the city and station, the location of the station, away from the City Centre and with no entries from Crown Street makes it feel disconnected from the city.
- **Street level activation:** Due to the mix of uses including car based warehousing and depots, pedestrian amenity is limited in the southern part of the precinct

01 The approach to the rail precinct is marked by an intersection of four streets and can be a disorientating place to locate the City Centre from.
02 There are multiple development opportunity sites on the western side of the rail corridor along Crown and Gladstone Streets.
03 A recent increase in development in the City has seen the emergence of larger medium density residential and commercial developments in the precinct.

Precinct Analysis

Precinct *MacCabe Park*

MacCabe Park is the City Centre's largest park and is located centrally between the train station and the commercial core. The Park's renewal has the potential to transform the entire City around it providing a revitalised open space which can be enjoyed by everyone.

What characterises this precinct?

- **Civic Life:** The park is significant within the civic life of the Wollongong community playing host to numerous cultural events, including fairs, indigenous celebrations, concerts and commemorative occasions such as Viva la Gong and ANZAC Day services.
- **Flat topography:** Located at a low point in the City, the Park and its surrounding areas are particularly susceptible to flooding as it was historically swamp-land which has been filled in. There is a very low grade of 1-2% from Tom Thumb Lagoon.
- **Built elements:** The Keira St edge is lined with a series of low-rise semi-industrial buildings within the park, leaving the park's western edge largely concealed from the street. The Centennial Hall and Carpark off Church Street and the Council office building on the corner of Burelli and Church Streets encroach on the green space.
- **Youth Centre:** A well used youth centre on the northern edge of the park at the corner of Burelli and Keira Streets is a community draw-card, however it turns its back on the park and like the industrial buildings along the Keira Street edge, conceals the park from Burelli Street.
- **Variety of spaces:** within the park there are a variety of spaces for different uses- memorials and places of reflection, heritage listed date palms through the middle, and a sculpture visible from the Burelli Street entrance.

01 MacCabe Park is a well vegetated open space, centrally located in the City.
02 The playground is well used by the community and has undergone several upgrades.
03 The park plays host to a number of important Civic events including ANZAC Day dawn services

What's great about it now?

- **Civic life:** The Park was and continues to be a place for everyone. The Park, including a youth centre, is frequently utilised.
- **Council investment:** Since the 1980s Council has been actively investing in the Park through the progressive acquisition of sites along Keira Street with the intention of converting these sites to parkland. The Park is also home to the Council run youth centre located at the northern end fronting Burelli Street.
- **Proximity to railway station:** The Park is the closest green space to the railway station, and the gradient is flat, making access to it relatively easy
- **Flexible open space**: Large public open space is able to accommodate a variety of uses, including concerts and festivals.
- **Connection to Burelli Street:** Located directly off Burelli Street, the northern end of the Park is central to the City and well connected to the Burelli Street civic core, as well as to the retail core.

What's missing?

- **Activation at the edges:** Existing development within the Park conceals the park from the street, does not activate the area is an issue for surveillance and safety.
- **Good access to the Park**: A number of existing buildings with light industrial uses currently occupy the Park, particularly along the Keira St edge, and limit views and access to and from the park. Council has been acquiring these properties progressively.
- **A safer welcoming environment after hours**: Despite its extensive use during the day, the Park lacks adequate lighting, visibility and security measures to ensure that it is a safe place to be after hours.
- **Greater diversity of use:** Despite the numerous uses and events, further opportunities exist to provide active uses including ball courts and cycling paths to provide a transition of uses for workers in the day and residents after work.

01 A number of public events and festivals take place in the park transforming it into a large gathering space.
02 Space for sitting and reflection
03 The existing line of retail buildings that flank the eastern edge of Keira Street turn their back to the park posing a security issue.
04 An mural painted on Centennial Hall facing the park improves the building's poor rear interface

Precinct Analysis

Precinct *Western Crown & Keira Street*

The gateway to Wollongong's commercial and civic heart, Western Crown Precinct is a place where the City's top restaurants sit side by side with long established watering holes, historic landmarks and contemporary retail outlets.

What characterises this precinct?

- **A historical record of the city's urban life:** Historically, Keira and Crown Streets have been the cultural, commercial and retail lifeblood of the city, bustling with street life and busy shop-fronts.

  Although its role as a cultural, commercial and retail high street has been gradually diminished over the years, a number of historically significant buildings that mark this period in its history still remain. This includes grand buildings like the Regent Cinema or Hotel Illawarra on Keira Street.
- **Variety:** The built form along Crown and Keira Streets is reflective of the traditional high street, and transitions from fine dining and office on Keira Street to the retail and office character of Western Crown Street. The fine grain tenancies and local offers play and important role in supporting the small employment uses and foot traffic generated by the station and health precinct further west along Crown Street.
- **Major point of arrival:** Like the Rail Arrival Western Crown Precinct includes the two key points of vehicular entry into the Wollongong City Centre (Western Crown Street from the west and Keira Street from the north)

  The precinct is defined largely by its role as a busy multi-lane classified road flanked by tightly knit, small scale retail and commercial buildings 2-3 storeys in height with awnings and narrow frontages which have changed little throughout its history.

01 Despite its intimate scale, the northern approach into the City Centre from Keira Street is an underwhelming experience.

02 The approach into the City Centre from Western Crown Street is flanked by a series of small scale shops and retail buildings that do not present a clear sense of arrival into a regional city.

What's great about it now?

- **Gateway to the City Centre:** Despite its underwhelming sense of arrival, this precinct plays a pivotal in delivering many visitors into to the City Centre. An opportunity exists to enhance the arrival experience for many visitors and residents alike.
- **The Eat Street Dining Legacy:** Both Keira and Crown Streets have long had a tradition of being a destination for socialising and dining. This is currently reflected by the multitude of restaurants, catering to a broad range of tastes, despite the development of new mall buildings offering a wide range of dining alternatives.
- **A proud past with buildings to match:** Despite the changes to the City over a long period of time, the streets and a significant number of original buildings remain largely intact. The mixture of contemporary buildings and older style heritage buildings from different eras are opportunities to develop new and innovative uses for the future.
- **A catalyst site with a potential for real change**: The site between Crown, Keira, Burelli and Atchison Street is a significant land holding within the precinct which represents a rare and unique opportunity to re-imagine Western Crown as a destination that could incorporate a unique mix of uses which could include hotel accommodation, residential, food and retail uses at a range of scales.

What's missing?

- **A clear point of arrival into the city:** The arrival to the City Centre by car from the north along the Princes Highway and west along Crown Street are both sudden with little or no indication to signal your arrival and transition into the City Centre.
- **An alternative to the 'rat run' through the city:** The sequence of the highway abruptly turning into Keira Street in the City Centre means that large volumes of through traffic are being forced through the City Centre in what should be a pedestrian focused retail and civic area.
- **A safe people oriented walking environment:** The City needs to build on the existing network of lanes within the Centre to create additional secondary street connections that focus more on the local movement of people within the City Centre. This includes the removal of overhead bridges and passage ways between buildings to keep people circulating at grade and activating the City's streets and laneways.
- What's proposed: In order to reduce through traffic it is proposed that Keira and Crown Streets be designated as local roads and through traffic diverted via Throsby Drive and Denison Street.

01 Wollongong Central, West Keira is the newest retail addition to the precinct.
02 The Regent Theatre is a cultural institution on Keira Street.
03 The western side of Keira Street features an impressive variety of restaurants ranging from fine dining to everyday eats.
04 The southern end of Keira Street is a much quieter place with little or no activation.
05 The lack of street activation is not helped by sky bridges which remove foot traffic from the street.

Precinct Analysis

Precinct *Commercial Services*

Home to Wollongong's smaller scale professional service sector, close to the Mall, Courthouse and Keira Street dining precinct. You can eat and shop, while waiting for your tax return

What characterises this precinct?

- **Topography:** The precinct sits on a high point of the City. It is characterised by long inclined streets which make pedestrian movement a challenge.
- **Location:** Tucked away on the north-west edge of the City Centre, the area is characterised by smaller buildings a mix of small tenancy serviced based local businesses, homes and non-government organisations mixed into a varied streetscape.
- **Building typology:** The precinct is characterised by smaller buildings including single houses (turned offices), residential flat buildings and office buildings up to 8 storeys in height. These house a range of uses including service based local businesses, homes, retail and non-government organisations.
- **Roads:** The precinct is characterised by several long, continuous street frontages which are in excess of 250 metres making pedestrian permeability challenging.

01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03

01 Market Street, is the primary entry into the Commercial Services precinct.
02 A number of small cafés and restaurants operate along Keira Street.
03 The Illawarra Hotel is a live music and night club venue which is a popular night spot.

What's great about it now?

- **Between two great precincts:** Located north-west of the Western Crown Precinct and just north of the Rail Arrival precinct, it is close to the railway station, shops, restaurants and bars.
- **Views to the escarpment:** The precinct is located on the high side of the City and currently has uninterrupted views west to the escarpment.
- **Centre for local commerce:** The precinct is a balance of small, trade and service based businesses, shared office spaces and non-government institutions. There is a clear demand for small commercial tenancies in the City, currently being met by this precinct.
- **Market Street:** Is the major point of entry into the precinct and is flanked by a number of restaurants, bike shops and small businesses, including the heritage listed Illawarra Hotel on the corner of Keira and Market Streets.

What's missing?

- **Local connections within the precinct:** This precinct is physically and visually disconnected from the City Centre. Despite its proximity to Crown Street and the Station, the lack of connections to Crown Street combined with the steep topography make the precinct difficult to locate and access.
- **Connections to other precincts:** While the area is ideally geared for significant increases in densities, the precinct's lack of active and vehicular transport connections to the railway station and Crown Street inhibits this area's potential for further growth.
- **Protection of commercial uses:** The precinct contains a mix of uses, which is primarily commercial at its centre and residential at the fringes to the west and north. Keeping land primarily for commercial uses will be a priority.
- **Lack of open space:** Despite the great views of the escarpment, a lack of open space and tree cover reduces the amenity for residents and workers within the precinct.

01 The Rawson Street Car-park provides great vistas west to the escarpment
02 Residential development on the top of the hill has shifted the city skyline and increased population density significantly in short period of time.
03 An example of the mix of densities which characterise the area - a converted two storey house alongside a 3 storey commercial strata building is reflective of the varied scale of built form and mix of densities in the precinct.

Precinct Analysis

Precinct *Crown Street Mall*

Wollongong City's premier and historic retail high-street. A shopper's paradise that has a rich history and continues to be a place that attracts people from all walks of life.

Week night food markets bring life and music, Friday markets provide access to the region's best produce.

What characterises this precinct?

- **Location:** Situated in the geographic centre of Wollongong, the retail core is the heart of merchant activity in the City .
- **Pedestrian Mall:** Flanked by low scale retail, the buildings on both sides of the street are generally characterised by narrow frontages and street awnings to give the precinct a human scale. The open pedestrian mall provides flexible space for activity with high-quality landscaping, street furniture and public art.
- **Building typology:** The retail centre comprises two distinct and contrasting halves. The first is a shopping mall at the western end of Crown Street Mall. This cluster of large, multi-storey, mono-functional buildings is linked by sky-bridges and offers little in the way of pedestrian amenity or street-scape benefits. East of the shopping centre, is a series of low scale, single shop buildings providing an attractive fine grained streetscape. Residential uses above ground, offer passive surveillance and after hours activation to the mall.

01 An aerial view of the retail core reveals a recently updated landscape treatment with new art installations in the mall flanked by low rise shop fronts.

02 The inclusion of a new performance space at the heart of the mall is a focal point for community performances, but impacts views to St. Michael's Spire from some vantage points.

What's great about it now?

- **A meeting place:** The mall is host to produce, craft and 'Eat Street' markets making it an important focal point for formal and informal community gathering.
- **Pedestrian mobility:** The retail core and the surrounding lane-ways provide a highly permeable pedestrian friendly network of open space and lanes in the heart of the city.
- **The fine grain:** The lots oriented north-south create a fine grain of development characterised by deep buildings with narrow frontages and side setbacks which facilitate pedestrian only lane-ways, creating a tightly knit, but highly permeable series of retail shops and buildings. Successful fine grain precincts are emerging, particularly in the lane-ways between Crown and Burelli Streets, where small tenancies create important nodes and an element of surprise within the pedestrian network.
- **Heritage rich:** The mall is dotted with a number of heritage buildings including the Wesley Uniting Church and a group of heritage listed shop-fronts on the south-eastern side of the mall.
- **Public art:** The lane-ways provide important pedestrian cross-block connections and currently cultivate a creative city culture with vibrant public art murals.
- **Breaking down the box:** Large format shopping centres tend to present to the street as 'big boxes' with a single entry, however some effort has been made to sleeve smaller retail tenancies along the street frontage of the Crown Street Mall.
- **Proximity to Historic Spine:** In contrast, the area north of the retail centre including St Michael's Cathedral, Market Street and Wollongong Local Court serve as a strong reminder of the City's past, with local heritage items along Market Street serving as strong reminders of the effort to protect Wollongong's built heritage.

What's missing?

- **A concentrated retail core:** The dilution of the City Centre with ground floor uses on all streets is a real challenge for the City Centre
- **Activation of Crown St Mall:** From the train station to the beach-front Crown Street covers a length of nearly 3km, with 400m length of mall. Along this length, the predominant ground floor use is retail, however vacant tenancies, particularly at the fringes, contribute to a lack of vibrancy.
- **Shopping malls are competing with the street:** Much of the retail activity is being directed into internalised shopping centres, which negatively impact on the vibrancy of the street and the viability of tenancies on the street.
- **The right mix:** A mixed-use City Centre with a range of uses including community, retail, commercial and residential is required to create a vibrant centre. The challenge is how to achieve a genuine mix, with a diversity and fine grain streets.
- **Active and unobstructed streetscapes:** Pedestrian Overpasses negatively impact protected views along Crown Street and reduce pedestrian activation at street level.

01 The western end of Crown Street Mall is occupied by the multi-storey Wollongong Central shopping centre which includes a number of large retail stores
02 Artwork in the lanes are a feature of the City Centre. Globe Lane features several works in a setting with bars and restaurants
03 A view from the block behind the Crown Street mall reveals the extent of parking on rooftops.
04 Globe Lane and Globe Way link Crown Street Mall to MacCabe Park
05 Crown Street Mall is host to a variety of markets and events and plays an important role in enabling Wollongong's residents to meet formally and informally

Precinct Analysis

1 Precinct *Historic Spine*

The Historic Spine is a fantastic place to take a quiet moment from the hustle and bustle of the retail core below.

Sweeping views of the city combined with grand Victorian buildings connect visitors with the historic beginning of the City.

What characterises this precinct?

- **Heritage:** With the highest concentration of historically significant buildings in the Wollongong City Centre, the precinct was outlined in the 1834 town plan for Wollongong and is important to the earliest history of the township.
- **Composition:** A precinct of two parts: The precinct can be described best as two separate but connected portions.

  The first is the hill on which St Michael's Cathedral sits. This area includes a cluster of heritage listed civic buildings including the law courts, which forms the centre of the old town.

  The second is Market Street, which is arranged symmetrically on an east-west axis with the Cathedral. This street comprises a mixture of commercial, residential and mixed use buildings and forms a strong view corridor in both directions, with views to the ocean from the top of the hill towards St Michael's Spire and the escarpment beyond. Market Street is terminated by Market Square where the street alignment pulls the focus to the North-East, towards the historic harbour.
- **Vistas:** This high point is one of the few places in the City Centre from which the ocean, escarpment and the traditional steelwork heritage of Port Kembla can be seen.

01 Street view of St Michael's Cathedral (1859)- a Victorian Gothic sandstone building in a green setting and significant trees.
02 The view down Market Street from the Cathedral affords the precinct views of the ocean.
03 The view south down Church Street provides a vista down to Port Kembla.

What's great about it now?

- **Location:** The hill is the topographical high point of the area and at one time in the City's history, was the City's Centre.
- **Market Street Axis:** Market Street runs east-west from Langs Park extending all the way to the rail corridor. The street is split by St Michael's at the top of the Hill.It was the road which connected the original Market place (now Market Square) with the harbour.
- **St Michael's Cathedral:** The old sandstone Cathedral is the focal point of the precinct. Located at the top of the hill, St Michael's Cathedral overlooks the entire city and can be seen from the eastern end of Market Street.
- **The old civic core:** The St Michael's Spire and Courthouse Clock tower are important and identifiable markers of the old City. The 1834 town plan grid still remains today linking through the Market Square and the Harbour. The memory of the old town through heritage buildings civic institutions clustered around the precinct.
- **Student life:** The University of Wollongong have a limited number of student housing beds in a development immediately behind the Cathedral, which are extremely popular.

What's missing?

- **Green streets:** Heritage hill is relatively green with the church grounds and large trees. Market Street however lacks tree canopy coverage to provide pedestrians with amenity and shelter.
- **Activation on Market Street (east):** The eastern portion of Market Street is dominated by medium density residential dwellings with poor commercial interfaces at ground floor which do little to activate the street.
- **Wollongong Central Interface:** The northern edge of the Wollongong Central Shopping Centre backs onto the precinct, resulting in an undesirable interface made up of on-grade car parks. The gradient change and lack of connection through the large footprints impact pedestrian accessibility of heritage hill.

01 The Wollongong Law Courts have recently undergone a facelift and extension.
02 Market Square and Market Street are key to the historical significance of the Wollongong City Centre.
03 The view south reveals significant views to Port Kembla and escarpment which should be protected.
04 The lower portion of Market Street east is dominated by medium density residential dwellings with poor commercial interfaces at ground floor.
05 Entry to the on-grade car park which backs onto Wollongong Central results in a poor interface opposite the Cathedral.

Precinct Analysis

Precinct *Eastern Crown Street & Arts Precinct*

Wollongong's arts and civic heart converge around the generous public domain of Eastern Crown and Burelli Streets. Here theatre, music and art co-exist with Council Chambers, Government offices, Wollongong Central Library and mid-rise commercial buildings. A rich network of lane-ways and open spaces connect, this part of Wollongong is key to the city's café and small bar scene.

What characterises this precinct?

- **Varied built form character:** Bookended by the retail and entertainment districts, the Eastern Crown Street and Arts Precinct is slow and green, a true mixed use precinct with a balance of residents, workers and civic facilities. It is a compact area which features a mixture of development types ranging from small 1-2 storey shop fronts facing Crown Street to larger multi-storey commercial strata office buildings lining Burelli and Stewart Streets.
- **Civic Uses:** The precinct is home to the key civic functions of the City including the town hall, performing arts centre, regional gallery, central library and Council chambers.
- **Pedestrian friendly:** These public landmarks are well served by a strong network of generous footpaths, pedestrian lane-ways and squares with extensive street planting, on a relatively flat gradient.
- **Commercial Cluster:** The result is a precinct that is highly permeable and easily accessible and invites a broad range of commercial enterprises to co-exist, from small lane-way bars and restaurant start-ups to large private companies, in large floor-plate tenancies. The proximity to civic uses and clustering of existing commercial business give the precinct a prestigious commercial address.


01


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01 Illawarra Performing Arts Centre (IPAC) is a respected venue for the performing arts.
02 Council Chambers and the Library overlook the Arts Precinct lawn.

What's great about it now?

- **It is the civic heart of Wollongong:** The Eastern Crown Arts Precinct has all of the ingredients of a great regional city in two compact, walk-able street blocks. This includes the town hall, performing arts centre, regional gallery, central library and Council chambers, which are located either side of Burelli Street between Kembla and Corrimal Streets.
- **Great cafés and Bars:** Eastern Crown and Kembla Streets have a variety of fine grain food and beverage offers conveniently located for commercial office workers and nearby residents alike.
- **A network of pedestrian connections:** There is a network of north- south pedestrian lane-ways connecting Crown, Burelli Street buses, Kembla Street, the Library, Crown Street Mall and the foreshore, making it a permeable and walk-able precinct. The pedestrian link through Ethel Hayton lane and the Arts Precinct Lawn includes consistent planting providing a green vista and canopy cover.
- **Safe, slow and convenient streets:** On Eastern Crown Street blisters contribute to generous footpaths which give pedestrians a sense of priority, and make crossing the road easy. Half hour parking makes it a convenient destination for shoppers and cafe-goers.
- **Open Space:** The Illawarra Performing Arts Centre and Wollongong Art Gallery are located around a generous landscaped square which provides relief along the street, a green outlook from the office towers and open space amenity in the City. The precinct has a higher percentage of tree canopy than most of the City.
- **Public art is a dominant feature** in the form of discrete light boxes, large format murals and sculpture.
- **Varied built form:** Eastern Crown Street is characterised by portions of fine grain and collections of period buildings. The two storey street wall and awnings create a successful street-scape. On the northern side of Burelli Street the arts precinct comprises buildings in the round with generous setbacks, on the southern side the mid-rise commercial buildings are clustered

What's missing?

- **Civic presence:** In spite of having all of the ingredients of a great regional city in this compact area, the precinct lacks a strong civic character. The precinct does not announce itself as the civic heart of the City.
- **Commercial and civic built form:** Although commercial office buildings are clustered in what has the potential to become a prestigious commercial precinct, the buildings themselves are dated. The arts and civic buildings have a poor interface with the public domain. The art gallery and town hall both present their rear facade to the landscaped square.
- **Mixed public domain experience:** Burelli Street has generous footpath setbacks, but limited and inconsistent street tree planting result in a poor public domain experience.
- **Distance to rail:** It is important for the arts and commercial uses to be easily accessible by public transport. The distance from the station and the topography at the western end of Burelli Street and Station Streets negatively impact the connectivity to rail. New active and public transport connections with rail will be important.

01 There is a good network of open spaces and connections.
02 The Art Gallery presents a predominantly inactive wall to the square.
03 The public domain has a rich food and beverage offer where public art is a dominant feature.
04 There is a consistent street tree canopy on Eastern Crown Street for the block between Kembla and Corrimal Streets.

Precinct Analysis

Precinct *Foreshore*

The foreshore is one of the City's greatest assets, a destination to celebrate, be entertained and enjoy the natural beauty of our coastal setting. People from every walk come together at the WIN Sports and Entertainment Centres in support of their local team or to enjoy local and international live shows. The recently upgraded 'Blue Mile' links the precinct to the Harbour and the popular North Beach.

What characterises this precinct?

- **Sports and recreation:** Located next to the beach this precinct offers many opportunities for both active and passive recreation.
- The precinct is home to a number of the city's key sporting and public open spaces including City Beach, Lang Park, WIN Stadium, Wollongong Entertainment and Sports Centre and Steelers' Leagues Club.
- **Higher density residential:** The recently completed residential developments along Corrimal, Crown and Harbour Streets mark a dramatic shift in the precinct's character from low density 3 storey walk-up apartments with front lawns, small school buildings on church lands, to large scale multi-unit developments in excess of 11 storeys with 3-4 storey street walls.
- **The City Centres backyard:** While this precinct is popular during major sporting events, it presents a larger opportunity to provide residents and workers of the City Centre better access to their coastline and major public spaces on a day by day basis. This will be increasingly important as higher density residential development increases in he City Centre.

01 City Beach is one of Wollongong's greatest natural assets, yet is underutilised.
02 The Wollongong Entertainment and Sports Centre and Stadium occupy prime beach-front position
03 Recently completed residential development characterises the changing face of the foreshore.

What's great about it now?

- **Home to the City's beach:** The City is in the privileged position of having a beach on the door-step of the entrainment, arts and business precincts, just short a walk for a lunch-time surf or an after-work swim.
- **Lang Park is a key event space:** Major sporting events and festivals take advantage of the beach-front location and unencumbered open space that Lang Park offers. This is a place of choice for boot-camps and fitness.
- **Scenic walking and cycling:** The attractive Blue Mile walking track follows the coastline, connecting City Beach to Wollongong Harbour and North Wollongong Beach.
- **A sports and entertainment hub:** The Stadium and Entertainment and Sports Centre are regional attractors for the City.
- **An attractive place to live:** New residential developments in the area have access to good views and amenity, and are fast becoming prestigious addresses.
- **Ease of access:** The precinct is on the free green bus loop and being relatively flat, has good active transport connections to the retail core, arts and cultural precinct and North Wollongong.

What's missing?

- **The Foreshore is disconnected from the City:** The large lots of the stadium, entertainment centre and golf course are barriers between the City Centre and the foreshore. These occupy a long stretch of the foreshore, block views of the beach and ocean from the city and limit opportunities for connections. The Stadium loading dock and service road on the eastern side of the complex are in a location which is incompatible with the beach-front address and create a poor public domain experience.
- **Crown Street is the only street connecting city and beach:** Market, Burelli, Stewart, Bank, Glebe, and Beach Streets do not connect with the beach-front.
- **There is a poor pedestrian approach to the beach:** On the Crown Street approach to the beach, the sand and water are difficult to see due to dune and road conditions. The roundabout and bus terminus prioritise vehicular movement make pedestrian access to the beach unclear and unpleasant.
- **There are limited attractors at the beach:** For those wanting to enjoy the beach over a meal or drink, there are few options. The spectacular setting has the opportunity to offer a variety of destinations for an early morning coffee, a scenic lunch or an after-work cocktail. The existing bar is compromised by a poor interface with Andrew Lysaght Park and the loading dock
- **Lang Park interface is compromised:** Whilst Lang Park has the opportunity to provide an excellent interface between the city and the beach, Marine Drive is a barrier between the two, and a result Lang Park is under-utilised. On the western edge of Lang Park, the inactive property frontages provide a privatised, poor interface with the park.

01 The beach is difficult to see from Crown Street, and the large roundabout and bus terminus prioritise vehicles over pedestrians.
02 The stadium loading dock and service road are located along the beach-front, creating a poor pedestrian experience
03 Private properties back on to the Western edge of Lang Park with inactive frontages and limited opportunity for passive surveillance.

Summary of key findings

Findings identified through urban design analysis and testing of the existing planning controls, and supported by economic analysis and forecasting, can be broadly summarised under the themes of land use; built form; and public domain and connections

These findings underpin the thinking behind the directions and strategies outlined in the Urban Design Framework.

Land Use

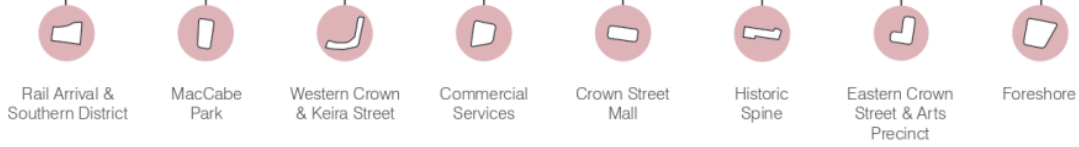
- Current land use controls could result in a City filled with residential development, compromising long term employment growth
- The retail core is spread out too far, which results in empty shopfronts and creates inactive streets
- The City's cultural identity is diversifying to support City life

Built Form

- General development controls don't respond to the character and historic qualities of places in the City
- The planning controls do not provide clear guidance for development to deliver the intended built outcomes for the city
- The City's development controls do not promote development that defines a city skyline or enhances the unique natural setting
- Developments favour maximising building development controls over design quality, producing a less attractive City

Public Domain and Connections

- The City lacks clear physical and visual connections to key places which makes wayfinding difficult and discourages walking.
- Arrival into the City Centre is confusing and provides an underwhelming first impression of Wollongong
- Public open spaces are valued but do not yet realise their full potential.
- Key public spaces are at risk of overshadowing by surrounding buildings
- Tree canopy in the City Centre is inadequate

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TRAMPS
PROPERTY SETTLEMENTS
Draft | Wollongong City Centre Urban Design Framework

03 Recommendations

Based on our analysis and key findings, recommendations to inform planning policy change are defined in the form of Objectives, Directions and Strategies. These have been broadly categorised into 3 key areas - built form, land use and public domain and connections.

Urban Design Framework

A design framework to deliver *A City for People*

The Urban Design Framework consists of objectives, directions and strategies for development, which form a framework to deliver the Vision of *A City for People*.

Objectives

The objectives express a high-level aim for each key area - land use, built form, and public domain & connections. These objectives were identified following the city-wide and precinct-wide analysis and respond to the key findings in each area.

The objectives should guide future decision making, specifically the refinement of planning and design controls.

Directions

The directions describe the key moves required to achieve the objectives.

Strategies

The strategies begin to explain in detail the mechanisms required to deliver the directions. The strategies range in their scope, with some relating to the Wollongong City Centre as a whole and others being precinct-specific.

OBJECTIVE

DIRECTIONS & STRATEGIES

Land use

A vibrant and growing Regional City

Planning controls promote a diversity of uses to encourage a vibrant City Centre, day and night. Jobs and housing growth supports Wollongong's role as a Regional City. Wollongong is an attractive place to live, work, visit and invest.

1. Prioritise jobs growth and establish a resilient commercial core
   - *Define and strengthen the role of the B3 Commercial Core for employment*
   - *Investigate incentives for commercial development*
2. Define a thriving retail network that responds to character and supports a range of offers
   - *Protect the character and role of key retail streets and precincts*
   - *Only require non-residential ground floors on key retail streets*
   - *Develop planning controls that support a balance between night-time economy and residential city living.*
3. Plan for a variety of housing to support a lively and inclusive city
   - *Guide residential development in the City Centre in the right locations*
   - *Leverage opportunities for public benefit improvements through development*
   - *Encourage a diversity of housing in the City including Affordable Rental Housing and Student Housing*

Built form

An attractive and diverse city in a unique natural and historic setting

Clear planning controls preserve the unique historic character of Wollongong's precincts. Renewal at all scales is encouraged and this creates an interesting built fabric. Built form variety creates a recognisable city skyline , celebrates the natural setting and is human scale.

4. Grow a legible city that supports a distinctive and evolving character
   - *Plan for diversity in form and renewal at all scales*
   - *Plan for building envelopes that preserve amenity and support the desired future character*
   - *Preserve buildings and places of significant character values for the enjoyment of future generations*
   - *Preserve views to the escarpment, ocean, natural and built heritage*
5. Strengthen and simplify planning controls to promote built form diversity in response to people and place.
   - *Develop controls that ensure slender tower forms, appropriate separation and consistent setbacks*
   - *Develop controls for floor to ceiling heights that ensure good amenity and adaptability*
   - *Develop controls and provide guidance on site amalgamation and isolation*
   - *Develop controls for fine grain frontages to ensure human-scale development*
   - *Develop ground setback controls that provide attractive interfaces and functional streetscapes*
   - *Develop street wall controls that respond to character and human scale*
6. Elevate the importance of design quality in the City Centre
   - *Strengthen the commitment to design excellence*
   - *Encourage innovation and design quality in the local design and development industry*
   - *Provide clarity and improve outcomes through a strong assessment process*
   - *Prepare design guidelines that communicate better design outcomes*
   - *Develop specific design guidelines that demonstrate better built form outcomes on flood prone lands*

Public domain and connections

A green and walkable city

The city street grid is clear and facilitates walking. Revitalised public spaces are a catalyst for growth and support an active. healthy community. A significant increase to the City's tree canopy contributes to a green and sustainable city.

