



Wollongong City Centre

Access and Movement Strategy 2013

An integrated transport plan to support the revitalisation
of Wollongong's City Centre

Table of Contents

Background	1
Introduction	1
Access & Movement Strategy 2005 Overview	1
Access & Movement Strategy 2005 Implementation	4
Access and Movement Strategy 2013	9
Relationship to Other Strategies and Plans	9
Land Use Context	12
Overview	12
Principles	13
Pedestrian Access and Movement	15
Issues	15
Principles	16
Pedestrian Strategy	16
Cycling Access and Movement	19
Issues	19
Principles	19
Cycle Strategy	20
Vehicular Traffic Access and Movement	22
Issues	22
Principles	22
Road Hierarchy	23
Traffic Management Strategy	23
Ajax Avenue Extension	24
Parking	26
Issues	26
Principles	27
Car Parking Strategy	28
Public Transport	31
Issues	31
Principles	31
Bus Routing Strategy	32
Bus/Rail Interchange Strategy	34
Implementation	36
References	37
Appendix 1 - Summary Action Plan	

Background

INTRODUCTION

Wollongong City Council is committed to ensuring that the Wollongong City Centre continues to develop and grow as the Regional Capital City of the Illawarra Region. To achieve this, Wollongong City Council developed the Wollongong City Centre Access & Movement Strategy 2005, a key part of the integrated *Revitalisation Strategy* for the City Centre to encourage future development and growth in the Centre within a new regulatory framework. The *Revitalisation Strategy* integrates land use planning, urban design, city economics as well as access and movement considerations.

The Wollongong City Centre Access & Movement Strategy 2005 investigated and addressed future transport system needs to support planned, sustainable growth, ensuring accessibility to, from and within the City Centre whilst maintaining amenity. The Strategy was based on a holistic and integrated approach to transport and land use planning to develop sustainable solutions for the Wollongong City Centre. The Strategy was adopted by Council resolution on 5 December 2005.

The Wollongong City Centre Access & Movement Strategy 2005 identified a number of key issues, principles and strategies for each of the following key components of the transport system:

- Land Use Context
- Pedestrian Access and Movement
- Cycling Access and Movement
- Vehicular Traffic Access and Movement
- Car Parking Access and Management
- Public Transport



ACCESS & MOVEMENT STRATEGY 2005 OVERVIEW

Why was an Access & Movement Strategy developed?

Population growth in conjunction with increasing car ownership indicated a growing demand on the City Centre's road network, particularly at key access points to, from and within the City Centre. Anticipated effects included a reduction in road network performance and increased congestion, resulting in increased travel times and delays with a corresponding reduction in road user safety and amenity.

In order to sustainably accommodate increasing demand it was recognised that existing travel behaviours need to be changed, and strategies to enable these changes required. It was acknowledged that road system capacity increases would be necessary as the city grows. However, the 2005 Strategy acknowledged the significant benefits of moderating car travel demand, particularly when compared to the costs of expanding road network system capacity to meet the future demands. Through the provision of accessible, efficient alternatives to car travel, the strategy developed solutions to moderate travel demand growth to achieve optimised, sustainable outcomes.

Timeframes

The Wollongong City Centre Access & Movement Strategy 2005 provided a structured plan including short, medium, and long term strategies and actions that supported Council's future vision for the City Centre. A long term timeframe of 2026 was adopted for the transport analysis supporting the Wollongong City Centre Access & Movement Strategy 2005.

The measures and actions recommended included an implementation plan with short and medium term solutions to provide immediate benefits to the transport system whilst still enabling Council to progress the long term plan.

A multi-modal strategy

The Wollongong City Centre Access & Movement Strategy 2005 addressed a number of key components of the transport system. It included a thorough investigation of individual transport modes, followed by the integration of proposed solutions for these separate components with other elements to ensure a cohesive approach in order to deliver a comprehensive and integrated transport strategy. This approach was applied to ensure that implementation would be undertaken through a unified plan where the combined effects would produce the desired outcomes.

The result was the development of a multi-modal strategy that addressed the City Centre road network - the traditional core aspect of the transport system - in addition to a wide range of complementary measures to reduce the impacts of travel demand on the City Centre, including:

- Walking and cycling actions and strategies.
- Public transport improvements.
- Car parking strategies and policies.
- Consideration of land use policies which will affect demand for travel and parking.



Multi Modal Travel

Community and agency participation

The Wollongong City Centre Access & Movement Strategy 2005 was developed in consultation with government agencies, key community and business groups and the general community through a variety of consultation forums. This process provided guidance and refinement of the measures and actions recommended.

Since the launch of the Wollongong City Centre Access & Movement Strategy 2005 Council has worked closely with government agencies (Roads and Maritime Services, Transport for NSW, Department of Planning and Infrastructure NSW) as well as local transport providers and unions in order to realise a number of outcomes.

ACCESS & MOVEMENT STRATEGY 2005 IMPLEMENTATION

The Wollongong City Centre Access & Movement Strategy 2005 provided a framework to develop and improve all facets of the transport system servicing Wollongong City Centre. In addition to a range of infrastructure and operational actions, the strategy also recommended:

- Further studies to develop and refine the concepts of the Wollongong City Centre Access & Movement Strategy 2005 and
- The development of implementation plans for identified infrastructure and non-infrastructure measures.

Short-term actions were proposed within 5 years, medium-term within 10 years and long-term between 10 and 20 years. As suggested by these timeframes, many aspects of the Wollongong City Centre Access & Movement Strategy 2005 have now been advanced. Further studies which have now been undertaken include:

- *Comprehensive on street and off street parking surveys* (Luxmore Parking Consulting 2008 & TDC 2011)
- *Wollongong Parking Stations Feasibility Study*, Luxmore Parking Consulting 2010
- *Wollongong Inner City Parking Strategy*, WCC 2009
- *Wollongong City Centre Integrated Bus Operations And Traffic Management Implementation Plan*, Cardno 2006
- *Wollongong City Centre Pedestrian and Cycling Access and Mobility Implementation Plan*, QED 2007
- *Wollongong City Centre Parking Implementation Strategy*, Cardno 2007
- *City Centre West Parking Management Plan (Hospital Hill Precinct LATM Plan)*, QED Pty Ltd / Cardno 2007
- *Wollongong Foreshore Access & Movement Strategy*, Cardno 2006
- *Wollongong Station Interchange and Precinct Master Plan*, Halcrow 2005
- *Wollongong City Circle North Shuttle Bus System Feasibility Study*, Parsons Brinckerhoff Pty Ltd 2005

The following infrastructure and operational modifications to the City Centre's transport system have now been completed as recommended in the Wollongong City Centre Access & Movement Strategy 2005:

- **Pedestrian Access and Movement:**
 - Construction of new footpaths:
 - Loftus Street – Darling to Denison, south side
 - Harbour Street – Bank to Stewart, west side
 - Crown Street – Gilmore to Staff, south side
 - Stewart Street – Corrimal to Harbour, south side
 - Intersection upgrades including:
 - Corrimal Street / Gipps Street signalisation
 - Globe Lane / Burelli Street blisters
 - Church Street / Ellen Street traffic channelization and pedestrian refuge

