Part two

Methodology

2.1 Strategy methodology

This strategy was developed in accordance with the Urban Renewal SEPP 2010. It builds on the extensive work already undertaken by the City of Newcastle, Hunter Development Corporation and the Government's former Cities Taskforce.

Figure 2.1 shows the process for preparing this strategy under the Urban Renewal SEPP.

Detailed technical investigations were undertaken to inform the preparation of the strategy in the following areas:

- Economics
- Transport
- Public domain
- Heritage and adaptive re-use.

Copies of these investigations are provided in the appendices to this strategy.

In addition, the department undertook rigorous precinct and site-based testing of the current LEP and DCP controls to determine their appropriateness in achieving quality renewal outcomes. This testing and the findings of the technical studies were used to inform the proposed amendments to the current planning framework and development of an urban renewal strategy and initiatives that form part of this strategy.

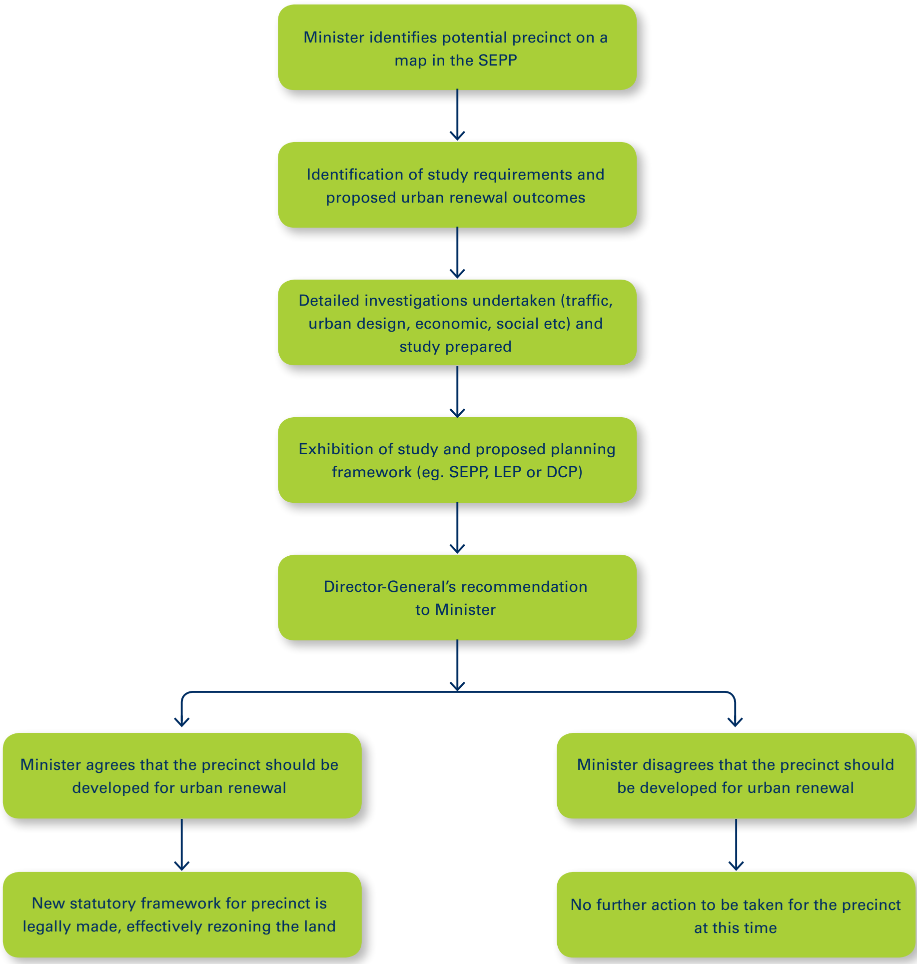


Figure 2.1 Planning process for Urban Renewal Precincts

2.2 Stakeholder engagement

The department worked in partnership with the City of Newcastle and Hunter Development Corporation when preparing this strategy. A key feature of this partnership was the establishment of a Project Steering Committee comprising representatives of each agency. During the preparation of the strategy, the Committee met on a regular basis to consider and provide direction on key matters.