7. Strengthen the structure of the City through a permeable grid that prioritises pedestrians
   - *Define the role and function of streets in the City*
   - *Create a permeable city grid for pedestrians*
   - *Deliver active transport infrastructure*
   - *Enable the mode shift from cars to public transport*
   - *Identify roads for vehicular traffic and servicing*
8. Create a green network of open spaces for a sustainable, healthy and attractive city
   - *Reinforce the character of key streets and precincts with appropriate tree planting*
   - *Define and implement a 35% minimum canopy target on key walking streets by 2037*
   - *Prepare a City Centre Street Tree Masterplan*
   - *Establish a tree-centric approach to deliver greening in response to existing constraints*
   - *Leverage new development to offset the cost of greening*
   - *Identify and prioritise public domain projects to catalyse renewal and encourage investment in the City*
9. Protect sunlight to key public spaces
   - *Protect solar access to key public spaces to maximise amenity*

Land Use - A vibrant and growing Regional City

The Economic and Cultiral Heart of the City

As defined by the Illawarra-Shoalhaven Regional Plan, Wollongong City Centre is the economic and cultural heart of the Illawarra, and is a nationally significant City. In accordance with the Regional Plan, much of the future prosperity of the Region will be built on the potential to generate jobs from the integration of education, health care, business and tourism precincts in Metro Wollongong. The City Centre is key to achieving this.

The land use strategies for the City Centre focus around getting the balance of land uses right: encouraging commercial investment; containing a vibrant retail core; and supporting City life with residents.

Shaping land use across the City Centre

Cities are more than commercial business districts. There is a fine balance in understanding how commercial, retail and residential markets interact to deliver liveable cities. Economic analysis, growth forecasts and capacity testing was undertaken to understand how we can plan for our changing economy and growing City.

What the testing revealed:

Commercial lands need to be protected

It is critical for a Regional City like Wollongong, that housing in the City Centre does not inhibit commercial growth. The city is losing commercial land to residential development and therefore needs to define adequate zoned land and support commercial uses into the future.

Retail uses need to be concentrated

There is a need to establish current and future retail demand in the City and encourage a vibrant, compact retail core, which reinforces the important role of the traditional high-streets of Crown and Keira Streets.

Residential needs to support City growth

Well designed residential uses in mixed use areas support the vitality and resilience of a city. Increasing the city's residential population will bring significant benefits; a more diverse night-time economy; increased pedestrian activity; passive surveillance; and more people living within walking distance of all the services and amenities they need.

Housing must be in the right location, and provide the right mix to meet the needs of a growing population. Variety in dwelling type and size will contribute to, and support a diverse community.

Objective

A vibrant and growing Regional City

Planning controls promote a diversity of uses to encourage a vibrant City Centre, day and night. Jobs and housing growth supports Wollongong's role as a Regional City. Wollongong is an attractive place to live, work, visit and invest.

Directions

1. Prioritise jobs growth and establish a resilient commercial core
2. Define a thriving retail network that responds to character and supports a range of offers
3. Plan for a variety of housing to support a lively and inclusive city

Urban Design Framework

1 Direction: *Prioritise jobs growth and establish a resilient commercial core*

The analysis has found that the current land use strategy is compromising diversity and long term commercial growth opportunities due to a lack of distinction between land use zones. Supporting the growth and function of higher-grade commercial uses, with a range of complementary mixed uses, is an important part of Wollongong's role as a regional metropolitan city.

This direction aims to ensure that the City Centre has adequate zoned land for commercial uses into the future. The direction also aims to ensure that sites are attractive to commercial tenancies, which aligns with the *Economic Development Strategy.*

★ STRATEGY 1.1

Define and strengthen the role of the B3 Commercial Core for employment

This strategy recommends redefining the boundary and range of land uses permissible in the B3 Commercial Core zone.

Quarantined commercial core areas where residential development is prohibited has the potential to manage land use competition and stop degradation of the commercial function of the City. Areas have been identified based on current and desired future character through the precinct analysis, lot and amalgamaition patterns as well as locational assets that support a strong office market.

The creation of defined commercial areas is a signal to the market that the City remains a business core. These commercial areas comfortably accommodate the forecast demand for commercial floor space beyond 2036.

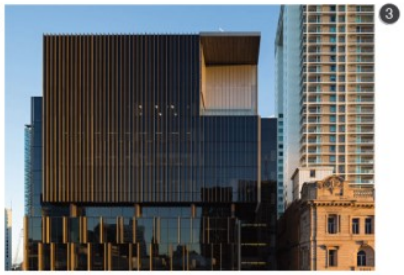
No land use changes are proposed for areas outside the B3 and B4 zones of the Wollongong City Centre.

The proposed B3 Commercial Core is broken into smaller areas, each playing their own role in achieving an attractive central business district.

1. The Burelli Street Precinct is intended to attract A-Grade office development. It will be a premium commercial street serviced by its proximity to the train station, retail core and MacCabe park.
2. To the north, the Market Street West precinct is intended to support a boutique office character with smaller tenancies and shared working spaces well connected to Keira Street and the station.

Commercial land use strategy diagram

Land Use

1


2


4


3 The Retail Core is intended to consolidate retail and mixed commercial uses and further support the objective of strengthening the commercial core. It is proposed that a defined active frontage control be applied. Residential development in this area will be limited to promote retail and commercial outcomes within this precinct.

The removal of shop-top housing from the B3 commercial only zones (1 & 2 in the adjacent diagram), along with limiting residential floor space in the remaining area, will ensure that commercial and retail land uses are prioritised in key locations.

While the commercial only precinct should prohibit residential uses, there is the opportunity to consider allowing a range of temporary non-strata development options including student housing and other accommodation services.

Outside of the defined commercial only precincts, shop-top housing will remain permissable in the Commercial Core. The intent is that residential uses support City Centre vibrancy, however the City function for jobs growth is a priority. Full commercial development is permitted and promoted, with mixed use development in the Commercial Core zone requried to retain a minimum 30% commercial floor space or retain the net commercial floor space existing on the site (whichever is greater). This means that the net commercial floor space on the site is retained as a minimum.

4 The B4 Mixed Use zone should deliver a truely mixed use development outcome to support the Commercial and Retail core.

The objectives of the B4 Mixed Use zone is to deliver a suitable mix of business, office, residential and retail land uses to support the vibrancy and success of the Commercial Core.
The surrounding Mixed Use zone is intended to function as a city support area, providing the right balance and flexibility of uses for the future.
Residential and commercial development will be permitted throughout this zone, delivering a true mixed use outcome. Horizontal mix of uses will see residential and commercial buildings side by side, and vertical mix of uses will see a range of land uses in the one building.
Ground floor residential uses should be permitted in the B4 Mixed Use zone excluding areas with an active frontage requirement.

★ STRATEGY 1.2

Investigate incentives for commercial development

Council should consider undertaking market testing of reduced on-site car parking for development in the Commercial Core to determine whether a reduction in the parking requirement would incentivise development.

What is a Land Use Zone?

Land Use Zones define the legally permitted and prohibited uses of a piece of land, determining if a lot can be used for commercial, industrial, residential or other purposes. In other words, it defines what development land can, and cannot, be used for.

Urban Design Framework

2 Direction: *Define a thriving retail network that responds to character and supports a range of offers*

The analysis has found that retail uses are dispersed across the City Centre and that there is, overall, an oversupply of retail uses resulting in vacancies and inactive pockets in the City.

There is a need to establish current and future retail demand in the City and encourage a vibrant, compact retail core, which reinforces the important role of the traditional high-street of Crown and Keira Streets. The direction aims to conserve the historic fine-grain retail area on Crown and Keira Streets and around the existing large format centres where there is good foot-fall.

There are five key retail precincts within the retail core which should be encouraged to continue to develop as the primary retail focal points of the City. Each have individual characteristics, critical to the vibrancy of the city, hosting some of Wollongong's favourite offers both during the day and night.

The areas can be defined as:

1. 'Western Crown' Street offering affordable, alternative retail and emerging businesses.
2. Large format shopping centres at the intersection of Keira and Crown Street.
3. Crown Street Mall offering a pedestrianised retail, commercial and event space.
4. Eastern Crown and Kembla Street as a food, beverage and entertainment cluster closely linked to Burelli Street commercial and civic uses.
5. The Keira Street evening precinct with its existing collection of quality restaurants which are destination attractors for the City Centre.

Retail strategy diagram

Land Use

STRATEGY 2.1

Protect the character and role of key retail streets and precincts

Implement built form strategies to protect the fine grain character, function, streetscape and solar access to what is the existing retail heart of the City.

Implementation of this strategy should consider defining the retail areas through the active frontage control in the LEP and the character precincts in the DCP. Controls should encourage focus on large format retail at the intersection of Keira and Crown, and a high street character with a focus on fine grain on Crown, Keira and Kembla Streets.

It should be clear that even large format retail must address and activate any street frontages.

STRATEGY 2.2

Only require non-residential ground floors on key retail streets

Allow a diverse mix of uses which supports and balances the need for commercial, retail and residential growth in the centre today and in the future.

Currently the WLEP requires development within the B4 Mixed Use zone and B3 Commercial Core zone to provide a non-residential ground floor use. It is recommended that this approach is replaced with an identification of key retail streets on an 'active frontage map' for the City Centre, requiring a non-residential ground floor use that activates the street in these locations. This should be supported by examples of well-designed active frontages in the DCP or design guidelines.

The strategy will ensure that non-residential uses are appropriately located and support a retail street, rather than being dispersed across the City.

STRATEGY 2.3

Develop planning controls that support a balance between night-time economy and residential city living.

In alignment with the *Economic Development Strategy* and *Creative Wollongong: Cultural Plan*, provide clear policy guidance to City Centre living to assist in mitigation of real and perceived conflicts between residents and city noise.

Traditional fine grain shop-top tenancies on Keira Street

Residential interfaces with the public street, managed with planting, a setback, and a raised private open space

Late night food offers on Kembla Street

Urban Design Framework

3 Direction: *Plan for a variety of housing to support a lively and inclusive City*

Well designed residential uses in mixed use areas support the vitality and resilience of a city. When balanced with other uses, housing in the city can bring vibrancy, support local businesses and create an urban lifestyle desired by a diverse population.

Increasing the City's residential population will bring significant benefits; a more diverse night-time economy; increased pedestrian activity; passive surveillance; and more people living within walking distance of all the services and amenities they need.

It is critical for a Regional City like Wollongong, that housing in the City Centre does not inhibit commercial growth. Housing must be in the right location, and provide the right mix to meet the needs of a growing population. Variety in dwelling type, size and location will support a diverse community

Key objectives of designing residential for the City Centre should be the activation of key city streets and management of land use conflicts.

STRATEGY 3.1

Guide residential development in the right locations

Promote a diverse mix of uses which support and balance the need for commercial, retail and residential growth in the Centre today and in the future. Permit residential uses at ground floor level, in nominated areas across the Mixed Use zone.

Ground floor residential needs to provide privacy for residents as well as ensure streetscape amenity.

STRATEGY 3.2

Leverage opportunities for public benefit improvements through development

The strength of the residential market is a key opportunity to leverage significant public benefits for the City Centre, including local infrastructure such as affordable housing, new parks, walking and cycling connections, and new community facilities.

Private development particularly residential development should contrbute to an improved public domain experience can be an effective mechanism to deliver these benefits. Without residential development, the ability to deliver local infrastructure and community facilities is significantly reduced.

This presents an exciting opportunity to make the most of residential in the City, and to leverage development contributions to deliver public domain improvements, new connections and open space.

STRATEGY 3.3

Encourage a diversity of housing including Affordable Rental Housing and Student Housing

The City Centre is well serviced and well placed to assist in the delivery of housing offers.

Affordable rental housing for low and very low income residents has been identified as a key need. Offering a range of affordable housing in the City Centre, close to key services will improve housing outcomes in our Local Government Area.

It is recommended that Council prepare an Affordable Housing Contributions Scheme. This work will identify Affordable housing needs and define how a scheme could be applied in the City Centre.

The City has a young population, and high proportion of small households, but there is a lack of student housing in the City Centre. Only 5% of student housing is located in the City Centre. Providing more student housing in the City Centre would bring more students into the City, helping to create a more diverse resident population.

Land Use

Double height apartments at ground with fences maintain privacy while offering visual interest.

Individual entries contributes to life on street and continues fine-grain rhythm.

Medium and high density housing is appropriate in the City Centre

Improvement to public spaces such as parks and community facilities creates public benefit around developments.

Built Form - An attractive and diverse city in a unique natural & historic setting

Grow a City Centre with exceptional built form

The design of individual buildings and the spaces they create shapes our City Centre and influences its character and function. Every building and public space must be designed to reflect its context and to enrich the quality of the City for people.

Built form controls play an important role in setting expectations for the way a building 'fits' into the City. Setbacks, building height and seperation and floor space ratio controls work together to guide building envelopes. However, they don't work alone. To deliver a high quality City, building envelope controls need to be met with high quality design, tailoring each building design to its unique circumstance.

Shaping new built form controls for the City Centre

Built form testing was carried out based on identified Character Precincts. Building envelopes were developed across a range of site sizes, and different lot patterns, including small and infill sites. The process revealed how controls guiding building envelopes need to better respond to, and respect, the distinctive and evolving character of places across the City Centre.

What the testing revealed:

Building envelopes need to respond to context, including character and heritage

Testing developed appropriate variations in building height, floor space ratios, street wall heights and setbacks by precinct to better reflect the existing character. These changes establish the baseline for recommended changes to planning controls across the City Centre.

Not all sites will achieve maximum height and floor space

There is significant variation in lot configuration with some 45% of sites across the City Centre having narrow frontages. Testing shows how sites of varying scales will sit in the City context. In many circumstances, sites which are smaller or have a narrow frontage are unable to achieve maximum height and floor space ratio outcomes. This is particularly evident where lot configurations are typically narrow and long.

There is an opportunity for a more flexible approach to 'unlock' narrow sites

Narrow sites present an opportunity across the City Centre. They should be 'unlocked' to allow for creative and innovative responses to renewal. While planning controls (maximum building heights and floor space ratio) should not be 'as of right', flexibility should be provided where high quality design processes are in place, to facilitate appropriate development outcomes.

There is sufficient capacity for growth

Testing demonstrated that the ability for the City Centre to grow and deliver projected commercial and residential development to support our growing community can be accommodated within proposed planning control changes.

Processes for considering outcomes on larger sites across the City Centre are not differentiated. Bespoke site planning and building envelope requirements will allow appropriate flexibility and deliver design excellence and city benefit

As sites become larger, there is a disconnect between how a floor space ratio can predict building envelopes.

Site planning may require new streets and public spaces and there is increased capacity to configure floor space in different ways – tall and slender towers or lower, wider buildings.

A tailored design approach is required.

Owners or proponents of sites greater than 5,000 square metres should be encouraged to engage with Council to discuss a tailored planning pathway to access appropriate height and density through a site specific planning proposal.

Proponents using this process will need to demonstrate that a proposal can deliver community benefit, design excellence, and alignment with the strategic direction as set by Council. This will need to be documented clearly in a City Centre Planning Strategy.

Key Public Views
Solar access protected
Low-scale street wall
Heritage + Character buildings
Topographic high points
Flooding extent (2015)
Coastal Management SEPP
Spine of tall buildings through commercial office precinct
Taller mixed use buildings
Building scale reduces through the City support area as the city transitions towards the coast and surrounding residential

Objective

An attractive and diverse city in a unique natural and historic setting

Clear planning controls preserve the unique historic character of Wollongong's precincts. Renewal at all scales is encouraged and this creates an interesting built fabric. Built form variety creates a recognisable city skyline, celebrates the natural setting and is human scale.

Directions

4 Grow a legible city that supports a distinctive and evolving character

5 Strengthen and simplify planning controls to promote built form diversity in response to people and place

6 Elevate the importance of design quality in the City Centre

Urban Design Framework

4 Direction: *Grow a legible city that supports a distinctive and evolving character*

STRATEGY 4.1

Plan for diversity in form and renewal at all scales

Floor Space Ratio (FSR) is recognised as an important regulator for development.

FSR guides building envelopes in partnership with many factors including building height, street wall, setbacks, and landscape controls. Only through a high quality design process that considers all these factors can the appropriate yield of a site be established with any certainty.

Floor Space Ratio is not 'as of right'. It is expressed as a maximum, however, it is not an upper limit achievable on all sites. Complexities around the context of the site, its orientation, lot width, size and unique site characteristics, such as heritage significance, mean that a development will not always achieve the maximum FSR.

To grow a legible city that supports the character of Wollongong, the floor space ratio controls should be revised to:

Map maximum FSR controls across the City Centre that respond to 'place'

Through detailed precinct planning, building envelope testing and an appreciation of local character, a series of floor space ratio controls are being developed to respond to place. This marks a significant shift in the FSR strategy for the City Centre. It is recommended that the requirement to derive FSR from land use and site size is removed to enable a more strategic, place-based approach to guiding scale in the City.

Protect and incentivise commercial capacity

Generous FSR controls should be maintained in selected commercial areas, and be aligned with approriate height controls. This is to incentivise development, particualry in the proposed new A-grade commercial precinct to emerge along Burelli Street, where the urban structure supports taller buildings with larger floorplates.

Unlock development potential on narrow sites to allow renewal when high quality design outcomes can be demonstrated

Narrow Sites – site frontage less than 20 metres

Nearly half of sites across the City Centre have narrow frontages (frontages of less than 20m). Under the current controls these sites must be amalgamated in order to access height and floor space controls for redevelopment. This has key implications on delivering change and promoting smaller scale renewal.

Building envelope testing demonstrated that appropriate built form outcomes can be achieved on smaller sites when designed well.

It is recommended that narrow sites be 'unlocked' to allow for redevelopment where it can be demonstrated that a high quality design can be achieved and key amenity criteria can be meet for the site and its neighbours.

Residential flat buildings on narrow sites – site frontage less than 24 metres

Testing demonstrated that residential flat buildings in the urban city context can be delivered on sites less than 24m site width. A series of built form envelopes identified potential small site renewal for residential on sites as narrow as 14 metres. Delivering residential on sites less than 24 metre site widths is challenging. In some instances, site orientation and site context will make it unachievable.

For sites with a width less than 20 metres, and for sites with a width less than 24 metres proposing a residential flat building - it is proposed that a base FSR be applied and potential height be capped at the recommended Street Wall height. Consideration may be given to allowing additional FSR and height above this base in accordance with the proposed maximum FSR and Building Height in exceptional circumstances.

What is Floor Space Ratio (FSR)?

FSR is used to calculate the maximum developable floor area (m^2) relative to the total size of a site.

The purpose of FSR is to provide an appropriate relationship between the size of a site and the amount of development on that site.

It sets a maximum development density and intensity of land use, and seeks to encourage a consistent building scale within an area.

For example: You have a site that is 1000m^2 and a maximum FSR of 3:1.

Your developable floor area is calculated by multiplying the site area by the FSR provided.

3x1000m^2=3000m^2.

You could deliver this 3000m^2 in many ways, dependant on context and the requirements set by other planning controls that guide maximum building envelopes e.g. height, street-wall, setbacks and floorplates.

Built Form

STRATEGY 4.2

Plan for building envelopes that preserve amenity and support the desired future character

Protect the amenity of key public places

Introduce new solar access planes to inform reduced street wall heights and increased setbacks above street wall on Crown Street Mall, and reduced heights in the Arts Precinct.

Limit residential capacity in flood prone areas

Proposed changes to land use permissibility (allowing residential at ground) will result in an increase to residential floor space permitted in flood affected areas. This is not permitted under Section 9.1 Ministerial Direction for flood prone land. Heights should be reduced in these areas to limit any increase in residential capacity, in alignment with the Ministerial Direction.

Create a legible city skyline that concentrates height around the office core

Introduce an east-west spine of height along Burelli Street, between the station, MacCabe Park and the Arts Precinct, denoting the commercial and civic core of the city. Ensure heights on the City Centre fringes step down to maintain views to key natural features and transition to low scale areas.

Height clearly defines CBD with a transition to lower forms as you move out of the City Centre.

Ensure heights reflect character of precincts

Define appropriate street wall heights on Crown Street and Keira Street to protect the fine grain, human scale character.

Ensure consistancy across the Market Street commercial services precinct where some existing sites have controls permitting significantly taller heights than those in-keeping with the character of the smaller office buildings in this area.

Align heights with the desired future character of Burelli St A-Grade commercial precinct, which is suitable for larger footprint, taller office towers.

Align heights to development potential

Ensure height controls on sites around the station are aligned with the achievable development envelope. This will ensure the controls better reflect likely development outcomes and prevents the inflation of land values based on unachievable heights.

Built form testing found that in several areas with taller height limits maximum FSR was achieved well before the height control was reached

Height strategy diagram

1:10,000 0 100 200 300 400 500M

- Solar access protected
- Low-scale street wall
- Heritage + Character buildings
- Flooding extent (2015)
- Spine of tall buildings through commercial office precinct
- Taller mixed use buildings

What is a Height Limit?

Height limits are one of the controls used to define the maximum size of a building. Heights limits are given in metres and determine how tall a building can be.

Height limits are important because they help shape the character of an area and define the city skyline, with the tallest buildings normally denoting the centre of the City.

Urban Design Framework

STRATEGY 4.3

Preserve buildings and places of significant character values for the enjoyment of future generations

Improve planning controls to respond to place and celebrate the character of Wollongong

Wollongong has many character buildings and places that provide an interesting streetscape, rich fabric and host many of our community's local businesses and civic functions. It's important to strengthen planning controls to protect these places and facilitate good design outcomes in and around them for the future.

Protect signficant buildings and places

The identification and management of historic places is an essential part of ensuring we continue to 'celebrate the uniqueness' of the built environment and character of Wollongong City Centre.

Ensure significant buildings are listed and managed in alignment with community values and legislative direction. The Heritage Schedule and Heritage Map in the Wollongong LEP 2009 should be updated to include relevant additional buildings.

Encourage the adaptive reuse of character and heritage buildings through the promotion of the Heritage incentive clause in the LEP, supported by Heritage Guidelines.

STRATEGY 4.4

Preserve views to the escarpment, ocean, natural and built heritage.

Views towards the escarpment and ocean are what give Wollongong its unique character and appreciation of its natural setting. Views also help people using the City orient themselves, and connect with the wider context.

Many views towards the escarpment and ocean have already been obscured by development, or are difficult to achieve in low-lying areas of the City Centre. Views along streets can be more easily preserved. Care should be taken when developing at the terminus of streets, to preserve views to significant landscape beyond.

Ensure the form of development in the city centre preserves views to the escarpment from the foreshore

Maximise continuous views of the ridge-line of the escarpment from Flagstaff Hill.

Preserve views along street corridors

Give access to potential new views that may be made available with redevelopment. This is particularly relevant to the WIN stadium and WIN Entertainment Centre, with the potential opportunity to extend Burelli and Stewart Street view corridors to reveal a visual connection to the foreshore.

Ensure built form controls create a permeable skyline

Amend built form controls including side setbacks and setbacks above street wall preserve views between buildings to significant natural landscape and built form.

Improve views to St Michael's spire and Courthouse

Preserve views to the Cathedral and Courthouse and its silhouette against the sky. Ensure structures within Crown Street Mall and Church street assist with opening up views towards St Michael's spire.

Recommended key views

Built Form

5 Direction: *Strengthen and simplify planning controls to promote built form diversity in response to people and place*

STRATEGY 5.1

Develop controls that ensure slender tower forms, appropriate separation and consistent setbacks

Achieve an attractive city skyline sympathetic to the topography, natural setting and character

Minimise building profiles to maximise the opportunity for shared amenity and views to the sky and as specified in key views map.

Preserve and open up public views of significant built form, open spaces and natural features available from and around the site.

Promote tower slenderness

Provide a consistent control for maximum floor plate sizes above street wall height:

① Retain existing maximum floor plate sizes for commercial (1,200m² GFA) but increase maximum building depth to 30m to allow for greater variety of tower forms.

② Decrease maximum floor plate size for residential development to 750m² GFA to ensure tower slenderness. Increase maximum building depth to 21m to allow for a typical residential apartment layout.

Where the unique circumstances of a site demonstrates that a more skilful design can achieve improved outcomes for public domain views and amenity, variation from strict application of this control, where appropriately justified may be possible.

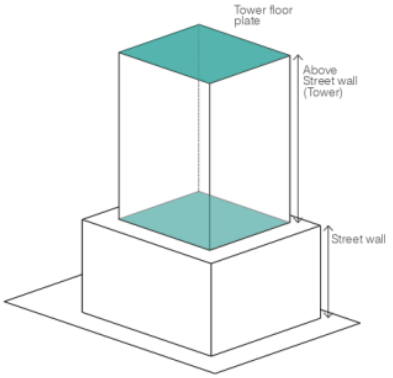
Attractive and diverse tower forms

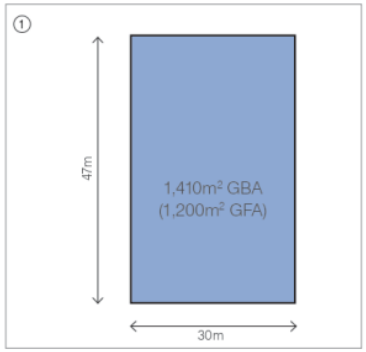
To avoid stepped building forms, a single setback should be provided above street wall. For taller buildings this means the greatest side and rear setbacks should be applied from street wall height.

Ensure well separated towers

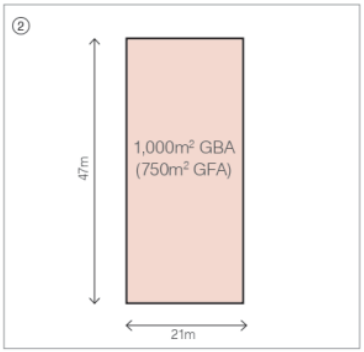
Building separation as per *Apartment Design Guide* for residential and a minimum 6m from side and rear boundaries for commercial uses above street wall height in the commercial core.

Apartments blocks with habitable spaces directly opposite each other should be avoided and increased separation be provided where possible.





Example of max floor plate and depth for commercial development (assuming GFA efficiency is 85% of GBA)



Example of max floor plate and depth for residential development (assuming GFA efficiency is 75% of GBA)

Urban Design Framework

STRATEGY 5.2

Develop controls for floor to ceiling heights that ensure good amenity and adaptability

The following floor-to-ceiling heights are recommended as a minimum to achieve a high level of internal and external amenity:

- Ground: minimum 4m for all ground floor uses in active frontage areas. 3.3m for all other areas. As per ADG for residential.
- Level 1 and above: 3.3m for commercial. As per ADG for residential.

Note: Residential at ground should generally be raised to provide visual privacy. In flood prone areas ground requires raising up to 1.5m. See Design Quality section for good design of ground floor built form interfaces.

STRATEGY 5.3

Develop controls that provide guidance on site amalgamation and isolation.

Isolation should be discouraged. Where a site will unavoidably be isolated, joined basements and 0-setback podiums should be provided to allow the neighbour to develop to an appropriate potential under the controls.

STRATEGY 5.4

Develop controls for fine grain frontages to ensure human-scale development.

Wollongong has been successful in developing a fine grain along its pedestrian spine of Crown Street Mall and Crown Street and Keira Street. The traditional shop-front pattern of 6-12m should be maintained and enhanced and fine grain buildings should be required through the entire centre. New developments should relate to the existing fine grain of shop-fronts, even where the typology may include taller buildings.

What is Human-scale development?

We use the term human scale to refer to people as pedestrians and their experience of a City.

In its simplest definition, creating a human scale environment means making sure that the buildings that we interact with are of a scale that is comfortable for an average person to be around.

Built Form

Strengthen and simplify planning controls to promote built form diversity in response to people and place

STRATEGY 5.5

Develop ground setback controls that provide attractive interfaces and functional streetscapes.

Promote walk-able urban retail streets

Retain zero setbacks for active frontages on key streets, where awnings can be provided. For key large sites which are able to achieve greater setbacks and currently have narrow footpaths, an additional setback is recommended.

Protect views

Ensure that views along streets to the city's natural setting can be maintained. (Refer to views section for more detail).

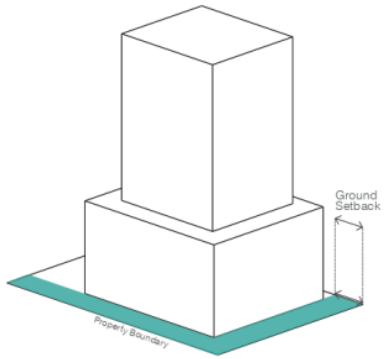
Set the tone for prestigious commercial precincts

Provide a generous dedicated setback on the southern side of Burelli Street between the station and Corrimal Street to allow for a significant public domain and planting zone, and wider setbacks on the northern side to allow for tree planting.

Provide wider setbacks along Market Street West to allow for greater public domain space and street tree planting on this key street of the urban services precinct.

Get the mixed use interface right

Require 3m ground setback in mixed use zones outside the retail core this will allow for flexibility in ground floor uses whether it be commercial or retail uses with space for outdoor seating, or residential requiring a transition zone with landscaping and amenity for residents.



STRATEGY 5.6

Develop street wall controls that respond to character and human scale.

Protect and enhance the character and heritage quality of Crown Street Mall, Crown Street and Keira Street

- Establish a 2 storey street wall height (9m), which aligns with prevailing heritage parapet heights.
- At Crown Street Mall establish a 2 storey street wall height (8.5m) generous 10m setback above the street wall to protect the unique low scale character of this key public space. In doing so this will improve solar access to the mall from the north, allow the heritage to breathe, the fine grain character to be read. The setbacks are equal on both northern and southern sides to ensure generous views to the sky from the mall.
- On Crown Street (between Darling and Keira and Kembla and Corrimal Streets) and Keira Street (north of Crown Street) establish 6m setbacks above street wall to protect the heritage and fine grain character of the streets.

Promote the civic character of the Burelli Street commercial spine

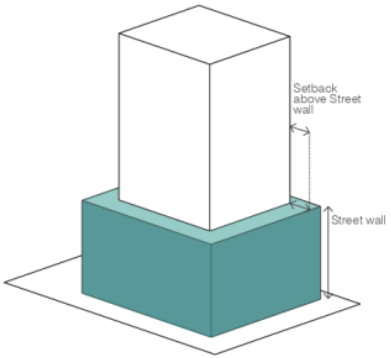
Establish street wall heights of 6 storeys (22m) along Burelli Street. Permit a variety of setback typologies including tower to ground.

Ensure a human-scale interface with MacCabe Park and a transition to low scale areas.

Provide a consistent treatment of park edges where land uses change through consistent 4 storey street wall height (15m) and 4m podium setbacks. Transition street wall heights from the core to the city fringe where they interface with low density residential.

Deliver strong and well articulated street walls

- Permit continuous street walls along Crown Street Mall, Crown Street and Keira Street to retain existing shop-front character.
- In all other areas require a maximum street wall length of no more than 55m (approximately mid-block) before which an articulation break is required to ensure human scale development and physical relief in the streetscape.



Urban Design Framework

6 Direction: *Elevate the importance of design quality in the City Centre*

The analysis indicates that a higher standard of design quality in the City Centre is required to deliver improved outcomes in both built form and public domain.

Design quality does not necessarily mean a more expensive design. Good design achieves functional, attractive and sustainable solutions to a range of issues. In Wollongong City Centre some of the key issues which required an improved design response are:

- building modulation to manage bulk and scale and respond to context
- the resolution of flooding and accessibility requirements without compromising the streetscape
- establishing a positive relationship to heritage and character places, the natural environment, and the public domain.

