

Part four

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4.1 Urban renewal strategy

The strategy to encourage renewal in the city centre is multi-faceted. It incorporates the work of consultants who have prepared supporting documents and includes:

- a planning framework that promotes activity, development and well-located land uses
- a place-making approach to the future development of the city
- physical improvements to the city's key public domain spaces
- a series of economic initiatives that will support urban renewal
- a strategy to promote transport, access and connectivity to and within the city centre.

There is no single answer to renewal of the Newcastle city centre, but rather a series of initiatives that will need to be planned to occur over time. Many of the initiatives can be started in the short-term, and a framework will be put in place to support them. Over the longer term, strategies need to be deployed to support their ongoing implementation at the right time. Implementation will be incremental, involving progressive redevelopment and change in the built environment as well as gradual change in the public domain, which will build momentum for the overall revitalisation and renewal of the city centre.

Successful implementation will require the collaboration of a range of stakeholders in varying capacities including local and state government, the private sector and the community. Together, these stakeholders will play a key role in delivering the renewal of the city centre. The implementation plan that supports the initiatives identifies stakeholder responsibilities and indicative timeframes.

Successful urban renewal initiatives have the following factors in common:

- strong positive local vision
- involvement and inclusion of residents
- clear leadership
- a strategy for the short, medium and long-term
- attention to the retail and business marketplace
- partnerships with private sector and experienced community development organisations
- using public and social investment to reinforce renewal
- promotion of the locality as a high quality destination, through recreational and community facilities.



Figure 4.1 Transition of Hunter Street's activity nodes, impression (JMD 2012)

More specific to Newcastle, the strategy and initiatives seek to ensure that:

- the strength of the city centre is recognised and reinforced, relative to other centres within the local government area
- the city centre is a vibrant, viable and attractive destination for businesses, residents and visitors, and minimises the need to travel to outlying centres
- the city centre provides accessible and suitable employment opportunities as well as a mix of retail and service facilities for the community
- the city centre's retail and employment lands are attractive for investment by local, national and international businesses, both now and in the future
- the city centre is permeable, all parts are well-connected and easy to access.



4.2 Guiding principles

The following guiding principles have been applied to the strategic planning for Newcastle's urban renewal in support of the initiatives and proposed implementation actions. Some of these are derived from principles used in Hill PDA's report.



1. Opportunities to grow and expand

Provide adequately zoned land to ensure the ongoing economic sustainability of the city and accommodate anticipated growth and trends.

Identify and monitor sites and areas suitable for large-scale retail and commercial development.

4. Integrity and viability

The growth and development of the city centre should support and reinforce the existing integrity and uniqueness of Newcastle. This includes supporting and encouraging the adaptive reuse of the heritage buildings that contribute to the rich fabric of the city. This should be supported by the planning framework and designed to encourage innovation.

7. Housing mix and affordability

Delivery of more residential development in the city centre will enhance vibrancy and viability through increased day and night activity, and support for jobs and services.

Encourage a range of housing types for a variety of markets, including student and seniors housing.

2. Economic viability with enhanced choice and competition

The city centre supports a diverse range of retail, commercial and residential uses.

Promote development that provides increased consumer choice and strong, diverse services to minimise loss of business to competing centres.

Promote flexibility to accommodate emerging trends in retailing and other uses where they improve the city centre.

3. Busy and vibrant city centre

The city centre should have the opportunity to develop its own character and identity that reflects the needs and aspirations of the community. This identity can positively influence the branding and marketing of the city centre, assist with attraction of new investment, and give a strong sense of community and place.

5. Investment, employment and business growth

Population growth in the city centre will increase demand for jobs and services, necessitating additional investment. Growth and expansion of existing businesses must be supported through the planning framework, with suitable land use zoning and development controls.

Support for existing and emerging business is vital for the long-term viability of the city centre through targeted investment attraction strategies.

6. Transport, access and connectivity

Maximise accessibility and convenience of public transport to and within the city centre, and prioritise a range of transport modes to reduce private vehicle use.

Promote connectivity and way finding between precincts and to the waterfront, and encourage pedestrian activity throughout the city centre.

Support infrastructure and public domain improvements to attract people to the city centre.

8. Retail variety

Support supermarkets on appropriate sites and provide a range of convenient retail options to enhance competition, thereby maintaining the economic viability of the city centre.

Recognising the regional demand for bulky goods retailing and encouraging its location within or surrounding the city centre will help ensure its viability, while protecting existing industrial land within the LGA.

9. Provide for future employment growth

Promote a commercial core that provides for a range of employment-generating activities.

Cluster shared resources and services to attract new business.

Employment-zoned land that can accommodate relatively large floor plates should be preserved, so that the city centre is the primary location for commercial office, entertainment and community uses. This is a priority in meeting the future needs of both the city and the wider region.

4.3 Urban renewal initiatives

This section describes the various initiatives that will support urban renewal of the city centre as the regional capital of the Hunter, making it a vibrant, economically successful city that is an attractive place for residents, workers, visitors and the wider community.

The initiatives can be broadly categorised as place-based, economic and transport-related, which will be implemented through a variety of means including amendments to the planning framework and an implementation plan that sets out a framework for delivery over time.

Place-based

- reshaping Hunter Street as the main street and a key destination by:
 - widening footpaths, encouraging outdoor dining and activity opportunities, introducing new landscaping and cycle ways
 - reinforcing growth in existing activity nodes and revitalising Hunter Street Mall as a catalyst for the east end's renewal
- recognition and strengthening of the civic precinct as the main municipal, educational and cultural hub of Newcastle
- positioning of the west end as the city's future CBD
- providing clear guidance on development constraints
- support for Newcastle's heritage as an essential component of place-making

Economic

- diversification of Newcastle's economy to ensure robustness and resilience into the future
- promoting and supporting the city centre as an educational hub
- encouraging new retail uses into the city centre
- a living city, attracting more residents to the city centre
- a developer contributions regime that supports renewal and upgrade works.

Transport-related

- support for integrated public transport in the city centre and promoting a mode shift
- creating a connected pedestrian and cyclist network
- improving the efficiency of the road network for all users
- managing the impact of carparking
- improving connections for all transport modes across the rail corridor.



Figure 4.2 *Potential* square and Hunter Street, impression (JMD 2012)



Figure 4.3 *Today* Hunter Street

Place-based initiatives

4.3.1 Reshaping Hunter street as the main street of the city

Newcastle city centre is comprised of a number of distinct character areas that together form a city centre, offering a vibrant and varied range of experiences. Each of the primary character areas are located along Hunter Street and form activity nodes centred on public transport hubs.

Hunter Street is the spine of the city and has historically been the city's main street. It ties the major components of the city's activity together, from the east end, through the civic precinct, to the west end. It is also close to other major hubs of the city such as Honeysuckle. It functions as a main transport corridor and supports key retail and main street shopping. Re-establishing Hunter Street as the city's spine will provide focus for the overall growth and development of the city centre and will support the desired future directions for each sub-precinct of the city centre.

The major precincts of Newcastle city centre include:

- East end: residential, retail, leisure and entertainment
- Civic: the government, business and cultural hub of the city
- West end: the emerging business area including the western end of Honeysuckle, i.e., the Cottage Creek precinct
- Honeysuckle east end: the mixed use leisure, residential and retail area
- Darby Street: eating and boutique retail (on the city edge).

Key concepts

The strategies for the re-establishment of Hunter Street as the main street of the city are twofold. Hunter Street needs to be able to stand alone as a great place, however, by its very nature it needs to lead somewhere and connect to other places. The strategies for improvement combine:

- reshaping the street through improved public domain, wider footpaths for activity, more landscaping and dedicated bus and cycle lanes to ensure Hunter Street provides for all users
- use of Hunter Street to facilitate better connections between precincts within the city centre, and focusing activity in nodes rather than dispersing it along the full length of the street
- the re-establishment of Hunter Street as the main street of the city needs to take into consideration its function, appearance and place within the wider connected network. Improvements to Hunter Street are central to achieving urban renewal in Newcastle.



Figure 4.4 *Potential* activity zone on Hunter Street, impression (JMD 2012)



Figure 4.5 *Today* Hunter Street

Activity nodes

At just over 3 km long, Hunter Street as a main street needs to have activity concentrated in a series of distinct nodes, rather than attempting to be active and vibrant for its entire length. Concentrating activity in a limited number of activity nodes supports urban renewal by improving the vibrancy of established centres. This is consistent with the Newcastle City Centre Renewal Report (HDC, 2009) and the Hunter Street Revitalisation Masterplan (City of Newcastle, 2010). Over time, the working and resident population of the city centre will grow incrementally, supporting wider activation of Hunter Street, radiating from the core of the nodes.

Three primary activity centres have been nominated based on:

- the existing activity nodes where business and development is occurring more strongly, which are supported by public transport and existing or potential open space
- areas that exhibit distinctly different characteristics
- areas that are likely to experience the most change
- areas that present significant opportunities for built form and public domain changes and improvements.

The primary activity nodes are east end, west end and Civic. A series of secondary activity centres have also been identified that acknowledge existing important sub-precincts within the city centre. These are Bolton Street in the east; Newcastle Art Gallery, Devonshire Street and Hunter Street's 'bridal precinct' in Civic; and Steel Street, Marketown, National Park Street's 'adventure precinct' and Cottage Creek in the west end. These are identified in Figure 4.6.



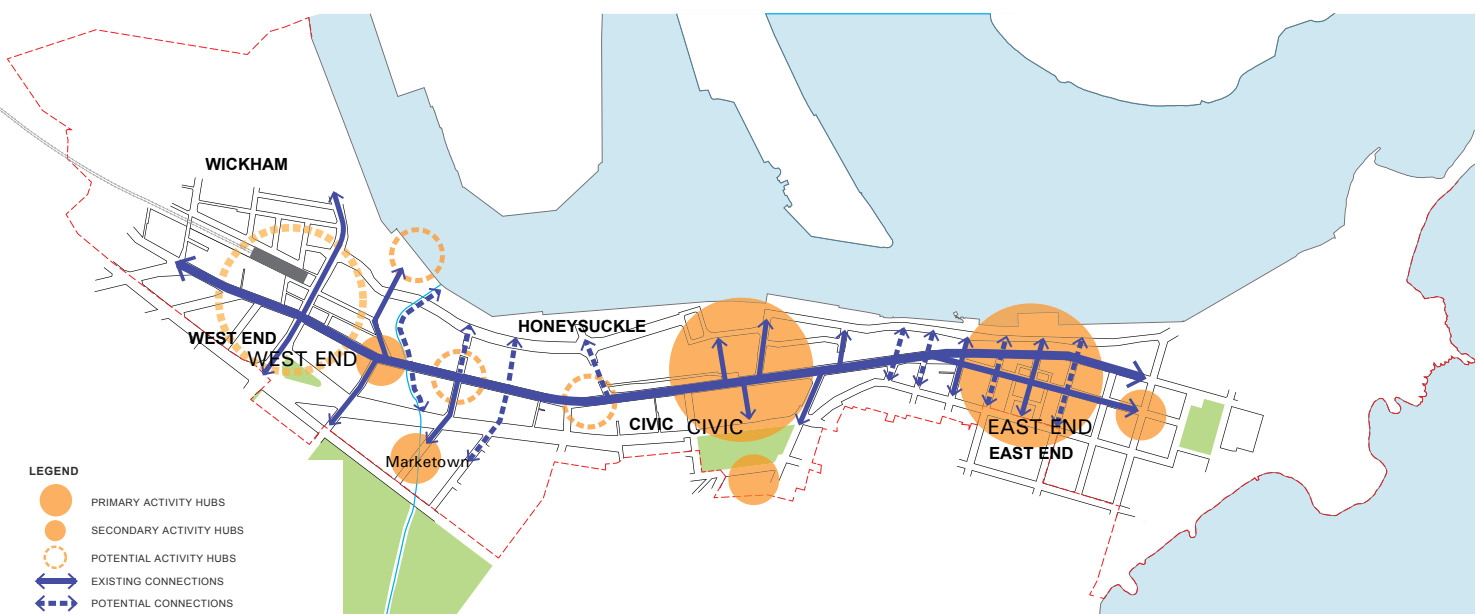


Figure 4.6 Existing and proposed activity nodes with key connections

Activity strategies

There are three key aspects to the vision for a revitalised Hunter Street proposed in the Public Domain Study by JMD Design that was undertaken as part of this urban renewal strategy. These were distilled from previous work by the City of Newcastle and were used to direct the design work in the Public Domain Study. The vision is to:

- green the street - landscape
- people the street - activity
- read the street - connections and legibility

The balance between each key aspect will vary depending whether the particular stretch of Hunter Street is located within or between activity nodes. For areas between activity nodes, there will need to be flexibility. In the short term, activity may not be possible, but the footpath design will need to be able to accommodate an activity zone in the future as the activity nodes expand. Future activity zones on the footpath could potentially accommodate other things in the short term such as removable landscape, public art or street furniture items.

Green the Street - landscape

Greening the Street encompasses improving the amenity of Hunter Street through extensive street planting. A strong landscape quality to the street will improve the amenity for pedestrians, modifying the micro-climate by providing shade in summer and sun in winter if deciduous species are selected.

Extensive street planting will contribute to improving the environmental and social sustainability of Newcastle. Improved amenity to the streets provided by planting will encourage a greater number of people to walk as it will be a more pleasant experience. Shading the pavement will reduce the heat island effect, which will have a positive impact on the heating and cooling requirements of adjacent buildings. Specifying native species also contributes to biodiversity and supports urban wildlife populations. Rain gardens and other planting as part of water-sensitive urban design elements contributes to the sustainable management of stormwater and water quality. In suitable areas, productive landscapes can contribute to urban food production and help build and sustain a sense of community through participation in the creation and maintenance of community gardens.

Diversity in planting can be used to define separate precincts by creating different types of open spaces that contribute to wayfinding and legibility. The form of planting can also be used to modify traffic speed, constraining street widths and sculpting open space.



Image courtesy of JMD Design



Image courtesy of JMD Design



Image courtesy of JMD Design

People the Street - activity

Improving the amenity of streets through increased planting is only one method of improving street life. Giving pedestrians priority and providing for cyclists in certain parts of Newcastle and certain areas of the street zone will contribute greatly to increasing activity in the city centre.