In preparing this strategy, the department has also worked in collaboration with a range of government agencies, including:

- Transport for NSW
- Newcastle Buses
- Roads and Maritime Safety
- Office of Environment and Heritage
- Mine Subsidence Board.

Subsequent to the preparation of the strategy, clause 9(3) of the Urban Renewal SEPP requires the Director General to publicly exhibit it. During this exhibition period, the public may make submissions. Following the closure of the exhibition period, the department will consider all submissions and decide whether to amend recommendations made by the strategy before making a recommendation to the Minister.

Part three

Place analysis

3.1 History of urban development

Newcastle was originally inhabited by both the Awabakal and Worimi peoples, who referred to the Newcastle area as Muloobinba, which means 'the place of edible sea fern'.

On 9 September 1797, while on his way to Port Stephens, Lieutenant John Shortland entered the estuary of the Hunter River on which Newcastle is situated. Permanent settlement by Europeans began in 1804.

Extensive underground coal mining began in the early 1800s in areas that are now parts of the city centre. Supporting these mining operations was the development of a coal export port.

By the mid-1800s, largely driven by coal exports, Newcastle had emerged as a major shipping and commercial centre. Building on this role, in the first part of the 20th century Newcastle's economy refocused on manufacturing activity. The establishment of the BHP steelworks in 1915 (BHP Billiton) confirmed Newcastle as one of Australia's major industrial centres. During this time, significant commercial development occurred in the city centre, with the erection of many of the city's key heritage assets, particularly in the east end, and the rise of Hunter Street as the city's main retail destination.

Following World War 2, aided by the increase in private vehicle use and changing living preferences, significant growth occurred in Newcastle's suburbs. This evolution of the suburbs supported the later establishment of large out-of-centre shopping centres at Charlestown and Kotara.

The 1960s and 1970s saw industrial expansion in Newcastle and the Hunter region and the influx of energy related investment.

The city was also affected by the rise of globalisation, which led to the restructuring and eventual removal of a Newcastle presence by major industrial employers such as BHP.

Despite these challenges, the city centre has continued to evolve and grow. The removal of industry from the city centre and the closure of the BHP steelworks increased the latent amenity of the city centre and provided a large amount of land for redevelopment purposes.

Responding to this challenge, the Honeysuckle Development Corporation (now the Hunter Development Corporation) was formed in the early 1990s to renew the obsolete former railway and industrial land along the Hunter River waterfront. This area has now been transformed into a mixed use community that is home to a large amount of A-grade office space and new higher density housing. This has focused urban renewal on the waterfront.

Over the past two decades, the role of Hunter Street and the traditional city centre has changed. Previously an active main street offering key retail and business for the region, Hunter Street's position as the primary retail destination for the city has weakened concurrent with the expansion of suburban shopping centres. Similarly, the broader traditional city centre role as the main commercial centre for the city has also declined. Conversely, the residential population of parts of the city centre has increased in recent years with the construction of new higher density residential development.

3.2 Land use

In its role as the Hunter's regional city, the Newcastle city centre has a large and diverse range of land uses. In particular, the city centre is the primary location for higher order civic, cultural and commercial land uses in the region.

Hunter Street forms the main commercial spine of the city centre. At its eastern end, there is commercial and retail activity focused on the Hunter Street Mall. Residential uses are dispersed throughout this area. Taking advantage of the high level of amenity, a cluster of high-rise tourist and visitor accommodation has recently been developed overlooking Newcastle Beach.

Further to the west on Hunter Street, cultural and entertainment uses are located in the civic precinct focused around Wheeler Place. With the future development of the new court house and justice precinct, the role of the civic precinct as the city's main government and administrative area will be consolidated.

The west end provides a mix of commercial and retail land uses. Distinct from the east end, larger format retail land uses can be accommodated on the bigger land areas in the west end. The city centre's main shopping centre, Marketown, is located in the west end and includes a discount department store and food retailers.