STRATEGY 6.1

Strengthen the commitment to design excellence

Ensure that the size of the development and its potential to deliver great urban outcomes, including the potential to deliver more public domain, is linked to a more rigorous design process.

- Very narrow sites should be required to undertake a Design Review Panel pre-lodgement process prior to DA submission. This will ensure that developments on these challenging sites are appropriately reviewed and evaluated at and early staged.
- Large or key sites should be subject to a master planning process and design excellence competition. Council should consider in the development of a design excellence competition process, the cost that this may add for developers.

STRATEGY 6.2

Encourage innovation and design quality in the local design and development industry

Identify design talent based in the Wollongong LGA and more widely and endeavour to provide opportunities for small public projects; public space projects, community building refurbishment etc.

Consider an ideas competition for a key component of Wollongong, to stimulate Sydney and nation-wide interest in Wollongong from the architectural, urban design and planning community.

Recommended Key Sites Map

An example of a design competition outcome: Sutherland Entertainment Centre - winning entry (CHROFI)

Hyde Park cafe - Andrew Burns Architecture

Built Form

STRATEGY 6.3

Provide clarity and improve outcomes through a strong assessment process

Continue to develop a more design focused Council through the creation of a dedicated City Centre team, to support City Centre development.

Require development applications to provide clear site analysis and explicit explanation of how the proposed design outcomes respond to the site analysis.

Incorporate a requirement in the DA assessment process to provide wall sections and detailed elevations to clearly indicate materiality and key details. Incorporate adherence to these details as a condition of consent, to avoid the dilution of architectural concepts and materiality as projects progress through documentation.

STRATEGY 6.4

Prepare design guidelines that communicate better design outcomes

Develop design guidelines to improve the design quality of typologies that are developed most frequently. For example guidelines for shop top housing, designing in the vicinity of heritage structures, incorporation of fine grain retail, design for flooding, and ground floor residential.

Guidelines should make a more tangible link between existing character, desired future character and how architectural design can achieve it. Guidelines could leverage the design quality policies prepared by Government Architects NSW, either by adapting the guidelines to make them specific to Wollongong City Centre or incorporating them in the guidance offered to developers.

STRATEGY 6.5

Develop specific design guidelines that demonstrate better built form outcomes on flood prone lands

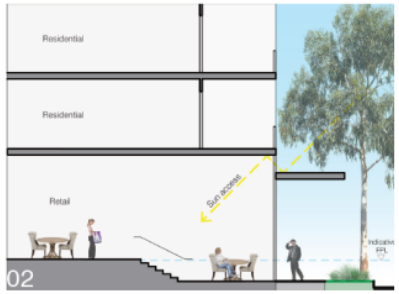
Develop a series of built form controls in the Development Control Plan that promote good design outcomes for the City in flood prone areas. This includes integrated resistance and impermanence for both residential and commercial/retail situations.

For residential developments, design principles should include:

- Retaining walls and landscaping
- Promote surveillance of the street from ground floor apartments
- Raised ground floor levels for privacy
- Provide individual residential entries to ground floor apartments
- Locate access stairs perpendicular to the footpath
- Locate ramps behind low scale walls and/or planting to limit their visual impact and extent of blank walls and balustrades.

For retail and commercial developments it is critical to ensure that finished floor levels are as close to street level as possible. This will ensure that streets are active and that commercial tenancies are visible. This may need to allow for flooding of some part of commercial tenancies where appropriate and subject to Council requirements. Design principles should include:

- Include an upper level transition and circulation zone for activation along the street and easy access
- Enable the capacity to link circulation zones between property to potentially contribute to a wider circulation network above flood level
- Split the overall change in level between indoor and outdoor to maintain human scale
- Include active temporary uses such as outdoor dining at lower levels to reinforce street life.



01 Functional solutions can achieve high quality urban design outcomes. This Waterloo building has highly detailed stair and ramp access to its ground floor retail frontage. Source: http://www.sjb.com.au/projects/casba-dank-street

02 Designing for flooding for sacrificial retail uses fronting onto the ground floor.

Public Domain and Connections - A green & walkable City

Wollongong is an accessible, pedestrian-friendly city

City streets, lanes and spaces create the structure of the city. These elements make up the public domain are central to our experience of place. Successful pedestrian streets and spaces are important to the amenity and economic vitality of a city.

The structure of the City was tested alongside an understanding of land use and built form outcomes.

What the testing revealed:

The City needs to promote active transport

A proactive approach is required to create connections between buildings and enhnce pedestrian movement along city streets. Long blocks with continuous street walls and no through sitel inks have resulted in limited permeability making the City unfriendly for pedestrians.

Streets need to be designed as places with high amenity

Delivering quality tree canopy, awnings, freedom of movement and minimal conflict with cars.

The traditional grid from the 1830s is being eroded

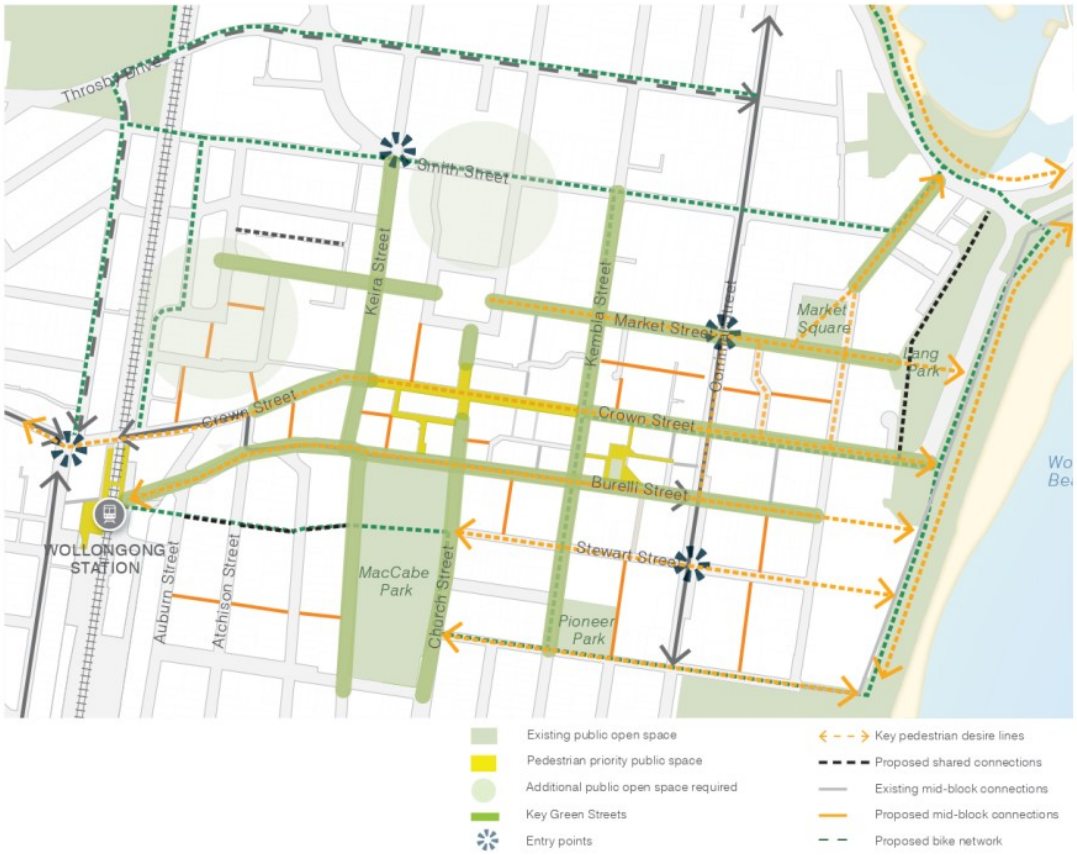
The grid and structure of the City needs to be reinforced with increased permeability, active transport and to contribute to precinct character.

Sunlight to important public spaces needs to be protected

Important public spaces, like the Mall, need to have clear sun protection controls.

Important public domain projects need to be identified to act as catalysts for change.

A structure plan needs to be developed for the City incorporating the strategies for land use, built form and public domain and connections as outlined in the Urban Design Framework.



Objective

A green and walkable City

A significant increase to the City's tree canopy contributes to a green, walk able and sustainable city. Attractive and revitalised public spaces support an active and healthy community and are a catalyst for economic growth in the city. The city grid is clear and permeable and facilitates walkability

Directions

7 Strengthen the structure of the City through a permeable grid that prioritises pedestrians

8 Create a green network of open spaces for a sustainable, healthy and attractive city

9 Protect sunlight to key public spaces

7 Direction *Strengthen the structure of the City through a permeable grid that prioritises pedestrians*

This section sets out the strategies required to reinforce the grid and structure of the City, increase permeability, and contribute to precinct character.

These strategies are being reinforced and tested through the development of the *Access and Movement Strategy* for the City Centre, utilising the Movement and Place framework in keeping with the guidelines under the *Future Transport 2056*.

STRATEGY 7.1

Define the role and function of streets in the City

A defined street hierarchy that reinforces precinct character and the role of each street should be implemented. The strategy for key streets is:

- Burelli Street: Civic and premier A-grade office street defined by tall towers, key cultural destinations, large trees and generous public domain.
- Market Street West: Secondary office street with street tree planting and wide footpaths.
- Crown Street Mall: pedestrian only street with primary retail, high quality public domain connected via a series of lane ways.
- Crown and Keira Streets: Secondary retail & commercial high streets. These streets have increased pedestrian amenity through landscaping and footpaths.
- Keira and Kembla Streets: Established after-hours dining streets with outdoor seating.

STRATEGY 7.2

Create a permeable city grid for pedestrians

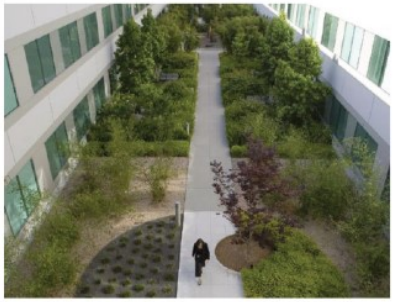
- Deliver a new east-west street between the station and MacCabe Park to break down blocks, provide new connections and improve legibility and accessibility between key destinations in the centre.
- Improve legibility of the arrival experience into Wollongong, with pedestrian connections to the centre through upgrades to Lowden Square; Crown Street and the hospital through a new station forecourt over the railway to Crown Street.
- Reinforce the laneway network with additional mid-block connections.
- Consider formalising the public/private threshold between Lang Park and the adjacent private properties by linking the disconnected streets along the park's western edge.
- Consider how Marine Drive could be modified to improve the connection between Lang Park and the foreshore for people. Include the removal of the roundabout and relocation of the bus layover in this work.
- Investigate slowing down vehicular speeds within the City to 40km/h on low traffic streets.
- Continue the Blue Mile link along the foreshore south to Bank Street. Work with Venues NSW to ensure public domain is activated increasing public access, safety and enjoyment of the beach. Discuss the opportunity of additional east-west pedestrian links through the venues to connect the foreshore to the City via Burelli and Stewart Streets.

STRATEGY 7.3

Deliver active transport infrastructure

Provide the infrastructure for safe active transport by delivering the proposed cycle network and complete the city loop from the station by considering new routes:

- Along the new east-west street in the rail arrival and southern precinct, through MacCabe Park and continuing along Stewart Street to connect to the extended Blue Mile link.
- Provide a safe active link north from the station along Railway Parade through the Commercial Services precinct to connect to Smith Street.



Increased pedestrian permeability between buildings.

Generous public domain and tree plantings. Passeig de Sant Joan Boulevard, Barcelona, Spain

A road transformed into a shared way with high quality public domain and day and night activation. New Road, Brighton, UK

Cycleways integrated into existing streetscape. Bourke Street Upgrade Sydney

Public Domain and Connections

STRATEGY 7.4

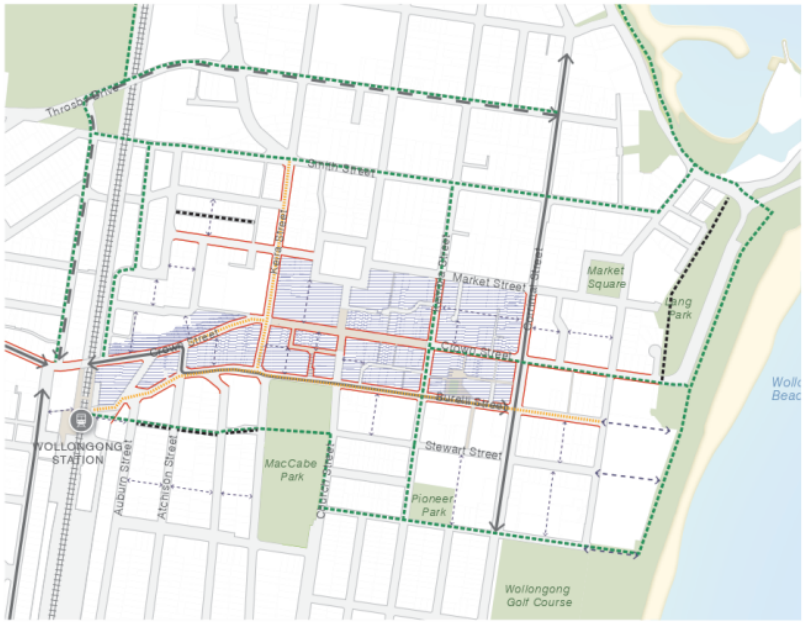
Enable the mode shift from cars to public transport

- Prioritise bus movements at the station to provide a more efficient service for passengers and promote public transport over cars.
- Collaborate with State Government and Federal Agencies to deliver significant public transport improvements to Wollongong City Centre.
- Improve existing public transport to deliver more frequent servicing from outside the City Centre
- Link public and active transport to improve their attractiveness to users
- Dis-incentivise car parking in the City Centre

STRATEGY 7.5

Identify roads for vehicular traffic and servicing

- Denison Street by-pass provides the opportunity to funnel through traffic around the centre, calmin traffic and discouragng cars in the core.
- Corrimal Street is a key north-south connector through the centre and subject to existing road widening conditions.
- Burelli Street is an important vehicular and bus street providing the primary east - west connection through the Centre, and will need to manage pedestrian priority with traffic needs.
- Manage vehicular movements to priortise pedestrians by limiting driveways, vehicular and service access to key pedestrian streets including Crown Street, Burelli Street and Keira Street.



Recommended streets and movement strategy

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Recommended interventions

- Vehicular Corridors
- Throsby Denison Bypass
- no additional vehicular entrances
- Pedestrian priority core
- Bike network
- Road/Laneway upgrades
- Pedestrian Connections
- Shared Connections

Urban Design Framework

8 **Direction:** *Create a green network of open spaces for a sustainable, healthy and attractive city*

Street Tree Planting

We know that urban tree canopy is important to control urban heat, support cleaner air and water and provide local habitat. Analysis has found that tree canopy in the City is below target levels. Extensive underground services in streets present design and technical challenges to maximising planting opportunities.

This section sets out the actions required to increase greening in the City and thereby improve sustainability, comfort and character.

STRATEGY 8.1

Reinforce the character of key streets and precincts with appropriate tree planting

- Improve the visual and physical amenity of streets with a consistent street tree canopy providing shade and visual continuity
- Encourage trees, shrubs and grasses for their inherent value to support coastal identity and for the environmental and ecological benefits that tree canopy offers.
- Key streets are identified for street tree planting within lot boundary set-backs- a green boulevard along Burelli Street and Market Street and Crown Street south.

STRATEGY 8.2

Define and implement a 35% minimum canopy target on key walking streets by 2037

- Support the creation of a City Centre Street Tree Master Plan aligned with the *Urban Greening Strategy (UGS).*
- Work towards a canopy target of 35% as supported by the UGS

STRATEGY 8.3

Prepare a City Centre Street Tree Masterplan

- Inform planting program and renewal
- Specify technical standards and species
- Identify appropriate locations for urban greening including street trees and green walls / roofs.
- Identify key locations and opportunities for statements planting to assist with the legibility and walkability of the City Centre.
- Include strategies for education in greening within private lands and in dense urban environments such as green walls, terraces, planter boxes and roofs consistent with *Urban Greening Technical Guidelines*. Align with WSUD objectives to ensure 'green', 'blue' and 'grey' infrastructure are complementary and co-designed.

Recommended focus streets for urban greening

Public Domain and Connections

STRATEGY 8.4

Establish a tree-centric approach to deliver greening in response to existing constraints

Review street services conditions in relation to tree planting. Provide the opportunity for greater tree planting along key pedestrian streets in the Centre, through either ground setbacks or blister parking and plantings:

- Identify services locations in the street which prevent tee planting.
- Where services in streets prevent street tree planting, the front building set-back has been increased to allow for tree planting.
- Where there are services in streets as well as a distinct existing street wall typology and heritage character, and where road width permits, trees are proposed in blisters between parking bays in the outside lanes of streets.
- Provide space, soil and water for canopy trees.

STRATEGY 8.5

Leverage new development to offset the cost of greening

Redevelopment can be leveraged to deliver new greening, but can also impact on existing greening. The strategy is to:

- Use the opportunity that redevelopment presents to deliver new planting on public and private land
- Introduce Tree Amenity Valuation (see City of Melbourne) via guidelines and the DCP.
- Require developers to fund the cost associated with tree removal and replacement of trees impacted by development.

Canopy and vegetation planting in blisters

Mature trees provide canopy over and frame the street

Planter boxes with potted colour in areas that are constrained

Urban Design Framework

Create a green network of open spaces for a sustainable, healthy and attractive city

Open space

As the residential and worker population densify in the City Centre, the need for additional open space increases. Analysis has found that parts of the City are blessed with generous public open spaces, but that many are in need of renewal, and that other part of the City will need new green space as the City densifies.

This section sets out the actions required to achieve the open space required to support the vision for *A City for People*.

STRATEGY 8.6

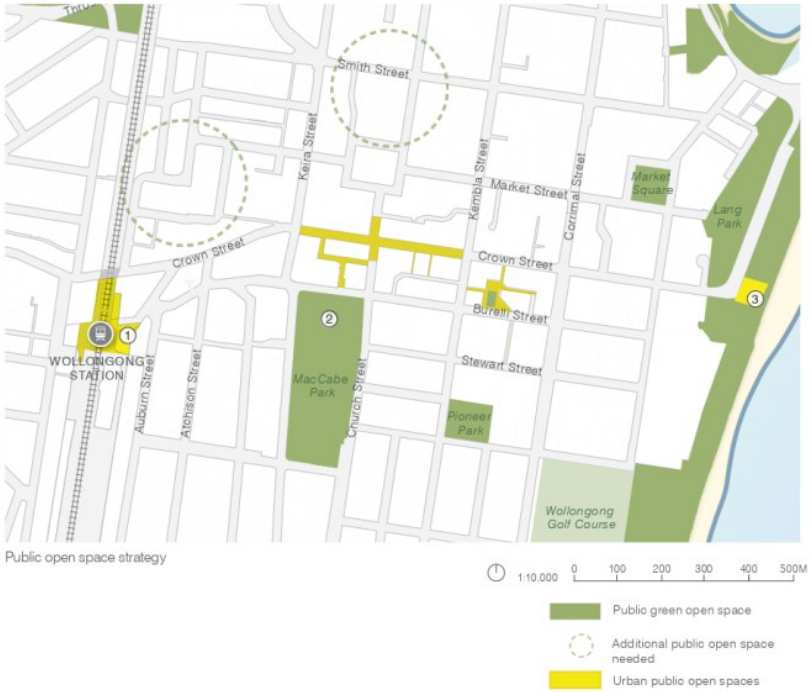
Identify and prioritise public domain projects to catalyse renewal and encourage investment in the city

Public open spaces provide for a wide variety of opportunities for recreational, social and cultural activities, as well as promoting healthy lifestyle and opportunities for casual and formal interaction.

The strategy is to:

- Renew the City with accessible parks and open spaces to make it attractive, safe and liveable to its residents, workers and visitors.
- Link landmark sites to public domain delivery.
- Plan for future additional open space needs by nominating land in appropriate locations and sourcing funding.
- Prioritise the following 3 catalyst projects:

  ① Station Upgrade including Lowden Square
  ② MacCabe Park
  ③ Foreshore Plaza



Public open space strategy

Stage space in the Mall

Sitting space in the Arts Precinct

Urban Design Framework

9 Direction: *Protect sunlight to key public spaces*

Solar access

Solar access is the ability to receive sun light to a space. Provisions are put in place to assure exposure of public spaces to the sun during a desired period of the year.

Good solar access is a key contributor to the amenity of public spaces and streets, particularly during winter. Solar access controls should ensure sufficient sunlight to new and existing public spaces at all times of the year.

Analysis has shown that existing solar controls successfully protect most of the key public open spaces within the City Centre. However, there are currently no solar access controls for Crown Street Mall or the Arts Precinct.

STRATEGY 9.1

Protect solar access to key public spaces to maximise amenity

Clear sun access controls should be in place for key open spaces. These must be rigorously tested to maximise protection of spaces while minimising impact on development potential.

Solar access controls should relate to key times of the day when spaces are most used by the public. This will differ for different spaces.

The cumulative overshadowing impact of multiple developments should be prevented through built form controls and considered design response to where a building is placed in the City Centre.

Controls should take into account the impact of solar protection on the strategic development potential of the Centre.

Recommended solar access


Arts Precinct
May 2019
9:30am

Structure Plan

A structure plan has been developed for the City which incorporates the strategies for land use, built form and public domain and connections outlined in the Urban Design Framework. The structure plan is high level and summarises the strategies into a single plan.

- Public open space
- Additional public open space required
- Important interface
- Key Green Streets
- Streetscape upgrade
- Vehicular network
- Bike path network
- Entry points
- Pedestrian connections
- Pedestrian priority areas
- Active frontages
- Key Sites - Masterplan
- Commercial Core
- Public urban open spaces
- Heritage +Character buildings
- Shared connections

Structure plan

Precinct Visions

The structure plan for the city is further developed at precinct scale. Reflective of the desired future character of each precinct, specific strategies are proposed to support the delivery of the vision for the City.

Precinct Visions

Precinct *Rail Arrival and Southern District*

Future Character

The City will offer an inviting, high quality and well connected rail arrival, with strong pedestrian links to the City Centre, coast and hospital. Burelli Street will provide a prestigious front door to the office core of the city. An important new east-west laneway will connect the station to MacCabe Park and provide a buffer between the new office core and the southern district.

The gritty character of the southern district, which is manifested through its built form - large buildings with a semi industrial feel, is retained and enhanced.

- New, green and civic spaces at the station will provide a new front door to the City and be a safe place with improved access and legibility for commuters on both sides of the rail line.
- The station will form a gateway into the City framed by a newly defined Burelli Street as a civic street with a commercial street-scape, offering A-grade offices close to the station.
- A thriving and edgy neighbourhood filled with a great mix of places to live, off-beat places to eat and shop, with easy access to transport and open space, all on the doorstep of the commercial district.

Lowden Square and the new street connection provide a strong connection, and a sense of arrival into the CBD

Public Domain improvements create an enjoyable space to wait at the station

Small, light manufacturing remains in warehouse space throughout South Wollongong

Residential development mixed with existing buildings create a unique city experience

Precinct *MacCabe Park*

Future Character

The City's central urban park is a green lung for the City providing breakout areas for office workers, urban sports opportunities, activities for all ages and a place for festivals and events.

- Following the planned acquistion of private properties, the entire Park is publically owned and operated for the benefit of the community
- Surrounding the Park, low scale street wall buildings with development above set back to maximise solar access
- Street and building design facing the Park is active day and night, with cafés, ground floor apartments and commercial offers
- The impact of flooding is addressed through landscape and water sensitive urban design
- A range of active and passive recreation is on offer
- The Park is celebrated as an identifiable City asset - a well utilised, high quality green space

MacCabe Park will be a focal point for the City on the Burelli Commercial Spine linking rail to foreshore

A variety of usable spaces in the park optimise water sensitive urban design.

Opportunities for community facilities to be integrated into the park

The City will develop around this key open space

Precinct Visions

Precinct *Western Crown & Keira Street*

Future Character

Western Crown has the potential to be a major green link which connects the City Centre with its railway station.

Crown and Keira Streets will offer increased pedestrian amenity with street trees, widened footpaths and reduced traffic.

- Restoration and adaption of heritage buildings within this precinct will contribute to the mixed land use and has the potential to create a new destination to reinvigorate Western Crown
- Crown Street will be a highly walk-able, safer green street which extends the arrival experience from the station to the City Centre.
- A precinct full of shops and restaurants which preserves the fine scale and historic role of Crown and Keira Streets as a great place to socialise, eat and shop.
- The Façades Program which initiated the restoration of the Western Crown cluster of heritage buildings should be encouraged to continue

Western Crown Street will become a pedestrian friendly active high street with mixed use development set back behind fine grain retail street walls.

Heritage buildings will continue to contribute to the character of the precinct

Increased building setbacks and footpath widening will allow for outdoor dining

Increased building setbacks and footpath widening will allow for outdoor dining

Precinct *Commercial Services*

Future Character

The precinct will continue to serve an important role as a place of local commerce with enhanced amenity and fine grain connections to enable better pedestrian movement.

- A walk-able commercial precinct with great views to the escarpment and connections to the Keira St dining strip.
- New parks, pedestrian connections and lane-ways will ensure it is a more desirable place to live and work.
- A second commercial centre which is well located near the railway station and continues to be a bustling place of commerce and a great place to live.

Market Street will continue to develop as a vibrant commercial services precinct with new open space and improved public domain

A new open space will be a welcome relief for the busy office worker population

New mid-scale small suite commercial buildings will sit side by side with existing built form

A focus on creative working spaces will continue

Precinct Visions

Precinct *Crown Street Mall*

Future Character

Crown Street Mall has been the retail heart of the City for over a century and continues to be a significant contributor to the social life of the city.

It is important to protect the amenity of this part of the City and encourage day and night activity through a complementary mix of uses.

- The character of the low rise commercial and retail buildings on Crown Street is protected.
- Fine grain retail and commercial is integrated with dining, entertainment and leisure.
- A true after hours Centre which operates beyond the hours of nine-to-five, reflecting the needs of a cosmopolitan city.
- A multi-service precinct where you can get your groceries, have dinner and collect the dry-cleaning on your way to the railway station and home.
- A high amenity pedestrian precinct well connected via character filled laneways to adjacent commercial and civic clusters on Burelli and Market Streets.
- The solar amenity of the Mall is protected all year round.

New development on Crown Street will be set back to protect the fine grain character of Crown Street Mall, and preserve solar access to the open space

Streets are active at night time creating a safe city

Laneway uses contribute to the thriving character of the precinct

Small tenancies support the fine grain character

Precinct *Historic Spine*

Future Character

The Historic Spine will continue to be the historical heart of Wollongong City.

Enhancing Market Street through minor public domain improvements and connecting it to active transport links will ensure that the precinct continues to be valued and loved by the community.

- The Law Courts and St Michael's Cathedral will continue to serve their key civic functions.
- The Historic Spine is the only place that allows visitors to the City Centre vistas to the escarpment, ocean and Port Kembla. It is important these are preserved.

Sensitive adaptive reuse and additions to the heritage fabric of the precinct will ensure that the character is preserved and supported.

New built form can complement existing heritage fabric

Streetscape improvements will support the heritage character

Precinct Visions

Precinct *Eastern Crown Street & Arts Precinct*

Future Character

This precinct is the City's cosmopolitan civic and office core. The Arts Precinct is a welcoming and active city plaza with high amenity and a range of offers for city workers, residents and visitors. Venues including bars, live performance venues and restaurants activate the area at night.

- Interconnected laneways, streets and buildings celebrate art music and culture through the installation of public art.
- The Arts Precinct lawn provides a key passive recreation and event space, activated by surrounding cultural institutions such as the Town Hall, Gallery and IPAC.
- Lower Crown Street is defined by clusters of heritage listed civic and commercial buildings. The high quality form and materiality of the building façades is complemented by the amenity of the public domain.
- Mature trees line Burelli and Crown Streets and the Arts Precinct, and are integral to its public character.

Burelli Street will be a bustling and prestigious commercial centre

Slender towers will announce the A grade precinct on the skyline

Generous setbacks on Burelli Street provide relief in the City

New tower lobbies will complement the existing built form

Precinct *Foreshore*

Future Character

The foreshore is blessed with the natural asset of its beach-front location. Re-enforcing the City street grid through new links will ensure that the beach becomes visually and physically connected to the City.

Simple public domain measures to enhance public accessibility for residents, workers and visitors to the City alike, will activate the precinct day and night.

Promoting residential alongside the entertainment uses will ensure day and night activation.

- A sparkling ocean front destination which puts Wollongong on the map. Attend a beach-side event only a 2 minute walk from Wollongong's CBD
- The precinct where City meets ocean will provide an exciting urban destination for an ocean-front business lunch, or a sundowner with a view. The interface between Crown Street and beach is improved.
- Lang Park, the Stadium and the entertainment centre will continue to be major regional attractors activating the precinct all weekend.

The foreshore will become an important gathering place with a variety of active and passive uses

The beach arrival will be a focal point of the precinct

There is potential to increase active edges to major public domain in the precinct

Lang Park could improve its activation and connection to the beach

The City needs to be flexible, open to new approaches and understand that over time, incremental changes will shape the City Centre's continuous journey of revitalisation.

SGS Economics & Planning

WOLLONGONG CITY CENTRE PLANNING REVIEW: ECONOMIC ANALYSIS

FINAL V2.1
JUNE 2019

Prepared for
Wollongong City Council

Independent insight.

SGS Economics and Planning Pty Ltd
ACN 007 437 729
www.sgsep.com.au
Offices in Canberra, Hobart, Melbourne, Sydney

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EXECUTIVE SUMMARY

Wollongong City Council is undertaking a review of the Wollongong City Centre to implement the vision of *A City for People*. The Wollongong City Centre Planning and Design review aims to inform appropriate distribution of height and scale of buildings across the city centre with planning, urban design, open space and economic analysis.

SGS Economics and Planning has been commissioned by Wollongong City Council to undertake economic analysis to inform this review. This study has involved:

- review of development capacity under the existing controls,
- feasibility analysis to better understand the commercial and non-commercial development feasibility within the City Centre,
- identification of growth forecasts for both commercial and non-commercial development, and
- identification of levers that could potentially be used to incentivise the delivery of the right development growth in the City Centre.

Strategic context

Wollongong is the regional capital of the Illawarra-Shoalhaven. It is the civic and economic heart of the Illawarra region. Proximity to Sydney provides opportunities for residents and potential connections for local businesses. However, there is significant job leakage with residents commuting to Sydney for work and self-containment has declined from 74 per cent in 2011 to 71 per cent in 2016.

There are several economic nodes across Wollongong including Wollongong Hospital and health precinct, University of Wollongong and Wollongong Innovation Campus. Greater physical and economic links between these economic anchors will be important in driving economic growth across the Wollongong local government area (LGA). It is important that the role of Wollongong City Centre in the context of these nodes is clear and a strong vision will assist in promoting this.

As of 2016, Wollongong City Centre contains over 21,000 jobs, which is 27 per cent of jobs across the Wollongong LGA. The four largest industries of employment are health care (26 per cent), public administration (16 per cent), accommodation (11 per cent) and retail (9 per cent).