- Local Area Traffic Management (LATM) in Cliff Road (Foreshore):
 - Footpath widening
 - Traffic calming (slow points (blisters), edge lines, speed cushions)
 - Zebra crossing on threshold adjacent to Georges Place
 - Shared zone outside Novotel
 - Refuge island adjacent to Osborne Park
- Shared Path upgrades associated with Bathers Pavilion renovation (adjacent to intersection of Blackett Street / Cliff Road)
- Zebra crossing on threshold in Lowden Square outside Wollongong Rail Station



Pedestrian crossing upgrade – Cliff Road at Georges Place

- **Vehicular Traffic Access and Movement:**

- Reintroduction of traffic to the Keira St transit mall (Crown Street to Burelli Street) in association with bus priority measures
- Church Street / Ellen Street intersection traffic management facilities
- Traffic signals:
 - Kembla Street / Bourke Street (modifications)
 - Corrimal Street / Gipps Street / Georges Place
 - Cliff Road / Harbour Street
 - Foley Street / Gipps Street
- Roundabouts:
 - Swan Street / Auburn Street
 - Swan Street / Kembla Street
 - Kembla Street / Bank Street
- Cliff Road traffic calming facilities



General traffic in Keira Street transit mall

- **Car Parking:**

- Introduction of on street pay parking (parking meters) in conjunction with review of on street time restrictions
- Council at-grade car park expansions at three locations – Rawson Street, Thomas Street and Stewart Street / Bank Street
- Two new long stay leased space at-grade car parks at Ellen Street / Keira Street and Stewart Street / George Street
- Two new casual long stay at-grade car parks – Burelli Street / Corrimal Street (old Dwyers site) and Burelli Street / Town Hall Place (old Oxford Hotel site)
- Major commuter car park at Wollongong Rail Station (Railway Station Square)



Burelli Street east temporary casual long stay car park

- **Bicycle Access and Movement:**

- On-road advisory treatments in Church Street, Beach Street and West Street
- Improved bicycle paths and bike parking along Blue Mile

- **Public Transport:**

- Implementation of Gong Shuttle
- Crown Street / Keira Street signals Bus Priority Implementation
- Bus Passenger Infrastructure Upgrades Designs (implementation of Burelli Street shelters due early 2014)
- CBD bus stop improvements including route segregation by colour and improved shelters and signage



Gong Shuttle

ACCESS AND MOVEMENT STRATEGY 2013

The Wollongong City Centre Access & Movement Strategy 2005 has been reviewed and updated to take into account land use changes and projects implemented in the intervening seven years. The updated Strategy maintains the preceding transport related policies and priorities and pursues an extension of the previously adopted principles and strategies that support the revitalisation of the Wollongong City Centre.

This strategy update follows the same methodology as the 2005 strategy and incorporates a three stage process for each transport mode as follows:

- i. Issue/problem identification (with research and consultation)
- ii. Principles and option testing (computer modelling and consultation)
- iii. Strategy/policy recommendations and solutions/projects (for Council adoption, design and implementation)

RELATIONSHIP TO OTHER STRATEGIES AND PLANS

The review of the Wollongong City Centre Access & Movement Strategy has been undertaken in the context of a number of state and local strategies and plans. Since the release of the 2005 Strategy, the NSW State Government has published further strategic planning and guidance documents relating to the long term strategic vision for Wollongong City Centre, which include:

- NSW Long Term Transport Master Plan, 2012
- Illawarra / South Coast Regional Action Plan, 2012
- NSW 2021 State Plan, 2011
- Illawarra Regional Strategy, 2006

In particular, the updated Strategy supports the NSW 2021 State Plan 2021 which contains a goal that states 15% of commute trips to Wollongong CBD will be by public transport by 2016.

Further to this, the Strategy supports a number of goals set out in the *Wollongong Community Strategic Plan 2022* (WCC, 2012) which has been developed as “a long term plan that identifies where the Wollongong community want to be in the future. This plan will assist in shaping the future of the Wollongong Local Government Area. It provides direction for the provision of key projects and services which enable us to meet the needs of our community and deliver good quality services and facilities.”



Wollongong 2022 Community Strategic Plan

The Wollongong Community Strategic Plan 2022 includes the following six interconnected goals with the sixth relating directly to Wollongong's transport system:

- 1) *We value and protect our environment*
- 2) *We have an innovative and sustainable economy*
- 3) *Wollongong is a creative, vibrant city*
- 4) *We are a connected and engaged community*
- 5) *We are a healthy community in a liveable city*
- 6) **We have sustainable, affordable and accessible transport:**
 - *"We will have access to an integrated transport network from north to south and east to west. We prefer to walk, cycle or take the bus or train. We have safe, accessible and interconnected pathways to encourage pedestrian traffic. The local government area (LGA) continues to be linked to the broader region and the city of Sydney via efficient, safe and affordable networks. We will achieve this when:*
 - ***Walking, cycling and public transport is an accessible and well-resourced means of transport, and the use of private cars is reduced:***
 - The city is established as bike-friendly.*
 - The free Gong Shuttle Bus service is extended.*
 - Interconnected and accessible cycle ways and footpaths are in place.*
 - A 'Park n Ride' commuter bus network is established and the community is encouraged to 'leave the car at home'.*
 - ***Wollongong is supported by an integrated transport system:***
 - Effective and integrated regional transport, with a focus on road, bus, rail and freight movement (including the port of Port Kembla), is provided.*
 - Integrated communities are planned for and encouraged close to major transport links and major commercial centres.*
 - Rail services and stations are improved across the LGA.*
 - Opportunities to reduce travel time between Sydney and Wollongong are pursued and implemented.*
 - Availability of late night transport options is improved.*
 - ***Transport-disadvantaged communities have increased access to services:***
 - Community transport options for frail older people, people with disabilities and the transport-disadvantaged are actively promoted and available.*

The Wollongong City Centre Access & Movement Strategy 2013 will assist in the realisation of the above goals. The broader context of the Strategy with respect to Council's provision of services is shown in **Figure 1**.



Figure 1 – Study context

LAND USE CONTEXT

OVERVIEW

The NSW Government's strategic planning and guidance documents recognise Wollongong City Centre as the hub of the Illawarra Region, providing higher order regional services and facilities such as medical, education, commercial services as well as cultural and entertainment facilities. The Wollongong City Centre Access & Movement Strategy 2013 in turn recognises that City Centre accessibility needs to be managed and enhanced to serve the needs of an expanding population and fulfil its role as a regional city. The Strategy considers its strategic context in terms of:

- Wollongong City Centre is and should continue to be the most “accessible” place in the Illawarra Region.
- It forms the major public transport node for bus and rail travel in the region.
- It has an extensive supporting road system, including connections from surrounding suburbs for cyclists and pedestrians.