Recent studies show that giving pedestrians priority and encouraging cycling in centres has a greater impact on improving the viability of businesses than does the provision of more carparking (Tolley, 2011). This is because vehicles and parking have a greater land take than cycles and pedestrians, and vehicles tend to carry only one person. The number of people able to be accommodated in a centre is larger if they come on foot or by bicycle, hence the amount of activity increases. While individuals that come on foot or by bike may spend less, the aggregate spend is greater because of the larger numbers.

The land take devoted to vehicles in the form of multiple carriageways and parking areas in a street is dead space, taking away from the amount of land that can be devoted to commercial enterprises and community and cultural facilities, which will attract more customers and visitors. Reducing this land take by encouraging people to access the centre by foot and bicycle will provide opportunity for a more diverse range of activities and enterprises. This does not mean that there will be no parking in the city centre, rather that people are encouraged to park and walk.

Providing activity zones on the footpath also allows the footpath to perform as an activator to the street, providing space for commercial enterprises that in turn attract more people to spend more time and money in the precinct. More people on the street results in greater safety by providing more opportunity for passive surveillance. Footpath widening to accommodate activity zones in selected locations will also improve safety simply by providing more space for people. This is of critical importance to more vulnerable sectors of the community, such as children and old people, who may avoid a certain area if they feel unsafe.



Image courtesy of JMD D



Image courtesy of JMD Design



Design

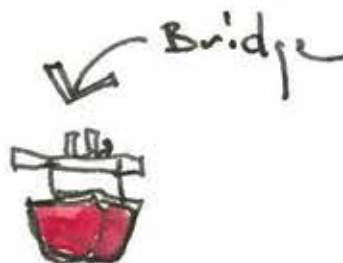


Image courtesy of JMD Design

Reading the Street - connections and legibility

Integral to revitalising Hunter Street and re-focusing it as the major connector in Newcastle city centre is improving the legibility of the street. This involves:

- promoting and improving existing physical and visual connections across the rail corridor and establishing new ones to reconnect the different precincts of Newcastle
- utilising existing street alignments, preferred pathways and corridors to and from key activity areas and destinations such as the foreshore, Marketown, Darby Street and Honeysuckle, and along Cottage Creek
- revealing existing landscape elements within the urban grain of the city such as Cottage Creek and Birdwood Park
- ensuring the connections to other places are obvious through the use of wayfinding techniques such as specific colours and forms to accentuate landmarks and emphasise direction, and highlighting prominent visual features to become specific reference points. For example, totems signalling crossings across the rail corridor
- using different landscape treatments, furniture and finishes to identify different precincts and to create a spatial hierarchy, including the use of bespoke street furniture for special places like Wheeler Place
- using different landscape treatments, furniture and finishes to identify distinct zones within the street corridor for different uses, for example, different paving finishes for footpaths and cycleways.



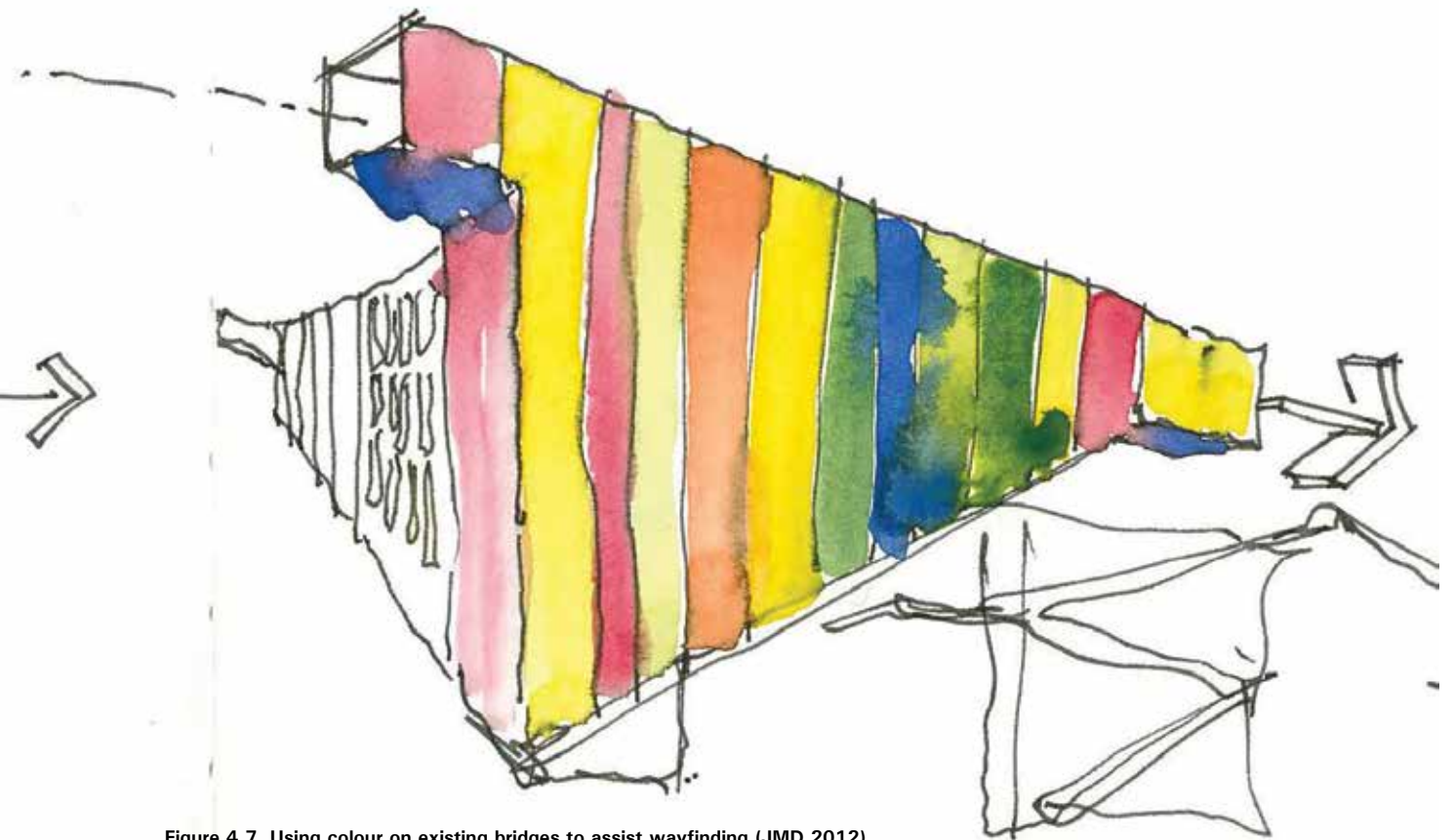


Figure 4.7 Using colour on existing bridges to assist wayfinding (JMD 2012)

Hunter Street proposal

Currently Hunter Street has a generous width of about 25 m. Generally there are four travel lanes and two parking lanes within the roadway. Footpaths on both sides are a standard width of about 4 m. The large amount of space devoted to vehicles results in a car-dominated environment, with vehicles travelling at relatively high speed through unrestricted carriageways.

The ample width of the street means that there is opportunity to accommodate not only cars, but a series of other activities including better space for pedestrians and cyclists. The proposed cross-section for Hunter Street incorporates two vehicular travel lanes, a morning peak clearway on the northern side, inset bus stop zones, an activity zone on the southern side, and footpaths, cycleways and street planting on both sides of the street.

Widening footpaths and introducing more landscaping, activity zones and street furniture will improve the amenity for pedestrians and stimulate activity and renewal in buildings fronting the street.

On-street parking will remain available in the clearway outside of morning peak hour, between tree bays on the southern side of Hunter Street. Parking bays on both sides of the street will allow people to access businesses and come and go easily, contributing to the overall activity of Hunter Street.

Figures 4.8 and 4.9 illustrate the preferred option for Hunter Street. Further detail is available in the appendixes. JMD Design's full report contains the shortlisted options that were investigated as part of this strategy.

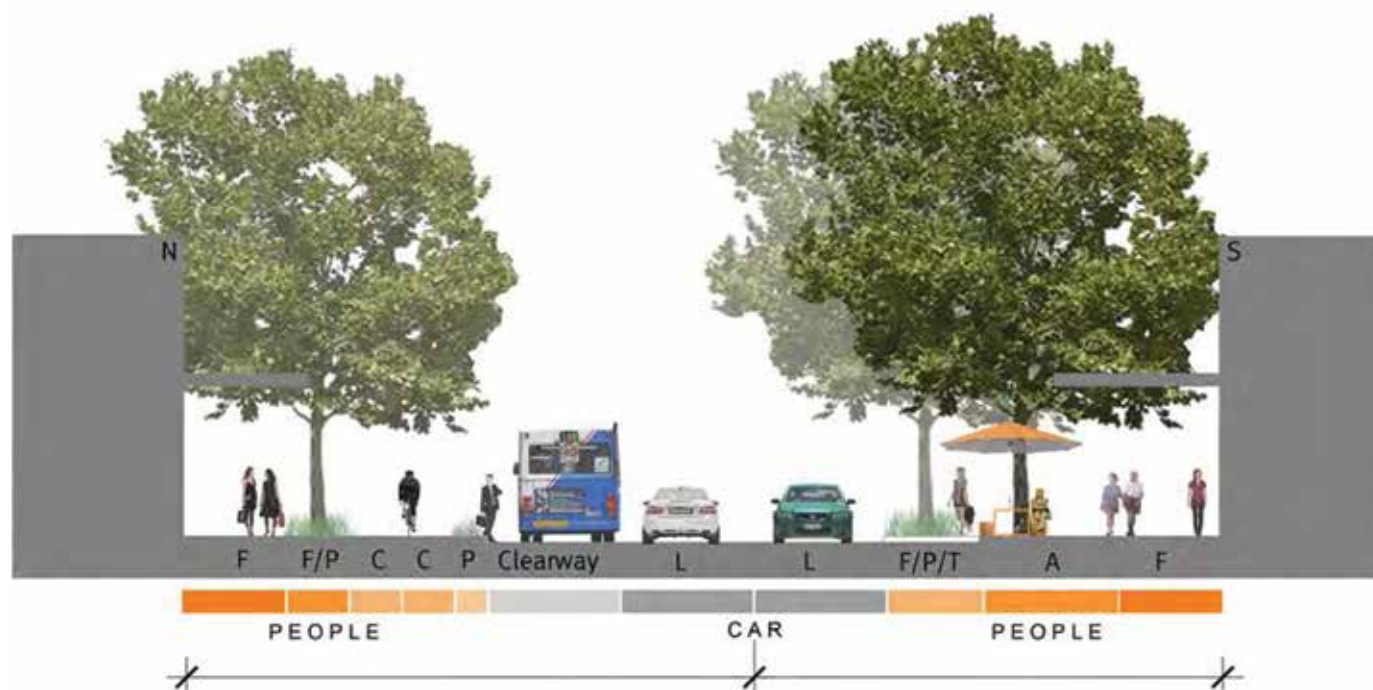


Figure 4.8 Hunter Street upgrade - section (JMD 2012)



Activity zone, temporary seating



Legend

1. footpath pavement 2. kerb extension 3. dual cycle way 4. dedicated parking lane 5. bus clearway east
 6. shared footpath (ie bus stop waiting zone or road crossing or cycleway) 7. existing tree planting 8. proposed tree planting
 9. proposed verge planting 10. activity zone modules: temporary, passive recreation, active recreation, vegetate, spill out

Figure 4.9 Hunter Street upgrade - plan (JMD 2012)

Flexibility between activity nodes

In the short-term, it will not be possible to accommodate active uses in the ground floor of buildings for the entire length of Hunter Street. Therefore, it is proposed that activity be concentrated in the activity nodes with the possibility that in the future, capacity for activity is extended beyond the activity nodes. In order to allow for future activity, flexible uses and building floor plates that can later accommodate retail are encouraged. In the interim, lower order commercial uses such as professional suites can occupy the ground level of buildings along Hunter Street. Activity zones along the footpath might include temporary public domain treatments such as landscaping in planter boxes, or relocatable street furniture and public art.

Actions to implement

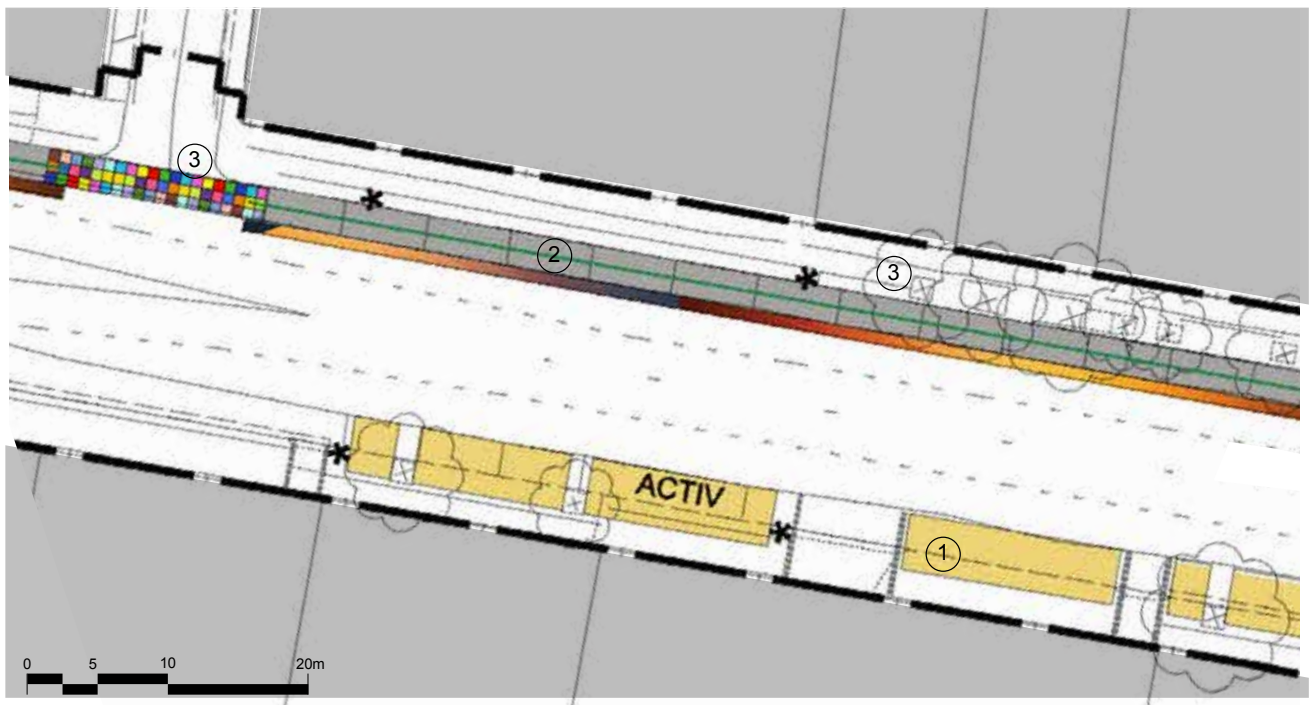
1. Inclusion of proposed Hunter Street public domain upgrades as part of the schedule of works in s94A contributions plan. Proposed upgrade should be broken down into specific areas associated with the activity nodes.
2. DCP should be amended to incorporate revised view and pedestrian permeability mapping. Special area controls should be included to identify proposed public domain upgrades and pedestrian links.
3. Proposed public domain works should be included in council's Public Domain Manual.
4. Implementation of the upgrade for Hunter Street can commence with temporary works and materials in selected locations to trial various elements of the proposed upgrade. Once trialled items are verified, they can be rolled out incrementally along Hunter Street. For instance, temporary resumption of parts of the parking lane can be used to test activity zones, landscaping and bus stop configurations. These can then be added to incrementally, and gradually converted from temporary to permanent interventions. The cycleway is an example of one element that can be trialled before permanent installation. Strategies are illustrated below and right.