Employment is forecast to grow from 25,000 jobs in 2016 to 32,000 jobs by 2036[1]. Forecast growth is primarily across population-serving industries such as health and education. These are industries which generally forecast to grow across NSW. There is limited local specialisation or competitive advantage driving growth which is a significant barrier to Wollongong City Centre become a strategic employment centre. These issues should be addressed by the updated EDS.

Residential is the most active property market in the Wollongong City Centre. Where both residential and commercial development are allowed, this has the potential to constrain future commercial development if majority of sites have been developed as residential strata with multiple owners (which would make acquisition and redevelopment difficult) or if residential development 'prices' out commercial development. This highlights the need to understand development capacity, particularly feasible development capacity.

[1] The variation in employment numbers in 2016 is due to the data source. TPA forecasts for 2016 are higher than the ABS Census figure for 2016.

The trends observed highlight the need for the role of the Wollongong City Centre to be clearly articulated, particularly its economic role and function. The City Centre continues to play a strong role as the administrative and civic centre for the Illawarra-Shoalhaven region. However, action is required to change the trajectory of the City Centre, to attract commercial investment and grow strategic employment as well as population-serving industries.

A broad assessment of Wollongong City Centre has been conducted against the 10 success factors identified above (refer to Table 3). This assessment highlights that Wollongong City Centre has all the foundations for a successful regional city, however these need to be better leveraged to attract commercial investment and employment.

TABLE 1: ASSESSMENT OF WOLLONGONG CITY CENTRE AGAINST KEY SUCCESS FACTORS

Success factors	Broad assessment
A strategic location within a growing economy	▪ Population of Wollongong LGA is growing which has resulted in strong growth in population serving industries ▪ Located in close proximity to Greater Sydney which has led to increase in population but a significant proportion of residents travel to Greater Sydney for employment
Pre-existing business locations occupied by successful firms	▪ Wollongong City Centre over 21,000 jobs within several other major employment anchors located in close proximity ▪ A significant gap is large-scale professional and financial services firms
A supply of quality, skilled labour	▪ There is a supply of quality skilled labour, however the majority of these workers are employed in Greater Sydney and not locally
Infrastructure that binds the centre internally and links it externally	▪ Links externally include rail, road, bus and cycling infrastructure ▪ Links internally could be improved, particularly physical connectivity between major nodes within the Wollongong City Centre
Competitive place-based assets	▪ Access to waterfront and open space is a significant asset for Wollongong City Centre
Local and external customer bases to ensure robust supply chains	▪ There appears to be a concentration of local population serving industries and businesses ▪ Port Kembla plays a significant role in supporting regional, national and international supply chains
Business support for the centre	▪ Some business support but majority of investment has been residential.
Government support for the centre	▪ NSW Government and Wollongong City Council jointly support the growth of Wollongong as a major commercial centre
Strong links between the regional centre and its civic/cultural life	▪ Some existing foundations. This has not been reviewed in detailed as part of this study.
A spatial metaphor to drive the regional centre forwards.	▪ A City of People provides the foundation for a spatial metaphor

Source: SGS Economics and Planning, 2018

Initial capacity assessment

Capacity modelling was conducted as part of this project, this examined capacity under the existing controls and is summarised in the paragraphs below.

There is significant capacity for development within the study area based on the existing planning controls. However, feasibility analysis has highlighted that only a small proportion of this capacity is feasible based on the current market, being 41 per cent of uplift for residential floorspace or four per cent of uplift for commercial floorspace.

The planning controls allow for a built form which is much greater than the current market is delivering. Given that the maximum theoretical capacity is determined overwhelmingly by the FSR control, the maximum building height controls are in excess of this level by another

significant margin. Planning controls are not a constraint on capacity as significant capacity exists.

Under the maximum capital yield scenario (likely development outcome), a net loss of 45,000 sqm of commercial floorspace is observed. This is a significant issue as commercial floorspace is required to support the economic role of the Wollongong City Centre.

Commercial development is only marginally feasible, requiring significant cross subsidisation with residential development.

The net increase in commercial floorspace which could be attainable (34,000 sqm) under the maximum commercial yield scenario is limited and will be unable to meet forecast increases in demand over the medium term. Intervention is required to promote growth and highlights the need for potential incentives or levers to be considered that could address these feasibility constraints.

The significant increase in residential activity risks detracting from the character of the Wollongong City Centre as a business area, and by extension making it more difficult to attract commercial activity. Competition between commercial and residential development is a significant issue. Land values have potentially been inflated by the permissibility of residential development making straight commercial development unfeasible. These trends may warrant consideration of a commercial core zone in which residential development is prohibited or restricted.

Growth forecasts

Across the study area, there is projected to be demand for:

- An additional 120,000 sqm of commercial floorspace
- An additional 195,000 sqm of residential floorspace
- An additional 3,000 – 18,000 sqm of retail floorspace.

Table 9 below displays the forecast growth in demand in comparison to the two feasible capacity scenarios above, with a forecast gap in provision displayed for each scenario.

TABLE 2: FORECAST FLOORSPACE SUPPLY/DEMAND RELATIONSHIP (2036)

Land Use	Projected Demand	Change under Maximum Capital Yield Scenario	Gap *(Oversupply / Undersupply)*	Change Under Maximum Commercial Yield Scenario	Gap *(Oversupply / Undersupply)*
Residential	195,000 m²	265,000 m²	70,000 m²	213,000 m²	18,000 m²
Commercial	120,000 m²	- 45,000 m²	- 165,000 m²	34,000 m²	- 86,000 m²
Retail (high)	18,000 m²	83,000 m²	65,000 m²	83,000 m²	65,000 m²
Retail (low)	3,000 m²	83,000 m²	80,000 m²	83,000 m²	80,000 m²

Source: SGS Economics and Planning, 2018

Demand for commercial floorspace significantly exceeds feasible capacity (under the current market conditions). It is anticipated that feasible capacity will be equal to demand within the medium-term. Under the maximum commercial scenario, there is estimated to be a shortfall of 86,000 sqm of commercial floorspace by 2036. Under the maximum capital yield scenario, identified as the most likely outcome given, there is projected to be an undersupply of 165,000 sqm.

Both scenarios will likely result in increased commercial rents within the study area, and potentially displacement of jobs growth to other areas (e.g. the Innovation Campus). This requires actions to improve feasibility for these base growth projections to be achieved.

Conversely, the feasible capacity for residential development is significantly higher than projected demand (under current market conditions). The profitability of residential development under current market conditions means that this is a likely outcome. This could potentially result in the 'crowding-out' of commercial uses, highlighting the potential need for a commercial core zone where residential development is restricted.

Identified retail demand is relatively low. There is potential for an oversupply of inadequate retail floorspace with the provision of ground-floor retail across the B3/B4 zones under the current active frontage policy. A retail study is required to more accurately estimate demand and supply across the local retail system.

Development feasibility

The site-specific feasibility testing has echoed the results of the precinct scale feasibility assessment. Development which contains a low amount of (or no) commercial floorspace is feasible.

The delivery of commercial floorspace requires significant cross-subsidisation with residential development, and the amount of commercial floorspace which can be feasibly delivered on sites under current conditions is likely to be small.

The increased construction costs associated with taller buildings significantly decreases the feasibility of all types of development. The higher returns realisable on residential floorspace allow for a greater tolerance to these cost increases, however over twenty storeys this dramatically impacts on the ability to generate a profit. As noted within the capacity assessment, planning capacity is not a barrier to development.

Estimated current land acquisition costs present a significant constraint on a range of sites and can be prohibitive for redevelopment, particularly in high value areas of the study area, and/or where the current use of land is valuable. However, commercial development without residential is unfeasible even before land acquisition costs are taken into consideration.

Council's influence extends to planning controls, car parking requirements, development contributions and the planning process, as well as providing certainty for the market through clear policy and planning controls. Of these only a small number can be tested quantitatively.

The high construction costs associated with basement carparking inhibits the feasibility of development across all sites. While adjustments to the provision of parking within a development can exert a significant impact on its feasibility, any actions would require careful consideration of broader implications for transport, built form and property values.

Reducing the allowance for developers' profit and risk has a moderate impact on development feasibility. This would need to be facilitated by changes to the DA process to reduce the risk. The extent to which changes to the DA process are likely to reduce risk should be tested with developers.

A reduction in the development contributions levy provides a marginal increase to development feasibility. However, such a reduction would reduce the revenues available to Council.

None of the potential levers tested result in a feasible outcome in isolation. The development of any substantial commercial floorspace in the study area will likely require a combination of actions by Council to increase development feasibility in conjunction with realisable commercial rents increasing over time, which is likely if the supply-side tightens and the City Centre maintains a strong competitive position relative to other competing locations.

Recommendations

With feasibility of development being a major barrier to growth within Wollongong City Centre, it will be important that any future opportunities for commercial development are protected and encouraged.

The objective of implementing any actions is to:

- promote commercial development in the City Centre in line with the vision
- support economic potential of the City Centre
- address feasibility issues.

Feasibility can be improved through either improving (or increasing) the market for commercial development or reducing the cost of development.

This study has identified 11 recommendations for Council to implement to increase the feasibility of commercial development in Wollongong City Centre.

1. Develop an economic vision for the Wollongong City Centre through the economic development strategy update.
2. Continue to implement the bike lane program and investigate opportunities to expand the Wollongong Shuttle network.
3. Continue to implement existing public domain investment projects which increase the amenity of the Wollongong City Centre.
4. Advocate for improvements to Wollongong railway station to improve physical connectivity between the railway station and commercial core.
5. Undertake an assessment of the value that existing industry and industry targets place on public domain improvements and use these to prioritise investment.
6. Investigate alternative development contribution rates or mechanisms to fund future public domain investment in the Wollongong City Centre.
7. Introduce a commercial core where residential development is prohibited in close proximity to Wollongong railway station, Crown Street Mall and public open space.
8. Market test a reduced on-site car parking rate with developers and prospective commercial tenants to understand market for this and potential impact on rents.
9. Test feasibility of developing multi-storey car park against the contribution rate for offsite provision of parking for development.
10. Reduce risk for developers and increase certainty for development by providing clearer guidance to commercial landowners and developers across key sites within the commercial core of the City Centre. This includes a consistent process, speed of response and clearer planning controls.
11. Undertake an updated LGA-wide retail centres study to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in retail floorspace.

These recommendations (or actions) are important to promote commercial development in line with the economic vision of Wollongong City Centre and its roles as a regional city for the Illawarra. No single action will be able to increase commercial feasibility and therefore it is important that this suite of actions is implemented.

These actions recognise the substantial investment Council has made in the Wollongong City Centre to date and the importance of continuing these programmes. A number of these recommendations (or actions) are well-aligned with the upcoming economic development strategy update and should be implemented as part of this process. The Wollongong City Centre does not operate in isolation, and the outcomes of the future LGA-wide economic development and employment lands studies may require the review of these actions in the future to ensure that these are aligned.

The most significant action will be the introduction of a designated commercial core where residential development is prohibited. This is a long-term strategy and there are a number of risks associated with this. The commercial only area should be large enough to be coherent but also align with the demand to ensure it is not at risk of being stagnant.

The condensed commercial core should be located:

- in proximity to Wollongong railway station to ensure accessibility to public transport
- in proximity to Crown Street Mall to ensure accessibility to retail, hospitality and other services for workers
- proximity to public open space e.g. MacCabe Park and/or waterfront.

The commercial core will need to be sufficient to accommodate up to 120,000 sqm of floorspace but allow sufficient flexibility depending on the market. A transition area could be established which keeps the long-term intention of greater commercial focus without jeopardising activity in the core in the interim, this includes allowing temporary uses in the short to medium term. This strategy is considered to be crucial to ensuring the long-term economic success of the City Centre and ensuring that there is capacity for a significant commercial function.

1. INTRODUCTION

1.1 Project background

Wollongong City Council is undertaking a review of the Wollongong City Centre to implement the vision of *A City for People*. The Wollongong City Centre Planning and Design review aims to inform appropriate distribution of height and scale of buildings across the city centre with planning, urban design, open space and economic analysis.

SGS Economics and Planning has been commissioned by Wollongong City Council to undertake economic analysis to inform this review.

1.2 Project scope

The objective of this analysis is to investigate a range of economic matters which will inform the detailed investigations into City Centre design and planning policy review. In particular, this project seeks to:

- better understand the commercial and non-commercial development capacity of the City Centre,
- better understand the commercial and non-commercial development feasibility within the City Centre,
- identify aspirational growth targets for the City Centre in terms of both commercial and non-commercial development, and
- gain an understanding into how to incentivise the delivery of the right development growth in the City Centre.

The approach undertaken is outlined in Figure 1. Two workshops were held with Council officers to discuss issues and opportunities and the potential levers to address commercial feasibility issues. The results of these discussions are integrated throughout this report.

FIGURE 1: APPROACH TO STUDY

BACKGROUND REVIEW	CAPACITY REVIEW	HIGH LEVEL FEASIBILITY ANALYSIS	SITE SPECIFIC FEASIBILITY TESTING	GROWTH FORECASTS	RECOMMENDATIONS AND REPORTING
KEY TASKS					
▪ Review of existing strategies and policies ▪ Analysis of demographic and economic trends ▪ Review of current market	▪ Identification of theoretical capacity under the current controls using GIS analysis	▪ High level assessment of development feasibility based on current controls and current market	▪ Assessment of development feasibility of five different commercial development forms across five sites using Residual Land Value (RLV) model	▪ Calculate residential, commercial and retail floorspace forecasts using current projections for the study area	▪ Identify and assess potential levers to address development feasibility constraints and achieve forecast growth
STAKEHOLDER ENGAGEMENT					
		▪ Consultation with local agents to understand local market context	▪ Workshop 1 with Council staff on issues and opportunities		▪ Workshop 2 with Council staff on potential levers

The study area boundary is shown in Figure 2, along with the City Centre boundary within the Wollongong LEP. Wollongong Hospital is included in the City Centre boundary but is excluded from the study area.

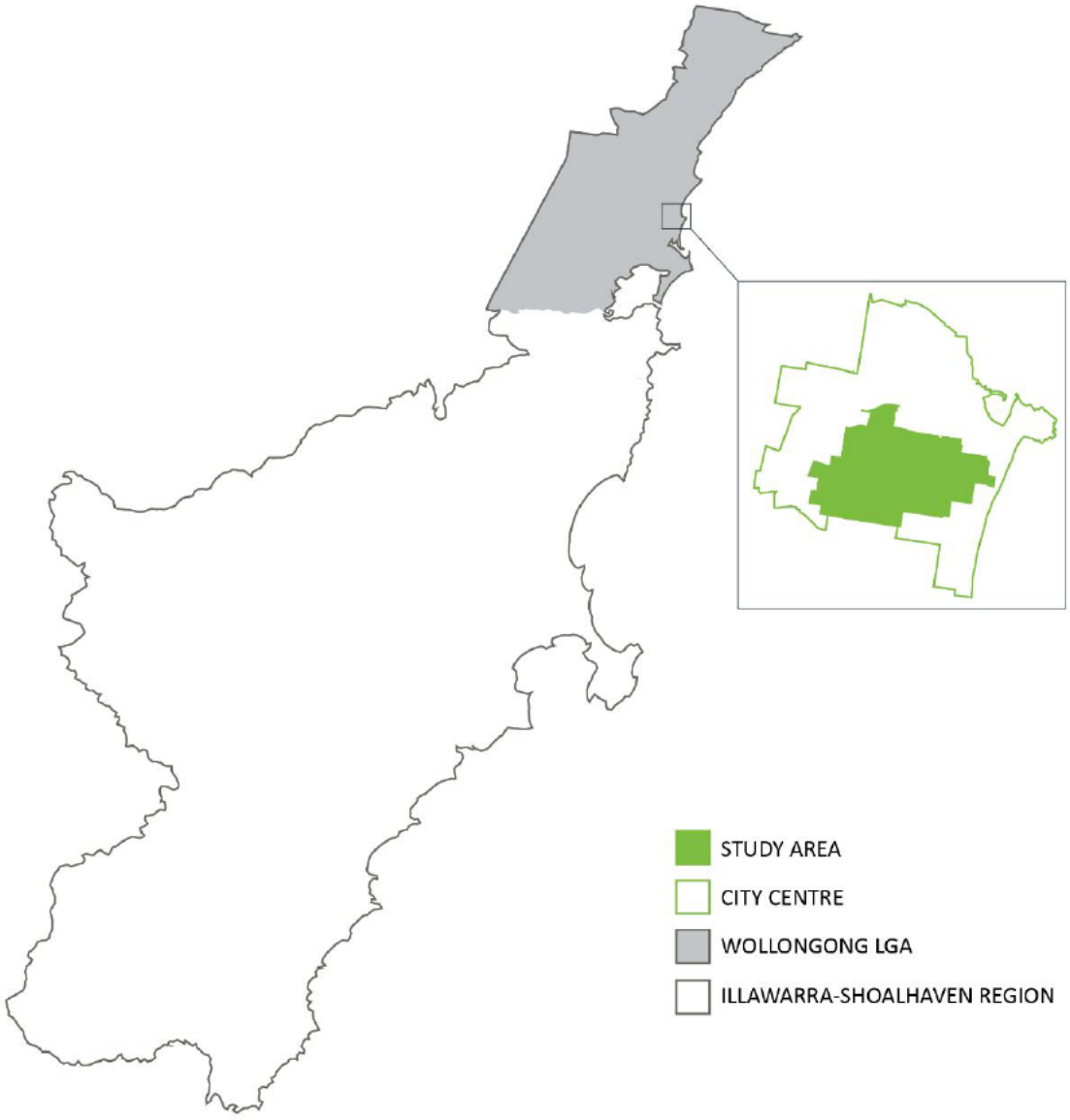
This economic analysis forms part of a larger body of research to inform future planning and design controls for the City Centre. Architectus and Andrews Burns Architecture have been separately commissioned to prepare an Urban Design Framework.

FIGURE 2: WOLLONGONG CITY CENTRE AND STUDY AREA

Source: Nearmap, 2018; SGS Economics and Planning, 2018

Analysis of data has been undertaken at a number of different geographies for the purpose of comparison and benchmarking the study area and Wollongong City Centre against the LGA and the Illawarra-Shoalhaven Region. These boundaries are illustrated in Figure 3. The Illawarra-Shoalhaven region includes Wollongong, Kiama, Shellharbour and Shoalhaven LGAs. The City Centre is LEP boundary and the study area contains the core commercial area of Wollongong. The figures reported throughout the report vary due to the boundaries adopted for the analysis and the data sources used.

FIGURE 3: COMPARISON OF BOUNDARIES



Source: SGS Economics and Planning, 2018

In some instances in this report, Wollongong is compared to Greater Sydney as defined by the Australian Bureau of Statistics (Sydney Greater Capital City Statistical Area) which includes the Greater Sydney and Central Coast regions.

Please note, the data analysis does not extend beyond data collected through the land audit and publicly available data form the Australian Bureau of Statistics and NSW Transport and Performance Analytics. Detailed analysis of recent economic development trends (since the 2016 Census) is outside the scope of this study.

1.3 Report structure

This report is structured as follows:

- **Section 2 – Strategic context:** Outlines the vision for the City Centre, its intended economic functions, and recent economic trends.
- **Section 3 – Capacity assessment:** Contains an initial round of capacity modelling of both maximum theoretical and maximum feasible capacity, which was used to inform the preparation of the Urban Design Framework.
- **Section 4 – Forecast growth:** Details the growth in commercial, residential and retail floorspace forecast for Wollongong City Centre.
- **Section 5 – Development feasibility:** Assesses the feasibility of 5 test sites under existing planning and design controls.
- **Section 6 – Recommendations:** Outlines the key findings of this analysis and recommendations for the City centre's planning and design controls.
- **Appendix A: Capacity and feasibility technical method:** Provides a detailed discussion of the method used for the capacity assessments in this analysis.

2. STRATEGIC CONTEXT

This section discusses the policies and strategies outlining the intended roles and functions of the Wollongong City Centre and their implications for the city's growth.

2.1 Understanding regional economic centres

Regional economic centres operate differently to metropolitan cities. A high-level review of the relevant literature relating to regional centres is provided below including key ingredients for success.

Central Place Theory

This theory envisages towns and cities within a hierarchy of inter-dependent relationships, where higher-order centres sit at the top of a regional hierarchy, with smaller centres focused on convenience goods and low value-add services at the bottom[2]. Lessons from this theory include that:

- Regional centres tend to be monopoly suppliers of higher-order goods/services
- Regional centres build strength from networked relationships with surrounding centres
- The value of consumption in a regional centre is strongly related to the employment conditions and prospects of the labour pool.

This suggests that the Wollongong City Centre should have strong connections to surrounding centres, and access to appropriately skilled labour.

Land or Bid Rent Theory

This theory explains why the most accessible land in urban centres is the most sought-after despite being the most expensive, and shows that revenue advantages come from being in central locations in a city. If the revenue generated justifies the higher rents paid, investments in these locations will continue, and the success of businesses then attracting additional customers which produces a virtuous growth cycle. Key lessons for economic corridors include:

- The pulling power of a regional centre and its employment lands depends on the quality of the firms (and has less to do with the land value on its own),
- Quality retail/industrial/residential activities are reinforcing, in building strong pools of labour/customers, and adding value to land assets and other pre-existing investments in an area, and
- Developing cheap/low density industrial lands in isolation will not create a strong regional centre.

Land uses will be drawn to central city locations, particularly in Sydney. Wollongong City Centre will need to focus on attracting quality firms and activities which are considered to be of high value.

Industrial Agglomerations

Large scale industrial agglomerations take advantage of cheap local energy sources to drive material transformations, with the advantages seen in economies of scale, external

[2] O'Neill & Dimeski 2011, Developing a Penrith Valley Economic Corridor Report, Prepared for the Penrith Business Alliance, Urban Research Centre, University of Western Sydney.

economies and access to large scale infrastructure. While industrial agglomerations have changed significantly over time, some potential lessons for regional centres include:

- Lower costs can come from external relationships with local buyers/sellers, cooperative management or marketing, or access to quality regional infrastructure, and
- The success of production concentrations is enhanced by transport and communication systems, for example in helping to create efficient supply chains, make commuting easier, enhance the internal movement of people and/or goods, and link producers to markets.

Businesses will be attracted to dense economic centres such as the Sydney CBD. This will create significant competition for Wollongong. Wollongong City Centre will need to differentiate itself and focus on increasing connections between people and goods.

Industrial Clusters

Industrial clusters are geographic concentrations of interconnected companies, suppliers and firms in related industries and associated institutions, which create relationships which are both competitive and cooperative, with major examples such as Silicon Valley. The success of industrial clusters depends on enhanced information flows, heightened awareness of firms' marketing, positive responses to peer pressure for innovation, and having competitive local supply conditions. Lessons from industrial clusters include:

- That a successful concentration of firms must be driven through competition and innovation
- That firms within a cluster must look for mutually supporting relationship with others (suppliers, competitors and buyers), and
- Conditions (such as labour, finance) must be based on best practice and the promotion of ongoing innovation and competitiveness.

As noted in a report on the Penrith Valley Economic Corridor, rarely do economies function exactly as depicted in theory, and successful spatial economies, such as economic corridors, often contain elements of each of these theories to varying degrees. The role that government's play, particularly in the provision of infrastructure, is also underplayed in the literature, along with the importance of connections and networks between enterprises. Successful economies require openness and connectedness (e.g. long distances and inter-urban networks), but also local strengths to build on.

Success factors

Ten key ingredients for success in developing regional centres have been identified. These include:

- a strategic location within a growing economy
- pre-existing business locations occupied by successful firms
- a supply of quality, skilled labour
- infrastructure that binds the centre internally and links it externally
- competitive place-based assets
- local and external customer bases to ensure robust supply chains
- business support for the centre
- government support for the centre
- strong links between the regional centre and its civic/cultural life
- a spatial metaphor to drive the regional centre forwards.

While broad, these are likely to be applicable to Wollongong City Centre and vital to ensuring the success of this regional city.

2.2 Vision for Wollongong City Centre

Wollongong City Centre is envisaged to become a vibrant capital of the Illawarra -Shoalhaven with diverse employment, services and recreation uses.

A City for People

A City for People was prepared for Council by Gehl Architects in 2016, in a process designed to put people at the centre of Wollongong's future development. It involved surveying the public space and activity of the city to understand how spaces were used, and to inform the vision for Wollongong to become people-oriented, sustainable and liveable.

The strategy includes 12 key vision statements, aimed at insuring that the city centre is a thriving and unique regional city, with a diverse economy and high-quality lifestyle. The city centre is also intended to be recognised as a place that people will want to be in, whether to live, learn, work or play.

Celebrate the uniqueness

- The natural beauty of the escarpment can be seen from streets, and nature is an important part of Wollongong's street character.
- There is a seamless transition between the core city and the foreshore, where there are a range of things to see and do.
- Wollongong's heritage is reflected in buildings and spaces in between, telling the city's Indigenous, European and industrial story.

Develop a human scale city

- Wollongong has a compact city centre, delivering a connected and efficient CBD.
- Building design is related to streets, delivers a comfortable scale, and connects to the city's natural setting.
- Design excellence is celebrated, evidenced in the look and feel of the city, and with exceptional street presentation.

Grow a living city

- Wollongong has a strong and growing residential population, and a diverse community with a shared sense of pride and social connection.
- The city centre includes a network of connected paths and open spaces, unique in character and supporting city life.
- Blocks and streets in the city centre provide for a range of uses, delivering street vibrancy day and night and opportunities to live, work, learn and play.

Create an accessible, pedestrian-friendly city

- Walking and cycling are prioritised in Wollongong's streets, which are comfortable and enjoyable, and attract a range of people day and night.
- Public transport is the preferred method of accessing the city, linking with the pedestrian and cycling network, and providing regular and reliable trips.
- Car movements and parking are used to support city centre functions while still prioritising comfort for pedestrians.

A City for People defines a series of precincts within the city centre and identifies key projects and outcomes to achieve the above vision statements over the short (1-2 years), medium (5+ years) and long term (10+ years).

Illawarra-Shoalhaven Region Plan

The Illawarra-Shoalhaven Region Plan, prepared by the Department of Planning and Environment (DP&E), provides a clear direction for planning and development over the next 20 years in the Wollongong City centre and surrounding region. This document identifies the Wollongong City Centre as part of a regional Metropolitan City (referred to as Metro Wollongong (see Figure 4).

The Plan envisages Metro Wollongong as the economic and cultural core of the region and a nationally significant city. The importance of growing employment in Metro Wollongong, especially in health, education and knowledge intensive industries, and the delivery of housing in and around the city centre are noted in the Plan as key drivers to increase the national significance of Wollongong.

The study area largely falls in the Commercial Core identified by DPE. The Commercial Core centres on Crown Street as the focus for retail, office, tourism and cultural activity. The Waterfront Precinct to the east is intended to be a focal point for tourism activity, anchored by the stadium, entertainment centre and beaches.

The University of Wollongong and the Innovation Campus are identified as part of Metro Wollongong; however, the Plan does not facilitate or outline approaches to integrate the University's activities with the Commercial Core and study area of this analysis.

A key action within the Region Plan is to create new and innovative opportunities for commercial development in the commercial core by making it more attractive for investment and business (Action 1.1.1). DP&E will work closely with Council to:

- examine opportunities to change planning and development controls to create more flexibility, to attract commercial investment and business activity
- improve the public domain through planning contributions and by investigating other potential funding opportunities.

This highlights a clear focus on attracting commercial investment and improving amenity.

FIGURE 4: METRO WOLLONGONG AND THE ROLE OF THE CITY CENTRE

Source: DPE, 2015

Economic Development Strategy

Wollongong City Council's *Economic Development Strategy* (EDS) outlines Council's key priorities, goals and actions to support economic activity in the LGA. The vision for Wollongong under the EDS includes for the city to:

- Be a global leader innovative and sustainable research, development and new industries, and become renowned for leading the way with green technology and jobs,
- Be established as the Regional Centre, creating hubs of activity with a thriving and resilient local economy, and able to support the establishment of new industries, enterprises and business which attracts people to live and work, and
- Be a student-friendly city, where residents are educated and employed, and there is access to employment and education through a diverse industry base and world-class learning institutions.

The EDS notes that the major economic challenge facing the LGA is to improve employment opportunities, particularly considering structural changes in the economy as it diversifies, and the large number of residents who travel to Sydney for work. As such the central policy focus of the EDS is on jobs, with aims to:

- Reduce unemployment to levels comparable to the State or national average,
- Reduce the number of people commuting outside the LGA, and
- Reduce the 'brain drain' phenomenon where young people leave the LGA after study due to a lack of opportunity.

Actions identified for Council to address the LGA's employment challenges include:

- Ensuring that adequate employment land is provided to support jobs and economic growth,
- Using best practice planning processes to facilitate and encourage investment
- Encourage the use of the city day and night, and
- Continue to lobby for opportunities for jobs growth including the relocation of jobs growth to Wollongong.

The EDS identifies the City Centre as having a vital role as the administrative centre for the city and for the broader Illawarra region, as well as an important role for tourism related businesses. The EDS does not identify a specific industry (or industries) that Council would like to attract to the City Centre. It is understood that the EDS will be shortly reviewed and updated.

2.3 Economic profile

Industries of employment

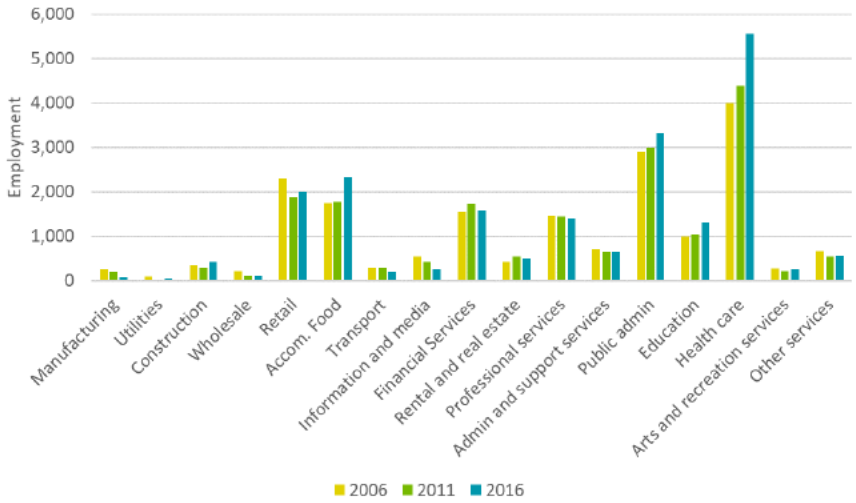
In 2016, Wollongong City Centre[3] contained 21,290 jobs. Representing a 12 per cent increase in jobs over the previous decade and a compounded annual growth rate of 1.1 per cent.

Wollongong City Centre's employment accounts for 27 per cent of all jobs in the Wollongong LGA, 16 per cent of all jobs in the Illawarra-Shoalhaven region and one per cent of jobs in the Greater Sydney and Illawarra-Shoalhaven regions combined.

The major industries of employment in Wollongong City Centre are health care (26 per cent), public administration (16 per cent), accommodation and food services (11 per cent) and retail (nine per cent) (refer to Figure 5). These are population serving industries and reflect the role of Wollongong as a civic centre.