Figure 2 – Wollongong Regional Context
adapted from Illawarra Regional Strategy (NSW Department of Planning 2006)

The *Illawarra Regional Strategy* (NSW DoPI, 2006) estimates that the population of the Illawarra would grow by 47,600 to 328,600 by 2031. In the same timeframe employment land, City Centre and regeneration initiatives are expected to provide capacity for 30,000 new jobs. The recently released *NSW Long Term Transport Master Plan* (TfNSW, 2012) notes that the population of Wollongong LGA increased by 9,300 between 2006 and 2011; a further increase of 33,000 is expected by 2031.

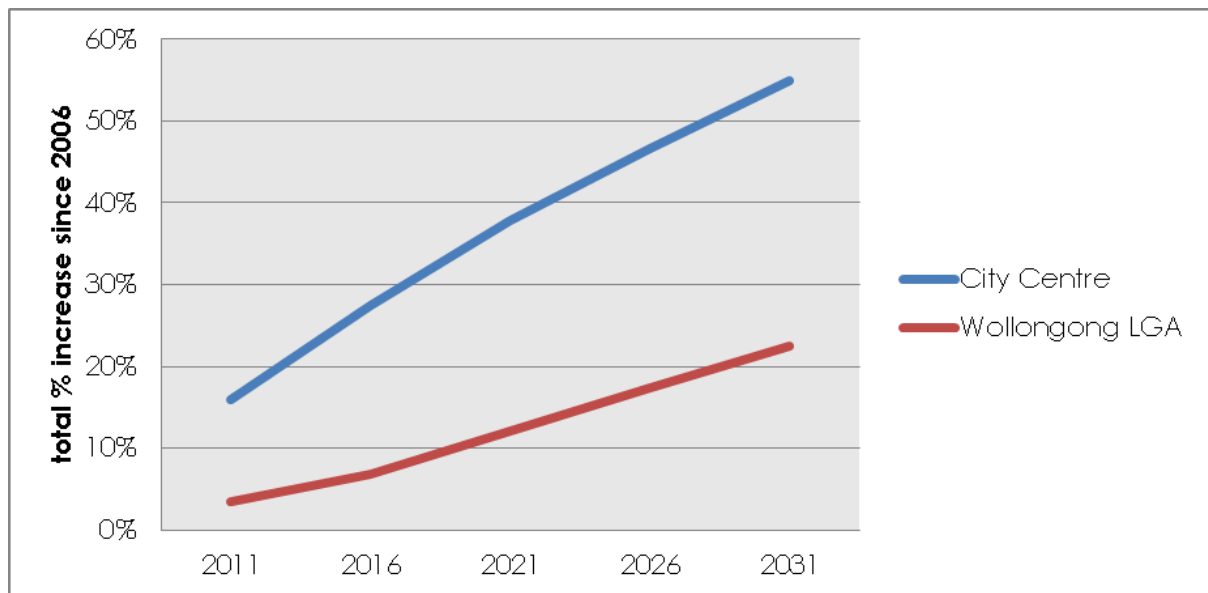


Figure 3 – Wollongong City Centre Population Projections

It is clear that strong, sustained growth will result in increased demand on the transport system. In the future it will be critical to maintain efficiency of access to and from the City Centre despite this increase to enable economic and commercial growth.

While the use of sustainable transport modes can reduce demand for road and parking infrastructure, the Wollongong City Centre Access & Movement Strategy 2013 recognises the role of land use planning in supporting travel demand management objectives. Land use planning that integrates with transport planning help to bring about:

- Transit Oriented Development involving increased density residential developments around rail stations, transport interchanges, and highly serviced public transport corridors can encourage public transport use.
- Self-contained development, providing increased density residential developments in close proximity to the City Centre (or other employment centres) stimulates walking and cycling trips, reducing road traffic, and providing health and amenity benefits.

To promote these planning practices Council aims to promote mixed uses within the City Centre, with increased density residential development combined with retail and/or commercial on the lower levels. It is noted however that current land use trends will also continue in association with this mixed use. The Wollongong LEP 2009 and the Wollongong DCP 2009 address City Centre land use planning and development controls in detail.

PRINCIPLES

The Wollongong City Centre Access & Movement Strategy 2013 promotes the development of a sustainable transport system that aligns with and supports land use developments within Wollongong City Centre to 2036. As the location, type and mix of development can enable and encourage access to a range of transport alternatives, guiding principles have been developed to address land use and transport integration:

- Facilitating higher density developments close to major transport nodes.
- Encourage businesses to locate within the City Centre rather than in dispersed urban fringe or suburban locations.
- Support a sustainable transport system for the City Centre through complimentary land use planning.
- Create a vital and active environment in the City Centre.
- Encourage mixed use development that can shorten or negate the need for external trips



Mixed Use Development in Crown Street

PEDESTRIAN ACCESS AND MOVEMENT

ISSUES

Pedestrians are a key component to a successful city centre environment and pedestrian activity is fundamentally important in creating an active, vibrant and safe City Centre. Therefore, it is important that the functionality of the City Centre continues to facilitate both ease of pedestrian movement as well as active pedestrian use of space, where the commercial core is a destination not just a thoroughfare.



Keira Street Pedestrian Crossing

The key issues related to pedestrian access and movement around the City Centre that need to be addressed are set out below:

- Inadequate opportunities for pedestrian movement across the railway and heavily trafficked road corridors, such as Bourke Street, Corrimal Street, Flinders Street (particularly north of Bourke Street) and Crown Street (west of Keira Street);
- Poor quality, ageing footpaths and lack of footpaths on City Centre streets, especially on key pedestrian desire lines;
- Lack of pedestrian connectivity, especially dedicated pedestrian connections, in the City Centre. Only a limited number of pedestrian only connections already exist ;
- Issues of poor public amenity, safety and convenience for pedestrians in the mall, with potential for improved pedestrian activity in this retail zone as a focal destination in the City Centre (currently the subject of a major refurbishment project);
- Issues with connectivity for pedestrian access into the rail station precinct and between the rail station and the City Centre;
- City Centre locations perceived as being isolated and unsafe , particularly at night, which create a “fear of crime” against people and/or their property;

PRINCIPLES

The following principles define the core vision for pedestrian access and movement in the City Centre:

- Provide attractive, safe, convenient and direct pedestrian routes between all key precincts and major trip attractors and destinations in the City Centre;
- Ensure that the City Centre has a greater degree of permeability for pedestrians than for cars;
- Ensure that intersections are designed to facilitate pedestrian movements rather than vehicle capacity on City Centre collector and access streets.
- Reduce waiting times for pedestrians, where possible, at key city centre locations;
- Provide high quality, safe mid-block crossings along City Centre collector and access streets;
- Discourage pedestrian crossings on higher order roads at mid-block locations through design which directs pedestrians to appropriate signalised intersections where safe crossing facilities can be provided;
- Design pedestrian infrastructure to make pedestrians feel safe and secure throughout the City Centre;
- Meet the accessibility needs of disabled persons to facilitate their movements to and around the City Centre.