Temporary cycleway - barricade



Figure 4.10 Temporary cycleway, impression (JMD 2012)



Legend

- 1. Temporary activity zone modules
- 2. Temporary dual cycle lane separated from traffic lane by Jersey kerb
- 3. Demarcation of cycle lane crossing with side street (for illustration purpose only)

Existing trees
 Driveway
 * Existing lightpost

Figure 4.11 Hunter Street upgrade plan (JMD 2012)



Image courtesy of JMD Design

Temporary cycleway - delineation



Figure 4.12 Temporary cycleway, section (JMD 2012)

4.3.2 Revitalise Hunter Street Mall as a catalyst for the east end's renewal

The east end of Newcastle centres on Hunter Street Mall and the termination of Hunter Street at Pacific Park. The precinct is characterised by hilly topography and a mix of uses focusing on the retail core of Hunter Street Mall. The subdivision is more finely grained than other parts of Newcastle city centre. A mix of heritage buildings with more recent infill development and a higher proportion of residential development give this part of Newcastle a unique character, as distinct from other parts of the city centre.

Hunter Street Mall is the centre of this precinct and offers a finely grained pedestrian-scaled public space with strong linkages via the footbridge to the river foreshore, and terminating street vistas to the Cathedral and the Hunter River. Existing public domain treatments have exceeded their expected life and are generally cluttered.

Hunter Street Mall is the focal point of existing main street retail activity in the city and will continue to be into the future. There is potential to build upon its position as a unique main street shopping destination, distinguishing it from nearby suburban shopping centres. The presence of a growing residential population in the precinct generates a demand for a full-line supermarket and a discount department store with complementary specialty retail. The positioning of Hunter Street Mall as a unique main street shopping destination would be further supported by the provision of cinemas, restaurants, a theatre and a hotel to generate a diverse and attractive night-time economy. Improvements to the quality of the public domain in Hunter Street Mall will also improve its performance as a public space. This will encourage and attract visitors, and enable the hosting of special events such as night markets, food and drink festivals and street performances.



Vision for opportunities in the precinct

Redevelopment of the former David Jones site and the block bounded by Hunter, Wolfe, King and Newcomen Streets presents the opportunity to support the creation of a mixed use neighbourhood. This brings the conveniences of city living alongside vibrant boutique retail and commercial development. Moving the court precinct to Civic opens up further opportunities to support the evolution of the east end from commercial core to a more varied living, shopping, eating and working precinct. Proximity to the ocean and the river foreshore add to the advantages of the east end.

Promoting an increase in the residential population will support the evolution of Hunter Street Mall into a vibrant main street shopping destination along with a diverse range of other uses such as small commercial and tourism facilities. Encouragement of boutique retail would differentiate Hunter Street Mall from the national retailers generally found in competitor suburban shopping centres. This will reinforce its identity as a destination in its own right.

The primary opportunity site in the east end is the former David Jones site (site 1 on Figure 4.13) and the block bounded by Hunter, Wolfe, King and Newcomen Streets (2), in which property group GPT has landholdings totalling 16,740m². Other smaller opportunity sites will become available as existing legal support services move out to follow the courts to Civic. It is important that the planning controls support redevelopment of the key opportunity sites.



Figure 4.13 Opportunity sites adjoining Hunter Street Mall

Public domain

Public domain improvements, particularly in Hunter Street Mall, will support urban renewal in the east end, redevelopment of GPT landholdings, and ongoing improvements to the quality of retail offerings. JMD Design has proposed a preferred design concept for Hunter Street Mall that removes existing clutter and integrates pedestrians and vehicles with well-designed, high quality public domain treatments. A central meandering shareway for vehicles and pedestrians is lined by street trees and planter boxes. Activity zones are located beneath selected trees. Carparking is restricted to the end of the Mall. Promotion of connections to the beach and surrounding precincts will further support revitalisation of Hunter Street Mall.

Actions to implement

1. Public domain improvements with Hunter Street Mall as a priority. These projects should be included in special area controls within the Works Schedule of Expenditure in the Civic Improvement Plan and Section 94A Development Contributions Plan.
2. Planning controls that nominate appropriate building heights, land uses and densities, and that promote design excellence, particularly on GPT's landholdings.
3. Special area controls specific to this area that reinforce street wall heights, preserve significant views, foster connections, and promote appropriate responses to heritage elements.
4. Promotion of flexibility with respect to carparking requirements, especially in view of site constraints, development feasibility and the presence of abundant council-owned carparking.
5. Planning for new retailers in Hunter Street Mall.
6. Encouraging Hunter Street Mall as a boutique shopping destination and 'eat street' with extended hours into the evening for night time activation.
7. Incorporate Hunter Street Mall as a key event space within broader tourism and event strategies.



Figure 4.14 Hunter Street Mall upgrade plan (JMD 2012)

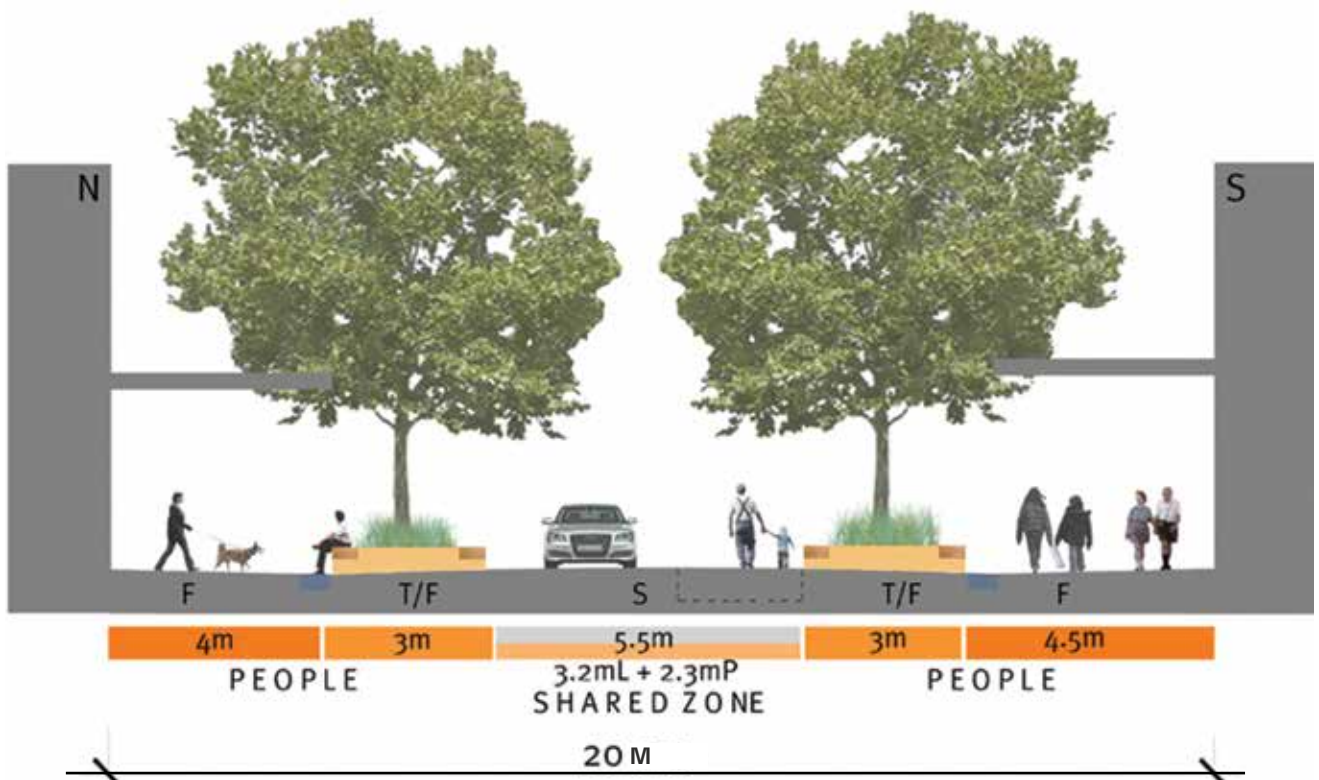


Figure 4.15 Hunter Street Mall upgrade section (JMD 2012)



Figure 4.16 Hunter Street Mall upgrade plan (JMD 2012)

4.3.3 Recognise and strengthen the civic precinct

Civic is where the City of Newcastle's city administration centre is located along with other government services, the University of Newcastle and a number of cultural facilities that reflect Newcastle's importance as a major regional city. The precinct is defined by distinct natural and built features such as Civic Park in the south, the rail corridor to the north, Auckland Street to the west and the cliff line along King Street, terminating at Crown Street in the east. It is the location of major public assets such as Wheeler Place and Civic Theatre.

Vision about opportunities for precinct

The relocation of the courts to the civic precinct as well as redevelopment of significant sites such as the Civic Arcade will have a major effect on the future character and activity within this precinct, especially the redevelopment of smaller commercial spaces in Civic for support services that relocate with the courts.

Introduction of new activities, such as more educational facilities associated with the University of Newcastle, will potentially stimulate positive change and renewal. The location of a significant student body and increased wider population within the city will create flow-on demand for housing, retail and other services within the city centre, all of which will stimulate activity within Civic. Improvements of connections to Honeysuckle will reinforce that demand.



Opportunity sites

A number of redevelopment opportunities exist within Civic (Figure 4.17). These include the former Civic Arcade site (1), Stegga's Emporium at 517 – 529 Hunter Street (3), the Star Hotel (4) and large consolidated landholdings such as the Jolly Roger Hotel site (2).



Figure 4.17 Opportunity sites, Civic

Public domain

A significant public domain opportunity exists to improve north-south connectivity along the axis stretching from Civic Park, through Wheeler Place and across the rail corridor at the current location of Civic Station. This has been recently reinforced by the decision to replace train services with bus services from a new transport interchange at Wickham. Improving the functionality and presentation of this axis complements the master planning work that has been done for Civic Park.

JMD Design has proposed a series of improvements to Wheeler Place, the forecourt to the existing Civic Station building and the footbridge across the rail corridor. Developed before the government's recent decision, these two options will:

- improve the flexibility of Wheeler Place for a range of events and make it more attractive for users
- increase the ease with which pedestrians can cross Hunter Street and access the waterfront
- improve the quality of public domain treatments in terms of planting, street furniture and wayfinding
- improving the permeability and connectivity of the city centre.

One option proposes regularly spaced shade trees (the Bosquet option), while the other option proposes irregularly spaced palm trees (the Palm Cluster option). Both options accommodate space for events, seating and a fountain. Both options retain the existing paving, working around the layout of the existing paving slabs. The community's feedback is sought about the two design concepts, outlined below.

The two designs combine Wheeler Place and the existing Civic Station building forecourt into a single entity, encouraging pedestrian linkages from Civic Park through to the Honeysuckle foreshore. The connection is emphasised by a common planting pattern and continuity in the paving across Hunter Street linking the two spaces.

Improved connectivity across the rail corridor as shown by a new pedestrian bridge could also be achieved at grade. Waiting areas are designed with pedestrian amenity in mind, incorporating lightweight roof structures and seating.

The crossing over Hunter Street is wide, linking Wheeler Place with connections across the rail corridor. It allows flexibility for pedestrians, similar to the wide pedestrian crossings at Martin Place in Sydney.



Wheeler Place

Cluster of Palms

The palm clusters have a minimal footprint, which leaves the space relatively uncluttered to allow for ease of pedestrian movement through Wheeler Place. Gatherings, market stalls and events can occur without obstruction. The slim vertical trunks of the palms allow views through the square, making it suitable for staged events. The movement corridor to the west of Wheeler Place, cleared of clutter, encourages a fast track link through the plaza, which is reinforced by a shallow linear water element. The redistribution of the existing Canary Island palms allows the significant historical façade of the Civic Theatre to be seen.

A stage is centred at the southern edge of Wheeler Place allowing movement on both sides, while remaining a central focus. The lightweight timber stage can double as an attractive seating platform when events are not being held. To the south of the stage at the base of the city administration centre, a one-stop-shop provides another destination point. The structure flanked by a palm cluster takes a similar form to the kiosk in the existing station forecourt enlarged to cater for more diverse usage. The surrounding paving is upgraded and the space de-cluttered to provide a simplified forecourt to the city administration centre.



**Figure 4.18 Forecourt opposite Wheeler Place
Cluster of Palms, impression (JMD 2012)**



Figure 4.19 Forecourt Cluster of Palms, section (JMD 2012)



Figure 4.20 Wheeler Place Cluster of Palms, impression (JMD 2012)



Figure 4.21 Wheeler Place Cluster of Palms section (JMD 2012)



Figure 4.22 Wheeler Place Cluster of Palms plan (JMD 2012)

Bosquet

A thick green canopy shades the forecourt of the existing Civic Station building and Wheeler Place. Movement corridors are pushed to the edges of Wheeler Place, while the central space becomes a passive area. The character of this space is very different from the Cluster of Palms option and has a dense canopy, which creates an intimate sense of enclosure. The London Plane trees are a deciduous species allowing them to respond to seasonal conditions, offering shade in summer and sunshine in winter. A water feature circles the plaza on the ground and has water jets that encourage water play. The spacing of trees allows activities such as markets to take place within Wheeler Place, offering a more comfortable user experience than the current unshaded paved area.