North of the rail corridor, Honeysuckle has emerged as the preferred location for new A-grade office space. Existing business has been attracted to Honeysuckle due to the quality of its commercial office space, creating vacancies in other parts of the city centre. A range of complementary uses include higher density residential development, restaurants, hotels and the Newcastle Museum.

Wickham contains a mix of industry that includes manufacturing premises, and small-scale, low rise residential uses.

The city centre has not traditionally been home to many residents. Rather, residential land uses are clustered around the city centre in locations such as Cooks Hill. Where residential uses are provided in the city centre, the majority are units and townhouses rather than detached single dwellings.

The city centre is well provided for with public open space distributed throughout the city centre, with key locations being Civic Park, Birdwood Park and the eastern foreshore.

The early 1980s marked a severe global economic recession that affected much of the developed world, including Newcastle. Consequent economic restructuring saw the departure of the hospital

from the city centre, along with much of the larger scale industrial land uses. The exception can be seen at Wickham, where a number of established light industrial businesses remain. Larger scale and port-related uses have relocated to north of the Hunter River, opposite the city centre.

Land surrounding the city centre is largely zoned for residential uses and occupied by single detached houses and smaller-scale unit complexes. Older areas to the south of the city centre, such as Cooks Hill and Hamilton South, have a significant stock of relatively intact heritage buildings and streetscapes, comprising smaller-scale terraces and semi-detached and free-standing detached houses. The current LEP includes large parts of these suburbs in conservation areas. The Hamilton and Darby Street centres close to the city centre are vibrant, small-scale suburban main streets that provide a range of services to the local resident population. Under the renewal corridors approach of the current and proposed DCP (adopted by the City of Newcastle), parts of these centres and adjoining areas are able to accommodate some additional residential and business growth.

3.3 Economics

The Newcastle city centre, which incorporates parts of the surrounding suburbs of Cooks Hill, Hamilton East, and The Hill, accommodates about 6,000 residents and 22,000 employees, which is over 20% of all workers in the Newcastle Local Government Area (LGA) (Hill PDA 2012). The city centre contains about 698,000m^2 net lettable area (NLA) of employment floor space, including retail, commercial, industrial, tourism and community uses (Hill PDA 2012).

The city centre has proved to be resilient in the face of multiple economic challenges and has continued to develop and evolve commensurate with its standing as a regional city. Outside the Sydney Metropolitan region, the Newcastle city centre is the largest and most diversified central business district in NSW (Hill PDA 2012).

Industry and port-related services continue to play a role in the city's economy, reflecting the industrial origins of the city. However, Newcastle, like many post-industrial cities, has experienced a transformation in economic drivers over the past 30 years. The gradual decline of large industrial employers has been replaced by growth in knowledge-intensive and service-based industries.

Residential performance and trends

At the 2006 Census, the Newcastle local government area (LGA) had a resident population of over 141,700 people, accounting for 30% of the population of the Lower Hunter region. Within the Newcastle LGA, about 6,000 people reside in the city centre. While residential development is scattered across the city centre, there are significant concentrations of residential development near waterside locations towards the east end of the city centre and in some areas of the Honeysuckle precinct.

There are a number of factors driving residential growth in the city centre, including strong demand from students, young professionals, first home buyers and investors; people looking to downsize; current market conditions; and the supply of waterside land suitable for residential development.

Supply of waterside land is provided for in the Honeysuckle precinct. Under the Honeysuckle master plan, 110,000m² gross floor area (GFA) of new residential floor space is planned for the Cottage Creek precinct. If realised, this could accommodate 1,500 of the city centre's additional dwellings.

Underpinning residential growth in the city centre are flexible planning controls. Recent economic feasibility analysis undertaken to support this urban renewal strategy clearly indicates that under current market conditions, new residential and mixed use development with a residential component is more viable compared to solely commercial development.