Actions completed since 2005 strategy:

- Intersection upgrades – Corrimal & Gipps Signalisation, Globe Lane & Burelli Street Blisters, Church & Ellen traffic refuge upgrade, Foley Street & Gipps Street Signalisation and Harbour Street & Cliff Road Signalisation.
- Local Area Traffic Management at Cliff Road (Foreshore) – Footpath widening, traffic calming (slow points (blisters), edge lines, speed cushions), zebra crossing on threshold at Georges Place, shared zone outside Novotel Hotel, refuge island at Osbourne Park
- Shared Path Upgrades associated with Bathers Pavillion renovation (adjacent to intersection of Blackett Street and Cliff Road)
- Construction of new and replacement footpaths in Loftus Street, Kembla Street, Harbour Street, Crown Street and Stewart Street.

PEDESTRIAN STRATEGY

The pedestrian movement and access strategy is intended to ensure pedestrians can safely and conveniently access all locations within the City Centre. This should allow for pedestrian movement through the City Centre as well as creating a public domain which is safe, interesting and attractive for people to socialise in and experience.

The pedestrian strategy for Wollongong City Centre has been broken down into a series of programs as set out below:

- **Reduction in traffic speeds in the City Centre (Commercial Core).** The implementation of speed reduction measures throughout the core of the City Centre is part of this a greater emphasis on pedestrian amenity over a traffic carrying capacity in this area
- **A New Footpath Program,** with the general purpose of providing a basic level of access on every street and on both sides of streets in the Commercial Core. Certain streets with current or future high pedestrian use that are outside the Commercial

Core would also be subject to this program, despite already having a footpath on one side.

- **A Kerb Ramp Replacement Program**, which would replace deficient kerb ramps or build new kerb ramps throughout the City Centre area.
- **A Footpath Replacement Program**, which would bring streets up to the new standards that are mainly confined to the Commercial Core.
- **The Safety Hazards Program** deals with those locations identified as hazardous. A number of the locations are to be rectified under related programs, such as the Integrated Bus Operations and Traffic Management Implementation Plan.
- **Pedestrian crossing improvements** at many intersections throughout the City Centre as well as a number of mid block crossing points.



Figure 4 – Pedestrian Strategy

CYCLING ACCESS AND MOVEMENT

ISSUES

Cycling can play a role in reducing the pressures of rising traffic demand. Cycling is an economic, environmentally sustainable, healthy and easily accessible mode of transport. Substituting cycling for trips by the private motor vehicle is certainly a viable and more realistic travel option for the broader community for replacing shorter trips (trips less than 5kms). These shorter trips are the most polluting trips (due to cold starts) and often the most unnecessary vehicle trips. Therefore a reduction in these trips can make a significant contribution to reducing greenhouse gas emissions as well as providing broader health and economic benefits and efficient of access to the City Centre.

Connections from the immediate surrounds are equally as important, if not more so, than facilitating cycling in the City Centre. Currently, a regional shared path runs north south along the coastal foreshore and another route is proposed along the rail line. These can form a solid base for the cycle network. Connections from these north- south routes into the City Centre and to major destinations are also required (east west routes).

The key issues to address to improve connections to the City Centre for cyclists include:

- East-west cycle routes within the City Centre;
- Adequate provision of cycle routes from destinations west of the City Centre;
- Suitable opportunities to cross Corimal Street to the east of the City Centre from the regional shared path;
- A more direct north-south route to serve commuters to the City Centre as the existing shared path is indirect and primarily serves recreational users;
- Adequate provision of routes to the rail station;
- A cycle route between the City Centre and university;
- Provision of end of trip facilities, including secure bicycle parking and shower/ change facilities in the City Centre and in all new developments;
- Accommodating on-road cycle lanes into narrow City Centre road reserves.

PRINCIPLES

The following principles set out Council's approach for bicycle access in the City Centre:

- Provision of convenient, direct and safe bicycle routes into the City Centre from surrounding areas and within the City Centre area;
- Provision of publically accessible, conveniently located end of trip facilities for cyclists, including secure bicycle parking in the City Centre;
- Statutory planning will require appropriate bicycle parking provision and end of trip facilities for all new developments;
- Ensure provision of adequate infrastructure, signage and line marking to encourage cycling and make cyclists feel safe and secure everywhere in the City Centre.

Actions completed since 2005 strategy:

- On-road advisory treatments in Church Street, Beach Street and West Street
- Improved bicycle paths and bike parking along Blue Mile

CYCLE STRATEGY

The Wollongong pedestrian and cycling access and mobility implementation plan defined a strategy for creating a usable bicycle network, providing access to the City Centre, linking to major destinations and trip attractors.

The key actions proposed are as follows:

- A bicycle network for Wollongong City Centre comprising of **shared use paths** and well as a number of **on road treatments**. Potential network routes are shown in Figure 5 overleaf.
- **Public bicycle parking in the City Centre**, with a network of 90 new rails in public locations in the City Centre.
- **Reduction in traffic speeds in the City Centre (Commercial Core)**. The implementation of speed reduction measures throughout the core of the City Centre will have complimentary benefits for cycling and cyclists.

The actions proposed above will be incorporated into the City of Wollongong Bike Plan which is currently in development.