A timber stage is provided around the existing mature trees as for the cluster of palms option. The one-stop-shop is located in the south-east corner of the plaza in the Fred Ash building at the base of the council offices, providing a community anchor for Wheeler Place.

The paving to the forecourt of the City Administration Centre is reworked and simplified, with additional London Plane Trees to continue the bosquet theme.



Figure 4.23 Wheeler Place Bosquet section (JMD 2012)



Figure 4.25 Wheeler Place Bosquet, impression (JMD 2012)



Figure 4.26 Forecourt Bosquet, section (JMD 2012)

Actions to implement

1. Public domain improvements to Hunter Street and Wheeler Place as priorities. These projects should be included in the Works Schedule of Expenditure in the Civic Improvement Plan s94a Plan Schedule of Works.
2. Planning controls that nominate appropriate building heights, land uses and densities, and that promote design excellence, particularly on the Civic Arcade site.
3. Planning controls specific to this area in relation to built form that reinforce street wall heights, promote appropriate responses to heritage elements, foster connections across the rail corridor, and that facilitate mid-winter solar access to the southern side of Hunter Street.
4. Promotion of flexibility with respect to carparking requirements, especially in view of site constraints, development feasibility and the presence of council-owned carparking.



Figure 4.27 Forecourt opposite Wheeler Place Bosquet, impression (JMD 2012)

4.3.4 Position the west end as the city's future CBD

This precinct is the western gateway to Newcastle city centre and incorporates the new transport interchange at Wickham. It currently houses showroom and bulky goods retail, car dealerships and self storage. The potential of the precinct is unrealised and presents an opportunity for revitalisation and transformation in the long-term.

This precinct incorporates the western end of Honeysuckle and its eastern boundary is formed by Cottage Creek which, in the long-term, has the potential to become a pedestrian connection between National Park and the Hunter River foreshore and a pleasant landscaped corridor. Likewise, Birdwood Park has the potential to evolve into a more significant public domain precinct if planning promotes a strong built edge, less vehicular dominance and additional street planting.

Vision about opportunities for precinct

The predominance of larger lots and consolidated land ownerships, combined with fewer constraints, make this precinct ideally suited to become the long-term commercial core of the city. Uses such as bulky goods and showrooms are suitable to occupy the larger lot sizes in the interim. Buildings with a vertical mix of uses could be developed in the shorter term, with the intention of conversion to commercial uses in the future. Other uses such as residential could be accommodated above the podium in both the short and long-term. The new transport interchange at Wickham will support the development of this precinct.



Opportunity sites

Major opportunities lie with large consolidated landholdings in the west end. Sites such as the Regal Motors site (1), Kennards Self Storage (2), and the Salvos Store (3) have a number of lots in a single amalgamated ownership. Other sites such as the Stores site (4) and the former Newcastle Museum site (5) include heritage elements on relatively large landholdings and provide opportunities for unique developments that incorporate the heritage component. Other relatively large opportunity sites include the site fronting Birdwood Park that includes Hunter City Holden (6), the Spotlight site (7) and a relatively large consolidated landholding on Stewart Avenue (8) located on the northern side of the rail corridor, which is the northern gateway of the city.

Public domain

This precinct has fewer public domain assets, so incremental acquisition and improvement of public open space is needed to ensure the precinct is well-served as it evolves into a commercial core precinct.

Public domain opportunities are available via improvements to Birdwood Park, the Cottage Creek corridor, connections to the river foreshore and the new transport interchange at Wickham.



Figure 4.28 Opportunity sites, west end

Cottage Creek

JMD Design has developed a vision for Cottage Creek to transform the existing stormwater canal into a link for pedestrian and cyclist movement. The creek, when considered in its wider context, can provide a connection from beach to harbour for the western part of the city. Within the study area, Cottage Creek is heavily constrained within the urban fabric of the city.

Within the perimeter of the Cottage Creek canal easement there is a corridor of voids or “in-between spaces”, which are awkwardly nestled between the edge of the canal and the urban fabric. Two options have been envisioned for the corridor that look at different ways of providing a connection across the canal and usable open space to the west end. “The Cap” option creates a linear park, while “The Bridge” option creates linkages, utilising the in-between spaces. Each of these options may be applicable to different parts of Cottage Creek.

The transformation of Cottage Creek will take place incrementally over the long-term. Eventually all the pieces will join up, creating a landscaped corridor through the west end that links National Park with the Hunter River foreshore. This will involve:

- buildings being set back within private property to allow for landscaping on the banks of the creek to incorporate pedestrian paths and cycle routes
- building of flood permeable caps or bridges over the canal where setbacks are not possible on a particular alignment
- demolition of buildings currently built over the canal, specifically the existing commercial property on 681 Hunter Street
- Ensuring detailed design responds to flooding issues.



Figure 4.29 Creek crossings, impression (JMD 2012)



Figure 4.30 Cottage Creek links river to ocean



Figure 4.31 *Potential Cottage Creek, impression (ARUP 2012)*

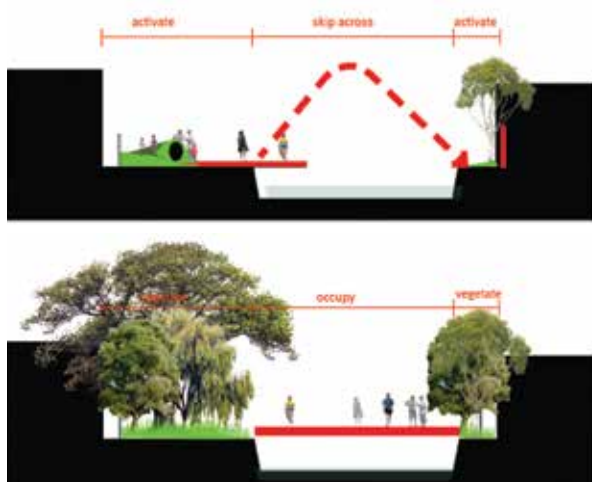


Figure 4.32 Creek crossing strategy, impression (JMD 2012)

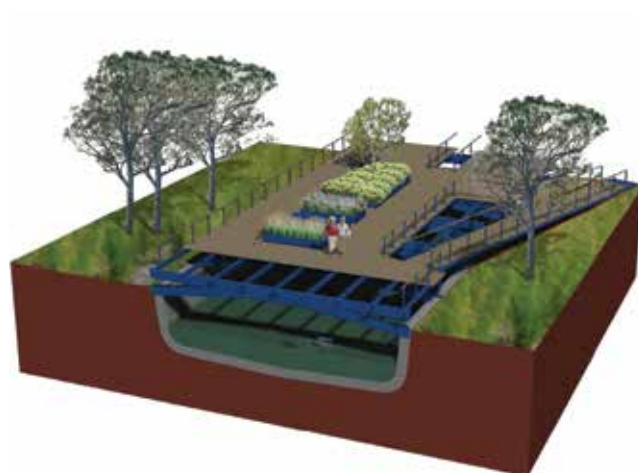


Figure 4.33 Concept - creek capping of a section of Cottage Creek (JMD 2012)

Birdwood Park

Birdwood Park has the potential to become an important city park in the west end and a gateway into Newcastle. Strong built edges of up to four or five storeys with a mix of uses will activate street frontages and enclose the park, helping it to read as an outdoor room within the city. Slip roads off King and Parry Street could be reconfigured as shareways, maintaining access to building frontages, but improving the connection to the park. Prominent corners could be redeveloped with well-designed buildings.

Actions to implement

1. Public domain improvements, with Hunter Street the priority. This project should be included in the s94A Plan Schedule of Works.
2. Special area controls that nominate appropriate building heights, land uses and densities and which promote design excellence, particularly on the Museum and Stores sites.
3. Planning controls specific to this area in relation to built form that reinforce street wall heights, promote appropriate responses to heritage elements, foster connections across the rail corridor, and which facilitate mid-winter solar access to Birdwood Park.
4. Promotion of less onerous carparking requirements, especially in view of site constraints and development feasibility.
5. Demolition of 681 Hunter Street, which straddles Cottage Creek.



Figure 4.34 *Potential Birdwood Park edge, impression (ARUP 2012)*



Figure 4.35 *Today Birdwood Park edge*

4.3.5 Clear guidance on development constraints

Mine subsidence

The Mine Subsidence Board is currently working on producing a series of guidelines to complement the recently released revised mine subsidence maps. These guidelines will provide more specific information about the magnitude of mine workings and the likely extent of grouting required for different areas.

In the longer term and similar to what has occurred in Honeysuckle, there is potential for the strategic selection of key development sites or blocks for a targeted grouting strategy which could inform a targeted grouting program.

As the costs associated with this are likely to be significant, the State Government could champion and seek funding for this work through grants or other special infrastructure funding.

Flooding

This strategy considered flooding when recommending changes to the current zoning pattern. The proposed zoning changes do not enable a significant intensification of land use compared to existing zoning in areas that are susceptible to flood. There is no change proposed to the zoning in Wickham, although this strategy recommends that it be reviewed further by council. Longer term flood risk can be considered as part of that review.

In accordance with the City of Newcastle's draft city-wide Floodplain Management Plan, it is recommended that the Department of Environment and Heritage and the City of Newcastle undertake further investigations to develop a strategic position on all low-lying areas, including Wickham, for the longer term.

It is recommended that the DCP be revised to incorporate measures that enable development to be more resilient to flood risk. These include measures such as locating particular building types that are more resilient to flood in areas with heightened flood risk and nominating a flood planning level for finished floor levels of the lowest habitable floors.

In most cases, higher density housing and commercial development are the most suitable building types for areas of low and medium flood risk in a city centre. These buildings are of more robust reinforced concrete construction, making them more resilient to the conditions of a flood event than detached and low-rise residential development. In addition, these buildings can be designed with habitable floor levels located above the level of the flood planning level. In locating habitable levels above natural ground level, architects and designers need to have regard to access requirements. Consideration also needs to be given to access ramp designs that minimise the risk of inundation of basement levels in a flood event.

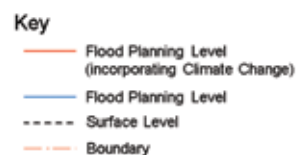
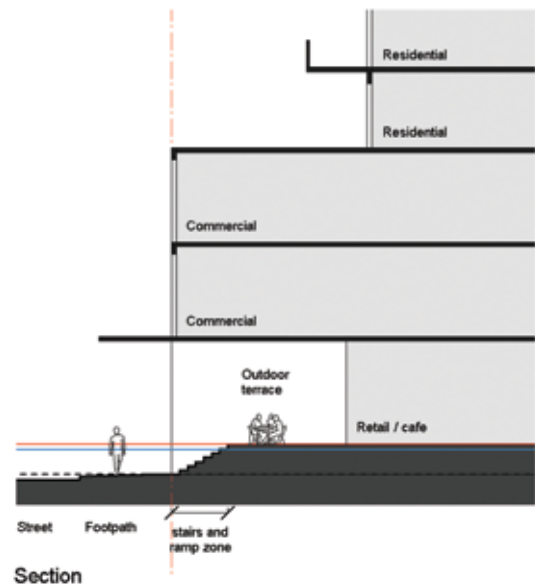
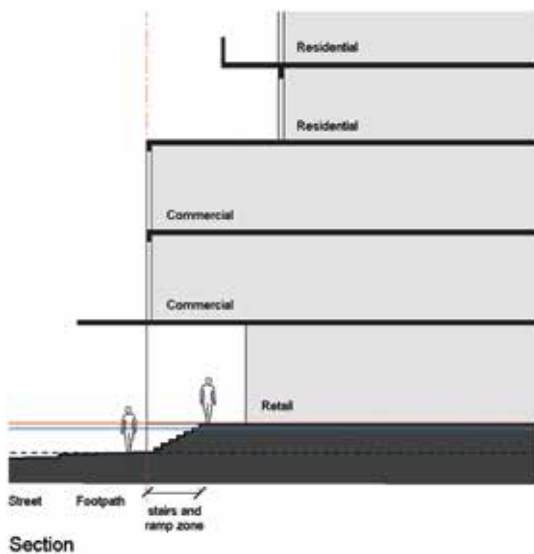
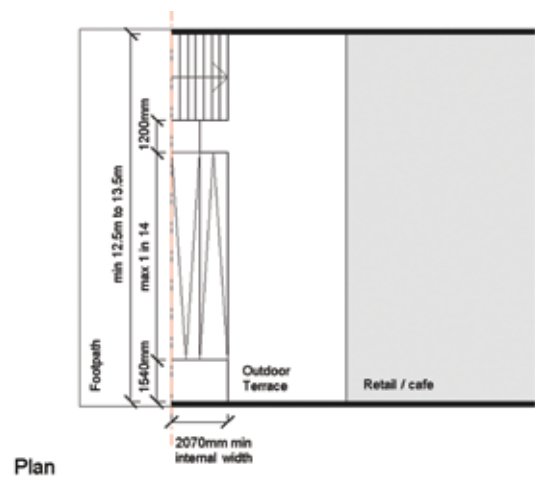
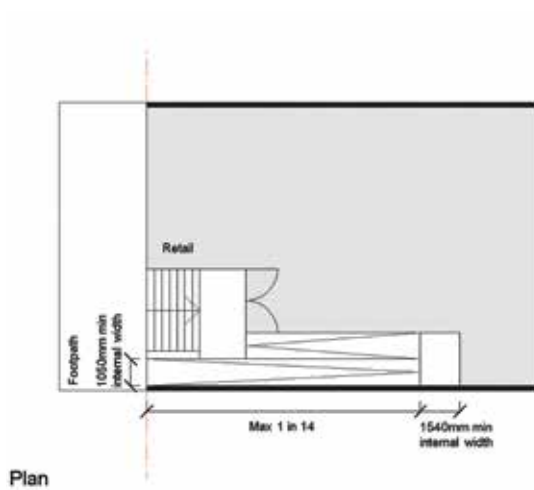