Retail performance and trends

A 2011 floor space survey commissioned by the department and the City of Newcastle indicated there was 108,000m^2 NLA of occupied retail floor space in the city centre and an additional 14,000m^2 NLA of occupied commercial shopfronts (Hill PDA 2012). This accounts for about 25% of the Newcastle LGA's total supply of retail floor space (Hill PDA 2012). The main retail sectors represented in the city centre include restaurants and take-away shops, bulky goods retailers and speciality retail stores (Hill PDA 2012). Most retail land uses in the city centre are provided in the form of strip retailing along Hunter Street, which is anchored by Hunter Street Mall to the east and Marketown Shopping Centre to the west.

The 2011 floor space survey indicated that there was 36,000m^2 NLA of vacant floor space in the city centre, accounting for approximately 22.5% of all shopfronts in the city centre. This high vacancy rate is largely attributable to changing trends in the retail sector, the uncertain economic conditions of the past three to four years, and the ongoing expansion of retail growth in suburban areas of other parts of the Newcastle LGA (Hill PDA 2012). The relatively low and dispersed population of the city centre, combined with the length of Hunter Street, also makes it difficult for some retail uses to be either supported or economically viable.

In terms of retail performance and sales activity, recent market analysis has indicated that in 2011, the Newcastle city centre had the potential to capture approximately $458 million in retail trade and that this retail trade potential was forecast to increase to $623 million by 2031 (Hill PDA 2012).

Demand analysis of retail floor space indicates the city centre could support a total of 139,000m^2 of floor space (Hill PDA 2012), which is more than the 108,000m^2 observed in the 2011 floor space survey. These results indicate that retail trade in the city centre is under-performing, with additional capacity available for new retail floor space to be provided in the city centre.

The under-supply of floor space may be attributable to several factors, including the cancellation of proposed redevelopment schemes, the closure of major retailers and the high proportion of vacancies driving poor perceptions of the city centre as a desirable location for retail trade (Hill PDA 2012).

The role of the city centre's retail land uses has changed over the past 20 years. Historically, the city centre was the sole regional retail centre in the Lower Hunter, but the gradual development of larger suburban retail centres (such as Kotara and Charlestown) has resulted in a significant diversion of trade away from the city centre. Even so, there remains significant potential to revitalise retail uses in the city centre and to capture retail trade from workers and residents.

Another trend impacting the retail profile of the city centre is the shifting nature of retail demand in response to the re-population of the city centre and of surrounding areas by residential development. Increased population and employment growth in the Newcastle city centre and on the city fringe is expected to drive demand for more retail floor space, with a specific demand for neighbourhood-level services for residents in inner city apartments and hotels.

Accordingly, retail floor space is forecast to increase to 172,000m^2 NLA by 2031, an overall increase of 33,000m^2 (Hill PDA 2012). This suggests there is the potential for the city centre to host another national department store, supermarket or discount outlet chain store, preferably in the east end.

Commercial performance and trends

Newcastle is the principal commercial centre servicing the Hunter region. It is home to a number of large corporate headquarters (including NIB Health Insurance and Hunter Water) and branch offices of national and international companies. Additionally, the city centre contains the main administrative, government and civic offices servicing the Hunter region, such as the head office of the City of Newcastle, and various state and federal government departments, including justice, education and health functions.

The city centre has a high degree of employment self-containment, providing more jobs than there are resident workers. Many workers commute to the city centre from other parts of Newcastle and Lake Macquarie and Port Stephens LGAs as it is well-serviced by public transport and road infrastructure. While employment land uses are spread throughout the city centre, the largest concentration of employment land is towards the east end of the city, Civic and the Honeysuckle precinct.

Outside of retail, the main industry sectors providing employment in the city centre include professional, scientific and technical services; public administration and safety; financial and insurance services; health care and social assistance; accommodation and food services; and information, media and telecommunications.

The city centre contains approximately 259,000m^2 NLA in occupied commercial floor space, and 44,000m^2 NLA vacant employment floor space. Commercial floor space monitoring by Property Council of Australia (January 2011) estimates that one-third of the total floor space (80,000m^2 NLA) is A-grade office stock, which attracts premium tenants, high rents and has the lowest vacancy rates. Almost one-third of all commercial floor space is lower C and D-grade stock, which suffers from higher vacancy rates and lower rents.