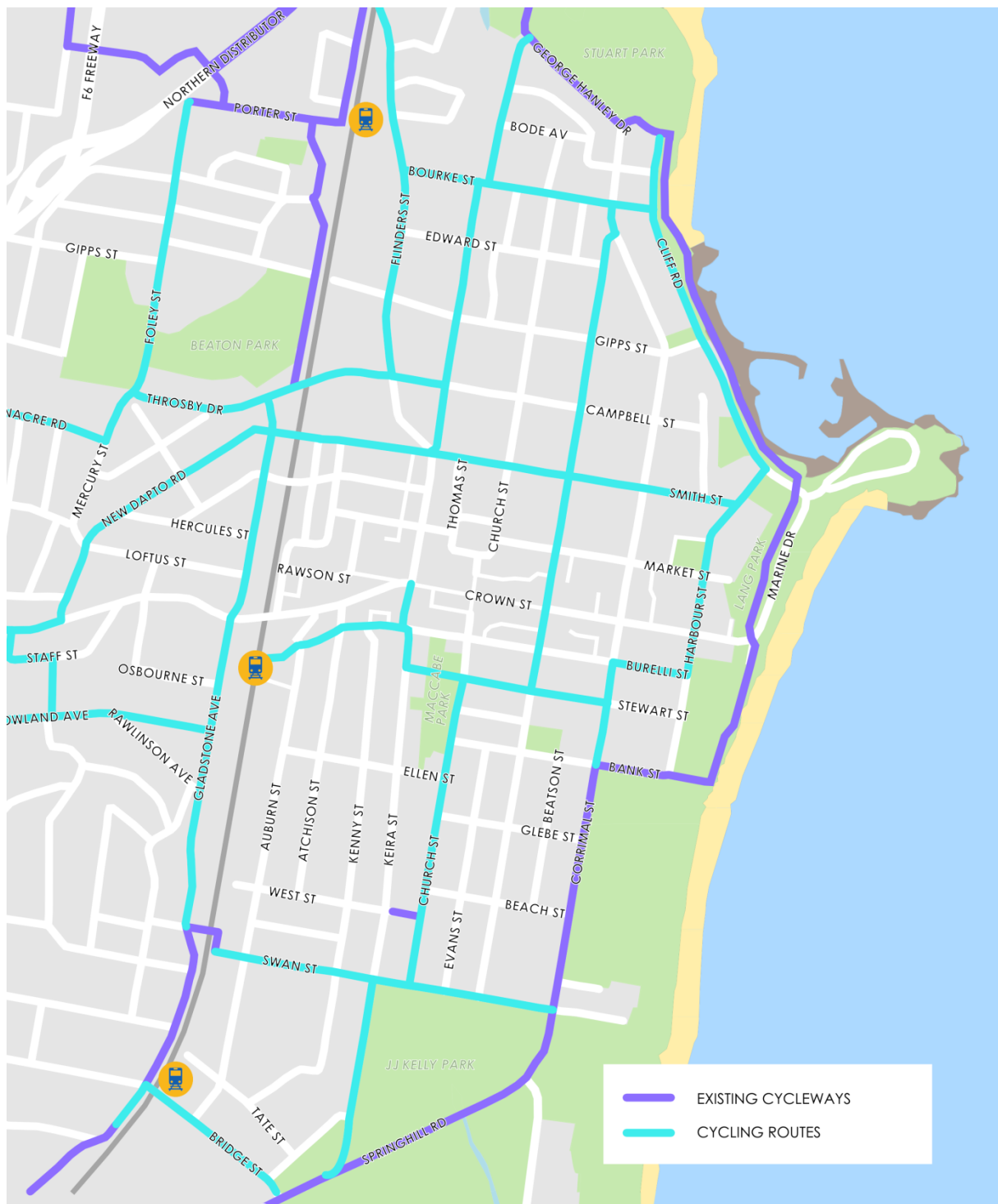


Figure 5 – Cycle Strategy

VEHICULAR TRAFFIC ACCESS AND MOVEMENT

ISSUES

The road network is a key element of the transport system. It is important that it is managed appropriately into the future to ensure it meets the growth of the city in a sustainable manner. Specific issues relating to traffic management in Wollongong City Centre include:

- the main routes through the city centre are not very direct and funnel traffic onto a few east-west roads;
- the main traffic routes are also generally the same routes that buses, cyclists and pedestrians use, creating modal conflict on narrow city centre corridors, reducing amenity and increasing conflict between modes;
- traffic circulating through the city centre makes it difficult for pedestrians to cross at intersections.

PRINCIPLES

A set of principles has been developed to respond to the specific traffic management issues of the City Centre and to embody good planning practice in the approach, as follows:-

- to discourage traffic on city streets: protecting Crown Street and Keira Street from being dominated by cars in order to create a pedestrian-focussed city heart;
- to promote road safety: design intersection upgrades to promote both pedestrian and vehicle safety;
- to promote public transport: improve bus travel and reliability through bus priority lanes, enhanced bus stops and bus phases at traffic lights;
- to provide a more legible street network: make it easier for drivers to navigate through the city by rationalising turn bans which require circuitous journeys and using signs which direct traffic to desired destinations;
- to plan for travel demand management: travel demand management is the process of limiting future traffic growth by encouraging more efficient transport. This includes increased public transport and walking and cycling trips as well as reduced car trip length and time and reduced number of overall trips.

Actions completed since 2005 strategy:

- **Update of Council's City Centre Traffic Simulation Models** (2011 Base, 2021 and 2036 models)
- **Traffic Modelling Assessment and Concept Design work** – Northwestern bypass (Denison Street Throsby to Gladstone)
- **Reintroduction of traffic to the Keira St transit mall** (Keira St between Crown & Burelli)
- **Traffic management facilities** (Church Street and Ellen Street intersection)
- **Traffic signals** – Corrimal Street/ Gipps Street/ Georges Place intersection, Cliff Road/ Harbour Street intersection, Foley Street/ Gipps Street intersection
- **Roundabouts** – Swan/ Auburn and Swan/ Kembla intersections

ROAD HIERARCHY

For all streets in the City Centre a balance needs to be achieved between the vehicle movement function and the place function serving adjacent land uses. Therefore, a holistic approach has been adopted which integrates traffic management with the planning of other modes and land uses, which incorporates all on-street activities.

The road hierarchy and functionality of each street is specific to its individual characteristics but also needs to be considered in terms of the broader traffic management for the City Centre area, facilitating access to key destinations and to car parks. The broad principles of road hierarchy, especially in the City Centre context are highlighted by Figure 6 below.

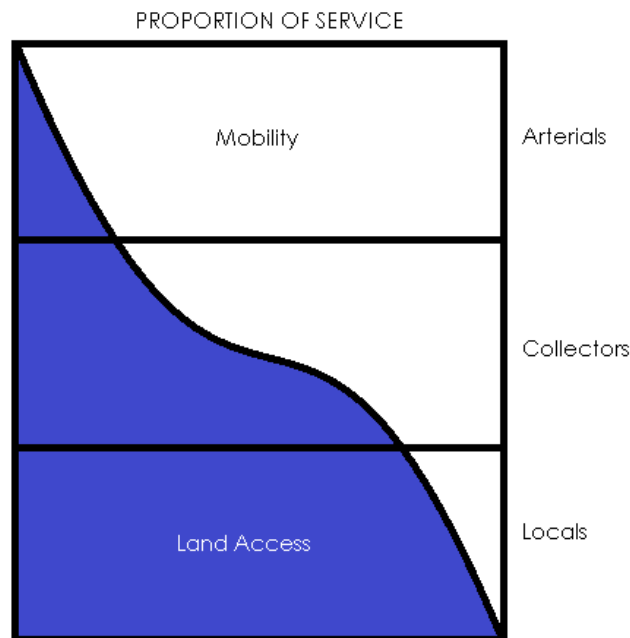


Figure 6 – Road Hierarchy Principles

The Traffic Management Strategy for Wollongong City Centre set out below is based on these functional principles for providing for vehicular access as well as developing a City Centre core focused on pedestrian, bicycle and public transport movement, with through traffic directed to an alternate traffic route system.

TRAFFIC MANAGEMENT STRATEGY

The intention of the traffic management strategy is to provide an alternate traffic route to the north and west of the City Centre which will provide for access into the City Centre core at the most appropriate locations but which will also divert “through traffic” away from the City Centre (see figure 7). To the east, however, Corrimall Street will have to continue to serve both a through traffic carrying function as well as a “to City Centre” function.

To the south and south west of the City Centre an alternate traffic route is provided by Springhill Road and Bridge Street to Gladstone Avenue. However, this linkage is well removed from the City Centre and the level of relief which the alternate traffic route provides is reduced, particularly for the southern area between Burelli Street and Swan Street.