Figure 4.36 Narrow frontage mixed use development

Figure 4.37 Wide frontage mixed use development

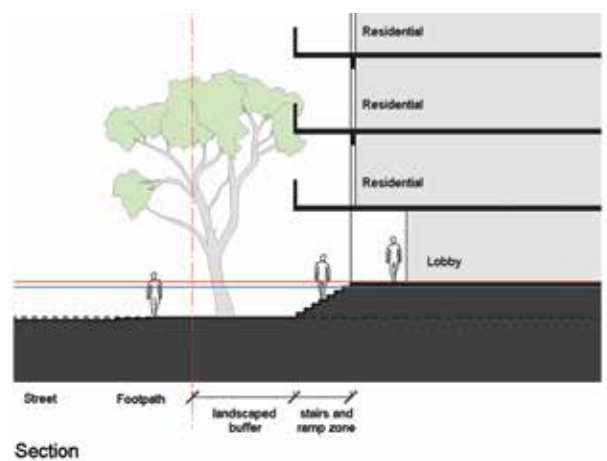
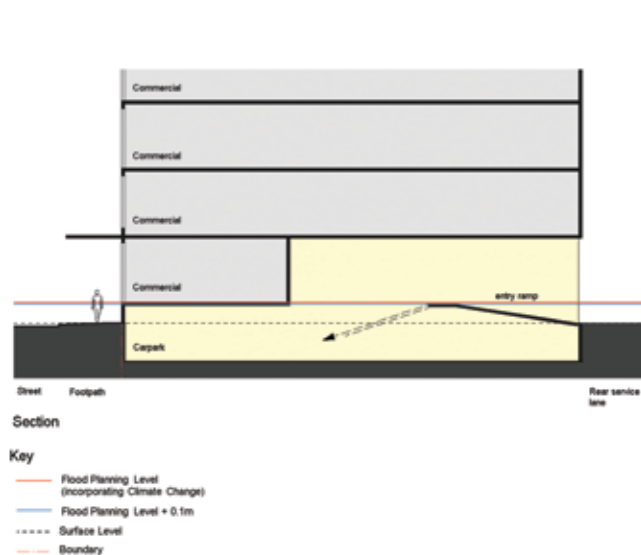


Figure 4.39 Access and address for residential buildings in flood zone

4.3.6 Supporting the city's heritage

Newcastle's wealth of heritage buildings, ranging from large former commercial buildings to intimately-scaled terrace houses, makes a significant contribution to the character of the city centre and reveals the city's history and culture. Many of these are concentrated in the east end, which has a large stock of relatively intact late 19th and early 20th century buildings. Some are not fully occupied and many are in a state of decline. The retention and revitalisation of the heritage buildings is essential to place making and urban renewal in all cities, especially in Newcastle. There are opportunities to retain and adaptively re-use these heritage buildings so that they can continue to contribute to the unique character of the city and sense of place, while regaining commercial and economic relevance.

An adaptive re-use project was conducted as part of the urban renewal strategy by Tonkin Zulaikha Greer Architects to develop conceptual strategies for the adaptive re-use of five selected buildings to:

- provide guidance and encouragement to the property owners of these and other similar buildings on how to successfully re-use them for residential or mixed use functions
- achieve economic viability by applying planning and design innovation.

Case studies

The five buildings selected are in a mix of private and council ownerships and are representative of the main building typologies found in Newcastle. Their selection does not imply that these buildings will be redeveloped. The buildings are listed as heritage items at either a local or state level. With a relatively short time frame, it was necessary to choose buildings which had owner's consent, were accessible and had drawings and historical information available. The adaptive re-use strategies pursued were based on a representative mix of uses. Each scheme was costed and with a series of sub-options, analysed for economic viability. The option that best combined economic viability with appropriate response to heritage was selected for inclusion in the strategy.

The Ocean Baths

This building is located on a rocky outcrop on Shortland Esplanade with panoramic views out to sea and down the coast. It was designed by F.G. & A.C. Castleden and constructed in 1922.

The original and current use is a bathing pavilion. The adaptive re-use proposal is to retain existing uses and add a restaurant and boutique hotel contained below the existing parapet. Adaptive re-use will take advantage of the development potential inherent in the building to incorporate income generating uses that will help fund the ongoing preservation of the building. The Hill PDA economic analysis has identified a demand for more hotel and tourism uses. This proposal is close to viable in the current market, when developed in association with an existing hotel, and is likely to improve in viability as the property market improves.



Figure 4.40 Ocean Baths - proposed ground level plan (TZG 2012)



Figure 4.41 Ocean Baths - proposed upper level plan (TZG 2012)



Figure 4.42 Ocean Baths - proposed east elevation (TZG 2012)



The David Cohen Warehouse and Bolton Street Car Park

This building is located in the east end at 46-50 Bolton Street. It incorporates a remnant façade of the original warehouse which was designed by F.B. Menkens in 1901.

The original use was a warehouse. Partial demolition and construction of the car park occurred in 1983. The adaptive re-use proposal is for a mixed use retail, commercial and residential development that retains some of the carparking. This scheme retains the David Cohen heritage facade, which is an important streetscape element, and demonstrates that under-utilised carpark structures can be adaptively re-used for other purposes. The proposed scheme was not economically viable in the current market, but a different mix of units, more units and fewer car spaces, or a different use entirely is likely to improve the economic viability, especially as the property market enters a more prosperous cycle.



Figure 4.43 Bolton Street carpark - proposed ground level (TZG 2012)

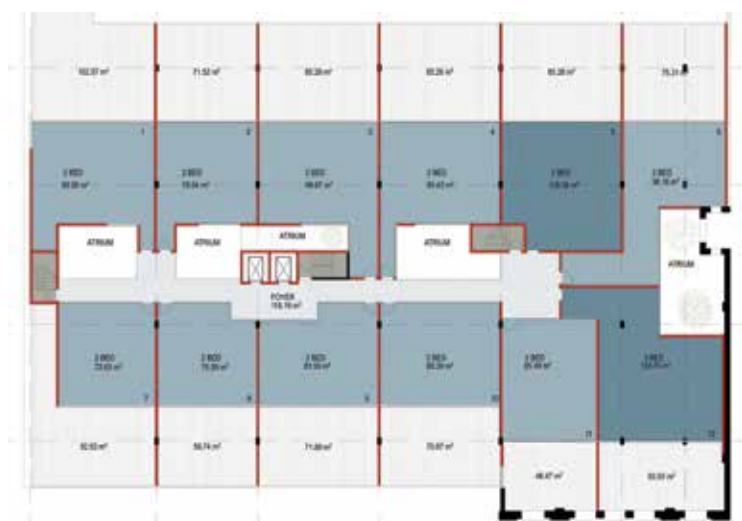


Figure 4.44 Bolton Street carpark - proposed typical residential floor (TZG 2012)

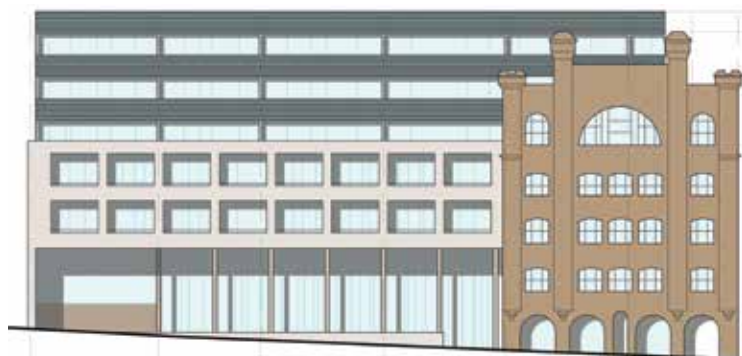


Figure 4.45 Bolton Street carpark - proposed street elevation (TZG 2012)



Figure 4.46 Bolton Street carpark - proposed section (TZG 2012)

The School of Arts

This building is located on a prominent corner location at Hunter Street Mall and Wolfe Street and dates from 1875 with additions by F.B. Menkens in 1885.

Its original use was as a school of arts and mechanics institute. The current use is retail on ground level and a youth community centre above. The adaptive re-use scheme was for a mix of uses with retail at ground level, function rooms on level one and hotel rooms above. This option is marginally economically viable in the current market, with viability likely to improve with the market.

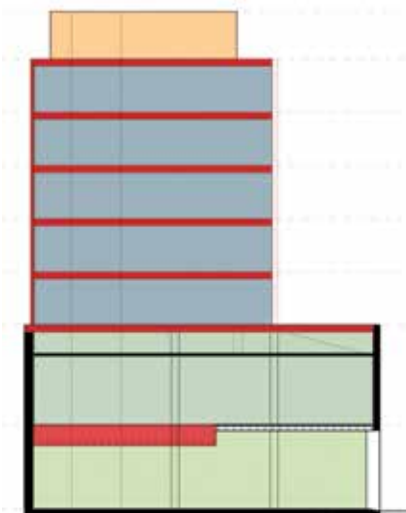


Figure 4.47 School of Arts - proposed section (TZG 2012)



Figure 4.48 School of Arts - proposed ground floor (TZG 2012)



Figure 4.49 School of Arts - proposed upper level (TZG 2012)



Figure 4.50 School of Arts - proposed typical floor (TZG 2012)

The Victoria Theatre

The Victoria Theatre is located at 8 – 10 Perkins Street in the heart of the east end and is an important streetscape item. It was designed by James Hendersen and constructed in 1890. It is of state importance being the oldest theatre building still standing in NSW. It is reasonably intact both internally and externally.

The original use was a theatre and is currently unoccupied. The significance of the intact original fabric, including a nineteenth century fly tower, means that alternative uses are not appropriate. The proposal involves reinstating its original use and upgrading the building to comply with current Building Council of Australia (BCA) requirements. Additional facilities are provided in a basement, suiting performance events. Seating capacity also allows for film screenings.

The proposal will have difficulty achieving economic viability, but this is consistent with performing arts venues across the country. A performing arts venue has to be developed on a different business model incorporating government and private sector sponsorship to support its ongoing operation. The social benefit and economic flow-on effects of the restoration and reuse of this building cannot be underestimated, particularly in view of its location. The future revitalisation of Hunter Street Mall is likely to alter the value proposition for the Victoria Theatre, making it a significant ingredient in the overall renewal of the east end.

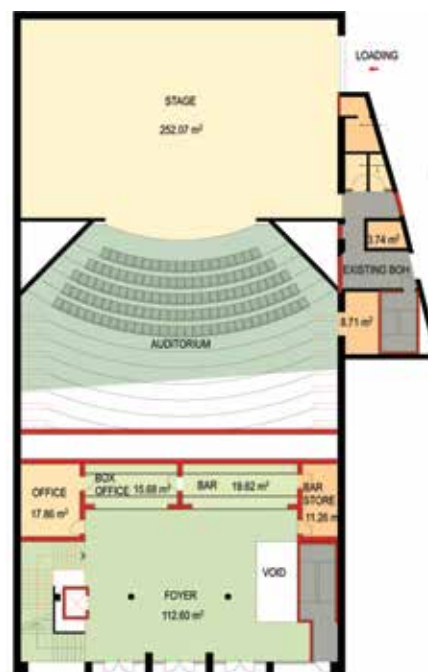


Figure 4.51 Victoria Theatre - proposed ground floor (TZG 2012)

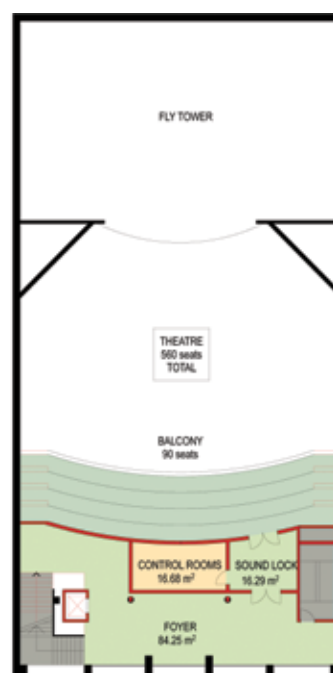


Figure 4.52 Victoria Theatre - proposed balcony level (TZG 2012)

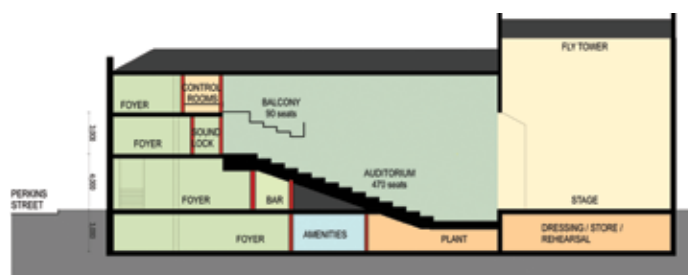


Figure 4.53 Victoria Theatre - proposed section (TZG 2012)

Stegga's Emporium

The Emporium is located in the western end of the civic precinct at 517- 529 Hunter Street. It was designed by F.B. Menkens and constructed in 1886.

The original and current use is retail. Substantial building heights and floor space ratios are permitted in this end of Hunter Street under current and future planning regimes. Some sites have already been redeveloped in accordance with these. The adaptive re-use proposal for mixed use retail and residential anticipates a larger envelope than is contained within the heritage element. The proposal demonstrates how this additional building volume would be designed to ensure an appropriate response to the heritage component.

The Hill PDA economics analysis has identified a demand for smaller apartments in the city centre. The option that incorporates a unit mix with a large proportion of studios, one and two-bedroom apartments is identified as economically viable in the current market.



Figure 4.54 Stegga's Emporium - proposed ground floor (TZG 2012)



Figure 4.55 Stegga's Emporium - proposed typical residential floor (TZG 2012)

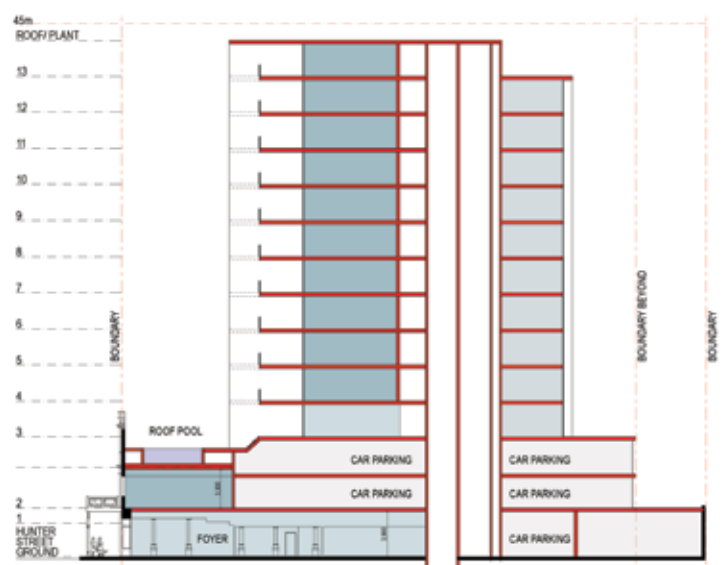


Figure 4.56 Stegga's Emporium - proposed section (TZG 2012)

Precedent Study

Accompanying the five adaptive re-use case studies are five built examples that demonstrate innovative approaches to a range of different adaptive re-uses relevant to building types found in Newcastle.