[3] Please note that this boundary corresponds to the one shown as the Wollongong City Centre (dashed blue line) in Figure 2 on page 2 above, as distinct from the Study Area boundary. This boundary has been used in this section to provide context on the economic role of Wollongong as a functional centre, rather than on the narrower definition of the study area.

FIGURE 5: EMPLOYMENT BY INDUSTRY, WOLLONGONG CITY CENTRE, 2006-2016

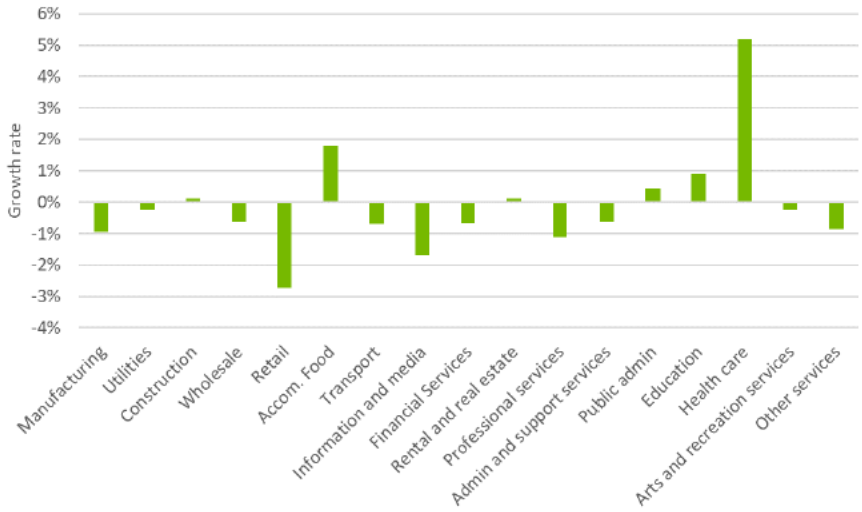


Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2006, 2011 and 2016. Note: this data relates to the Wollongong City Centre LEP boundary.

Over 50 per cent of growth in employment over the last decade in Wollongong City Centre has been in health care reflecting the presence of Wollongong Hospital the investment in the health precinct including the opening of the Wollongong Private Hospital. Accommodation and food services industries has grown the strongest the last decade behind health care (refer to Figure 6). Public administration has experienced some growth and retail has declined. The decline in retail was focused between 2006 and 2011.

Many industries declined over the last 10 years, including manufacturing, wholesale, transport, information and media, professional services, administration and support services and other services These are industries which Wollongong is reliant on growing to become a regional city.

FIGURE 6: INDUSTRY GROWTH AND DECLINE, WOLLONGONG CITY CENTRE, 2006-2016



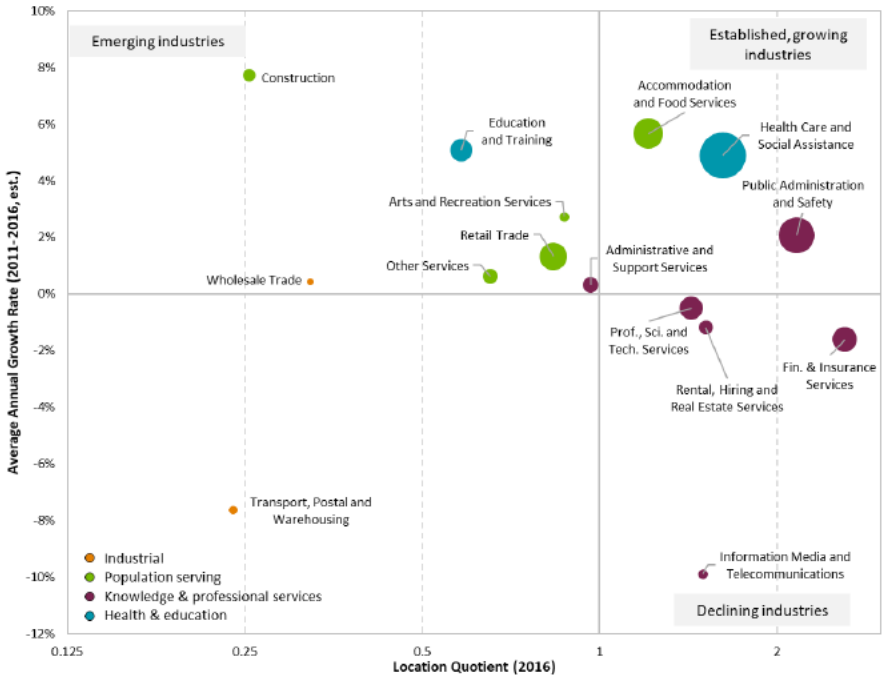
Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2006, 2011 and 2016. Note: this data relates to the Wollongong City Centre LEP boundary.

Local specialisation

The Wollongong City Centre specialises in population serving industries such as accommodation and food services, health and education, and in professional services. Its industry specialisations are measured by location quotients, which reflect the proportion of employment an industry takes up in one area compared to another. If the location quotient for an industry is greater than one, Wollongong City Centre has a specialisation in that industry compared to the benchmark region. Likewise, if the location quotient is less than one, the study area is relatively unspecialised in that industry. The larger the LQ, the more significant the specialisation.

Figure 7 shows the specialisation of Wollongong's industries relative to Illawarra-Shoalhaven, as well as annualised growth rate and total size. Industries have been categorised into four broad groups: industrial jobs, population serving jobs, knowledge intensive and professional services, and health and education.

FIGURE 7: LOCATION QUOTIENT WOLLONGONG CITY CENTRE VS ILLAWARRA-SHOALHAVEN



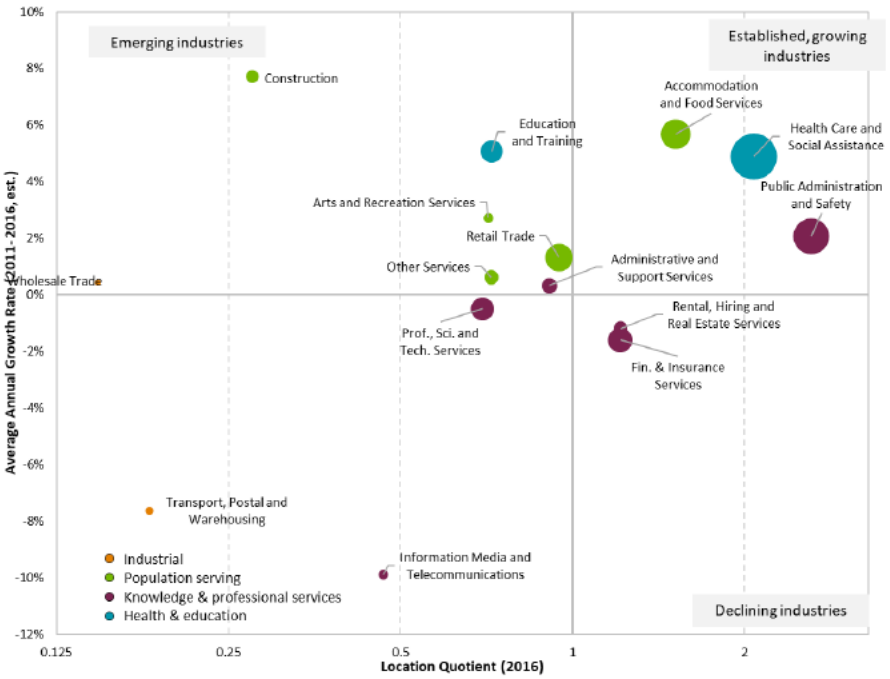
Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2011 and 2016. Note: this data relates to the Wollongong City Centre LEP boundary and Illawarra-Shoalhaven region boundary.
Please note that some small outlying industries have been excluded from the graph, specifically: Agriculture, Forestry and Fishing; Mining; Manufacturing; and Electricity, Gas, Water and Waste Services.

Industries sitting to the right of the y-axis have location quotients greater than one and are therefore industries in which Wollongong specialises. The chart shows several industries have location quotients greater than one, but that a number of these are in decline. The finance and insurance services industry has the largest location quotient at over 2.5 but has a negative annualised growth rate. Likewise, the rental, hiring and real estate, and information and media industries, with the latter having declined by an average of around 10 per cent year on year.

The chart shows a pattern of decline in knowledge intensive and professional services industries, ones that Wollongong specialises in compared to the Illawarra-Shoalhaven region, but growth and emerging specialisation in health and education and population serving industries, which are the largest employers. There is a general decline in industrial jobs.

Figure 8 shows the specialisation of Wollongong's industries relative to Greater Sydney.

FIGURE 8: LOCATION QUOTIENT WOLLONGONG CITY CENTRE VS GREATER SYDNEY



Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2011 and 2016. Note: this data relates to the Wollongong City Centre LEP boundary and Sydney GCCSA.
Please note that some small outlying industries have been excluded from the graph, specifically: Agriculture, Forestry and Fishing; Mining; Manufacturing; and Electricity, Gas, Water and Waste Services.

The chart shows that compared to Greater Sydney, Wollongong City Centre has a specialisation in public administration, health care and accommodation and food services. The City Centre also has a minor specialisation in finance and insurance services.

The growth of and specialisation in Wollongong's biggest industries, public administration and safety, health and social services and accommodation and food services, reflect the City Centre 's role as a regional capital – providing civic and health services for the entire Illawarra-Shoalhaven.

Local competitiveness

Shift-share analysis paints a picture of how well the region's current industries are performing by systematically examining the national, local, and industrial components of employment change. It provides a dynamic account of total regional employment growth that is attributable to growth of the national economy, a mix of faster or slower than average growing industries, and the competitive nature of the local industries. This analysis identifies those industries that benefit from local competitive advantages and those that suffer from local growth impediments.

The shift-share analysis includes the following elements:

- Expected Change is the rate of growth of the industry at the regional level. This is the change in a local industry that would be attributable to the growth or decline of the industry at the benchmark area level.

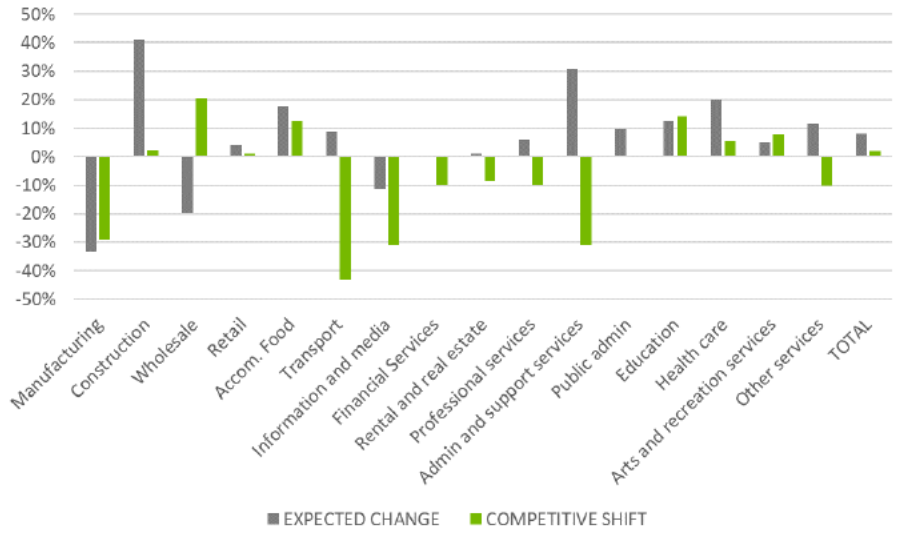
- Regional Competitive Shift explains how much of the change in each industry is due to some unique competitive advantage that the study area possesses, because the growth cannot be explained by broader trends in that industry or the economy as whole. It is the total industry growth in Wollongong City Centre minus the expected change in that industry given the benchmark (Illawarra-Shoalhaven) rates.

A shift-share analysis was conducted for the Wollongong City Centre against the Illawarra-Shoalhaven region to determine the extent to which job growth can be attributed to unique local factors and how much is due to regional trends (see Figure 9).

The shift-share analysis indicates Wollongong City Centre does not have a comparative/competitive advantage in most of its significant industries, including ones identified as industries of specialisation in the location quotient analysis. The area has a slight advantage in manufacturing, which declined less than it was expected to, and in education. It also has an ostensible competitive advantage in utilities and agriculture, but the small proportion of total employment that these industries account for makes it insignificant.

Based on this analysis, Wollongong City Centre is uncompetitive in health – its largest established and growing industry. This suggests there may be local barriers preventing its growth.

FIGURE 9: SHIFT SHARE WOLLONGONG CITY CENTRE VS ILLAWARRA-SHOALHAVEN, 2011-2016



Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2016. Note: this data relates to the Wollongong City Centre LEP boundary and Illawarra-Shoalhaven region boundary.
Please note that some small outlying industries have been excluded from the graph, specifically: Agriculture, Forestry and Fishing; Mining; and Electricity, Gas, Water and Waste Services.

Self-containment

Wollongong City Centre's employment profile demonstrates its role as the regional city for the Illawarra-Shoalhaven and the civic and health services it provides will ensure this role persists. Nevertheless, despite overall job growth, job self-containment across Wollongong LGA, the percent of people who live and work in the LGA has declined from 74 per cent in 2011 to 71 per cent in 2016 (refer to Figure 10).

Industries with the highest job self-containment:

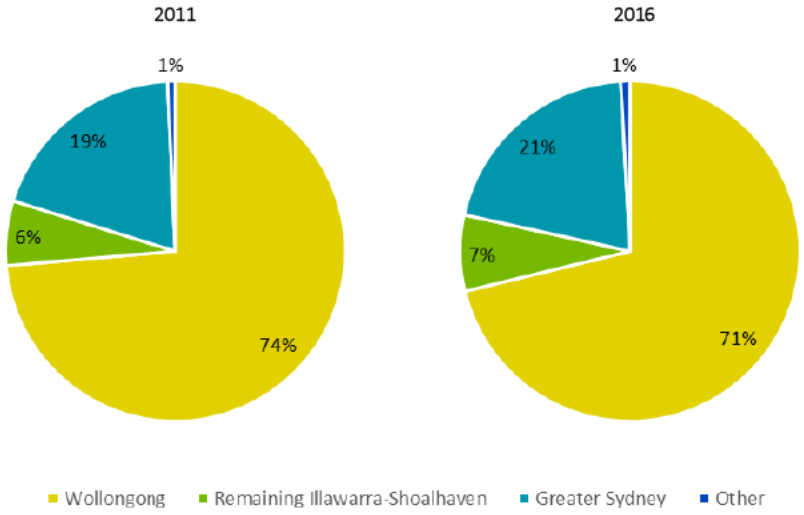
- Accommodation and food services (84.8 per cent)
- Rental and hiring services (78.8 per cent)
- Health care and social assistance (77.5 per cent)

Industries with the lowest job self-containment:

- Mining (47.4 per cent)
- Utilities (52.0 per cent)
- Wholesale trade (56.7 per cent)
- Information media and technology (58.4 per cent)

Mitigating some of the negative effects of job leakage, the industries with the highest self-containment are ones Wollongong specialises in and that account for a significant proportion of its total employment. The industries with the lowest self-containment account for a small amount of total employment, are in decline in the area and, except for media and technology, are low specialisation.

FIGURE 10: SELF-CONTAINMENT 2011 AND 2016

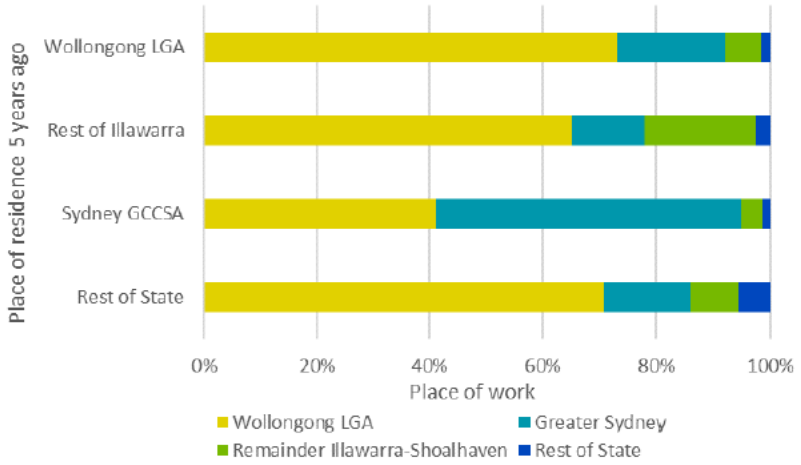


Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2011 and 2016. Note: this data relates to the Wollongong City Centre LEP boundary.

Figure 11 below shows the proportional split between where Wollongong LGA residents work, arranged by where they lived five years prior (at the time of the 2011 Census). This indicates that nearly 20 per cent of longer-term residents of the Wollongong LGA travel to Greater Sydney for work. In terms of residents who moved to Wollongong from Greater Sydney in the previous 5-years, majority (54 per cent) continued to work in Sydney despite making the move south. This indicates that Wollongong's slight downward shift in self-containment is more likely related to demographics in migration rather than a worsening economic position, particularly given the continued jobs growth observed in the LGA over this time period.

The most common employment destination in Greater Sydney for Wollongong residents are the City of Sydney, Sutherland, Campbelltown and Wollondilly.

FIGURE 11: PLACE OF RESIDENCE IN 2011 AGAINST PLACE OF WORK IN 2016



Source: SGS Economics and Planning, 2018 using Australia Bureau of Statistics, 2011 and 2016. Note: this data relates to the Wollongong LGA boundary. Note: Sydney GCCSA is the Greater Capital City Statistical Areas as defined by the ABS which includes Greater Sydney and Central Coast regions

2.4 Economic drivers

Major employers and economic anchors

There are several regionally significant economic activities within or in proximity to the Wollongong City Centre which exert a substantial influence on the LGA's economy, and these activities represent key growth areas which leveraged to create continued growth.

University of Wollongong (UoW)

Aside from being an important source of knowledge and skill development, the University of Wollongong (UoW) also generates a substantial volume of economic activity in its own right, providing 4,800 full-time equivalent jobs and contributing approximately $660 million to Wollongong's economic output. The Illawarra and Shoalhaven Regional Plan (2015) identifies a continuing need to assess and manage the provision of student housing in order to facilitate its continued growth.

UoW's Innovation Campus, was established in 2006, plays host to a range of research facilities within a business park style development approximately three km north of the Wollongong City Centre. The Innovation Campus contains financial services such as the Commonwealth Bank and AMP, or civil society groups such as The Benevolent Society and the Cancer Council of NSW. It appears that the supply of commercial office floorspace within the Innovation Campus is diverting demand away from the Wollongong City Centre.

Wollongong Hospital and health precinct

The Wollongong Hospital and its surrounding uses are a significant employer both within Wollongong and the LGA. The hospital recently underwent expansion works with a capital value of over $100m, including the addition of elective surgical facilities, with new retail facilities servicing the hospital to replace those removed as part of its expansion.

The Wollongong Private Hospital was completed in early 2016, situated immediately adjacent and to the west of the public hospital, with plans for further expansion works worth over $45 million having already been submitted by the hospital's owner.

Port Kembla

As identified within the NSW Ports' 30 Year Master Plan, Port Kembla is NSW's largest motor vehicle import hub, largest grain export terminal and second largest coal export port. It is recognised as an economic driver for the Illawarra-Shoalhaven region.

Port Kembla is an area of significant employment within the LGA, with the Wollongong EDS noting in 2013 that it sustains 3,863 full-time jobs directly and indirectly. The port is expected to grow substantially as further redevelopment projects take place, such as the expansion of the port's Outer Harbour, in a $700 million redevelopment which is anticipated to quadruple the port's bulk cargo trade.

Retail and centres hierarchy across the region

Existing hierarchy of centres

The Wollongong City Centre holds the prime position within the Illawarra's hierarchy of urban centres. The presence of major tertiary education and health facilities in conjunction with strong public transport access (compared to the rest of the Illawarra-Shoalhaven region) and infrastructure has reinforced this role, and the continued primacy of the centre is owing in no small part to its role in providing higher order business, civic, recreation, community and entertainment uses.

There are other lower-order centres within the region which still host a significant amount of retail floorspace and other services, such as Shellharbour City Centre, Warrawong and Dapto. While these centres are anticipated to grow, they provide a comparatively lower level of higher order services and uses (outside of retail functions) than the Wollongong City Centre.

Retail offer

The Review of Illawarra Retail Centres (2014) report prepared by SGS identified that there was demand for between 73,000 and 85,000 square metres (sqm) of retail floorspace in Wollongong City Centre by 2031. A large proportion of this demand is provided for by GPT's Wollongong Central shopping mall, being approximately 56,600 sqm of retail GFA. There is are two supermarkets (Woolworths and Aldi) located outside of the Wollongong Central development, with the remaining retail floorspace typically being in main-street retail buildings within the city centre or bulky goods retail within the City Centre fringe areas such as South Wollongong or along the Princes Highway. The study identified around 3,000 sqm of potential under supply of retail floorspace by 2031 under the high demand scenario.

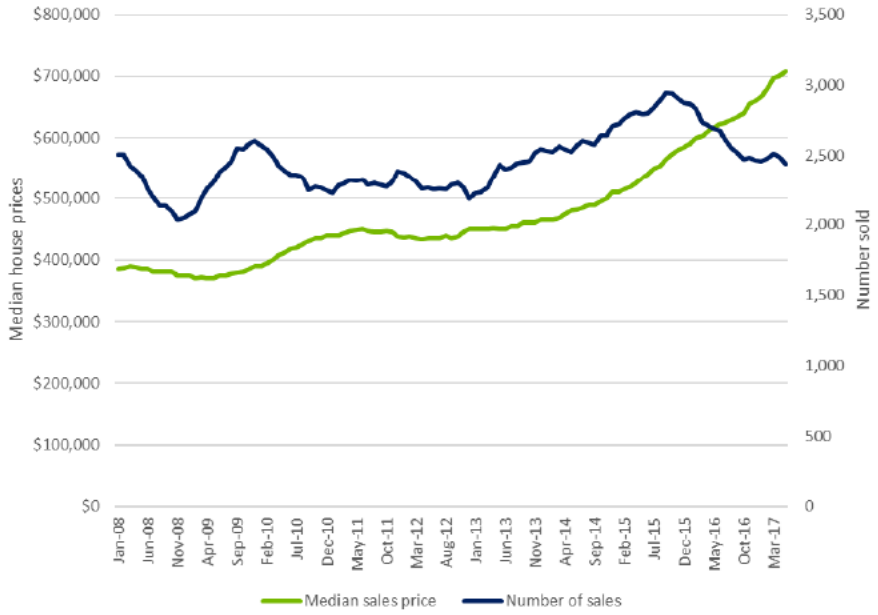
Residential development and revitalising the city centre

Residential development

Several of the strategic documents identify the intention to increase residential densities within the study area. Demand for dwellings within the area is currently high, given its proximity to services, transport, employment, recreation and entertainment. Significant development has been taking place within the study area, with major projects at the eastern end of the City Centre adding a significant supply of dwellings, in addition to the development of residential flat buildings in a dispersed pattern throughout the R1 zoning to the north of the City Centre.

Across Wollongong LGA, median sales prices for houses have continued to rise since 2012, however in the last year sales have declined (refer to Figure 12).

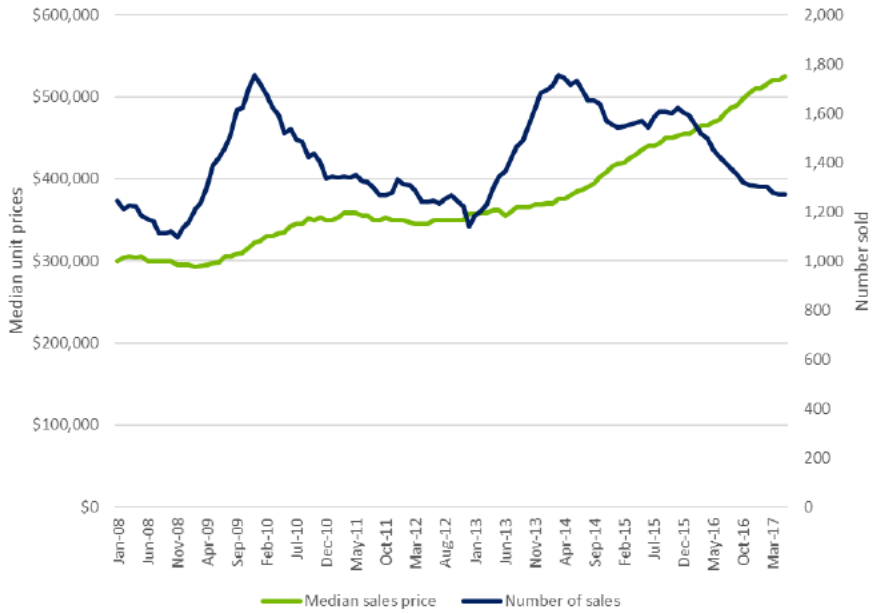
FIGURE 12: MEDIAN SALES PRICES, HOUSES: WOLLONGONG LGA



Source: SGS Economics and Planning, 2018 using custom RP Data, 2017

Unit prices have similarly rise, however sales have fluctuated (refer to Figure 13). This is likely due to timing of new developments being completed.

FIGURE 13: MEDIAN SALES PRICES, UNITS: WOLLONGONG LGA



Source: SGS Economics and Planning, 2018 using custom RP Data, 2017

Sales values within the study area have increased significantly since 2014, with median sales prices for houses sitting at approximately $870,000, or $560,000 for units. These are higher than the median sales values for the whole LGA.

Night time economy

Growth within the night time economy in recent years has seen the addition of new small bars and restaurants, or the extension of trading hours for existing premises; however, several documents note that a lack of residents within the City Centre is contributing to a lack of activity outside of office hours. Whilst increases in residential densities within the city centre will contribute to the population base who utilise the area in the evening, growth should be carefully managed to avoid potential land use conflicts given the inherent sensitivity of residential development.

Potential also exists to accommodate the growth of the University of Wollongong in conjunction with achieving greater activation through providing a greater proportion of the University's student housing within the Wollongong City Centre. The provision of a variety of residential dwellings for students, health workers and seniors within Wollongong City Centre is an objective within the Illawarra-Shoalhaven Region Plan.

Public spaces

Council is also seeking to facilitate growth within the City Centre through the creation of higher quality, walkable spaces which are pedestrian friendly and at a human scale. The development of the city centre should be reflective of the need to concentrate activity within a compact area, at a scale which is comfortable and respects the natural setting of the city and is well connected with a high level of amenity for active and public transport.

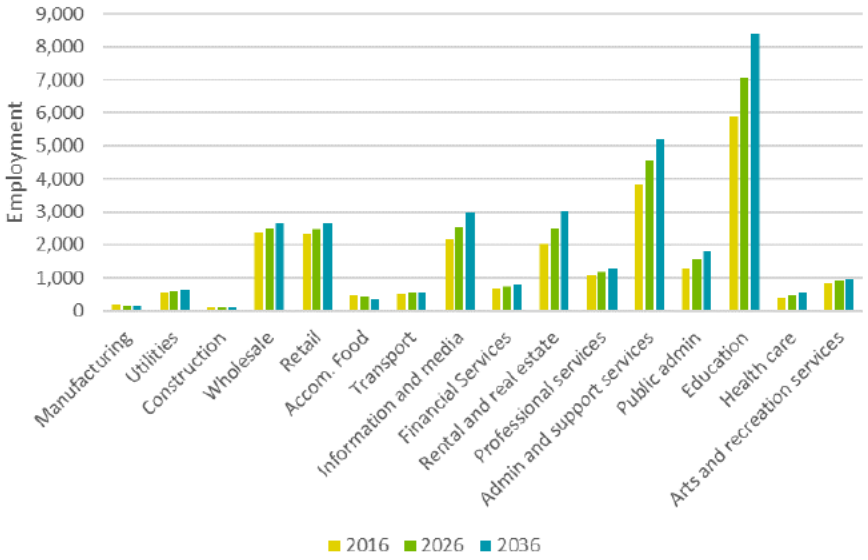
2.5 Forecast growth

According to NSW Transport and Performance Analytics (TPA) Travel Zone Projections (TZP16)[4], employment across the Wollongong City Centre is projected to increase from almost 25,000 jobs in 2016 to over 32,000 jobs by 2036. Employment in education and knowledge and professional services (including administrative and support services, processional services and administrative and support services) is forecast to grow and industrial jobs are forecast to decline (see Figure 14).

Forecasts show that many of Wollongong's current industries of specialisation will continue to grow, including health, public administration, finance, and accommodation and food services. Action will be required to attract industries which have been declining locally such as professional services.

[4] Transport Performance and Analytics (2017), Transport for NSW, https://opendata.transport.nsw.gov.au/dataset/employment-projections

FIGURE 14: FORECAST EMPLOYMENT GROWTH BY INDUSTRY, 2016-36



Source: SGS Economics and Planning, 2018 using NSW Transport and Performance Analytics (TPA) Travel Zone Projections (TZP16)[5]. Note: this data relates to the Wollongong City Centre LEP boundary.

2.6 Key findings and implications

Wollongong is the regional capital of the Illawarra-Shoalhaven. It is the civic and economic heart of the Illawarra region. Proximity to Sydney provides opportunities for residents and potential connections for local businesses. However, there is significant job leakage with residents commuting to Sydney for work and self-containment has declined from 74 per cent in 2011 to 71 per cent in 2016.

There are several economic nodes across Wollongong including Wollongong Hospital and health precinct, University of Wollongong and Wollongong Innovation Campus. Greater physical and economic links between these economic anchors will be important in driving economic growth across the Wollongong LGA. It is important that the role of Wollongong City Centre in the context of these nodes is clear and a strong vision will assist in promoting this.

As of 2016, Wollongong City Centre contains over 21,000 jobs, which is 27 per cent of jobs across the Wollongong LGA. The four largest industries of employment area health care (26 per cent), public administration (16 per cent), accommodation (11 per cent) and retail (9 per cent).

Employment is forecast to grow by an additional 7,000 jobs by 2036[6]. Forecast growth is primarily across population serving industries such as health and education. These are industries which generally forecast to grow across NSW. There is limited local specialisation or competitive advantage driving growth which is a significant barrier to Wollongong City Centre become a strategic employment centre. These issues should be addressed by the updated EDS.

Residential is the most active property market in the Wollongong City Centre. This has the potential to constrain future commercial development if majority of sites have been developed as residential strata with multiple owners (which would make acquisition and

[5] Transport Performance and Analytics (2017), Transport for NSW, https://opendata.transport.nsw.gov.au/dataset/employment-projections
[6] The variation in employment numbers in 2016 is due to the data source. TPA forecasts for 2016 are higher than the ABS Census figure for 2016.

redevelopment difficult) or if residential development 'prices' out commercial development. This highlights the need to understand development capacity, particularly feasible development capacity.

The trends observed highlight the need for the role of the Wollongong City Centre to be clearly articulated, particularly its economic role and function. The City Centre continues to play a strong role as the administrative and civic centre for the Illawarra-Shoalhaven region. However, its action is required to change the trajectory of the City Centre, to attract commercial investment and grow strategic employment as well as population serving industries.