A number of higher quality A-grade commercial buildings in the Honeysuckle area came onto the market in 2008/2009, which has attracted tenants from other parts of the city centre. Due to strong market absorption and low supply additions, recent commercial market activity in the city centre has seen vacancies for A-grade stock fall from 10.1% in 2010 to 5.6% in 2011, coupled with increased sales and leasing activity, and rising rental rates.

Demand for premium office space is forecast to continue, however there is a clear location preference for new A-grade office space to be provided in the Honeysuckle precinct. Despite the fact that lower quality C and D-grade stock is less attractive for business functions, commercial floor space demand is expected to grow to 480,000m^2 NLA by 2031. There is opportunity for existing C and D-grade stock to be recycled to the market as A or B-grade stock (Hill PDA 2012).

Employment growth and change

The relocation of government tenants, growth in tourism and serviced accommodation, and a general increase in the city centre's resident population is expected to continue driving increased employment floor space demand in the city centre, with particular emphasis and demand for commercial floor space.

However, recent economic feasibility analysis indicates that employment-generating development, without a residential component, is not feasible under current market conditions. While existing planning controls for the Newcastle city centre promote employment development, there is a mismatch between aspiration and commercial reality.

Despite this current situation, market research undertaken to support this urban renewal strategy forecasts that employment-generating floor space is predicted to grow between 256,000 and 357,000m^2 NLA to a maximum total of 954,000m^2 NLA up to 2031. This could result in an additional 10,000 employees working in the city centre (bringing the working population of the city centre to about 30,000). The main industry sectors where growth is anticipated to occur is in health care and social assistance; accommodation and food services; public administration and safety; retail trade; and professional, scientific and technical services.

3.4 Demographics

Current population

The estimated resident population of the Newcastle LGA in 2006 was 141,752. This represents an increase of 5,339 persons between 2001 and 2006. In addition to the LGA, the Lower Hunter region is also experiencing population growth. Table 2 shows key population indicators for the LGA and Lower Hunter region between 1996 and 2006.

Within the LGA, the occupancy rate per dwelling has been steadily decreasing. The average occupancy rate per dwelling in 1971 was 3.2 persons compared to 2.41 persons in 2006. This rate is forecast to reduce even further to 2.1 persons per dwelling in 2031. At 8.8%, compared to both the NSW (6.6%) and Australian (6.8%) averages, the LGA has a relatively higher proportion of young adults (20 – 24 years). Similarly, the LGA has a relatively higher proportion to residents in the 65+ years age group (15.8%) than the NSW (13.8%) and Australian (13.3%) averages.

In 2006, there was a lower proportion of people born overseas (11.4%) in the LGA compared to the NSW average (23.8%). There was also a lower proportion of people from non-English speaking backgrounds (7%) compared to the NSW average (16.8%).

Relative household income levels are also slightly lower in the LGA than the NSW average. There were more households earning a lower income (24.8%) compared to the NSW average (20.1%). 23.9% of NSW households earned a higher income than the LGA average (18.7%).

Education levels between the NSW and LGA averages are similar. Overall, 41.1% of people in the LGA held educational qualifications, and 46.4% had no qualifications, compared with 40.6% and 45.6% respectively for NSW. Importantly, there was a trend towards higher education levels observed in the LGA between 2001 and 2006, with an increase of 4,655 persons holding a bachelor or higher degree and a decrease of 5,162 persons holding no qualifications between 2001 and 2006 (Profile ID 2009).

Forecast population trends

Table 3 below shows that the Newcastle LGA and the Lower Hunter Region are forecast to experience continued population growth between now and 2031.

Table 4 below shows that aligned to population growth, the Newcastle LGA and Lower Hunter Region are also forecast to experience demand for additional dwellings.