The criteria for inclusion were:

- relevant building type and scale for Newcastle
- a range of adapted uses that are relevant for the Newcastle city centre, i.e., mixes of hotel, retail, theatre, office and residential
- a building that is less likely to have a heritage listing, but is still important in terms of local character, demonstrating that just because a building isn't listed, doesn't mean that it cannot be retained and re-used
- examples that demonstrate a range of new uses that are relevant to Newcastle and consistent with theoretical examples.

The selected built examples are:

Establishment Hotel, George Street, Sydney, NSW

The Establishment Hotel is a good example of hotel use for a common Newcastle building type, and which complements the Newcastle School of Arts case study. It demonstrates adaptive re-use of a damaged building, which is also relevant to the David Cohen Warehouse facade and many buildings throughout Newcastle that were damaged as a result of the 1989 earthquake. The redevelopment incorporated a new purpose-built building beside the adaptively re-used heritage element.

Her Majesty's Theatre, Ballarat, Victoria

Her Majesty's Theatre, Ballarat is a regional example that complements the investigative case study for the Victoria Theatre in Newcastle. It is a well-used and efficient theatre that conserves the heritage fabric.



Establishment Hotel, Sydney (TZG Architects 2012)



Her Majesty's Theatre, Ballarat (TZG Architects 2012)

The Boland Centre, Cairns, Queensland

The Boland Centre is a regional example and relevant for all medium-scale corner buildings in the Newcastle CBD. This former department store has been re-used for a mix of commercial and retail uses. This example is relevant to the many former pubs and retail emporiums that remain in Newcastle.



The Boland Centre, Cairns (TZG Architects 2012)

Crago Flour Mill, Newtown, NSW

This project is a nineteenth century industrial building that has been converted to primarily office uses. It employs an innovative approach to dealing with parking by incorporating bicycle parking and a car share scheme. Crago Flour Mills demonstrates how former industrial buildings can be adapted to suit a changed economic environment. This example is relevant for former industrial buildings in Newcastle such as the former Museum in the west end, which started life as a brewery.



Crago Flour Mill, Newtown, Sydney (TZG Architects 2012)

Mutual Store and Empire Apartments, Melbourne, Victoria

This project is the conversion of two separate former department store buildings into a mixed use residential development. Both buildings have additional storeys beyond the heritage envelope. The Empire Apartments building contains student housing. This project is relevant for Newcastle as it combines two of the initiatives that are proposed as part of the urban renewal strategy — adaptive re-use of heritage buildings and the provision of more student housing in the city centre. Student housing is a highly viable residential use that should be considered by owners of heritage properties as market expectations for carparking are not as onerous.



Mutual Store and Empire Apartments, Melbourne (TZG Architects 2012)

Findings

The adaptive re-use project found that:

- many of the buildings in Newcastle are suited to a range of different contemporary uses
- redevelopment beyond the heritage envelope of many buildings is possible (both above and beside) without compromising the significance of the heritage fabric through the judicious use of setbacks and skilful design of new facades and elements to complement, but not mimic, heritage details
- innovative approaches to carparking such as use of car share schemes or sharing of space within existing nearby carparking structures, where provision of basement or other on-site parking is not possible
- retention of heritage facades enables the streetscape to retain its character, history and scale while allowing the building to have a new life within the contemporary economic and social context of Newcastle
- viable revitalisation of the city of Newcastle is possible, while retaining the heritage assets and distinctive character of the built fabric of the city.

Heritage is a key asset in Newcastle and retention and adaptive reuse of heritage buildings is an essential component of urban renewal. Adaptive re-use is an opportunity to create unique developments that underpin a sense of place in Newcastle. This adaptive re-use project has shown that economically viable scenarios are possible even in an under-performing property market. Additional measures can be put in place, especially with respect to carparking provision, to support the economic viability of a wider range of adapted uses concurrent with property market improvements.

Actions to implement

1. Amendment of the planning framework to nominate building heights and setbacks that result in better built form responses to heritage buildings in various precincts.
2. Amendment to the planning framework to nominate appropriate street wall heights that correspond to predominant parapet heights of heritage and character buildings in various precincts.
3. Amendments to the DCP planning framework to ensure appropriate response to significant heritage in a number of special areas. This will include detailed character statements that refer specifically to heritage elements.
4. Promotion of flexibility with respect to carparking requirements, especially in view of heritage constraints, development feasibility and the presence of abundant council-owned carparking.

Economic initiatives

4.4 A strong and diverse local economy

Overview

The department engaged Hill PDA to undertake a detailed economic analysis of the city centre.

The principal economic initiatives promoted by Hill PDA's report and this urban renewal strategy include:

- diversification of the city economy through encouragement of new industries into the city centre
- supporting the city as an educational hub
- encouraging new retail uses
- attracting residents to the city centre.

In addition to these specific economic initiatives, the economic analysis informed the development of a number of other complementary recommendations, particularly in relation to zoning and the planning framework, and the feasibility of adaptive re-use projects for key heritage sites in the city centre.



4.4.1 Diversification of the city economy

City centres with diverse economic bases are likely to be more successful and attract new investment when compared to those that rely on single industries for growth (Glaeser, 2011). While it is important to ensure there is a critical mass of commercial development in city centres, centres that are open only during business hours or do not provide supporting retail, cultural and service uses are not dynamic and will lose trade and activity to more favourable locations.

Newcastle's economic profile has changed substantially from a largely industrial and manufacturing base to one that relies increasingly on services and knowledge-based industries. It is this adaptability and resilience in the face of structural economic change that has seen Newcastle defy economic upheaval and maintain a critical mass of commercial and retail development in the city centre. The trend of the city centre accommodating government, administration, service and knowledge industries is likely to continue into the future, consistent with Newcastle's status as the capital of the Hunter region.

Educational uses

Encouraging the relocation of some university functions into the city centre is a key initiative that will further enhance the diversity of the city's economic base. This may lead to advanced, collaborative research led by University staff, conducted in partnership with key industries already located in Newcastle and the Hunter region. Such synergies can result in new industries being established in the city centre, with Newcastle having strengths geared towards sustainable energy generation and distribution, education and training, port operations, and freight and logistics.

While ensuring there is an adequate supply of floor space is one aspect of attracting new industries, case studies reveal that new industries are likely to be attracted by the promotion of certain themes, which can lead to clusters of like industries and the co-location of businesses that benefit from each other through collaboration and competition. Given location and proximity are so important, the Newcastle city centre is an ideal location for collaborative research and development industries.



Cultural industries

The development of cultural industries in the city centre not only plays an important role in stimulating economic growth, but it also assists in shifting perceptions of Newcastle for potential workers, investors and tourists. Newcastle attracts significant tourist activity due to its waterside setting, relatively easy access, and unique built heritage. The City of Newcastle can promote existing cultural infrastructure (such as regional museums and galleries) as a lever to grow Newcastle's cultural economy.

Growth in the cultural industries can further promote the city centre as a unique regional city that offers attractions and experiences not available in other parts of the Hunter region. This has been recognised through recent local initiatives to foster and cultivate cultural industries, such as the Renew Newcastle initiative.



Commercial pre-eminence

The Newcastle city centre should be promoted by all levels of government and encouraged as the predominant location for commercial office tenancies servicing the Hunter region. This will underpin the diversification of the city's economic base. Hill PDA's analysis indicates that growth in commercial floor space in the city centre will be driven by the demand for new A-grade office space, with most of this floor space being developed in the Honeysuckle precinct. The Cottage Creek area of Honeysuckle already accommodates several prestige commercial developments and exhibits business park characteristics.

Commercial office trends favour campus-style, business park arrangements with large floor plates. The development of the Cottage Creek area in Honeysuckle as a business park has the potential to deliver significant advantages in the short to medium-term with the truncation of the rail line allowing for improved connectivity between Honeysuckle and Hunter Street, the development of Cottage Creek as the premier A-grade office locale will provide benefits for ancillary business, retail and community services along the central and western ends of Hunter Street.

The west end will be the emerging commercial area of the city centre in the longer term. There is a need to protect the strategic sites in this location to ensure that future needs can be met and to build on the synergies with Honeysuckle.

Employment land supply

While branding and marketing of the city centre is essential, protection and supply of employment floor space is important in maintaining a critical supply of economic activity in the city centre.

Economic forecasting undertaken by Hill PDA concludes that there is the potential to create an additional 10,000 jobs in the city centre.

To facilitate jobs growth, Hill PDA's employment land forecasting analysis indicates that there needs to be an increase of between 156,500 and 357,500m² of net lettable employment land to meet employment targets. Alterations to the City of Newcastle's planning regime should occur to ensure this floor space can be provided.



4.4.2 Supporting the city as an educational hub

Educational facilities, especially universities and technical colleges, are important land uses for city centres as they create and attract a critical mass of students and staff that stimulate and drive demand for commercial and retail floor space. A large university campus may contain 10,000+ students and several thousand support staff (academic and administrative staff), and are clearly significant drivers for new growth and for the recycling and renewal of existing buildings in city centres.

Importantly, educational land uses can also create unique synergies between established businesses and industry sectors. Innovation is promoted in such unique agglomeration settings. Having universities and related research facilities co-located in city centres can lead to the development of new industries and specialist technologies, and products and services directly related to the existing economic base of that locality. The development of the Australian Technology Park (ATP) in Redfern (Sydney) is a prime example of the transformative power of educational institutions being used to recycle dilapidated buildings and to drive renewal in a brown-field area. The ATP is now a successful employment and research centre in a highly accessible setting.



The benefits of leveraging university-led renewal are recognised by multiple parties in the Hunter region, with a formal proposal to undertake a staged relocation of about 80,000m² of the University of Newcastle campus to the city centre. While the details are yet to be confirmed and funded, the concept of moving at least the Business and Law faculties from the Callaghan campus to the city centre could be a significant catalyst to drive change in the city centre.

In its submission to Infrastructure Australia, the university demonstrated that a relocation of up to 8,000 students and 1,000 staff had the potential to create an estimated 800 – 1,200 direct jobs, 1,700 – 2,500 indirect jobs during construction, and 1,025 permanent direct and indirect jobs during operation. Such a relocation would have the potential to generate an estimated \$12 million per annum in retail and service expenditure in the city during operating hours. Other less tangible benefits include increased activity, improved perceptions of the city centre, and the better utilisation of existing infrastructure.

There are many examples in Australia and internationally where the re-location and development of educational institutions has been a catalyst for successful urban renewal. This urban renewal strategy recommends and supports the relocation of some University of Newcastle faculties to the city centre.

4.4.3 Encouraging new retail uses into the city centre

Retail hubs and retail mix along Hunter Street

The emergence of suburban shopping centres, changes in retail trends and the overall length of Hunter Street mean it is unrealistic to expect all ground floor shops and retail spaces along Hunter Street to be occupied. The former role of Hunter Street as the only major commercial and retail destination servicing Newcastle and the Lower Hunter is unlikely to return, meaning that there needs to be more effective use of resources to ensure success in delivering effective urban renewal.

Consequently, this urban renewal strategy adopts a targeted approach to renewing Hunter Street. While Hunter Street should be re-established as the key retail and commercial spine of the city centre, its rightful return as a quality, active and vibrant high street can only be achieved by encouraging small clusters of activity around key locations that have been the focus of targeted urban design and public domain initiatives. Limiting expansion of out-of-centre retail in other parts of Newcastle will also help strengthen the city centre as a retail destination.

Bulky goods retailing

Bulky goods retailing is an increasingly important component of the retail landscape, accounting for more than 20% of all retail floor space in NSW (Hill PDA 2012). Bulky goods retailing traditionally favours locating in cluster arrangements where land is plentiful, carparking and loading facilities are available, and where sites are highly accessible along main roads.

Economic analysis indicates that there may be opportunities to provide bulky goods retailing towards the west end of Hunter Street as there is a supply of accessible and favourably located large sites.

Business Improvement Plans

Another way to encourage new retail uses is through the development and adoption of Business Improvement Plans (BIPs). BIPs have been used successfully in other cities in Australia and internationally to co-ordinate the management and rejuvenation of main street retail areas.

BIPs operate in a similar fashion to centre managers in private shopping centres, in that they provide a co-ordinated approach to the marketing of the city centre and management of common issues impacting retail operations, such as waste and parking management, safety and lighting, and environmental compliance issues. Such programs are typically funded by a business improvement levy as part of council rates with spending specifically targeted in a designated business improvement precinct.

The provision of BIPs, changes to planning regimes, targeted infrastructure funding and the provision of suitable land is not sufficient for driving demand for new industry. Engagement of a Local Business Coordinator, involved in implementation and with an ongoing focus on delivery of key priorities, is recommended. In addition, complementary city branding campaigns are recommended as part of this urban renewal strategy.

Detailed investment and economic strategies by the City of Newcastle, combined with innovative and aggressive marketing campaigns in collaboration with other government agencies (such as Regional Development Australia and the NSW Department of Trade and Investment) and the private sector, can also play a role in raising the profile of the Newcastle city centre in the consciousness of residents, workers and tourists.

4.4.4 A living city - attracting residents to the city centre

Successful city centres rely not just on business activities, they are also desirable locations for residents so that city centres remain active outside of business hours and on weekends. This strategy recommends policies and actions be adopted that actively promote suitable parts of the city centre and fringe for residential development.

Economic forecasting concludes that there is a need to plan for 4,400 additional residents in the city centre by 2031. Attracting new residents in the city centre and on the fringe will directly impact on the demand for services (especially retail services) in the city centre, which in turn will drive employment growth. Complementary spin-offs include increased demand for restaurants, cafes, tourism, recreation, entertainment and cultural activities.

Encouraging residents in the city centre and on the city fringe capitalises on the substantial public and private capital investment that the city's historical legacy provides, including transport infrastructure, the city's public domain and open space infrastructure, and other civic assets (such as libraries, galleries and community centres).

Significant infrastructure and services are located either in the city centre or on the fringe. Increasing the residential population in these areas will ensure its full utilisation. This results in tangible cost savings by either delaying or avoiding altogether the need to provide additional services and facilities in out-of-centre locations.