A broad assessment of Wollongong City Centre has been conducted against the 10 success factors identified above (refer to Table 3). This assessment highlights that Wollongong City Centre has all the foundations for a successful regional city, however these need to be better leveraged to attract commercial investment and employment.

TABLE 3: ASSESSMENT OF WOLLONGONG CITY CENTRE AGAINST KEY SUCCESS FACTORS

Success factors	Broad assessment
A strategic location within a growing economy	▪ Population of Wollongong LGA is growing which has resulted in strong growth in population serving industries ▪ Located in close proximity to Greater Sydney which has led to increase in population but significant proportion of residents travel to Greater Sydney for employment
Pre-existing business locations occupied by successful firms	▪ Wollongong City Centre over 21,000 jobs within a number of other major employment anchors located in close proximity ▪ A significant gap is large-scale professional and financial services firms
A supply of quality, skilled labour	▪ There is a supply of quality skilled labour, however the majority of these workers are employed in Greater Sydney and not locally
Infrastructure that binds the centre internally and links it externally	▪ Links externally include rail, road, bus and cycling infrastructure ▪ Links internally could be improved, particularly physical connectivity between major nodes within the Wollongong City Centre
Competitive place-based assets	▪ Access to waterfront and open space is a significant asset for Wollongong City Centre
Local and external customer bases to ensure robust supply chains	▪ There appears to be a concentration of local population serving industries and businesses ▪ Port Kembla plays a significant role in supporting regional, national and international supply chains
Business support for the centre	▪ Some business support but majority of investment has been residential.
Government support for the centre	▪ NSW Government and Wollongong City Council jointly support the growth of Wollongong as a major commercial centre
Strong links between the regional centre and its civic/cultural life	▪ Some existing foundations. This has not been reviewed in detailed as part of this study.
A spatial metaphor to drive the regional centre forwards.	▪ A City of People provides the foundation for a spatial metaphor

Source: SGS Economics and Planning, 2018

3. CAPACITY ASSESSMENT

This section contains analysis of the capacity for development under the current planning controls in the study area, and the feasible capacity for development under current market conditions. This section provides a general overview of the method used, with specific detail on assumptions provided in Appendix A.

3.1 Maximum theoretical capacity

Approach

The first of two measures utilised to determine the existing capacity within the study area, the maximum theoretical capacity is a hypothetical measure which provides an indication of what could be delivered if all available land within the study area was redeveloped to the maximum permissible level under current planning controls. It is important to note that it is highly unlikely to achieve such a high development yields in practice, as such measures does not factor in the feasibility of development nor the functionality of existing improvements.

For example, it is unlikely that a building will be demolished in order to achieve only a 5 per cent uplift in floorspace yield. However, it is necessary to consider capacity at the maximum amount theoretically possible to understand the impact of planning controls on development.

Certain sites within the study area were identified to be constrained and were excluded from the analysis. Further detail on this, as well as other technical aspects of the analysis, can be found in Appendix A: Capacity and feasibility technical method.

Results

The Wollongong LEP 2009 (WLEP 2009) permits residential uses in a wide range of zones present within the study area. Therefore, the maximum theoretical capacity within the study area may look quite different depending on whether residential or commercial floorspace is pursued to a greater extent. Two scenarios have been developed for this analysis:

- The **theoretical maximum residential** scenario
- The **theoretical maximum commercial** scenario

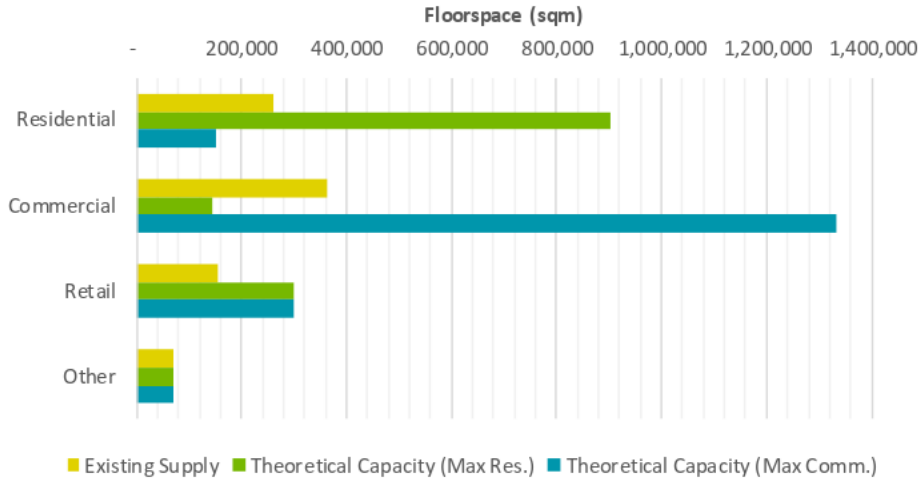
The results of the modelling are displayed in Table 4 and Figure 15.

TABLE 4: MAXIMUM THEORETICAL CAPACITY RESULTS

Land Use	Existing Supply	Theoretical Maximum Residential Scenario	*Difference*	Theoretical Maximum Commercial Scenario	*Difference*
Residential	260,000 m²	904,000 m²	*644,000* m²	151,000 m²	*-109,000 m²*
Commercial	365,000 m²	144,000 m²	*-221,000 m²*	1,332,000 m²	*967,000* m²
Retail	156,000 m²	299,000 m²	*143,000* m²	299,000 m²	*143,000* m²
Other	72,000 m²	70,000 m²	*-2,000 m²*	70,000 m²	*-2,000 m²*

Source: SGS Economics and Planning, 2018

FIGURE 15: MAXIMUM THEORETICAL CAPACITY RESULTS



Source: SGS Economics and Planning, 2018

To put the above floorspace numbers in terms of dwellings and jobs, a high-level conversion has been conducted using an average dwelling size of 100 sqm, and an average job to floor space ratio of 30 sqm and 35 sqm for commercial/other and retail floorspace respectively. The results are displayed below in Table 5.

TABLE 5: MAXIMUM THEORETICAL CAPACITY – JOBS/FLOOR SPACE

Land Use	Average dwelling size/ job to FS ratio	Theoretical Maximum Residential Scenario	Theoretical Maximum Commercial Scenario
Residential (dwellings)	100 m²	9,050	1,500
Commercial (jobs)	30 m²	4,800	44,400
Retail (jobs)	35 m²	8,550	8,550
Other (jobs)	30 m²	2,350	2,350
Total jobs	-	15,700	55,300

Source: SGS Economics and Planning, 2018

Both scenarios display a theoretical capacity figure that is substantially higher than current supply of floorspace, which indicates that the planning controls currently allow for a particularly significant amount of floorspace to be developed.

When testing the maximum theoretical capacity, a mismatch between the maximum FSR and height controls was observed within parts of the study area, with the maximum FSR being reached before the height limit for nearly all sites tested.

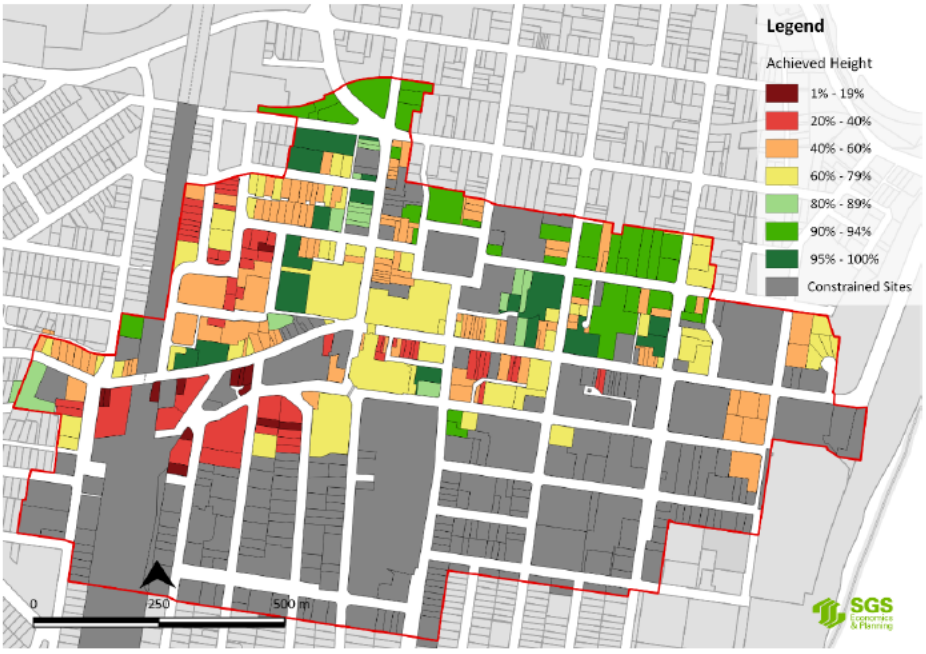
In the theoretical maximum residential scenario, 22 per cent of sites achieved heights within 20 per cent of the maximum allowed under the controls, and a further 22 per cent of sites did not achieve more than 20 per cent of the total height allowed. This distribution is displayed in Figure 16.

Similar results were observed within the theoretical maximum commercial scenario, however the mismatch observed herein was slightly greater[7]. In this scenario, 18 per cent of sites

[7] This is owing to the higher site coverage assumptions used for commercial floorspace (contained in Table 17 on page 44 of this report). For further information, please refer to the technical appendix of this report beginning on page 42.

achieved heights within 20 per cent of the maximum, and 45 per cent of sites did not achieve more than 20 per cent of the total height allowed. This distribution is displayed in Figure 17.

FIGURE 16: MAXIMUM THEORETICAL CAPACITY - PROPORTION OF HOB CONTROL ACHIEVED (THEORETICAL MAXIMUM RESIDENTIAL SCENARIO)



Source: SGS Economics and Planning, 2018

FIGURE 17: MAXIMUM THEORETICAL CAPACITY - PROPORTION OF HOB CONTROL ACHIEVED (THEORETICAL MAXIMUM COMMERCIAL SCENARIO)

Source: SGS Economics and Planning, 2018

3.2 Maximum feasible capacity

Approach

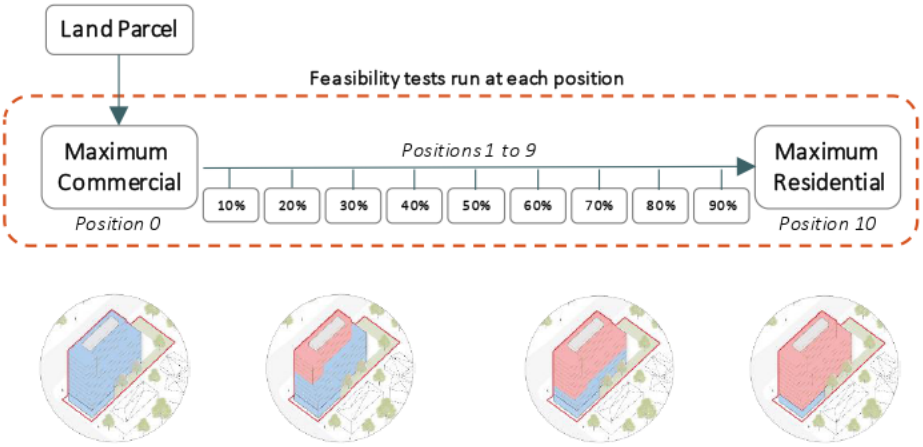
An assessment of feasible capacity was conducted to examine the likelihood that this capacity will be taken up. This requires development to be financially feasible. Refer to Appendix A: Capacity and feasibility technical method, for a more detailed explanation of the assumptions.

Each site within the study area was tested, initially with the built form observed in the maximum commercial scenario above (as under current planning controls), with the mix of residential to non-residential floorspace then being shifted in 10 per cent increments until the split used for the maximum residential scenario was reached. This has allowed to gain an indication of the mix of residential and non-residential floorspace required for the development to be feasible on each site.

Each increment (including the two maximum theoretical scenarios above, for a total of 11) is referred to herein as a position. To clarify:

- A parcel of land at Position 0 has the same floorspace as the **theoretical maximum commercial** scenario outlined above.
- A parcel of land at Position 10 has the same floorspace as the **theoretical maximum residential** scenario outlined above.
- A parcel of land at Position 4 has the same floorspace as the **theoretical maximum commercial** scenario outlined above, *plus/minus* 40 per cent of the difference between the **theoretical maximum commercial** scenario and the **theoretical maximum residential** scenario.

FIGURE 18: CAPACITY ASSESSMENT - MAXIMUM FEASIBLE CAPACITY METHOD (1 OF 2)



Source: SGS Economics and Planning, 2018

Further detail on the technical aspects of this segment of the analysis can be found in Appendix A: Capacity and feasibility technical method.

Results

Similar to the maximum residential and the maximum commercial scenarios above, the maximum feasible capacity has been divided into two scenarios. A site which is feasible at any Position is included in the capacity figure for both scenarios, however the specific scenarios differ on which Position they select based on the criteria:

- The **maximum capital yield** scenario
  This scenario takes the Position for each site which is both financially feasible, and which generates the highest capital return. Given the increased profitability of

residential development, this scenario is comprised entirely of sites in Position 10 (the theoretical maximum residential scenario).

- The **maximum commercial yield** scenario
  This scenario takes the Position on a given site which is both financially feasible, and which yields the highest amount of commercial floorspace. This results in sites being selected at a mixture of Positions based on the specific influences on their feasibility.

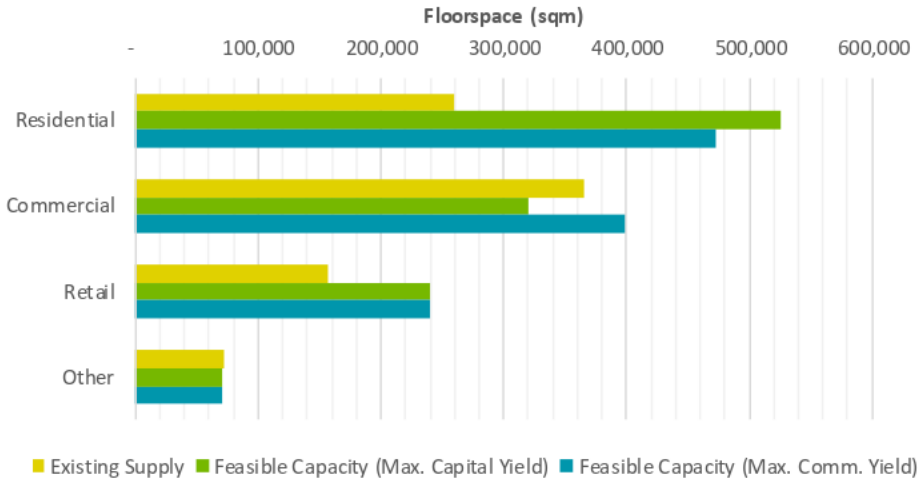
The results of the modelling are displayed below in Table 6 and Figure 19.

TABLE 6: MAXIMUM FEASIBLE CAPACITY RESULTS

Land Use	Existing Supply	Maximum Capital Yield Scenario	*Difference*	Maximum Commercial Yield Scenario	*Difference*
Residential	260,000 m²	525,000 m²	265,000 m²	473,000 m²	213,000 m²
Commercial	365,000 m²	320,000 m²	-45,000 m²	399,000 m²	34,000 m²
Retail	156,000 m²	239,000 m²	83,000 m²	239,000 m²	83,000 m²
Other	72,000 m²	70,000 m²	-2,000 m²	70,000 m²	-2,000 m²

Source: SGS Economics and Planning, 2018

FIGURE 19: MAXIMUM FEASIBLE CAPACITY RESULTS



Source: SGS Economics and Planning, 2018

To put the above floorspace numbers in terms of dwellings and jobs, a high-level conversion has been conducted using an average dwelling size of 100 sqm, and an average job to floor space ratio of 30 sqm and 35 sqm for commercial/other and retail floorspace respectively. The results are displayed below in Table 7.

TABLE 7: MAXIMUM FEASIBLE CAPACITY – JOBS/FLOOR SPACE

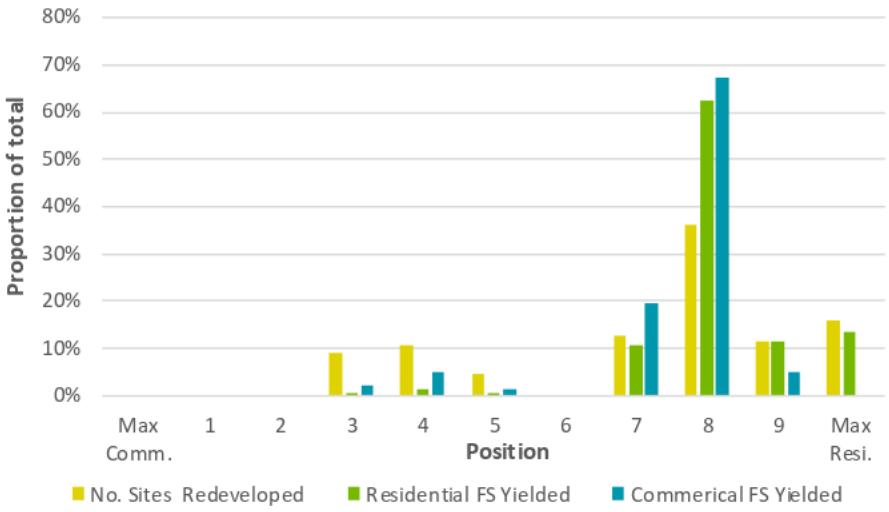
Land Use	Average dwelling size/ job to FS ratio	Maximum Capital Yield Scenario	Maximum Commercial Yield Scenario
Residential (dwellings)	100 m²	5,250	4,750
Commercial (jobs)	30 m²	10,650	13,300
Retail (jobs)	35 m²	6,850	6,850
Other (jobs)	30 m²	2,350	2,350
Total jobs	-	19,850	22,450

Source: SGS Economics and Planning, 2018

The maximum capital yield scenario is more likely to be reflective of the built form outcome pursued by private developers within Wollongong, as they seek to maximise returns on their projects by providing the maximum amount of residential floorspace possible.

Within the maximum commercial yield scenario, the mix of non-residential and residential floorspace varies on a site to site basis. This reflects the estimated amount of residential floorspace that would be required within sites to make them feasible. In cases where development is only marginally feasible, no commercial floorspace is included on the site. Figure 20 displays the distribution of sites and floorspace yield at the position under this scenario. The largest amount of commercial floorspace will be delivered under a high residential scenario ('Position 8'). This indicates that commercial floorspace requires significant cross-subsidisation from residential floorspace.

FIGURE 20: MAXIMUM COMMERCIAL YIELD SCENARIO - DISTRIBUTION OF POSITIONS AND FLOORSPACE YIELD



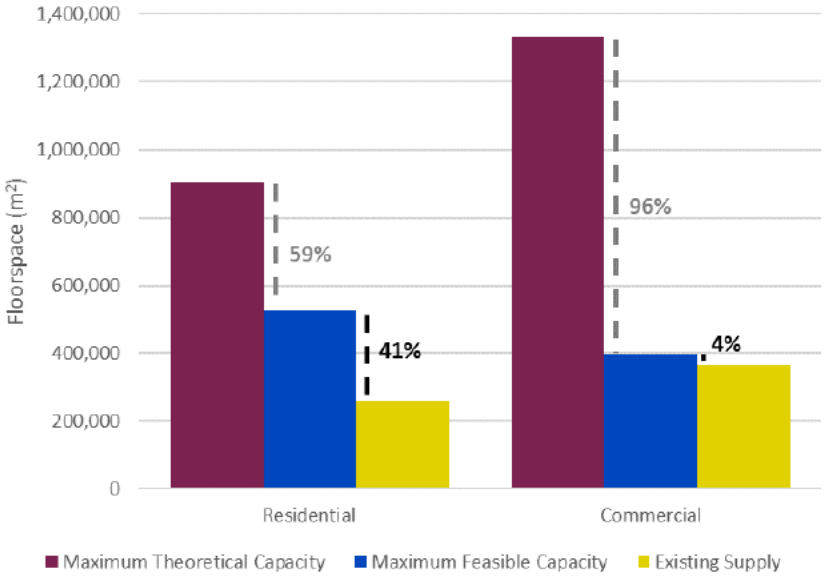
Source: SGS Economics and Planning, 2018

It should be noted that the maximum theoretical capacity produces results which have a dramatically higher yield of floorspace than that which has been assessed as being feasible for development. Only a small proportion of sites tested were identified as being feasible for redevelopment, being 36 per cent of unconstrained sites (or 20 per cent of total sites in the study area).

Figure 21 below displays a comparison between the maximum theoretical capacity and the maximum feasible capacity results. Please note that as two scenarios have been modelled within each assessment, the scenario which has the higher yield for that type of floorspace has been selected, as listed in the table immediately below the figure.

This indicates that the current planning controls within the study area permit a development capacity that is significantly greater than what is likely to be delivered under the current market conditions. This is particularly so for commercial floorspace, wherein only four per cent of the increase in floorspace yield under the maximum theoretical amount is found to be feasible. The 41 per cent achievable for residential floorspace, again indicates that the planning controls permit far more than what is practical for the study area.

FIGURE 21: COMPARISON OF MAXIMUM FEASIBLE CAPACITY AND MAXIMUM THEORETICAL CAPACITY



Land Use	Maximum Theoretical Capacity *(Scenario used in Figure 21 above)*	Maximum Feasible Capacity *(Scenario used in Figure 21 above)*
Residential	'Maximum Residential Capacity' scenario	'Maximum Capital Yield' scenario
Commercial	'Maximum Commercial Capacity' scenario	'Maximum Commercial Yield' scenario

Source: SGS Economics and Planning, 2018

3.3 Key findings and implications

The findings set out below pertain only to the modelling conducted in this section, which was used as an interim step to inform the development of this document and the Urban Design Framework, developed concurrently by Architectus and Andrew Burns Architecture.

There is substantial capacity for development within the study area based on the existing planning controls. However, the feasibility analysis has highlighted that only a small proportion of this capacity is feasible based on the current market, being 41 per cent of uplift for residential floorspace or four per cent of uplift for commercial floorspace.

The planning controls allow for a built form which is much greater than the current market is delivering. Given that the maximum theoretical capacity is determined overwhelmingly by the FSR control, the maximum building height controls are in excess of this level by another significant margin. Planning controls are not identified as a constraint on capacity as a result.

Under the maximum capital yield scenario (likely development outcome), a net loss of 45,000 sqm of commercial floorspace is observed. This is a significant issue as commercial floorspace is required to support the economic role of the Wollongong City Centre.

Commercial development is only marginally feasible, requiring cross subsidisation with residential development, as evidenced by the high proportion of floorspace found to be feasible in 'Position 8' (see Figure 20 above).

The net increase in commercial floorspace which could be attainable (34,000 sqm) under the maximum commercial yield scenario is limited and will be unable to meet forecast increases in demand over the medium term. Intervention is required to promote growth and highlights the need for potential incentives or levers to be considered that could address these feasibility constraints.

The significant increase in residential activity risks detracting from the character of the Wollongong City Centre as a business area, and by extension making it more difficult to attract commercial activity. Competition between commercial and residential development is considered to be an issue. Land values have potentially been inflated by the permissibility of residential development making straight commercial development unfeasible. These trends may warrant consideration of a commercial core zone in which residential development is prohibited or restricted.

4. FORECAST GROWTH

This section provides an overview of the projected growth in commercial, residential and retail in study area between 2016 and 2036.

4.1 Commercial floorspace

NSW TPA projections[8] have been used to identify the growth of employment within the study area, by ANZSIC 1-digit industry classification. Across the study area, there is projected to be demand for an additional 5,300 jobs between 2016 and 2036 (refer to Table 8).

Growth is projected in public administration, professional services, health and finance and insurance services. Action will be required to attract industries which have been declining locally such as professional services.

TABLE 8: EMPLOYMENT FORECASTS: STUDY AREA

Industry	2016	2021	2026	2031	2036	2016-36
Agriculture, Forestry and Fishing	8	7	7	7	7	-1
Mining	22	22	22	22	22	1
Manufacturing	182	157	138	126	121	-61
Electricity, Gas, Water and Waste Services	11	10	10	11	11	0
Construction	506	527	545	566	594	87
Wholesale Trade	128	130	126	122	120	-7
Retail Trade	2,285	2,378	2,416	2,483	2,548	262
Accommodation and Food Services	1,996	2,053	2,106	2,174	2,244	248
Transport, Postal and Warehousing	369	360	339	286	284	-84
Information Media and Telecommunications	529	545	549	555	553	24
Financial and Insurance Services	2,143	2,368	2,546	2,746	2,973	830
Rental, Hiring and Real Estate Services	572	610	639	667	698	126
Professional, Scientific and Technical Services	1,897	2,159	2,340	2,556	2,797	900
Administrative and Support Services	933	990	1,022	1,062	1,108	175
Public Administration and Safety	3,649	4,012	4,330	4,622	4,950	1,302
Education and Training	1,026	1,129	1,233	1,338	1,441	416
Health Care and Social Assistance	1,989	2,192	2,402	2,622	2,852	863
Arts and Recreation Services	285	315	343	373	404	119
Other Services	722	752	769	791	820	97
Total	**19,251**	**20,717**	**21,882**	**23,129**	**24,547**	**5,297**

Source: NSW Transport Performance and Analytics, 2016
Note: Travel Zones included in study area are 5643, 5646, 5647 and 5649

[8] Transport Performance and Analytics (2017), Transport for NSW, https://opendata.transport.nsw.gov.au/dataset/employment-projections

This employment was distributed across broad floorspace categories using the data collected during the land audit (conducted as part of the capacity assessment set out in Section 3). This was then converted into floorspace using typical job to floorspace ratios.

Based on this analysis, there is considered to be demand for an additional 120,000 sqm of commercial floorspace over the next 20 years.

The classification of commercial floorspace is based on the coarse land use categories collected through the land audit includes commercial floorspace within a range of building typologies such as offices above a retail shopfront as well as purpose-built, A-Grade office floorspace. There is likely to be demand for a range of floorspace at different price points.

4.2 Residential floorspace

Residential floorspace forecasts have been derived from demographic forecasting conducted by Forecast.id. According to population projections by Forecast.id, the population of study area will increase by 3,459 people by 2036 and this will drive demand for an additional 1,950 dwellings in the study area by 2036[9]. This equates to a household size of 1.8 persons per dwelling.

At an average dwelling size of 100 sqm per dwelling, there is considered to be demand for an additional 195,000 sqm of residential floorspace. This average dwelling size has been derived from consultation with property agents regarding the typical size of a two-bedroom apartment within the study area.

The forecast increase in demand for residential floorspace of 195,000 sqm may vary depending on the type and size of dwellings provided within new developments within the study area and does not take into account space within the building required to accommodate circulation, parking, common areas, or other such floorspace.

4.3 Retail floorspace

The Wollongong Retail Centres Study, prepared for council in 2004, provided forecasts for retail floorspace out to 2015. As this time period has now passed, this study is considered to be outdated. The most recent, and relevant, retail study was the Review of Illawarra Retail Centres, prepared by SGS for the NSW Department of Planning and Infrastructure in 2014.

The Review of Illawarra Retail Centres included retail modelling for all major centres within the Illawarra, including Wollongong, with forecasts extending to 2031 (refer to Figure 22).

The study forecast a demand for between 73,000 sqm and 98,000 sqm of retail floorspace in Wollongong by 2031. At the time of the study, there was 77,000 sqm of retail floorspace within the centre. The extension to GPT's Wollongong Central shopping mall provided an additional 18,000 sqm of retail floorspace, bringing the total retail floorspace to 95,000 sqm. Therefore, under a high scenario, there was considered to be a potential undersupply of retail floorspace of 3,000 sqm by 2031.

[9] An additional 1,950 dwellings is equivalent to 14 Oxford On Crown Wollongong developments (at 135 apartments each)

FIGURE 22: ILLAWARRA FLOORSPACE DEMAND ESTIMATIONS, 2031

Centre	Demand forecasted – 2031		Current plus planned floorspace	Level of over/under supply if high demand	Centre capacity
	Lower range	Higher range			
Albion Park*	28,000 m²	38,000 m²	37,000 m²	-1,000 m²	38,422 m²
Corrimal	26,000 m²	35,000 m²	28,000 m²	-7,000 m²	45,222 m²
Dapto	34,000 m²	46,000 m²	37,000 m²	-9,000 m²	526,480 m²
Fairy Meadow	34,000 m²	46,000 m²	35,000 m²	-11,000 m²	67,312 m²
Figtree	31,000 m²	41,000 m²	33,000 m²	-8,000 m²	2,047 m²
Gerringong	7,000 m²	9,000 m²	7,000 m²	-2,000 m²	112,028 m²
Helensburgh	7,000 m²	9,000 m²	7,000 m²	-2,000 m²	57,834 m²
Kemblawarra	57,000 m²	76,000 m²	58,000 m²	-18,000 m²	48,642 m²
Kiama	16,000 m²	22,000 m²	17,000 m²	-5,000 m²	231,552 m²
Nowra	53,000 m²	72,000 m²	57,000 m²	-15,000 m²	644,094 m²
Oaks Flat	6,000 m²	8,000 m²	6,000 m²	-2,000 m²	46,339 m²
Shellharbour City Centre	60,000 m²	81,000 m²	100,000 m²	19,000 m²	328,802 m²
Shellharbour Village	5,000 m²	6,000 m²	5,000 m²	-1,000 m²	47,866 m²
South Nowra	20,000 m²	27,000 m²	20,000 m²	-7,000 m²	113,412 m²
Thirroul	10,000 m²	14,000 m²	11,000 m²	-3,000 m²	55,173 m²
Ulladulla	36,000 m²	48,000 m²	38,000 m²	-10,000 m²	297,067 m²
Unanderra	15,000 m²	20,000 m²	16,000 m²	-4,000 m²	85,090 m²
Warilla Grove	23,000 m²	32,000 m²	25,000 m²	-7,000 m²	84,106 m²
Warrawong	51,000 m²	69,000 m²	56,000 m²	-13,000 m²	427,185 m²
Wollongong	73,000 m²	98,000 m²	95,000 m²	-3,000 m²	516,048 m²
Woonona	17,000 m²	23,000 m²	18,000 m²	-5,000 m²	88,823 m²
Total	609,000 m²	820,000 m²	722,000 m²	-114,000 m²	**3,863,044** m²

*Albion Park Rail (including its strips) and Central Business Park at Oak Flats have been added
Source: Cordell Connect, 2013; Shellharbour City Council, 2006; Shellharbour City Council, 2008; Shellharbour City Council, 2011; and Australand, 2013; and SGS Economics and Planning calculations

Source: SGS Economics and Planning, 2014

It is possible that the current retail system is in balance. This means future population growth in the catchment will drive demand for additional floorspace (all other things being equal). In lieu of an updated retail study, a high-level estimation of potential retail demand has been completed.

A retail catchment for Wollongong was estimated. For this catchment, the population forecast was extracted and use to estimate future demand based on current per capita provision of retail floorspace. Within the catchment, there is forecast to be an additional 6,000 residents. There is currently provision of three sqm of retail floorspace per person within this retail catchment. Based on this, there is potentially demand for an additional 18,000 sqm of retail floorspace over the next 20 years.