LGA	Total population 1996	Total population 2001	Total population 2006	Change in persons	% change
Newcastle	133,686	136,413	141,752	8,066	0.6%
Cessnock	44,362	45,071	46,206	1,844	0.42%
Maitland	49,941	53,718	61,880	11,939	2.39%
Lake Macquarie	170,495	177,185	183,138	12,643	0.74%
Port Stephens	51,288	56,474	60,484	9,196	1.79%
TOTAL	**449,772**	**468,861**	**493,461**	**43,689**	**0.97%**

Table 2 Key population indicators 2001-2006 (Hill PDA 2012, sourced from ABS)

The Lower Hunter Regional Strategy forecasts a future dwelling target of 4,000 additional dwellings for the city centre by 2031. Based on an average occupancy rate of 2.1 persons per dwelling, this represents a potential additional residential population of 8,400 residents.

Hill PDA's analysis of Bureau of Travel Transport Statistics, indicates a much lower dwelling growth forecast of 424 additional dwellings. In acknowledging that this is extremely low, Hill PDA estimate that a more realistic forecast of dwelling growth in the city centre to 2031 would be between 1,200 and 2,100 additional dwellings (Hill PDA 2012).

Fundamentally, statistics have shown that the Newcastle LGA and Hunter region has experienced continued population growth over the past decade. This population growth will need to be accommodated. Demographic change, resulting in an ageing population and smaller households, combined with the increasing desirability of inner city areas as preferred residential locations, continues to drive residential development in the city centre and city fringe.

There are a number of specific factors which will influence housing demand and growth into the future, and particularly in the city centre. These could include strong demand by students associated with the potential relocation of portions of the University of Newcastle's campus to within the CBD, demand by professionals for inner city housing, as well as first home buyers who are attracted to the affordability of units along with the amenities of the city centre, investors and increasing market demand for smaller more affordable units (Hill PDA 2012).

LGA	2006	2011	2016	2021	2026	2031	Persons	%
Newcastle	149,300	155,500	161,300	165,600	170,000	174,200	24,900	0.6%
Cessnock	48,300	50,500	53,100	56,500	60,100	64,000	15,700	1.1%
Maitland	64,700	73,300	82,000	89,600	96,600	103,200	38,500	1.9%
Lake Macquarie	192,000	197,000	202,300	210,100	218,200	226,000	34,000	0.7%
Port Stephens	63,300	69,400	74,500	78,700	82,300	85,400	22,100	1.2%
TOTAL	**517,600**	**545,700**	**573,200**	**600,500**	**627,200**	**652,800**	**135,200**	**0.9%**

Table 3 Forecast Lower Hunter Region population growth 2006-2031 (Hill PDA 2012, sourced from DP&I)

LGA	Infill			New release	Total dwellings	% of total growth
	Centres and corridors	Urban	Total			
Newcastle	12,200	2,500	14,700	5,800	20,500	17%
Cessnock	500	1,500	2,000	19,700	21,700	18%
Maitland	2,000	3,000	5,000	21,500	26,500	23%
Lake Macquarie	3,300	2,000	5,300	7,200	12,500	11%
Port Stephens	14,000	7,000	21,000	15,000	36,000	31%
TOTAL	**32,000**	**16,000**	**48,000**	**69,200**	**117,200**	**100%**

Table 4 Forecast Lower Hunter Region dwelling numbers 2006-2031 (Hill PDA 2012)

3.5 Landscape elements and features

Waterfront

Bordered by the Hunter River to the north and the Pacific Ocean to the east, and traversed by Cottage Creek, water is the major influence on the character of the city centre. The dominance of water is most pronounced at Honeysuckle and the east end, which tapers to a narrow sand spit that terminates at Nobby's headland.

Physical access to the Hunter River and Pacific Ocean waterfront is available from most locations, and will be enhanced with the future completion of the Honeysuckle Precinct. Largely due to historic development patterns and the treatment of flood-prone waterways, public access to Cottage Creek is not available in most locations.

Topography

The east end of the city is located on two steep hills, providing a scenic backdrop to the city centre when viewed from the Hunter River foreshore. Due to their elevation, major buildings on the crowns of these hills, in particular the Christ Church Cathedral, are dominant landmarks. In addition to the east end, due to it location at the mouth of the Hunter River and height compared to surrounding land, Nobby's headland is a dramatic and visually prominent feature of the city centre.