Feasibility analysis undertaken to support this urban renewal strategy clearly demonstrates the attractiveness of residential development in the city centre under current market conditions.

Targeted planning controls that identify appropriate areas for residential intensification in the city centre and city fringe can be made to deliver this new residential growth. The planning controls have the capacity for up to 6,000 additional dwellings by 2036 and readily support a growing residential population in the city centre. To further enhance the desirability of the city centre as a residential location, public domain and open space improvements must also be made.

The potential relocation of parts of the University of Newcastle campus into the city centre would increase the number of students living in the city centre, which in turn would contribute to demand for retail shops and services, and increase general street activity and passive surveillance. Further, students can create a stable and reliable customer base for existing business, drive growth in the leisure and entertainment sectors, while also providing a labour pool for other businesses.



4.4.5 A supportive contributions system

Contributions are obtained from development under the City of Newcastle's section 94A plan for the city centre. Under the section 94A plan, contributions are used to implement a range of public domain initiatives. The benefits of public domain improvements in supporting urban renewal are well-documented (Transport for London, 2006). It is important that they be funded and delivered over time.

The current development contribution levy of 3% of estimated cost is consistent with rates for other regional city centres across NSW and has not been identified by the economic study as a major disincentive for renewal.

Updating the contributions schedule

As part of preparing this urban renewal strategy, a review of the city centre Section 94A Development Contributions Plan 2009, Schedule 4 (Works Schedule for Expenditure in the City Centre) was undertaken in consultation with the City of Newcastle.

Based on this review, it is recommended that an updated Schedule 4 be adopted to better support renewal initiatives in the city centre. Table 7 shows the updated schedule. The schedule includes changes to existing items, including some deletions and cost decreases, and includes a number of new initiatives for improvements to park, community and transport infrastructure. Critically, a range of additional measures are proposed to support the re-establishment of Hunter Street as the city's main street. Compared to the total previous cost of \$55,600,000, the revised total costings are \$58,400,000 which represents approximately a 5% cost increase.

For most projects, the updated schedule is supported by greater detail about proposed initiatives. Importantly, estimates of cost for a number of these projects, in particular those for Hunter Street, are derived from itemised components using real costings. This will provide the City of Newcastle with greater confidence when making decisions about prioritising expenditure.

Deferring payment of contributions

Currently, the payment of development contributions is required before the issue of a Construction Certificate. This can involve the up-front outlay of significant funds for developers, resulting in a high level of risk. To stimulate renewal, it is recommended that the City of Newcastle consider a five-year trial of deferring the payment of section 94A contributions within the city centre from before the issue of a Construction Certificate to prior to the issue of an Occupation Certificate. This would apply to all development, and would aim to stimulate new development in the short-term.



Item	Cost \$
Art Gallery upgrade	3,000,000
City Hall upgrade	3,000,000
Civic Park landscape improvements	3,000,000
Civic Theatre upgrade	2,000,000
Cycleway network improvements	200,000
District multi-purpose centre	3,000,000
District open space embellishments	1,000,000
Fort Drive improvement	60,000
Honeysuckle waterfront precinct	7,500,000
Hunter Street Mall	3,200,000
Hunter Street upgrade - Civic	6,500,000
Hunter Street upgrade – Wheeler Place	6,500,000
Hunter Street upgrade - west	5,200,000
Installation of heritage interpretive signage	100,000
Library upgrade	3,000,000
Local open space embellishments	1,000,000
Newcastle Beach improvements	250,000
Nobby Beach improvements	250,000
Nobby's Beach surf pavilion	500,000
Nobby's Beach surf pavilion investigations	500,000
Nobby's to Newcastle South bather's way improvements	1,000,000
East end and Pacific Park improvements	500,000
Park and ride facility, western end of city centre	3,000,000
Public lighting improvements	500,000
Public toilets for the west end	200,000
Scott Street improvement	90,000
Shortland Esplanade improvement	130,000
Telford Street improvement	50,000
Tramway Reserve improvements	100,000
Transport shelters	200,000
Transport stop upgrades	400,000
Urban furniture, interpretation signage, paving, lighting, public art, trees and landscaping, transit precinct improvements and access	2,000,000
Wharf Road improvement	90,000
Zarra Street improvement	130,000
TOTAL	58,150,000

Table 7 Updated Schedule 4 contributions table

Transport initiatives

4.5 Promoting transport, access and connectivity to and within the city centre

Overview

To inform this strategy, the department and City of Newcastle engaged technical and management support service provider AECOM to undertake a detailed review and analysis of a large number of existing transport studies of the city centre, reconciling their recommendations and proposing a range of strategic directions for transport in the city centre. Central to this process was the engagement of key transport stakeholders, including Transport for NSW (TNSW) and Newcastle Buses, who participated in a series of workshops. This study is provided in Appendix 3.

AECOM recommended the adoption of five strategic directions for transport in the city centre:

1. making the most of the public transport network
2. creating a connected pedestrian and cycle network
3. improving the efficiency of the road network for all users
4. changing behaviour for a better city
5. enhancing Hunter Street and establish activity nodes.

These strategic initiatives seek to provide a more balanced transport network with a lesser reliance on private car use. Providing greater balance through encouraging the use of more sustainable forms of transport, such as public transport and active transport

(walking and cycling), has a number of benefits that include:

- supporting accessibility into and within the city centre
- supporting an increased and more concentrated residential and employment population, without a concurrent increase in traffic congestion
- supporting the creation of attractive, vibrant and high amenity places
- improving resilience to respond to emerging and potential future issues surrounding resource availability.

Providing a balanced transport network is a critical component of creating liveable, vibrant communities.

Embedded in these strategic directions are a number of recommended physical and complementary improvements to the Newcastle transport network. These initiatives are detailed in the Implementation Plan. Further investigation and consultation will need to occur on individual items before they are implemented.

TNSW has released a draft NSW Long Term Transport Master Plan which considers the key challenges and transport issues for the Newcastle city centre in its regional context as growth, transport and renewal.

In light of the government's recent decision that bus services will replace train services from a new transport interchange at Wickham, the resolution of more detailed transport issues to support the proposed city growth, land use and connections in the city centre will need to occur in the final NSW Long Term Master Plan, the Regional Transport Plans and the final urban renewal strategy.



4.5.1 Making the most of the public transport network

Strategic bus corridors

The NSW Government has set a target of increasing the share of commuter trips to the city centre made by public transport during peak hours to 20% by 2016 (NSW 2021, 2012). Key to achieving this target is making the most of the public transport network and initiatives to promote behaviour change. A key initiative to achieve this is investigating the introduction of strategic bus corridors.

The Newcastle Transport Management and Accessibility Plan (AECOM, 2010) and the City Centre Transport Study (AECOM, 2012) recommend the introduction of three strategic bus corridors connecting the city centre with the Newcastle metropolitan area. Table 8 shows the routing of these corridors.

Bus services would run at 15-minute intervals along these corridors during the morning and afternoon peak periods. This high frequency will minimise the amount of time that people wait for services, and would effectively lead to a timetable-less service.

Due to current travel times along these routes being similar to car travel, the introduction of bus priority measures and clearways should be investigated. In particular, 18 intersections have been identified as potential candidates for bus priority measures along that part of Newcastle Road between Broadmeadow and the city centre.

The introduction of park-and-ride facilities in the general vicinity of Warabrook, Lambton and the intersection of Northcott Drive and the Pacific Highway at Charlestown, catering for a cumulative total of about 900 to 1,900 existing commute trips, should also be investigated to further support patronage along these corridors.

In the city centre, these strategic bus corridors would run along Hunter Street to assist in re-establishing Hunter Street as the city's main street.

TNSW, in particular Roads and Maritime Services, is the primary agency involved in for the establishment of these corridors.

Origin	Destination	Via	Current Service
Charlestown	City centre	Jesmond	100
Glendale	City centre	Broadmeadow	363
Charlestown	City centre	Adamstown & the Junction	320

Table 8 Recommended strategic bus route corridors (TMAP, AECOM 2010) (AECOM 2012)

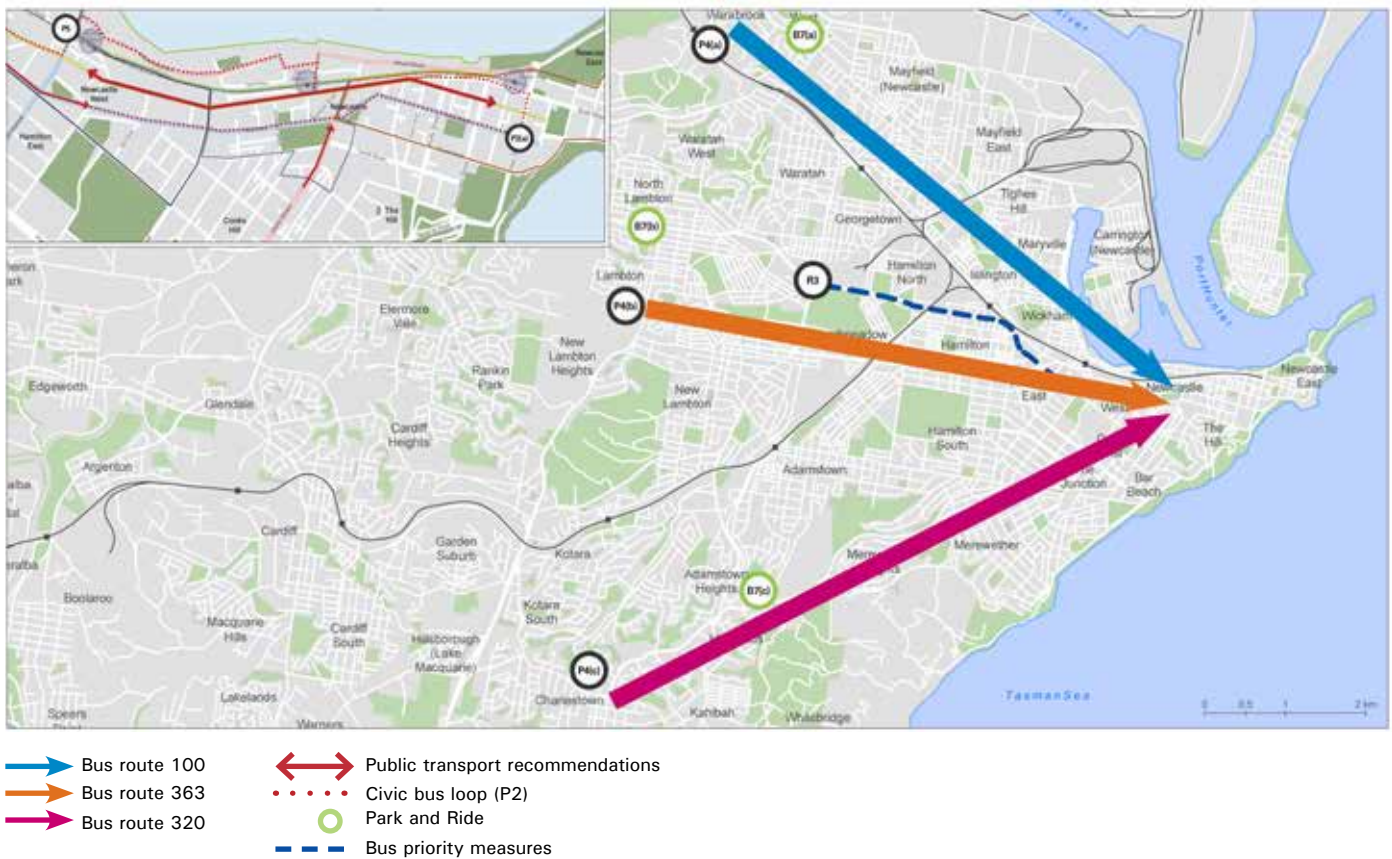


Figure 4.57 Strategic bus route corridors (AECOM 2012)

Infrastructure upgrades

The proposed strategic bus corridors would need to be complemented by consolidated and upgraded bus stops along Hunter Street to provide higher comfort levels and promote public transport.

Bus stops should be located adjacent to the activity nodes promoted by this strategy, and be evenly spaced along Hunter Street aligned with key pedestrian routes and desire lines between the city centre and the Hunter River waterfront. The activity nodes are also the logical location for pick up and drop off points should an alternative form of transport be pursued along the rail corridor in the longer-term.

These bus stops would be upgraded to include improved shelter, lighting and comprehensive public transport information. Section 5.8 of this strategy provides further detail on this initiative.

The City of Newcastle is the primary agency responsible for these upgrades.

Future uses of the rail corridor

In the short-term additional at-grade connections can be created across the corridor in strategic locations. Uses of the remaining parts of the corridor will need to be investigated, although there are opportunities for it to be landscaped in the short-term. This urban renewal strategy reinforces Hunter Street's current role as the main movement corridor in the city centre to support activity and economic opportunity. Any future uses of the railway corridor will need to factor this in.

4.5.2 Creating a connected pedestrian and cyclist network

Network improvements

The implementation of an improved pedestrian and cyclist network in accordance with the City of Newcastle's Cycling Strategy and Action Plan, and Pedestrian, Access and Mobility Plan will enhance the attractiveness of active transport as a viable alternative to the private car. Figure 4.58 shows the location of potential strategic network improvements, including between Hunter Street, Honeysuckle and the waterfront. Further investigation is needed to finalise these locations.

End-of-trip bicycle facility

For development over \$250,000, the current DCP requires the provision of on-site end-of-trip cycle facilities for employees.

To complement this policy, it is recommended that the City of Newcastle establish a demonstration end-of-trip bicycle facility, including secure bike storage and change facilities, in a central location in the city centre. Similar facilities have been established both in Australia (for example, at King George Square in Brisbane) and overseas, and have been responsible for encouraging a mode shift to active transport as well as encouraging existing users to continue using active transport (Griffith University, 2010). Given that most of this mode shift has been by commuters, the value is optimised, because transport routes are less congested during peak hours.



Figure 4.58 Recommended network improvements (AECOM 2012)

4.5.3 Improving the efficiency of the road network for all users

Strategic road upgrades

Ensuring the road network is safe and efficient is a key part of providing a balanced transport network. Congestion has a number of environmental, economic and social impacts, including increased air pollution, lost productivity and less leisure time. In addition to public transport-focused improvements such as bus priority measures and clearways, other improvements can contribute to a more efficient and safer road network.