The Integrated Bus Operations and Traffic Management Implementation Plan, 2006, confirms the strategic planning basis for the traffic management strategy measures which are set out below:

- **A road upgrade program** which includes the following significant projects to alleviate congestion, improve traffic flow and protect the amenity of the City Centre:
 - Intersection modifications at Throsby Drive/Flinders Street/Campbell Street and in Denison Street at Crown Street, Victoria Street and Throsby Drive in the short to medium term to improve connectivity of the alternate traffic route to the surrounding arterial roads and links to the City Centre core. A major intersection upgrade at Gladstone Avenue/Crown Street/Denison Street is also needed in the longer term.
 - New traffic signals within the city centre, new right turn bays and some parking restrictions to help manage traffic queues and clearways to help peak hour traffic as well as pedestrian safety and connectivity;

AJAX AVENUE EXTENSION

Unmanaged traffic growth in the North Wollongong/Fairy Meadow area will have significant impacts on traffic congestion and accessibility to the Wollongong City Centre. In addition, there will be detrimental impacts on residents and businesses in the immediate vicinity of the Innovation Campus (including Montague, Cowper and Bourke Streets and Elliotts Road), the residential precinct along Bourke, Virginia and Flinders Street and businesses along Flinders Street.

The potential growth in traffic along Bourke Street to 23,000 vehicles per day will:

- Significantly reduce residential amenity and safety;
- Require the short-medium closure of Virginia Street to prevent shortcutting;
- Potentially require additional side street access restrictions on Keira, Bessell, Park, Church and Ocean Streets;
- Require the removal of the remaining on-street parking.

Similarly, traffic growth on Flinders Street to 56,000 vehicles per day will have impacts on businesses along Flinders Street and potentially require the reduction in access from side streets (Edward and Charlotte Streets) and accelerate the implementation of additional traffic controls such as traffic signals.

Given the potential detrimental impacts on the immediate community and businesses, in addition to the broader impacts on access to the City Centre, an extension of Ajax Avenue to Squires Way / George Hanley Drive will be investigated, in conjunction with other alternatives, as a possible treatment to manage or even reduce these detrimental traffic impacts. The road extension would also have the following benefits:

- More direct access to the Wollongong City Centre eastern precincts;
- Enhanced east-west pedestrian and cycle connectivity;
- Improved access to Stuart Park and North Wollongong train station.

The Ajax Avenue extension proposal is planned to proceed two stages:

Stage 1 – Investigate to confirm link feasibility

Stage 2 – Subject to satisfactory completion of Stage 1, design and implementation

The investigations will include further studies into traffic generated by developments at the Innovation Campus and the adjacent industrial precinct.



PARKING

ISSUES

Parking policy is an aspect where the competitive position of the City Centre has to be considered. Maintaining the City Centre as the primary centre for the Illawarra Region is a key objective of Council's policy framework.



Multiple demands for on street parking in the City Centre

The cost of supplying parking in the City Centre is significantly higher than in suburban locations and is a key consideration in developing retail and commercial sites. However, for certain businesses there are significant advantages to be gained by locating in a City Centre that is highly accessible by all modes of transport.

From a transportation policy viewpoint there are advantages in encouraging development to the City Centre. In particular, there are efficiencies to be gained in the use of parking supply and reductions which can be made to the number of parking spaces provided in the City Centre due to the ability to share spaces for multiple trips.

Some cities go beyond this reduction in supply to account for efficiency of use (e.g. by consolidating parking supply), public transport use and local residential trips by setting further reduced parking rates to:

- encourage greater public transport use;
- reduce costs of city centre development where basement or structure parking is very costly;
- reduce the negative amenity aspects of large areas of car parking and pedestrian/vehicle conflicts at driveways, etc.

Achieving a desirable supply of parking spaces is an important “balancing act” to meet economic, accessibility and sustainability goals and to maintain a vibrant city centre.

PRINCIPLES

The following principles will guide the approach to parking in the City Centre:

- Reduce fragmented parking and encourage parking provision into major off street parking stations;
- Real time information on car parking for drivers;
- Good safe pedestrian access to car parks;
- Short stay parking opportunities on street and in most conveniently located parking stations;
- Long stay parking in fringe locations and control use to encourage sustainable transport modes;
- Safe attractive parking stations with minimum impact on the streetscape;
- Statutory planning processes to encourage developer contributions for parking supply in consolidated off street parking stations.

Actions completed since 2005 strategy:

- Development and implementation of the **Inner City Parking Strategy**
- **The introduction of on street and off street pay parking** - parking meters in 850 of the 1,440 on street parking spaces in the core of the City Centre and parking fees on Council's casual parking facilities
- Improved efficiency of parking enforcement will discourage overstay, thereby increasing the availability over 200 short term parking spaces
- Surplus revenue to fund parking, pedestrian, bicycle and public transport projects in the City Centre
- **Review of on street parking restrictions** to provide free short term parking opportunities including free 15min parking spaces in high demand locations
- **City Centre West Parking Management Plan** (Hospital Hill precinct LATM plan)
- Comprehensive on street and off street parking surveys (2008 & 2011)
- **Future Parking Stations** Feasibility Study
- Council at grade **car park expansions** at two locations – Rawson Street, Stewart St/George St
- New **long stay leased** space at grade **car park** – Corner Ellen St & Market St
- Two **temporary casual long stay** at grade **car parks** – corner Burelli Street/Corrimal Street (old Dwyers site) and corner Burelli Street and Town Hall Place (old Oxford Hotel site)
- Introduction of reduced parking rates for new development in the City Centre.

Specific issues related to car parking in Wollongong City Centre include:

- access to car parking due to restrictions in circulation in City Centre;
- limited on street parking and increasing demands for kerb space for other purposes (e.g. loading zones, bus stops, widening of footpaths for outdoor dining) potentially further reducing on street parking in the City Centre;
- supply and location of disabled parking;
- future economic growth meaning an increased parking demand which needs to be balanced with travel demand management into the future;
- lack of information on parking availability and location;
- vehicles accessing car parks conflict with pedestrians;
- enforcement of time limits.

CAR PARKING STRATEGY

City Centre growth over the next 25 years could necessitate the provision of significant additional public car parking based on land use projections and current travel trends. In the future efficiencies could be gained from a more consolidated parking supply, reductions through residential development in the centre, public transport growth and travel behaviour change (see graph). However, even with these efficiencies, which may reduce the demand for parking, there could be a need for a significant amount of new car parking (up to 6,000 spaces).