Therefore, there is forecast to be demand for an additional 3,000 to 18,000 sqm of retail floorspace within the study area over the next 20 years.

Retail forecasts are best produced through modelling that considers population and per capita expenditure change in the context of the local retail system. A retail study would consider demand by type of retail floorspace and identify whether current provision is suitable given the existing and future demand profile. It is recommended that an updated retail study be undertaken to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in floorspace.

4.4 Key findings and implications

Across the study area, there is projected to be demand for:

- An additional 120,000 sqm of commercial floorspace
- An additional 195,000 sqm of residential floorspace
- An additional 3,000 – 18,000 sqm of retail floorspace.

Table 9 below displays the forecast growth in demand in comparison to the two feasible capacity scenarios above, with a forecast gap in provision displayed for each scenario.

TABLE 9: FORECAST FLOORSPACE SUPPLY/DEMAND RELATIONSHIP (2036)

Land Use	Projected Demand	Change under Maximum Capital Yield Scenario	Gap *(Oversupply / Undersupply)*	Change Under Maximum Commercial Yield Scenario	Gap *(Oversupply / Undersupply)*
Residential	195,000 m²	265,000 m²	70,000 m²	213,000 m²	18,000 m²
Commercial	120,000 m²	- 45,000 m²	- 165,000 m²	34,000 m²	- 86,000 m²
Retail (high)	18,000 m²	83,000 m²	65,000 m²	83,000 m²	65,000 m²
Retail (low)	3,000 m²	83,000 m²	80,000 m²	83,000 m²	80,000 m²

Source: SGS Economics and Planning, 2018

Demand for commercial floorspace significantly exceeds feasible capacity (under the current market conditions). It is anticipated that feasible capacity will be equal to demand within the medium-term. Under the maximum commercial scenario, there is estimated to be a shortfall of 86,000 sqm of commercial floorspace by 2036. Under the maximum capital yield scenario, identified as the most likely outcome given its increased profitability, there is projected to be an undersupply of 165,000 sqm.

Both of these scenarios will likely result in increased commercial rents within the study area, and potentially displacement of jobs growth to other areas (e.g. Innovation Campus). This requires actions to improve feasibility in order for these base growth projections to be achieved.

Conversely, the feasible capacity for residential development is significantly higher than projected demand (under current market conditions). The profitability of residential development under current market conditions means that this is a likely outcome. This could potentially result in the 'crowding-out' of commercial uses, highlighting the potential need for a commercial core zone where residential development is restricted.

Identified retail demand is relatively low. There is potential for an oversupply of inadequate retail floorspace with the provision of ground-floor retail across the B3/B4 zones under the current active frontage policy. A retail study is required to more accurately estimate demand and supply across the local retail system.

5. DEVELOPMENT FEASIBILITY

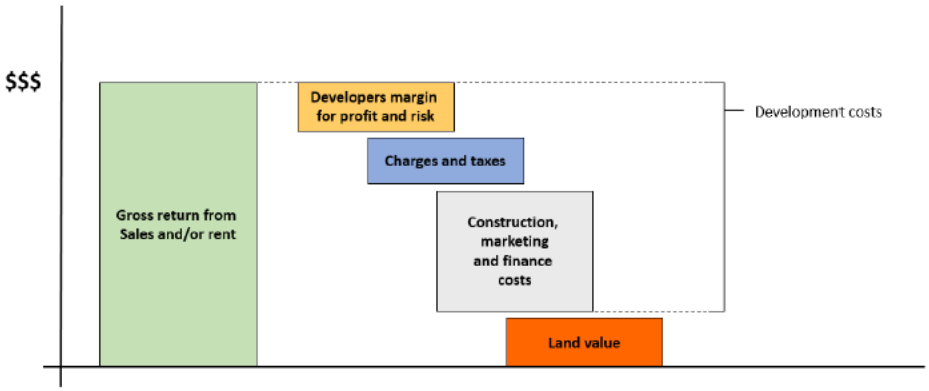
This section considers the feasibility of commercial and residential development in the study area under current market conditions.

5.1 Method

Development feasibility is typically assessed by comparing the residual land value (RLV) to the existing or next highest value for a site. The RLV can be thought of the maximum amount a rational developer would pay for a development site. RLV is estimated by deducting all development costs, including profit and risk, from anticipated revenues. The amount leftover from the equation – the residual – is capitalised into the value of the land. This is shown conceptually in Figure 1.

A hypothetical development is deemed feasible if the RLV is sufficient to entice the current landowner to sell their site for redevelopment. What is deemed 'sufficient' will vary from site to site and from land owner to land owner. The price that is acceptable is a function of the existing use value, market conditions and land seller motivation.

FIGURE 23: RESIDUAL LAND VALUE APPROACH TO VALUING LAND



Source: SGS Economics and Planning, 2018

A number of inputs are 'fed' into the feasibility testing process in order to 'model' the financial cash flows which underpin development's costs and revenues. The inputs and assumptions apply to each development. These assumptions have been included on page 56 in Appendix A: Capacity and feasibility technical method (Table 19 and Table 20). The same assumptions for costs and revenues have been utilised across both the feasible capacity analysis in Section 3.2 above and the site specific development feasibility analysis in this section, however the built form options on each site differ between the two analyses.

It should be noted that the assessment of development feasibility is based on current market conditions, and does not account for changes in the market in the future.

5.2 Site specific feasibility testing

Five sites were selected for detailed examination including built form and feasibility testing. These sites are described in Figure 24.

FIGURE 24: SITE LOCATIONS AND CHARACTERISTICS

	Site details			Council controls		Characteristics							Recommendations	
	Size (m²)	Frontage (m)	Current land use	Zoning	Height (m)	Ownership **	Heritage	Flood prone	Fronts open space	Laneway	Infill	DA activity **	Jan Gehl Precinct	Type ***
❶	3,828	40	Local retail centre and motel	B3 Comm Core	120	Private (strata)	✗	✗	✗	✗	✗	✗	Rail Arrival	Catalyst to rail entry
❷	12,482	188	Retail & commercial	B3 Comm Core	48, 60, 120	Private	✓	✗	✗	✗	✗	✓	Western Crown	Catalyst
❸	3,504	51	Vacant building	B3 Comm Core	16	Private	✓	✗	✓	✓	✗	✓	Crown S: Mall & McCabe Park	Catalyst
❹	2,022	36	Motel and retail	B3 Comm Core	32	Private	✓	✗	✗	✓	✓	✗	Lower Crown St	Typical
❺	2,029	20	Takeaway food premises	B4 Mixed Use	24	Private	✗	✗	✗	✗	✗	✗	Foreshore	Typical/ catalyst

Source: Architectus, 2018

The built form outcomes tested were developed to be compliant with the planning controls, aiming to achieve as close to the permissible heights and FSRs as possible.

Results of the feasibility testing is displayed in Table 10. The built form tested on each site is summarised along with the modelled RLV.

The feasibility ratio contained within the table (second row from the bottom) is utilised to determine whether a project is feasible, being the modelled RLV divided by the estimated acquisition cost of the land. A ratio of 1 or above indicates that the project is feasible, while a ratio below 1 indicates that the project is not feasible.

TABLE 10: SITE SPECIFIC FEASIBILITY TESTS AND RESULTS

Site No.	Site 1	Site 2	Site 3	Site 4	Site 5
Number of storeys	21	26	11	9	10
Office (GFA; sqm)	4,775	24,069	3,240	1,930	-
Retail (GFA; sqm)	4,775	10,450	3,240	1,930	200
Total Dwellings	251	476	142	82	36
1BR Dwellings	68	129	38	22	10
2BR Dwellings	145	276	82	48	21
3BR Dwellings	38	71	21	12	5
Parking Spaces	427	1,027	258	151	44
RLV	$2,922,000	-$29,327,000	$1,442,000	-$1,152,000	$2,265,000
Feasibility Ratio	0.10	-0.38	0.03	-0.19	1.26
Feasible?	No	No	No	No	Yes

Source: SGS Economics and Planning, 2018

The development outcomes tested across sites 1 to 4 are not feasible, however the outcome tested on site 5 is feasible. Sites 2 and 4 both produce a negative RLV, indicating that the development would be making a loss without the direct costs associated with the purchase of land being considered. Sites 1 and 3 produce a positive RLV but are not feasible, which indicates that while the development would return a profit, this amount would not be enough to cover the estimated acquisition costs of the land.

In order for the options tested above to become feasible, shifts within market conditions are required (for example an increase in market rents or sales values). Should such circumstances arise, the costs of land acquisition may present a barrier to the development of these sites, given that the estimated costs are particularly high for sites within the study area, particularly those which host well tenanted buildings.

There is also potential that highly permissive planning controls are artificially inflating the sales price of various items of land, via the perception that yields would be able to be realised (despite development to the full level of the controls being unfeasible on the vast majority of sites). This highlights the potential need for a commercial core to prevent speculation.

5.3 Commercial built form options

Significant demand in commercial floorspace is projected for study area. However, the commercial development options tested above are considered to be unfeasible under the current market conditions.

Architectus has prepared a number of alternative built form options that more closely reflect the vision for the study area. The feasibility of these options has been tested to understand the potential levers or actions that could be introduced to promote a built form that is aligned with the vision.

Three commercial built forms have been tested, having been developed as hypothetical scenarios without reference to the current planning controls:

- Option 1: 6,885 sqm GFA (six storeys with 850 sqm floorplate)
- Option 2: 8,339 sqm GFA (six storeys with 1,085 sqm floorplate)
- Option 3: 5,292 sqm GFA (eight storeys – six storey street wall and two storey setback - with 1,011 sqm and 906 sqm floorplates).

The development outcomes and feasibility results are detailed in Table 11. All three commercial development options are not feasible under the current market conditions. This is expected as there is no residential development incorporated within these options to subsidise the commercial floorspace.

TABLE 11: COMMERCIAL BUILT FORM FEASIBILITY TESTS AND RESULTS

Built form option:	Option 1	Option 2	Option 3
Number of storeys	6	8	6
Office (GFA; sqm)	6,885	8,339	5,292
Retail (GFA; sqm)	-	-	-
Total Dwellings	-	-	-
Parking Spaces	115	139	88
RLV	-$7,121,000	-$8,557,000	-$5,593,000
Feasibility Ratio	-0.58	-0.65	-0.46
Feasible?	No	No	No

Source: SGS Economics and Planning, 2018

5.4 Sensitivity testing

A number of sensitivity tests have been conducted to test feasible outcomes by altering development parameters. Sensitivity tests assist in identifying potential threshold sales prices or yields for feasible development and provide an indication of the market conditions required for development feasibility. It also helps to identify any Council actions that could be introduced to simulate development feasibility.

The following inputs into the feasibility model can be altered:

- Development parameters (i.e. the amount of floorspace and land uses)
- Parking requirements and costs
- Land acquisition costs
- Construction contingency
- Professional fees
- Development contributions
- DA fees
- Finance costs
- Developer profit
- Sales revenue/rents
- Sales commission, marketing and legal fees

However, it is important that adequate justification or evidence is provided for altering these inputs. Nine sensitivity tests have been conducted for each of the new commercial built form options (refer to Table 12). The tests were identified based on what can be influenced or altered by Council and justification has been provided. It is recognised that Council does not require parking to be underground but under the Development Control Plan encourages it to be provided underground where feasible.

Changes in land value were not tested. Changes in land cost do not change the RLV of a project. However, they can change the feasibility ratio if the project has a positive RLV. Since none of the projects have a positive RLV, this was not included as a specific sensitivity test. In addition, if a development had a positive RLV, this would represent the value of the land.

These sensitivity tests do not take account of any reduction in the market value of a property due to a reduced provision of on-site parking. Such a reduction could decrease the value of a property, and the quantification of these impacts would require further study before they can be included. The tests are also limited in that they do not consider design implications or costs, e.g. including parking within the podium levels of a building.

TABLE 12: SENSITIVITY TEST DESCRIPTIONS

	Test	Description	Justification
1	Development contributions	▪ A reduction in the Section 7.12 (formerly 94A) development contributions levy to 1%, down from the current 2%.	▪ Council sets development contribution rates
2	Developer profit	▪ A reduction in the developer's profit margin to 15% (down from 20%) to simulate lower risk associated with a project (through support from council through the DA process).	▪ Council can influence and alter the DA process which could impact risk
3	Car parking	▪ 50% reduction in parking on-site, with a contribution of $25,000 made per space (for provision of public parking off-site).	▪ Council can alter parking requirements for development and contributions
4	Car parking	▪ 50% reduction in parking on-site, with no contribution made.	▪ Council can alter parking requirements for development
5	Car parking	▪ Parking provided at the cost of multi-storey car park (as a proximate measure for parking within the podium of a development).	▪ Council can alter parking requirements for development
6	Car parking	▪ 50% reduction in parking on-site, with a contribution of $25,000 made per space (for provision of public parking off-site). ▪ Parking provided at the cost of multi-storey car park (as a proximate measure for parking within the podium of a development).	▪ Council can alter parking requirements for development and contributions
7	Car parking	▪ 50% reduction in parking on-site, with no contribution made. ▪ Parking provided at the cost of multi-storey car park (as a proximate measure for parking within the podium of a development).	▪ Council can alter parking requirements for development
8	Car parking and reduction in profit	▪ 50% reduction in parking on-site, with no contribution made. ▪ Parking provided at the cost of multi-storey car park (as a proximate measure for parking within the podium of a development). ▪ A reduction in the developer's profit margin to 15% (down from 20%) to simulate lower risk associated with a project (through support from council through the DA process).	▪ Council can alter parking requirements for development ▪ Council can influence and alter the DA process which could impact risk
9	Construction costs	▪ Required reduction in base construction costs to achieve feasibility.	▪ This is out of the control of Council. This was tested to understand the extent to which construction costs are impacting feasibility

Source: SGS Economics and Planning, 2018

The results of the sensitivity testing across the three commercial options is detailed in Table 13. The results include the feasibility ratio, the RLV and the proportional increase in net rents that would be required to achieve a feasible development (for sensitivity test 9 the required decrease in base construction costs is displayed).

TABLE 13: COMMERCIAL BUILT FORM OPTIONS SENSITIVITY TESTS AND RESULTS

Test	Option 1			Option 2			Option 3		
	Feasibility Ratio	RLV ($'000s)	Req'd. value ↑	Feasibility Ratio	RLV ($'000s)	Req'd. value ↑	Feasibility Ratio	RLV ($'000s)	Req'd. value ↑
Base	-0.58	-$7,121	75%	-0.65	-$8,557	69%	-0.46	-$5,593	90%
1	-0.56	-$6,797	73%	-0.62	-$8,165	68%	-0.44	-$5,343	88%
2	-0.49	-$5,991	67%	-0.55	-$7,189	62%	-0.39	-$4,725	81%
3	-0.29	-$3,513	61%	-0.32	-$4,187	56^	-0.23	-$2,820	76%
4	-0.20	-$2,385	56%	-0.21	-$2,821	51%	-0.16	-$1,953	71%
5	-0.17	-$2,117	55%	-0.19	-$2,495	50%	-0.14	-$1,747	70%
6	-0.08	-$1,011	51%	-0.09	-$1,156	46%	-0.07	-$897	66%
7	0.01	$117	47%	0.02	$210	41%	0.00	-$30	61%
8	0.10	$1,246	41%	0.12	$1,578	35%	0.07	$838	55%
Test	Feasibility Ratio	RLV ($'000s)	Req'd cost decr.	Feasibility Ratio	RLV ($'000s)	Req'd cost decr.	Feasibility Ratio	RLV ($'000s)	Req'd cost decr.
9	1.00	$12,240	58%	1.00	$13,214	54%	1.00	$12,220	70%

Source: SGS Economics and Planning, 2018

A reduction in the development contributions levy does not exert a significant impact on development feasibility, given that it comprises a relatively small portion of development costs.

Reducing the profit margin for developers only has a moderate impact on development feasibility. This would represent a reduction in risk for the developer and would need to be facilitated by changes to the DA process to reduce the risk. The extent to which changes to the DA process are likely to reduce risk should be tested with developers.

Of the sensitivity tests conducted, changes to parking provision had the most significant impact development feasibility. Reductions in the total amount provided substantial improvements, whether a contribution was levied to provide public parking or not.

None of the levers tested result in a feasible outcome in isolation of each other. These results demonstrate that the development of any substantial commercial floorspace will likely require a combination of various actions by Council to increase development feasibility in conjunction with realisable commercial rents increasing over time. This will be further discussed in Section 6 of this report.

5.5 Key findings and implications

The site specific feasibility testing has echoed the results of the precinct scale feasibility assessment. Development which contains a low amount of (or no) commercial floorspace are feasible.

The delivery of commercial floorspace requires significant cross-subsidisation with residential development, and the amount of commercial floorspace which can be feasibly delivered on sites under current conditions is likely to be small.

The increased construction costs associated with taller buildings significantly decreases the feasibility of all types of development. The higher returns realisable on residential floorspace allow for a greater tolerance to these cost increases, however over twenty storeys this dramatically impacts on the ability to generate a profit. As noted within the capacity assessment, planning capacity is not a barrier to development.

Estimated current land acquisition costs present a significant constraint on a range of sites and can be prohibitive for redevelopment, particularly in high value areas of the study area, and/or where the current use of land is valuable. However, commercial development without residential is considered to be unfeasible even before land acquisition costs are taken into consideration.

Council's influence extends to planning controls, car parking requirements, development contributions and the planning process, as well as providing certainty for the market through clear policy and planning controls. Of these only a small number can be tested quantitatively.

The high construction costs associated with basement carparking inhibits the feasibility of development across all sites. While adjustments to the provision of parking within a development can exert a significant impact on its feasibility, any actions would require careful consideration of broader implications for transport, built form and property values.

Reducing the allowance for developers' profit and risk has a moderate impact on development feasibility. This would need to be facilitated by changes to the DA process to reduce the risk. The extent to which changes to the DA process are likely to reduce risk should be tested with developers.

A reduction in the development contributions levy provides a marginal increase to development feasibility. However, such a reduction would reduce the revenues available to Council.

None of the potential levers tested result in a feasible outcome in isolation of each other. The development of any substantial commercial floorspace in the study area will likely require a combination of various actions by Council to increase development feasibility in conjunction with realisable commercial rents increasing over time, which is likely if the supply-side tightens and the City Centre maintains a strong competitive position relative to other competing locations.

6. RECOMMENDATIONS

This section of the report discusses the potential actions available to Council to address barriers to the development of commercial feasibility and provides recommendations for Council to implement.

6.1 Introduction

Wollongong City Centre is the civic and economic heart of the Illawarra region. Wollongong City Centre specialises in population serving industries such as accommodation and food services, in health and education and in professional services. Proximity to Sydney provides opportunities for residents and potential connections for local businesses. However, there is significant job leakage with residents commuting to Sydney for work. Without a strong commercial market, this is expected to continue.

The feasibility of commercial development is a significant barrier for Wollongong City Centre to realise its full economic potential as the regional city for the Illawarra Region. There are a number of potential actions that could be introduced to address this issue. The objective of implementing any actions is to:

- promote commercial development in the City Centre in line with the vision
- support economic potential of the City Centre
- address feasibility issues.

Feasibility can be improved through either improving (or increasing) the market for commercial development or reducing the cost of development. The potential actions available to Council are focused on improving commercial feasibility as this is considered to be the main barrier.

The discussion below has been informed by the analysis undertaken throughout this study and stakeholder workshops with Council officers. The impact of these actions has been quantified, where possible, through testing against the feasibility results for the three commercial built form options tested in Section 5.3 of this report.

6.2 Actions to improve the market position of the Wollongong City Centre

Across all sensitivity tests detailed in Section 5.3, an increase in the market value of commercial development is required to increase feasibility of commercial development (with no change other costs). The increases required range from 35 per cent to 90 per cent increase depending on the level of change in development costs. Across all sensitivity tests, an increase in rental/ sales values is required highlighting the importance of the actions discussed below to support this.

Develop a clear economic vision for Wollongong City Centre, building on the strengths of the region and its proximity to other economic anchors.

The vision for Wollongong City Centre under *A City for People* is for a compact city, which is connected and efficient. There is envisaged to be a seamless transition from the core of the city to the foreshore. A range of uses are expected to be accommodated in the City Centre to deliver vibrant streets during the day and at night, and to provide opportunities to live, work, learn and play. The City Centre will be accessible and pedestrian friendly.

The vision has a focus on urban design and liveability. This should be complemented by a clear economic vision which identifies the role of the Wollongong City Centre in the context of the other economic anchors and identifies key industries that Council wants to attract.

The current EDS provides a broad economic vision for the LGA and the City Centre. Building on this, the market position of the CBD and targets for industry attraction should be detailed further as part of further work on Wollongong's Economic Development Strategy. This strategy be supported by a strong evidence base which includes assessment of local value chains, gaps and opportunities for the City Centre given the dynamics of the local and regional economies, and a sound understanding of issues faced by current and prospective City Centres tenants and developers.

The Economic Development Strategy will underpin a strong 'economic vision' for the City Centre. This will provide a clear signal to the market of Council's intentions and give confidence to potential investors who value clear and consistent policy. It will also elevate the economic importance of the Wollongong City Centre. This vision should be translated into an action plan.

Recommendation 1:
Develop an economic vision for the Wollongong City Centre through the economic development strategy update.

It is important that the vision is realistic and capable of delivery.

A pathway should be established which identifies what needs to be achieved in the short to medium term in order to achieve the long term vision. This may include short to medium term goals or targets and may involve the staging of development.

The vision must be somewhat flexible as the economy evolves. For example, the industries of growth may change and there may be new industries which could be accommodated within the precinct which may not be reflected in the original vision

Improve connections between University of Wollongong and Innovation Campus, Wollongong Hospital and health precinct and local residential centres.

Improving physical connections is an overarching theme across a number of the key success factors for regional centres. Improving connections will influence the attractiveness of key employment locations for businesses and local workers, and support supply chain links.

The Urban Design Framework contains a recommendation 'Get the city streets right', which is focused on improving connections from rail to city core to coast prioritising pedestrians and active transport with a high quality public domain.

Improving connections between the economic anchors, being Wollongong City Centre, University of Wollongong and the Innovation Campus and Wollongong Hospital and health precinct will build a network of employment centres. This will also improve business to business connections (supply chain links). Improving connections between the City Centre and residential centres will be important in ensuring that the City Centre is an attractive location for workers but also to promote 24/7 activation.

It is important to recognise that Council's ability to influence any significant investment in rail infrastructure is limited to advocating on behalf of its residents. Council has a much greater influence over bus and bicycle infrastructure. There has already been significant investment in improving bus and bicycle connectivity between the Wollongong Innovation Campus and the City Centre.

Council and University of Wollongong are responsible for funding the Wollongong Shuttle (free bus). Opportunities to expand the route into South Wollongong are being investigated including the potential for an additional route. Council has advised that a new route should incorporate three sites proposed for park and ride development adjacent to the City Centre.

In terms of bicycle access, there is good connectivity via shared paths across Wollongong, however these do not link through the City Centre. The bicycle lane program is now focused on connecting these areas using separated cycleways. It is understood that Council are lobbying state government for funding at this time.

Recommendation 2:
Continue to implement the bike lane program and investigate opportunities to expand the Wollongong Shuttle network.

Invest in public domain and local infrastructure to improve amenity.

Investment in public domain and local infrastructure will improve amenity and attract residents, workers and visitors. It also provides a signal to the market and could increase sales prices/rents. A substantial increase in the market value of development is required and it is considered to be achievable in the long term with investment from Council.

Council has undertaken significant investment in public domain and local infrastructure over the last five years including streetscape improvements and upgrades to Crown Street Mall. Other recent projects include:

- Additional wayfinding improvements and public art
- Wollongong Harbour draft master plan
- WIN Stadium and Entertainment Centre master plan
- Urban Greening Strategy.

It is important to maintain ongoing investment to promote future investment in the City Centre. Areas which have been identified through consultation with Council officers to be lacking investment include MacCabe Park, access to Wollongong railway station and the foreshore along City Beach. Access to Wollongong railway station is particularly important for improving the attractiveness of Wollongong City Centre for commercial tenants. Wollongong railway station is owned and run by NSW Government and Council will need to advocate for improvements.

The Urban Design Framework should form the basis for future investment in public domain. The Urban Design Framework contains recommendations to 'Get the city streets right' and 'Balance growth with green in the city'. These include protecting solar access and vies to and from key streets and public spaces and prioritising key public domain projects and new open space.

Recommendation 3:
Continue to implement existing public domain investment projects which increase the amenity of Wollongong City Centre.

Recommendation 4:
Advocate for improvements to Wollongong railway station to improve physical connectivity between the railway station and commercial core.

A greater understanding of what is most highly valued by existing industry and industry targets in terms of public domain improvements should be identified through the economic development strategy update. Ideally this would put a dollar value on various classes of public domain improvements. Improvements which are considered to have the greatest value to prospective industry targets should then be prioritised.

Recommendation 5:
Undertake an assessment of the value that existing industry and industry targets place on public domain improvements and use these to prioritise investment.

To increase funding for public domain improvements, Council could consider alternative development contribution mechanisms. This includes reverting to Section 7.11 contribution rates as this would likely generate greater income per development. However, this will require a clear nexus between the new development and the infrastructure that it will fund.

Voluntary Planning Agreements (VPAs) are an alternative funding mechanism. Council officers have noted that there appears to be a lack of interest from developers to enter into VPAs. This was identified as probably occurring as a result from:

- A lack of clarity within the VPA process, in regard to questions around what the money will fund, precise amount required to pay, or how long it will take to deliver the services paid for; and
- Circumstances wherein the 'offer' under a VPA simply does not stack up, wherein additional capital costs of works-in-kind exceed the savings in development contributions, or where the additional monetary contributions do exceed the value of reduced capital costs.

A priority is ensuring that there is adequate funding available for investment in public domain and infrastructure to improve the amenity of the study area.

Recommendation 6:
Investigate alternative development contribution rates or mechanisms to fund future public domain investment in the Wollongong City Centre.

Introduce alternative planning controls to promote development activity.

Planning controls, including land use zoning, density and height controls, provide a clear indication to landowners on the use of their land. Planning controls influence land prices. A landowner will pay a base price for land which they calculate by taking account of all construction costs, development costs and risk. This will be based on what use and density is permissible.

This section considers the potential impact of altering the land use zoning and density and height controls on development feasibility.

Permissibility of residential development in commercial zones

Shop-top housing was introduced into the B3 Commercial core zone in the Wollongong City Centre to increase the vitality and safety of the city centre. However, allowing residential development in Wollongong City Centre has potentially driven up land values through speculation and in the process this has reduced the feasibility of commercial development.

The competition between residential and commercial land uses is a recurrent theme across a number of centres in the Sydney GMR including North Sydney, Parramatta, Gosford, Newcastle and Penrith. Planning to promote commercial development is a long term task. Where there is intense short term pressure for residential development and this is allowed in commercial areas, it has tended to 'squeeze' out commercial potential. In centres with scarce opportunities for commercial development, allowing a simple market contest between residential and office will result in residential 'winning', which may undermine long term employment potential and economic competitiveness.

Previous work undertaken by SGS[10] for major employment centres such as Chatswood and North Sydney has identified that the introduction of residential or mixed use development in the commercial core has compromised the commercial character of the centre. Chatswood CBD is now seen as more of a retail centre that than a commercial centre. The commercial prospects are limited due to the impact of substantial residential development on the amenity and outlook and therefore commercial address of Chatswood. North Sydney is facing similar challenges with residential development encroaching on commercial uses. These centres now suffer from a lack of capacity to accommodate commercial investment. The planning response in Chatswood has been to hold the line and protect the commercial core from further residential encroachment.

Taking a structural and long term view, it is too important to allow short-term imperatives driven by market cycles to undermine the economic potential of Wollongong City Centre.

The challenges of ensuring that sites in Wollongong City Centre provide for longer term employment outcomes, and a critical mass for commercial or office employment activity, while allowing for market responsive outcomes remain. Configuring planning controls and implementing a long term economic development strategy are key to managing this issue.

The historical approach has been to establish commercial only (or non-residential employment) zones to ensure an employment outcome, which may lead to the underutilisation of land in the short term, but ultimately focuses sustainable economic development.

Workshop discussions with Council officers highlighted that prospective commercial tenants prefer a commercial only zone as it indicates a much clearer commercial address and brand for their business. This reiterates the findings from similar studies of Chatswood and North Sydney. In addition, commercial only developments avoid the complexity associated with residential strata. However, this approach should be tested with the market.

Two approaches to reducing the amount of residential development within the commercial core are:

- **Exclude residential development within a portion of the B3 Commercial Core zone.** Given the long term aspirations which Council has for the Wollongong City Centre, it will be important not to lose this land to residential development. There is also likely to be sufficient capacity for residential development across the rest of Wollongong, and more broadly Wollongong LGA. This would provide a clear commercial address which will increase the market for commercial development. It will also likely place downward pressure on land values which will increase the feasibility of development.

- **Restrict residential development within a portion of the B3 Commercial Core Zone** with a requirement that a threshold amount of non-residential floorspace be achieved before residential development can be included in the development proposition. For example this could involve a requirement that a minimum of 10,000 square metres of commercial floorspace to be provided before residential development can be included. This would also require a maximum control on residential floorspace, for example 10-20 per cent.

There is potential for a third approach which allows for a transition to commercial only over the long term. A transition area would allow for temporary uses to be accommodated in the short to medium term (an example being student housing), on the condition that these sites eventually become commercial only sites in the long term in response to the ongoing evolution of the commercial market. This approach would potentially allow for flexibility in responding to an aspirational growth strategy in the long term.

There are a number of clear arguments for excluding residential development within the commercial core which are outlined in Table 14. This action is considered to be politically

[10] Willoughby Economic Development Strategy (2016), North Sydney Economic Development Strategy (2016)

sensitive and it is important that the risks are well understood and tested before being implemented.

TABLE 14: ARGUMENTS FOR AND AGAINST EXCLUDING RESIDENTIAL IN COMMERCIAL CORE

For	Against
▪ The identification of a commercial core reflects the role of the Wollongong City Centre and provides a clear signal to the market. ▪ Provides a clear commercial address which will increase market for commercial development ▪ Provide policy consistency ▪ Provides certainty to developers around controls ▪ Puts downward pressure on land values which may increase feasibility of development ▪ Ensures there is adequate land to accommodate growth in employment in the long term and provide for changes in the market	▪ Political sensitivities around 'downzoning' land ▪ Sites identified as commercial only may sit vacant with limited development in the short to medium term.

Source: SGS Economics and Planning, 2018

Recommendation 7:
Introduce a commercial core where residential development is prohibited.

The condensed commercial core should be located:

- in proximity to Wollongong railway station to ensure accessibility to public transport
- in proximity to Crown Street Mall to ensure accessibility to retail, hospitality and other services for workers
- proximity to public open space e.g. MacCabe Park and/or waterfront.

The commercial core will need to be sufficient to accommodate up to 120,000 sqm of floorspace but allow sufficient flexibility depending on the market.

Sites which have been recently developed for residential purposes should be excluded as these sites are unlikely to be redeveloped.

The Urban Design Framework contains a recommendation 'Preserve employment land with a commercial only core', which protects a corridor along Burelli Street for commercial only development. This is consistent with the above recommendation.