There are a number of locations within the city centre where the road network experiences congestion or safety issues. The following road network upgrades are priorities that will support urban renewal in the city centre:

- Parry Street / Steel Street intersection
- Merewether Street / Workshop Way intersection
- Parry Street / Union Street intersection
- Honeysuckle Drive near Cottage Creek
- Church Street / Watt Street intersection
- Hannell Street / Honeysuckle Drive.

Figure 4.59 shows the location of these upgrades.

The new transport interchange at Wickham will allow improved flow of north-south traffic on Hannell Street and Stewart Avenue.

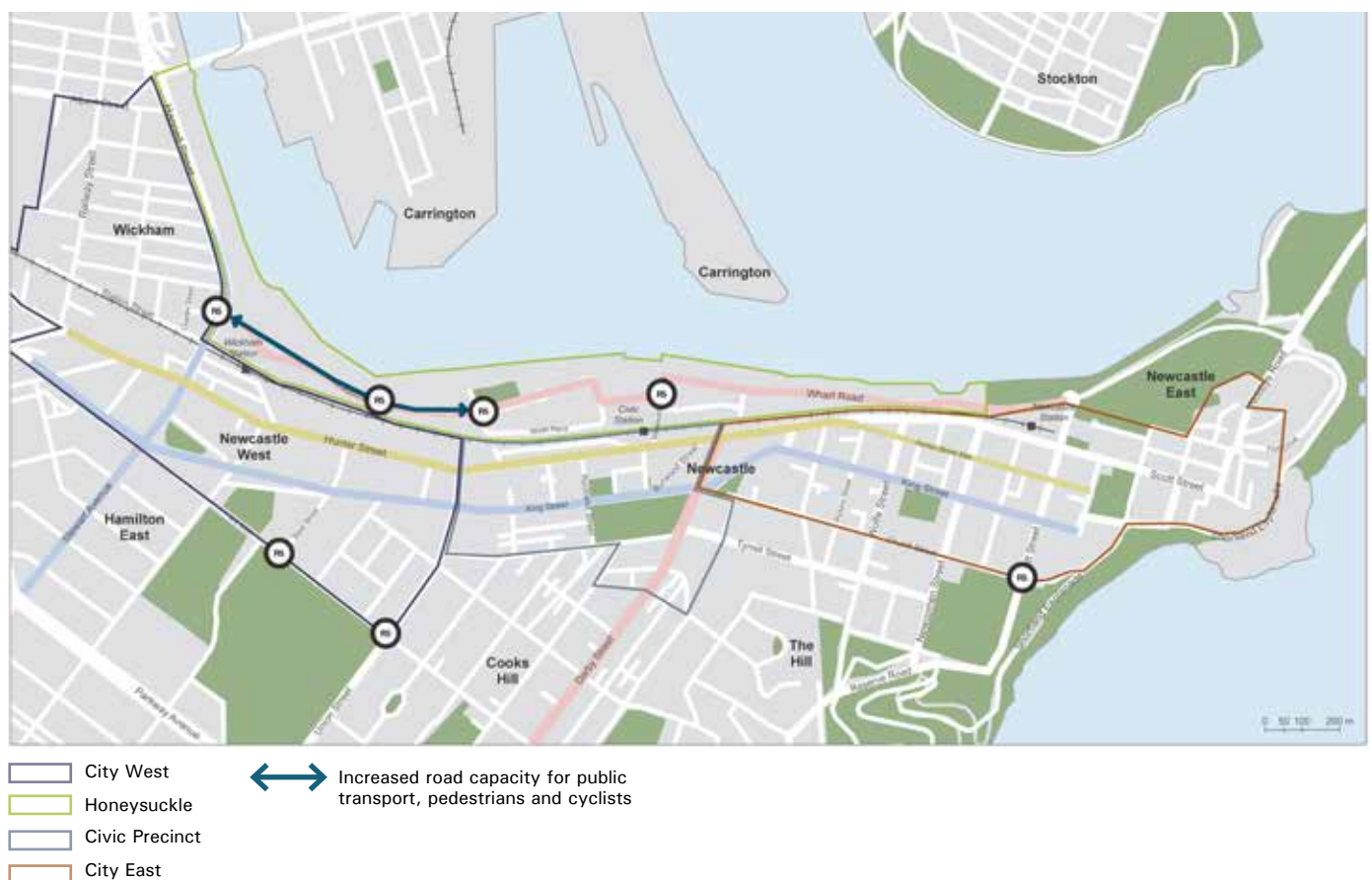


Figure 4.59 Strategic road upgrades (AECOM 2012)

Transport supporting Hunter Street as the main street of the city

Hunter Street is the city centre's key transport corridor, catering for a range of car-based, public transport and active transport movements. Despite this multi-functional role, Hunter Street is currently dominated by cars and buses, compromising the quality of the pedestrian and cyclist environment. Providing a better balance between car, public and active transport will support the goal of re-establishing Hunter Street as the main street of the city.



Public transport is currently focused on three distinct activity precincts located at the west end, Civic and the east end. Transport accessibility in turn supports the intensification of retail, commercial and residential uses in these activity precincts. Future changes to the public transport network, in particular the bus network, should be focused on reinforcing the concept of strengthening Hunter Street as a key route. Recommended projects for improvement to the public transport network include the establishment of bus priority lanes or clearways on Hunter Street.



Improvements to the active transport network, in particular enhanced pedestrian and cycle connectivity between the city centre and the Hunter River waterfront, should be focused on Hunter Street with cross connections in appropriate locations. Recommended projects for improvement to the active transport network include the establishment of a designated cycle lane along the length of Hunter Street, excluding the Mall.



4.5.4 Managing the impact of carparking

Capping carparking

The provision of carparking must achieve a balance between encouraging more sustainable forms of transport with protecting business viability.

To achieve these goals, a gradual evolution of carparking controls is recommended in concert with improvements to the public and active transport networks.

With an estimated 10,500 existing spaces, the city centre is currently well-provided for with on and off-street carparking. Figure 5.60 shows the location of existing publicly accessible off-street carparking.

Surveyed and modelled demand (GTA, 2006) shows that despite this provision, daily parking peaks at 7,500 spaces.

It is recommended that on and off-street car parking be capped at a maximum number of 11,000 spaces (AECOM 2012), consistent with GTA's 2008 recommendation.

To achieve this carparking cap, consideration should be given to:

- a gradual increase in long-stay parking tariffs
- expanding the commuter carparking control area in accordance with the recommendations in the Newcastle Parking Strategy
- expanding the commuter carparking control area to areas adjoining the city centre to discourage commuter carparking (which disadvantages residents)
- inclusion of a policy statement in the DCP that does not support the provision of new commercial carparks in the city centre
- the use of parking revenues to invest in initiatives that encourage more sustainable forms of transport such as cycleways.

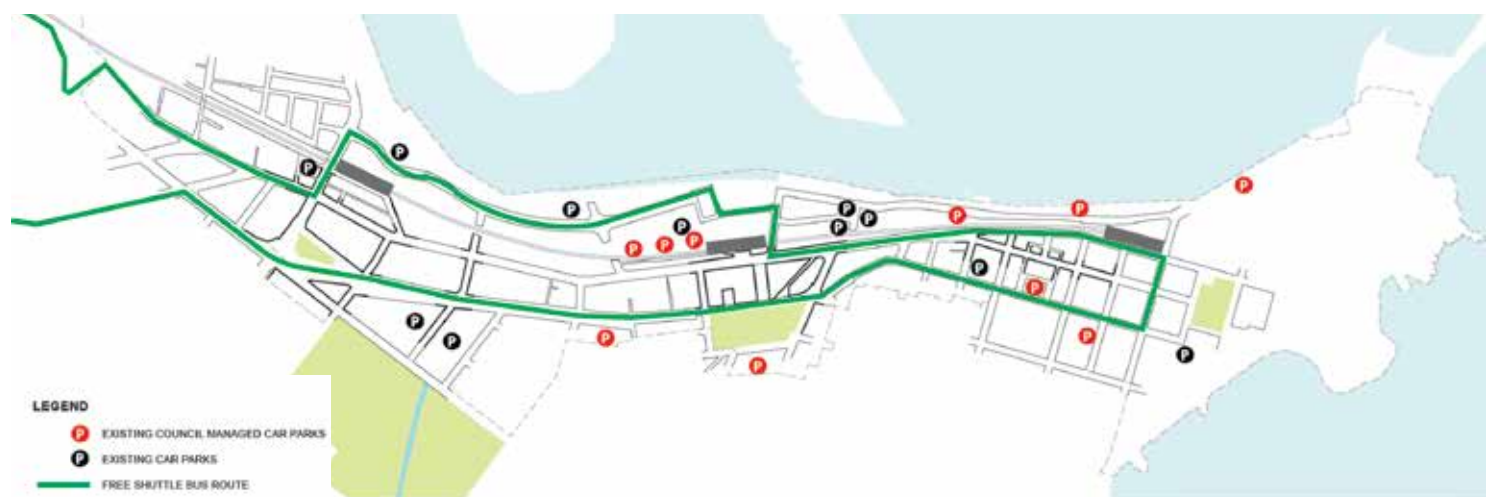


Figure 4.60 Existing carparks

Investigating carparking rates for development

The current and draft DCP for the city centre specifies a maximum carparking rate for residential development and a minimum rate for non-residential uses, such as offices and shops. Table 9 below shows the current city centre carparking rate for residential uses.

In addition to resident spaces, visitor parking is required at a maximum rate of one space for the first three dwellings plus one space for every five dwellings (or part thereof) after the first three dwellings.

The adoption of the maximum rate for residential development is generally consistent with other major city centres in NSW and interstate.

The minimum carparking rate for commercial development is one space per 60m² of gross floor area. Analysis of other city centres in NSW shows that this rate is comparatively high, with other rates ranging between one space per 100 – 200m². Provision of on-site carparking in the city centre is also challenged by the high water table and mine subsidence, along with costs of construction for basements and economic feasibility issues. Where above-ground carparking is provided, the amount of floor space that can be

achieved is reduced relative to maximum height controls. The visitor carparking rate for residential development is relatively high, and monitoring has indicated that this is rarely accessed by visitors as it is often provided within a security building.

It is recommended that further investigations be undertaken to determine whether there is scope for:

- reducing the current rate for non-residential development or adopting a maximum rate
- allowing for some of the parking for non-residential development to be reduced based on availability of carparking in nearby parking stations
- amending the current maximum rate of visitor carparking spaces for residential development to allow for a lesser number of spaces.

If justified, reductions would encourage the use of public transport and active transport, and will result in a more efficient utilisation of land, and reduced construction costs associated with basement podium carparking and loss of yield associated with podium carparking. Maximum parking controls would be supported by mandatory Workplace Travel Plans for all new major developments to encourage public transport or active transport use.

Dwelling size	Maximum rate (average)
Small (< 75m ² or 1 bedroom)	0.6
Medium (75m ² - 100m ² or 2 bedrooms)	0.9
Large (> 100m ² or 3 bedrooms)	1.4

Table 9 Current carparking rates for residential uses in the city centre

Carparking and heritage

Newcastle's wealth of relatively intact heritage buildings, including landmarks such as the Victoria Theatre and School of Arts, is a key asset and potential source of strategic economic advantage for the city. It is critical that this fabric be retained. In some cases, the on-site provision of carparking at the rate specified by the DCP is not physically possible, and has the potential to compromise the heritage value of buildings.

It is recommended that the DCP be amended to allow greater flexibility for the carparking provisions relating to heritage items in Schedule 5 (Environmental heritage of the LEP 2012 and contributory buildings listed in Conservation Areas).

One option for accommodating carparking requirements for these buildings would be to utilise nearby existing public carparking. This would be to the extent of the required carparking rates associated with the adaptive re-use of heritage premises. Council or the developer would enter into an agreement with the owner and operator of existing carparking structures for this purpose. Many existing carparking structures, including the council-owned and operated Bolton Street carpark, are located in proximity to heritage assets that are suitable for adaptive re-use.

Carparking built form

In addition to a review of carpark generation rates, it is recommended that additional built form controls for carparking be included in a revised DCP. Above-ground carparking structures are a reality in Newcastle due to the high water table, mine subsidence issues and development feasibility. Additional built form controls for above-ground carparking structures are necessary to ensure above-ground carpark structures are well-designed, and can sit well as infill development within the city.

A carparking structure can be an opportunity to introduce innovative design to the city, whether it be a new build, freestanding, retrofit or part of an integrated mixed use development. New built form controls for carparking structures should have the objective of ensuring that active and interesting frontages are incorporated in their design so that the car park makes a positive contribution to the city's built fabric. Interesting architectural facade treatments, incorporation of green walls, solar panels and applied public art treatments are all means by which a carparking structure can make a positive contribution to the built fabric of the city.





Examples of carparking screening and integration of ground floor uses

Car share

Car sharing has recently been implemented in Sydney and Melbourne as a means of reducing reliance on private motor vehicles and demand for carparking. Sydney has a comprehensive car sharing policy, based around council entering into agreement with car sharing companies for the provision of car sharing, including the council allocation of designated on-road carparking spaces for the exclusive use of car-share vehicles. Results from the City of Sydney show that at the end of 2010, approximately 4,000 residents and 500 businesses were members of their car share scheme (City of Sydney, 2011).

It is recommended that the City of Newcastle investigate car share for the city centre and pursue an agreement with a car share provider(s) based on the City of Sydney model, which includes the establishment of a target rate for car sharing as a percentage of all trips and measures to achieve this target.



Complementary initiatives

In addition to physical improvements, there are a number of complementary initiatives that can contribute to a more balanced transport network with increased mode share.

These measures include:

- Implementing an integrated ticketing system featuring a single, contactless ticket for each trip (TNSW)
- Undertaking education, marketing and promotion to increase awareness and understanding of the public and active transport network, including its benefits (TNSW and the City of Newcastle)
- Formation of working party between Government agencies to share best practice and discuss measures to further improve the transport network (NSW Government and the City of Newcastle)
- Undertaking research to better understand movement patterns and identify barriers to behavioural change (NSW Government and the City of Newcastle)
- Government leading by example through the early adoption of measures such as employee travel plans and high quality end-of-trip cycle facilities (NSW Government and the City of Newcastle)
- Develop a workplace travel plan model to assist workplaces in facilitating behavioural change (TNSW and the City of Newcastle).

Actions to implement

It is recommended that the City of Newcastle adopt the AECOM study as the guiding implementation document for local transport in the city centre. In addition to the key initiatives discussed in this section, the actions contained in this strategy are outlined in the Implementation Plan.