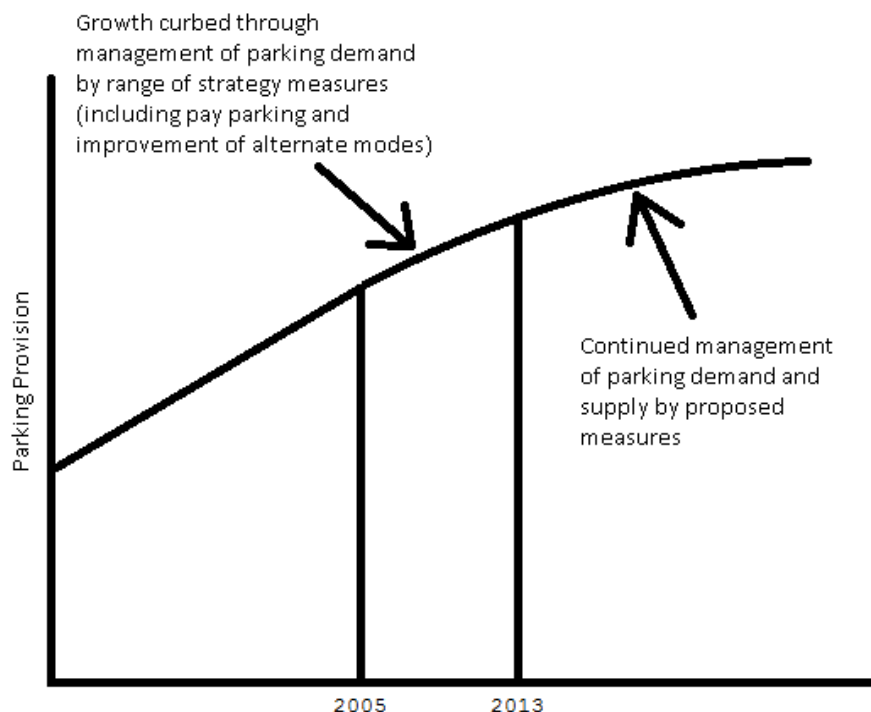


Figure 8 – Parking supply management

The major elements of the car parking strategy are as follows:

- **Future Parking Stations** - Encourage developers to provide parking in consolidated off street facilities (see map overleaf)
 - Reduction in parking demand due to shared parking opportunities
 - Reduction in costs of provision of parking due to economies of scale
 - Reduction in pedestrian / vehicle conflict due to fewer driveway crossings
- **Parking Guidance System** - incorporating signs which display real time information on parking availability, to be partially funded by parking meter revenue.
 - Spare capacity in off street parking facilities will be better utilised, increasing parking availability on street
 - Reduction in traffic congestion due to fewer circulating vehicles
 - Investigation of information provision to mobile devices (smartphone, GPS etc)
- **Improvements to pedestrian, bicycle and public transport facilities.**
 - Direct parking meter revenues to public transport, walking and cycling improvements to encourage uptake of alternative modes, reducing city centre car trips, congestion, parking demand and greenhouse gas emissions.
- **Comprehensive on street and off street parking surveys on 3 yearly basis** to monitor short stay and long stay demand



Figure 9 – Future Parking Stations

PUBLIC TRANSPORT

ISSUES

The current mode share of public transport trips in the City Centre is low at approximately 3% of all trips. The mode share of public transport trips for journeys to work is approximately double that for all journey purposes, at just over 6% (2006 census), however this falls well short of the state government target of 15% of journeys to work in Wollongong being made by public transport by 2016. It is a major aim of this strategy to increase the proportion of trips by public transport in the City Centre, for all journey purposes by notably for journeys to work. Increased public transport usage will require improvements to train and bus services, investment in new public transport infrastructure, cleaner fuels and an integrated planning approach, covering not only the City Centre but the broader Wollongong LGA and beyond.

The major issues related to public transport provision in Wollongong City Centre include:

- the lack of user friendly information at bus stops and quality of waiting facilities;
- limited road space – competing bus stops/lanes, bus shelter with traffic, parking, pedestrians;
- to consider future expansion of or enhancements to the 'gong shuttle loop service;
- the need for improved bus and rail integration and broader access improvements to the station precinct;
- future traffic growth in City Centre which could reduce the efficiency of bus services;
- bus travel times through the city street are unreliable and long delays often occur because of the amount of time it takes to load passengers and process each ticket;
- bus stops and which routes each bus follows aren't always clear to passengers.

PRINCIPLES

The principles developed for the Public Transport Strategy are as follows:

- Increase of public transport use to the City Centre through concentration on coordinated frequent services and good connections to City Centre attractions;
- Creation of a convenient interface between bus services, taxis and the rail system at Wollongong station;
- Major City Centre bus stops to provide convenient, attractive, comfortable and safe shelter for waiting passengers;
- Park and ride at Wollongong rail station continued in the shorter term whilst retaining options for future redevelopment of Wollongong station as more sustainable activities and provision of park and ride alternatives elsewhere;
- Appropriate travel demand management techniques to extend public transport use to choice riders;
- Capability for coaches to service Wollongong rail station;
- Bus priority and bus lanes as appropriate to maintain bus travel times

Actions completed since 2005 strategy:

- Wollongong Station Precinct Masterplan
- Gong Shuttle Implementation
- Bus Priority Implementation - Crown Street / Keira Street Signals
- Bus Passenger Infrastructure Upgrades Designs (implementation of Burelli Street shelters due early 2013)
- Implementation of CBD bus stops route segregation by colour and improved shelters/signage



Bus Priority Treatment in Crown Street at Keira Street

BUS ROUTING STRATEGY

The bus operations strategy includes the following key measures:

- design modifications of the Wollongong Rail Station Interchange to enable more bus set-down space at Jubilee Bridge and redesign of the station plaza to allow direct pedestrian access to Jubilee Bridge;
- provide bus priority measures to improve of efficiency of bus movement from Flinders Street to Keira Street integrating with masterplanning for the Campbell/Keira/Flinders site;
- relocating the bus terminus at Lang Park, potentially in conjunction with the redevelopment of McCabe Park;
- implementation of an integrated ticketing system will reduce bus loading times, particularly at city stops;
- bus priority measures to improve bus operations where appropriate;

- shuttle bus to service southern area of Wollongong City Centre (shown in Figure 10):
 - serving employment and industrial areas south of the city centre and linking these with the rail station;
 - potentially operating as a 20 minute loop service with between 3 and 6 services per hour (i.e. 20 minute and 10 minute service frequency);



Figure 10 – Proposed Southern Shuttle Bus

The bus routing strategy is to be supported by a passenger information system which provides legible information on bus services (frequencies, routes, delays, etc). Bus stops should be comfortable, convenient, attractive and safe with shelter and lighting.



Informative Signage at Bus Stops

BUS/RAIL INTERCHANGE STRATEGY

The redevelopment of Wollongong Rail Station, Transport Interchange and Railway Precinct presents an opportunity to create a western 'gateway' to the City Centre. The primary objectives for the redevelopment of the Railway Precinct are to provide:

- a modern multi-modal transport centre that will meet the future needs of Wollongong; and
- a catalyst which would bring about much needed improvement of the wider railway station precinct.

Issues

As a transport node, the railway precinct has several functions. The primary one is the connection of pedestrians, cyclists and bus, taxi and car passengers with the rail network. Pedestrians may also use the convenient access routes on their way to other facilities in the precinct.

The existing transport facilities are, however, fragmented and perceived by many to be unattractive. The station entrances are at platform level on both sides of the tracks. Bus passengers and pedestrians on Crown Street walk down steep grades to access the station, often crossing Crown Street in the process. Pedestrian and taxi passengers must often negotiate a footbridge to access the platforms on the opposite side of the track.