Unlike the east end, Civic and the west end are largely built on the Hunter River and Cottage Creek floodplain, and consequently have a relatively flat topography.

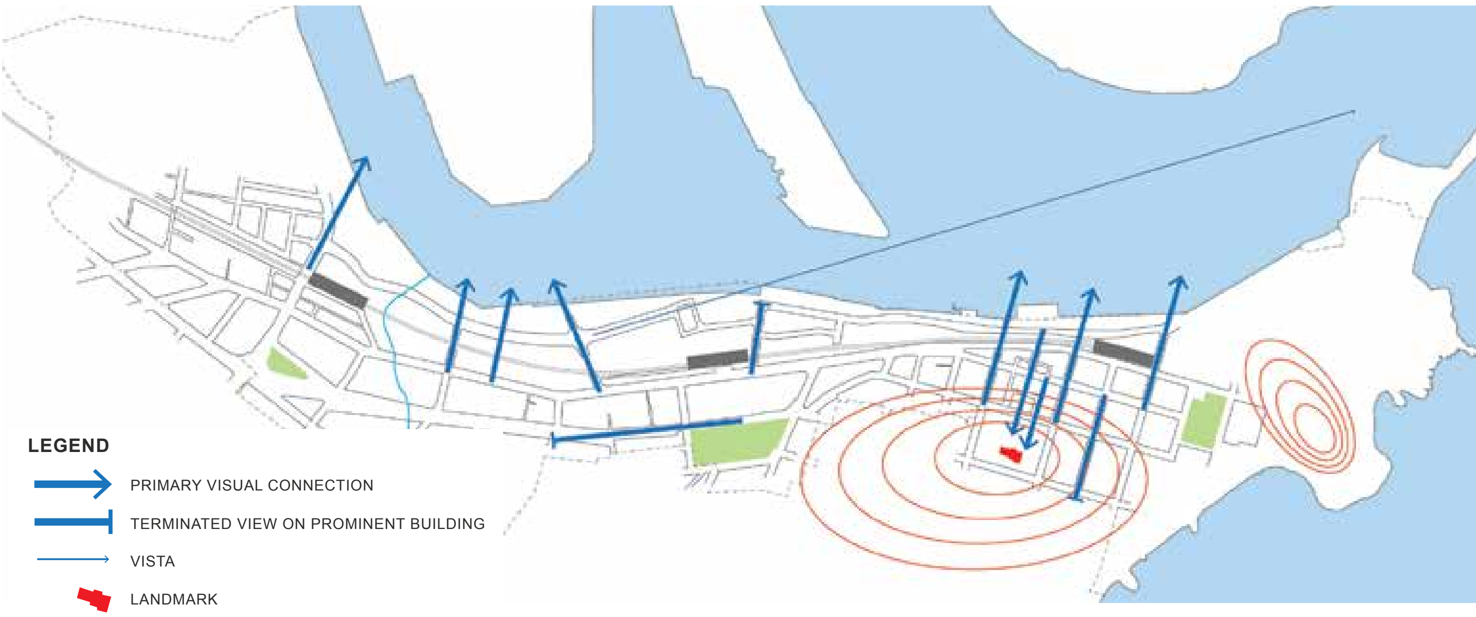


Figure 3.1 Views and topography

View corridors

Due to its steep, hilly topography and public open-space, views of the waterfront are particularly evident from the east end, where the Hunter River often terminates vistas obtained from north-south aligned streets. Expansive views are afforded at locations such as Cathedral Park. Due to the placement, bulk and scale of some buildings, views from the city centre are not as readily available from the public realm in Civic and the west end.

Parks

The city centre is well-provided for with parks. Critically, extensive parks are located along the city centre waterfront, providing unimpeded public access to this asset. The main parks in the city centre are Civic Park, Cathedral Park, Pacific Park and Birdwood Park. National Park to the west and Foreshore Park to the east provide large areas of parkland adjacent to the city centre. The parks offer a variety of opportunities for active or passive recreation.