Density and height controls

Heights have been found to be excessive in certain locations within the study, being disconnected from what is either practical/feasible to build or that which is in line with the vision for the city centre. This is likely increasing land values through property speculation.

Increasing height/FSR is likely to only have an impact on residential feasibility. It is important to consider the vision and the desired built form outcomes for the City Centre.

Council should consider adopting density and height controls which reflect the vision and built form objectives of the Wollongong City Centre.

6.3 Actions to reduce the cost of development

Explore alternative car parking arrangements to reduce the cost of construction.

Car parking adds significant costs to construction. As outlined in Section 5.3 of this report, reducing the requirements for car parking can significantly improve feasibility. A 50 per cent reduction in parking rates will increase development feasibility. Through consultation with

Council officers, parking requirements were noted as being broadly in line with other metropolitan and peri-urban centres.

Providing above ground podium parking similarly improves development feasibility. It was noted through consultation with Council officers that parking is often provided above ground, within the podium of a development, rather than in underground basement levels.

However, reducing parking alone does not result in a site becoming feasible and it is important to consider the impact that reducing car parking would have on the market value of development. While theoretical feasibility has been tested, the market appetite for reducing car parking provision has not.

Recommendation 8:
Market test a reduced on-site car parking rate with developers and prospective commercial tenants to understand market for this and potential impact on rents.

There may be opportunities for car parking to be provided off-site. Council has advised that five sites have been identified around the City Centre for the future provision of multi-storey car parks, which are to be largely funded through developer contributions made in-lieu of parking provision. However, this contribution has rarely been taken up by developers. This may be resultant from the cost of contributions being comparable to the cost of constructing the parking spaces on-site, in conjunction with the reduction in value that would result from providing a product without parking. The feasibility of Council delivering off-site parking at targeted sites should be further investigated including the contribution rate. This should be supported by market testing through the economic development strategy update.

Another consideration is traffic impacts. Consultation with Council officers revealed that several sites within the Wollongong City Centre are significantly constrained by level of existing traffic. It was suggested that a reduction in parking provision on these sites could potentially provide benefits to both traffic flows and development feasibility under the right circumstances.

Recommendation 9:
Test feasibility of developing multi-storey car park against the contribution rate for offsite provision of parking for development.

Alternative development contribution rates to reduce costs of construction.

Reducing development contributions has very little impact on feasibility. This revenue for Council can be used for important public works which would likely increase the realisable development values.

The current two per cent development contribution levy imposed for B3 Zones in the Wollongong City Centre was introduced as part of the Civic Improvement Strategy for the City Centre. The time period for the higher levy has now passed. It is possible that the levy may be reduced back down to the standard one per cent in order to incentivise development.

However, it is important to consider that development contributions have not been identified as a barrier to development through this study and reducing the contribution will have a marginal improvement on development feasibility. In addition, any reduction in the levy will reduce the amount of funds available for Council to invest in public domain to improve the market for commercial development.

De-risk development for landowners through providing greater certainty around the development process

Investing in a site which may be marginally feasible is a significant risk for landowners. If there is a lack of certainty regarding the outcome of a development, this may deter a landowner from undertaking development, particularly commercial floorspace which is considered to be largely unfeasible.

Council officers noted that negative impacts on the development process often occur through a lack of engagement by proponents with council expectations, particularly at early stages of development. This often results in delays during the assessment process, particularly relating to the design of the development.

Council consultation with developers/investors has identified that developers consider that Council could improve the development process through:

- Establishing a major projects team
- Providing greater recognition for and understanding of site specific issues (e.g. site by site variance in bedrock/geotechnical issues).
- Providing more clarity within their controls
- Improving the speed of decisions.

While the length of assessment was identified as a concern for developers (given the holding and finance costs associated with such a period), it was noted that a certain amount of time is required to fully undertake the assessment process. Concerns with Council taking too long to assess applications was also complicated by the fact that a range of developments within the City Centre require referral to a range of assessment panels.

As detailed in Section 5.3, reducing the profit margin for developers has a moderate impact on development feasibility. This would represent a reduction in risk for the developer and would need to be facilitated by changes to the DA process to reduce the risk. The effectiveness of this is unknown and there is a need for better engagement with developers to understand the financial implications of these delays.

Clearer planning controls may also assist in providing greater certainty to developers and reducing risks. The Urban Design Framework contains recommendations 'Promote diversity in the city' and 'Grow a legible skyline' which aim to provide greater clarity regarding planning controls.

Recommendation 10:
Reduce risk for developers and increase certainty for development by providing clearer guidance to commercial landowners and developers across key sites within the commercial core of the City Centre. This includes a consistent process, speed of response and clearer planning controls.

6.4 Other actions

Undertake a retail centres study

As identified above, the Wollongong Retail Centres Study, prepared for council in 2004 is now outdated (refer to Section 4.3). Retail forecasts are best produced through modelling that considers population and per capita expenditure change in the context of the local retail system. A retail study would consider demand by type of retail floorspace and identify whether current provision is suitable given the existing and future demand profile. It is recommended that an updated retail study be undertaken to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in floorspace. This work could form part of an LGA-wide employment lands study.

This retail study should be undertaken prior to introducing alternative controls relating to retail floorspace within the City Centre.

Recommendation 11:
Undertake an updated LGA-wide retail centres study to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in retail floorspace.

6.5 Recommendations

This study has identified 11 recommendations for Council to implement to increase the feasibility of commercial development in Wollongong City Centre.

1. Develop an economic vision for the Wollongong City Centre through the economic development strategy update.
2. Continue to implement the bike lane program and investigate opportunities to expand the Wollongong Shuttle network.
3. Continue to implement existing public domain investment projects which increase the amenity of the Wollongong City Centre.
4. Advocate for improvements to Wollongong railway station to improve physical connectivity between the railway station and commercial core.
5. Undertake an assessment of the value that existing industry and industry targets place on public domain improvements and use these to prioritise investment.
6. Investigate alternative development contribution rates or mechanisms to fund future public domain investment in the Wollongong City Centre.
7. Introduce a commercial core where residential development is prohibited in close proximity to Wollongong railway station, Crown Street Mall and public open space.
8. Market test a reduced on-site car parking rate with developers and prospective commercial tenants to understand market for this and potential impact on rents.
9. Test feasibility of developing multi-storey car park against the contribution rate for offsite provision of parking for development.
10. Reduce risk for developers and increase certainty for development by providing clearer guidance to commercial landowners and developers across key sites within the commercial core of the City Centre. This includes a consistent process, speed of response and clearer planning controls.
11. Undertake an updated LGA-wide retail centres study to provide a more accurate estimation of retail demand and better inform recommendations of potential growth in retail floorspace.

These recommendations (or actions) are important to promote commercial development in line with the economic vision of Wollongong City Centre and its roles as a regional city for the Illawarra. No single action will be able to increase commercial feasibility and therefore it is important that this suite of actions is implemented.

These actions recognise the substantial investment Council has made in the Wollongong City Centre to date and the importance of continuing these programmes. A number of these recommendations (or actions) are well-aligned with the upcoming economic development strategy update and should be implemented as part of this process. The Wollongong City Centre does not operate in isolation, and the outcomes of the future LGA-wide economic development and employment lands studies may require the review of these actions in the future to ensure that these are aligned.

The most significant action will be the introduction of a commercial core where residential development is prohibited. This is a long term strategy and there are a number of risks associated with this. The commercial only area should be large enough to be coherent but also align with the demand to ensure it is not at risk of being stagnant. The commercial core will need to be sufficient to accommodate up to 120,000 sqm of floorspace but allow

sufficient flexibility depending on the market. A transition area could be established which keeps the long term intention of greater commercial focus without jeopardising activity in the core in the interim, this includes allowing temporary uses in the short to medium term. This strategy is considered to be crucial to ensuring the long term economic success of the City Centre and ensuring that there is capacity for a significant commercial function.

APPENDIX A: CAPACITY AND FEASIBILITY TECHNICAL METHOD

This appendix provides technical detail on the approach, method and assumptions used to determine capacity within the study area. The results of these analyses are included and discussed above in Section 3 above, and as such have been omitted from this section.

Existing Floorspace

Step 1 – Collect existing floorspace data

The floorspace within buildings in the study area was obtained through a desktop audit conducted by SGS. Building footprints and heights in storeys were provided by Wollongong council, and utilised to derive the total floorspace within individual buildings.

The audit captured floorspace of buildings within the study area, using imagery available on Google Streetview to determine the type of floorspace based on the current use and building typology, organised into ten broad categories:

- Detached dwellings
- Multi-dwelling housing (includes townhouses, villas, etc.)
- Units (includes residential flat buildings and shop top housing)
- Commercial
- Retail
- Hotels/Motels
- Infrastructure
- Light industrial
- Community uses
- Unidentifiable uses

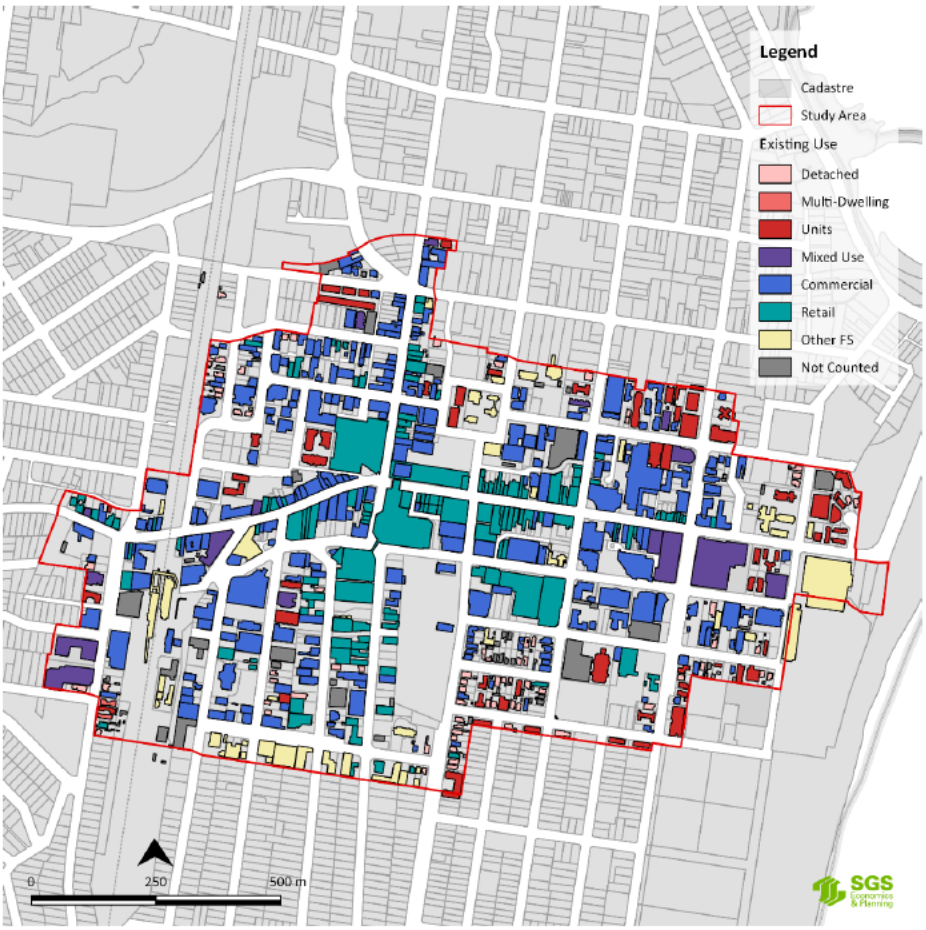
The quantum of floorspace was then utilised within the maximum theoretical and feasible capacity analyses as outlined below. The land audit boundary and results are illustrated in Figure 25.

Maximum theoretical capacity

Step 2 – Land parcels (sites) and attributes

The initial step in the process was to derive a base unit of land (the land parcel, or site) to be utilised in the analysis, along with collecting relevant attributes for the assessment. The cadastre layer within the study area was utilised, with individual lots being merged with other contiguous lots which were listed as having the same owner to create the base layer of land parcels used in the assessment. The length of the longest street frontage for each lot was determined and utilised as an input to calculate the maximum FSR for each site as per cl.4.4A of the Wollongong LEP (WLEP) 2009. Spatial layers for the various attributes for the analysis were then overlaid on the land parcels layer to determine to what extent they intersect with one another. These are outlined in Table 15.

FIGURE 25: LAND AUDIT BOUNDARY AND RESULTS



Source: SGS Economics and Planning, 2018

TABLE 15: DATA SOURCES AND NOTES - LAND PARCELS AND ATTRIBUTES

Item	Source	Notes
Land parcels	Wollongong Council	Based on cadastre layer; Merged contiguous lots under single ownership
Land zoning	Wollongong Council	Zone with highest proportion of area utilised for land parcel
Max FSR	WLEP 2009	Maximum FSR control is taken as per cl.4.4A of the WLEP 2009
Max height	Wollongong Council	Maximum height taken as area-weighted average where multiple height controls exist on a single parcel
Environmental heritage	Wollongong Council	Greater than 5% coverage by all environmental heritage items or areas
Flood risk	Wollongong Council	Greater than 10% coverage at all risk levels; Highest risk level that has above 10% coverage, or the risk level which occupies the highest proportion of area
Street frontages	SGS	GIS analysis used to determine the street frontage lengths of all land parcels

Step 3 – Define capacity parameters and assumptions

To conduct the analysis, it is necessary to develop a typical built form for the area. This was done by the creation of parameters for the:

- Type of floorspace built in each zone
- Building heights by type of floorspace
- Site coverage by type of floorspace
- Floor efficiencies by type of floorspace

Given the permissive nature of the land use controls contained within the WLEP 2009, which allows for the development of shop-top housing within the B3 – Commercial Core and B6 – Enterprise Corridor zones, two development outcomes have been modelled. These outcomes represent either the maximum yield of residential floorspace or commercial floorspace as permitted under the primary controls. The building configurations (floorspace type by position in the building) are set out in Table 16.

TABLE 16: CAPACITY MODELLING - BUILDING CONFIGURATION BY ZONE

Zone	Ground floor (Max. Residential)	Upper floors (Max. Residential)	Ground floor (Max. Commercial)	Upper floors (Max. Commercial)
B3	Retail	Residential	Retail	Commercial
B4	Retail	Residential	Retail	Commercial
B6	Retail	Residential	Retail	Commercial
R1	Residential	Residential	Residential	Residential
All other zones are excluded from redevelopment				

The parameters for building height, site coverage and floor efficiency are applied to the type of floorspace, and as such the same values are applied irrespective of what zone the development is taking place in. The site coverage parameter is expressed as the proportion of land parcel area which is taken up by the footprint of the building (building envelope area). These parameters are set out in Table 17.

TABLE 17: CAPACITY MODELLING - BUILT FORM PARAMETERS

Floorspace type	Building height per storey	Site coverage (building footprint)	Floor efficiency
Retail	4m	80%	90%
Commercial	4m	80%	90%
Residential	3m	40%	75%

Constrained sites were identified by the presence of environmental heritage items, flooding risk or infrastructure land uses, as set out in Table 18. Sites which have been identified as having a low flood risk remain within the modelling process, whilst sites with medium or high flooding risk have been excluded.[11]

[11] Flooding risk levels are allocated to a land parcel where more than 10 per cent of their land area is covered by the flooding overlay at that risk level. Where multiple risk levels cover a single parcel, the highest risk level which covers more than 10 per cent of the parcel's land area is allocated (e.g. a parcel which is covered by both the high and medium flood risk overlays at 14 per cent and 86 per cent respectively will be allocated into the high risk category). Where more than 10 per cent of the total parcel area is covered, but no single risk category is over 10 per cent, the category which occupies the highest proportion of land area is allocated.

TABLE 18: CAPACITY MODELLING - EXCLUSION OF CONSTRAINED SITES

Constraint	Excluded	Note
Environmental heritage	Yes	Sites with more than 5% of their total area covered by an environmental heritage item have been excluded.
High flooding risk	Yes	
Medium flooding risk	Yes	
Low flooding risk	No	
Infrastructure land uses	Yes	Sites which have been identified as containing infrastructure uses (e.g. schools) within the SGS audit have been excluded from redevelopment
Land zoning	Partial	Owing to the high-level nature of the analysis, sites which do not fall within the zones set out above in Table 16 are excluded from the analysis

Step 4 – Determine maximum theoretical capacity

The maximum theoretical capacity for each site was conducted using the above parameters, with parallel versions of the process being run for each of the maximum residential capacity and maximum commercial capacity scenarios.

Constrained sites which have been identified for exclusion were firstly removed the analysis, and the existing floorspace on those sites retained for inclusion in the final capacity figure.

For unconstrained sites, the use on the ground floor was allocated first, followed by allocating upper floors to the building (using the land uses set out in Table 16 and built form parameters set out in Table 17 above) until the maximum height permitted under the WLEP was reached.

At this point (with buildings allocated to the maximum permissible height across all sites), a large number of sites have exceeded the maximum floor space ratio (FSR) permissible under the WLEP 2009. For such sites, the floorspace allocated to the upper floors of the building is reduced until the site is compliant with its maximum FSR.

As cl.4.4A of the WLEP sets out, the maximum FSR control for a site is partially dependent upon the mix of residential and non-residential floorspace to be developed. Within the maximum residential capacity scenario, buildings within the B3, B4 and B6 zones contain a mix of residential and non-residential floorspace. As such, a reduction in the amount of residential floorspace provided in the upper storeys of the building will result in the allocation of a new maximum FSR control, which will be greater than the previous maximum FSR control.

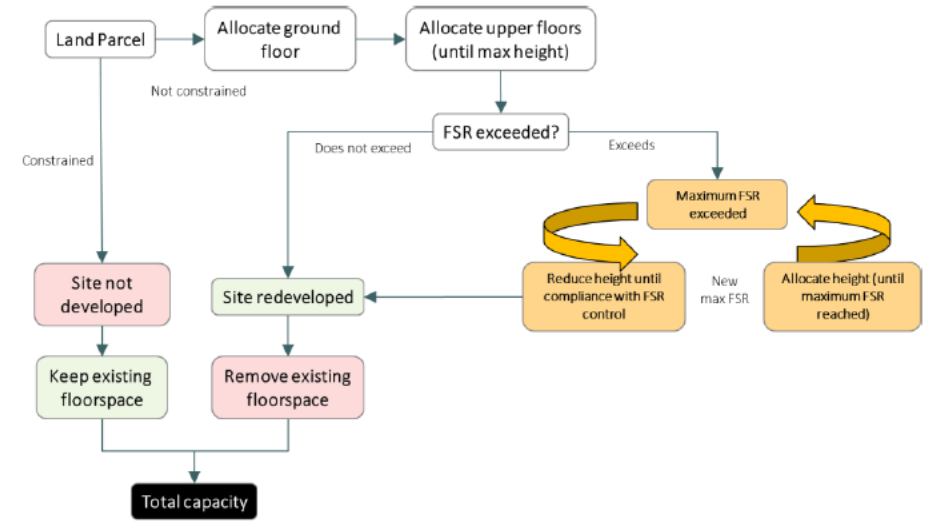
When residential floorspace is re-allocated to the building to meet this control, the mix of residential and non-residential floorspace is changed again, and a third maximum FSR is allocated to the building – being lower than the previous value, with the building again being in breach of this control.

This process of re-allocation is conducted for two iterations, which allows for all sites within the study area to achieve an FSR within 20 sqm of the maximum FSR control at that proportional mix of residential and non-residential floorspace.

Subsequently, the floorspace yield on each site is totalled to derive the yield of new floorspace under either of the maximum theoretical capacity scenarios, and the existing floorspace contained within these land parcels is removed from the total capacity figure.

This process is illustrated in Figure 26.

FIGURE 26: CAPACITY ASSESSMENT - MAXIMUM THEORETICAL CAPACITY PROCESS



Source: SGS Economics and Planning, 2018

At this point, the maximum theoretical capacity has been derived for the study area for each of the two distinct scenarios; the theoretical maximum residential capacity and the theoretical maximum commercial capacity scenarios. These are utilised as the basis of the maximum feasible capacity analysis, as outlined in the section below.

Maximum feasible capacity

The maximum feasible capacity analysis builds upon maximum theoretical capacity scenarios to determine a more realistic capacity figure, in contrast to the purely hypothetical nature of the maximum theoretical capacity analysis. In this analysis, the residual land value (RLV) of a development is compared against the costs of acquisition for the site. Further explanation of RLV modelling is contained above in Section 5.1.

Step 5 – Define feasibility parameters and assumptions

The following tables outline some of these broad inputs and the key assumptions that are made in order to 'model' the financial cash flows which underpin development's costs and revenues. The inputs and assumptions apply to each development.

TABLE 19: FEASIBILITY MODEL COST INPUTS AND ASSUMPTIONS

Input	Source	Value
Construction and demolition costs	Rawlinson's Construction Handbook 2017	Varies
Land acquisition costs	Return on asset method & Underlying Land Values (Valuer General of NSW)[12]	Varies (includes stamp duty)
Construction contingency	Various sources using industry standards	10% of base construction costs
Professional fees	Various sources using industry standards	9.2% of base construction costs and contingency
Development contributions	Wollongong s.94A contributions plan	0%-2% of construction costs
DA Fees	Wollongong Fees and Charges Schedule	Varies
Finance costs	Various sources using industry standards	6% of construction costs, land costs and fees & charges
Developer profit	Various sources using industry standards	20% of all other development costs

TABLE 20: FEASIBILITY MODEL REVENUE INPUTS AND ASSUMPTIONS

Input	Source	Value
Retail rents ($/sqm)	Market assessment and consultation	$450/ sqm
Commercial rents ($/sqm)	Market assessment and consultation	$400/ sqm
Median residential sales values	Market assessment	1BR: $459,100 +GST 2BR: $613,500 +GST 3BR: $1,072,700 +GST
Sales commission, marketing and legal fees	Various sources using industry standards	4% of sales revenues

These assumptions have been reduced down to a per/ sqm rate for inclusion in the maximum feasible capacity analysis.

Step 6 – Derive acquisition costs for all sites

Acquisition costs for each site are derived using two methods, one which captures the current improvements on the land and another which utilises the underlying land value (ULV) measure produced by the Valuer General of NSW.

The audited floorspace on each of the land parcels is capitalised into an estimated purchase using the average observed rents for that type of floorspace and a yield of nine per cent. Whilst this is suitable for the high level nature of the analysis, it should be noted that utilising assumptions that are consistent throughout the study area may not accurately capture site specific variations in rental yields.

An average ULV for each land use zone utilised within the capacity analysis was captured for properties that fall within the study area, being taken as the median of the per/ sqm ULV of properties within each zone.

[12] It is important to note that existing land values of sites have been measured by discounting the amortised returns on existing improvements on site, along with the Underlying Land Value. In practice, sites could potentially be rezoned, which would in turn shift the land value and the cost of acquiring specific sites.

These acquisition costs were also utilised within the site-specific feasibility modelling outlined above in Section 4.

Step 7 – Define built form outcomes to be tested

It is given that the objective of this analysis is to determine not only *if* the built form outcomes contained within either of the maximum theoretical capacity scenarios are feasible, but if so, to determine *at which point* between the two scenarios a project will become feasible.

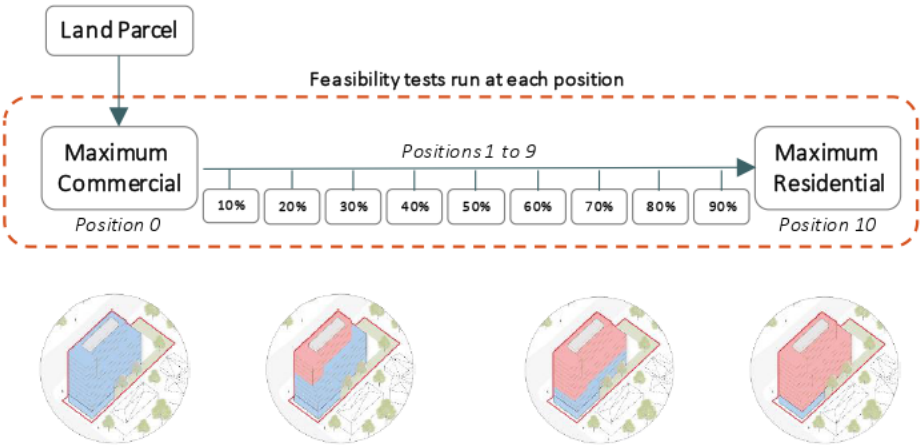
Owing to the modelling constraints posed by attempting to measure two variables (one being the maximum FSR control, based on the proportional mix of residential and non-residential floorspace within a site; the other being the feasibility of the development), it become practical to remove the FSR control as a variable in order to test feasibility as the dependant variable.

As such, a series of incremental shifts from the built form for each site from the maximum commercial capacity scenario was utilised, shifting at 10 per cent intervals until the maximum residential scenario is reached. This results in a total of 11 positions at which feasibility is tested, as shown below in Figure 27.

Each increment (including the two maximum theoretical scenarios above, for a total of 11) is referred to herein as a 'Position'. To clarify:

- A parcel of land at Position 0 has the same floorspace as the maximum commercial scenario outlined above.
- A parcel of land at Position 10 has the same floorspace as the maximum residential scenario outlined above.
- A parcel of land at Position 4 has the same floorspace as the maximum commercial scenario outlined above, *plus/minus* 40 per cent of the difference between the maximum commercial scenario and the maximum residential scenario.

FIGURE 27: CAPACITY ASSESSMENT - MAXIMUM FEASIBLE CAPACITY METHOD (1 OF 2)



Source: SGS Economics and Planning, 2018

Step 8 – Test feasibility at each position and derive total feasible capacity

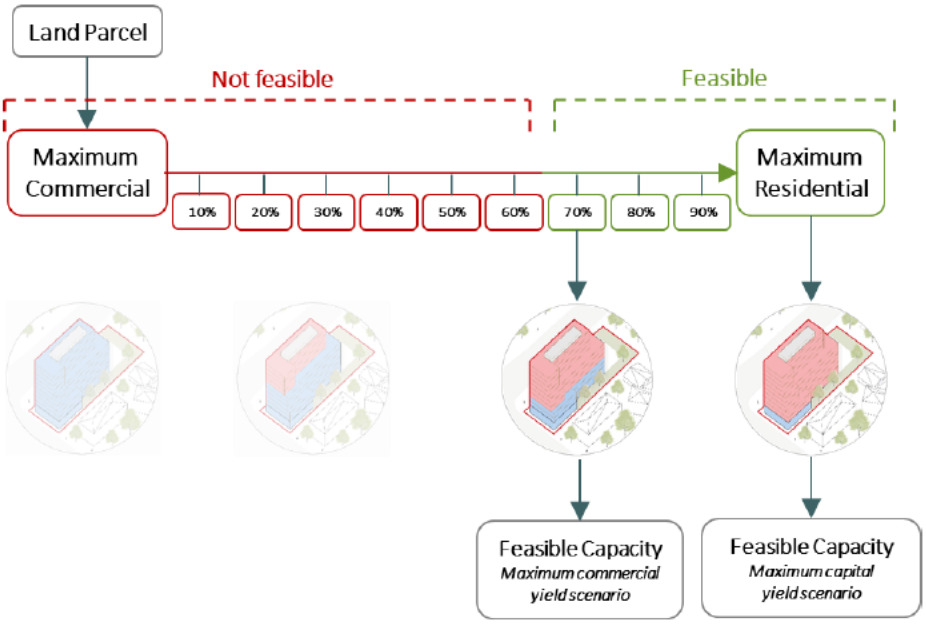
At each of the 11 positions, the quantum of floorspace within the building (including the parking required under the Wollongong DCP 2009) is translated into development costs and the saleable floorspace translated into revenues to derive the RLV across all sites that have not been excluded in the capacity analysis. This is then checked to see whether it exceeds the assumed acquisition cost at each position to determine whether the development is feasible.

Two scenarios have been utilised as outputs of the feasible capacity modelling in a similar fashion to the maximum theoretical capacity. These consist of a maximum capital yield scenario, in which the built form outcome that has the highest RLV is selected for inclusion, and a maximum commercial yield scenario, in which the outcome that yields the highest amount of retail and commercial office floorspace is selected for inclusion. This process is shown below in Figure 28.

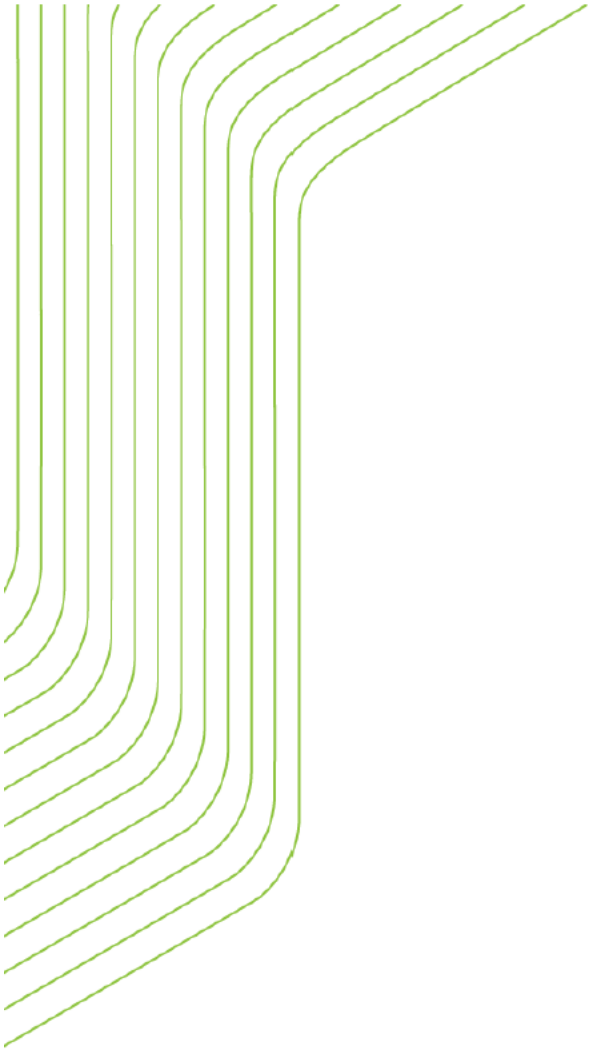
Owing to the increased profitability of developing residential floorspace, the maximum capital yield scenario returned a built form outcome at the maximum residential position in all cases where development was found to be feasible.

If the development is feasible at any position, the existing floorspace occupying that site is removed from the total feasible capacity figure for each scenario.

FIGURE 28: CAPACITY ASSESSMENT - MAXIMUM FEASIBLE CAPACITY METHOD (2 OF 2)



Source: SGS Economics and Planning, 2018



SGS Economics & Planning

Contact us

CANBERRA
Level 2, 28-36 Ainslie Place
Canberra ACT 2601
+61 2 6257 4525
sgsact@sgsep.com.au

HOBART
PO Box 123
Franklin TAS 7113
+61 421 372 940
sgstas@sgsep.com.au

MELBOURNE
Level 14, 222 Exhibition St
Melbourne VIC 3000
+61 3 8616 0331
sgsvic@sgsep.com.au

SYDNEY
209/50 Holt St
Surry Hills NSW 2010
+61 2 8307 0121
sgsnsw@sgsep.com.au