Wollongong Station Precinct Vision

The vision for Wollongong Station and the railway precinct is for a fully integrated transport interchange with station access from an elevated station concourse accessed off Crown Street and with direct links to the adjacent property sites. The vision would also see the relocation of the coach terminal to Gladstone Avenue within the redeveloped Piccadilly Centre.

The redeveloped station concourse would be one level below Crown Street allowing a pedestrian underpass below the busy street. The station would be provided with escalators and lifts to allow easy access and would have links through a redeveloped "Piccadilly Centre" to Gladstone Avenue and Crown Street.

The interchange with buses, taxis and car drop-off facilities would be centred on Crown Street. The existing street could be widened on both sides to provide space for bus stops, taxi ranks and car drop-off facilities. Additional space for these activities would also be provided in adjacent streets (Railway Parade and Gladstone Avenue).

A concept design showing an artists' impression of how the station could potentially look in future is provided below to highlight the vision for the Wollongong station precinct.



Artist's Impression - Future Railway Station Precinct Crown Street Level

Implementation

The actions involved in implementing the Wollongong City Centre Access & Movement Strategy form part of the traffic and transport planning activities of the Council and other transport authorities, principally Transport for New South Wales (TfNSW) and NSW Roads and Maritime Services (RMS).

Substantial changes are proposed over the 25 year planning period considered. Over time, the Wollongong City Centre Access & Movement Strategy will help the City Centre emerge as a strong primary centre within the Sydney Greater Metropolitan Region. Implementation of the strategies need to be strongly supported by community education and consultation activities by Council and other transport providers through an agreed Communications Strategy.



Council Road Works

References

Eppell Olsen & Partners, Wollongong City Centre Access & Movement Study December 2005
Eppell Olsen & Partners, Wollongong City Centre Access & Movement Study - Stage 2A (Principles, Policies & Draft Structure Plans), June 2003;
Eppell Olsen & Partners, Wollongong City Centre Access & Movement Study - Stage 2B (Parking Strategy - Draft for discussion), September 2003;
Eppell Olsen & Partners, Wollongong City Centre Access & Movement Study - Stage 2B (Strategies, Policies & Final Structure Plan), December 2003;
Halcrow Pacific Pty Ltd, Wollongong Rail Station Transit Interchange and Precinct Study, March 2005
Illawarra Transport Taskforce, Illawarra Transport Planning Principles, 2003;
Illawarra Transport Taskforce, Moving Together - A Transport Strategy for Kiama, Shellharbour and Wollongong, 2004;
NSW Department of Planning, Illawarra Regional Strategy, 2006;
NSW Government, NSW 2021 State Plan, 2011
Wollongong City Council, Wollongong 2022: Community Strategic Plan, 2012

Wollongong City Centre Access & Movement Strategy Summary Action Plan Program

Pedestrian Strategy

Action	Estimated Cost
Speed Reduction Measures Refer to Council Capital Program for traffic facilities and Traffic Facility Priority List	\$0.5M
New Footpath Program Refer to Council Capital Program for footpaths and Footpath Priority List	\$2.4M
Footpath Replacement Program Refer to Council Capital Program for footpaths and Footpath Priority List	\$6.4M
Pedestrian Crossings (unsignalised) Refer to Council Capital Program for traffic facilities and Traffic Facility Priority List	\$0.3M
Kerb Ramp Program Refer to Council Capital Program and Kerb Ramp Priority List	\$0.6M

Cycling Strategy

Action	Estimated Cost
On Road Bicycle Facilities Refer to Council Capital Program for cycleways and Cycleway Priority List	\$20,000
Shared Path Program Refer to Council Capital Program for cycleways and Cycleway Priority List	\$5.9M
Bicycle Parking Program Refer to Council Capital Program for cycleways and Cycleway Priority List	\$0.1M
Undertake cyclist counts to identify popular routes and the presence of unforeseen barriers to cycling in the study area.	TBD

Traffic Management

Action	Estimated Cost
City Centre Alternate Traffic Route includes road widenings, construction of signals, new turn phases, turning bays, roundabouts and other intersection improvements on the ring road. Refer to Council Capital Program and Traffic Facility Priority List.	\$73M
Construction of Traffic Signals Refer to Council Capital Program and Traffic Facility Priority List.	\$8.4M
Construction of Roundabouts Refer to Council Capital Program and Traffic Facility Priority List.	\$2.3M
Peak hour clearways/parking restrictions Refer to Traffic Facility Priority List.	\$50,000
Extend Ajax Avenue to the intersection of Virginia Street and Squires Way	\$30M
Road Widenings/extensions Refer to Council Capital Program and Traffic Facility Priority List.	\$5.5M
Other intersection improvements including changing lane allocations, banning turns, adding turn lanes and phases. Refer to Council Capital Program and Traffic Facility Priority List.	\$1.9M
City Centre West Precinct Traffic Calming proposals in New Dapto Road, Macquarie Street, Robinson Street and Hercules Street including modified intersection controls, angle parking, cycleways, footpaths and signage.	\$0.4M
Parking Bay Linemarking City Centre West Precinct.	\$0.1M

Car Parking Strategy

Action	Estimated Cost
Future Parking Stations	
Develop a consolidated parking policy which applies to non-residential development within the DCP, and encourages development sites to contribute towards public parking off site.	
Investigate the ability to provide joint venture car parks with developers on all identified car park sites.	
Develop a detailed staged implementation plan to deliver the multi story parking facilities identified in the Wollongong City Centre Parking Station Feasibility Study.	
Deliver multi storey parking facilities at the following Council car park sites: <ul style="list-style-type: none"> Stewart St/Bank St Victoria St/Belmore St Rawson St Stewart St/ George St Thomas St Stuart St (park & ride) 	\$60M
Deliver at grade park & ride car park at JJ Kelly Park	\$1.5M
Parking Management Systems	
In the medium to long term, and as public transport improvements are introduced, restrict the supply of long stay parking in the City Centre and use inverse pricing structures to encourage short stay parking and penalise long stay parking.	
Monitor residential streets surrounding commercial centres to ensure long term parking from the City Centre is not occurring inappropriately.	
Undertake detailed parking surveys in the City Centre on an ongoing 5 year basis. Liase with relevant stakeholders and adjust parking restrictions to suit needs and achieve travel demand management objectives.	\$0.2M
Provide information to the general public on the varying definitions of loading zones, no parking, clearways etc.	
Investigate and implement real time parking information signage	TBD

Public Transport Strategy

Action	Estimated Cost
Establish new bus layover.	\$3M
Widen Jubilee Bridge to enable indented bus bays ;	\$7M
Flinders Street/Smith Street/Keira Street intersection bus priority at traffic signals	\$50,000
Develop bus transit centre fronting McCabe Park	\$10M
Bus Stop Infrastructure Improvement Program Refer to Council Capital Program and Public Transport Infrastructure Priority List.	\$2M