3.6 Urban structure and activity

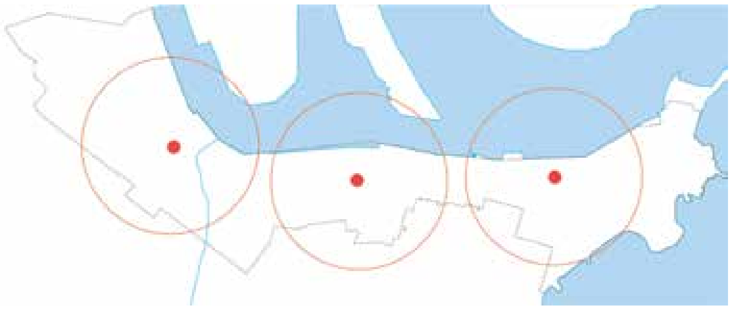


Figure 3.2 Walkability 400 m radius from public transport nodes

Figure 3.3 Linearity and limited crossings

Walkability

Due to bus stops on Hunter Street and Wickham station, most of the city centre is within a comfortable five-minute (400 m) walk from a public transport node. This provides a high level of accessibility for the city centre, and enables people to undertake or complete their journey as a pedestrian. Supporting good accessibility in the city centre is a relatively permeable street network in an east-west direction. Permeability is compromised in a north-south direction due to limited crossing points over the rail corridor.

Barriers and linearity

Despite geographic proximity, much of the city centre does not have a strong physical or visual connection with the waterfront. This is due to a number of factors, in particular the limited number and condition of pedestrian links between Hunter Street, across the rail line to the waterfront. Many of these links are indirect, not aligned with key views and are not obvious or well-signed.

This sense of separation is exacerbated by the strong east-west linearity of the city centre's main transport and activity corridors, Hunter Street, King Street and Honeysuckle Drive, combined with an absence of north-south activity corridors intersecting these streets and connecting to the waterfront.

Dispersal of activity

In the past, commercial and retail activity stretched continuously along Hunter Street, with a dominant cluster in the east end. With the rise of suburban retail and the subsequent decline of retail in the city centre, much of this activity has dissolved. This has led to dispersed clusters of activity, with many clusters focusing on a single or narrow band of uses.

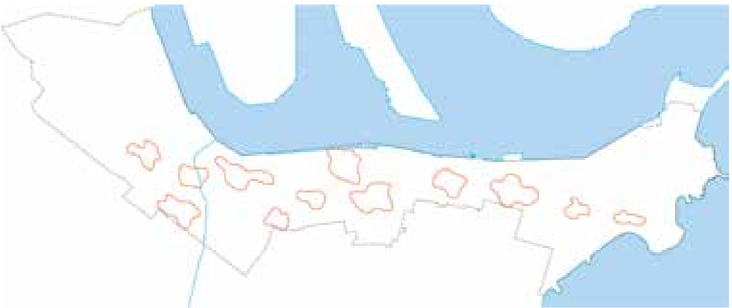


Figure 3.4 Dispersal of activity

Figure 3.5 Honeysuckle

Activity hubs

In parts of the city centre, these clusters have amalgamated into distinct activity hubs. Principal amongst these hubs are:

- in the east end on Hunter Street
- in Civic focused around Wheeler Place
- in the west end.

Compact and focused on the Hunter Street Mall, the east end is Newcastle's former commercial and retail core. More recently, the east end has evolved into a more mixed use area, with a number of adaptive re-use conversions of commercial buildings into residential.

Civic is the focus of municipal administration and government functions in Newcastle, being home to the City of Newcastle, government offices, and cultural and recreation facilities. Key cultural facilities include the City Hall, the Newcastle Art Gallery, Newcastle Museum, regional library and the Civic Theatre. The area contains the city's main civic space in the form of Wheeler Place and is bordered by the city's main park, Civic Park.

Honeysuckle

Occupying a large section of the city centre's Hunter River waterfront, Honeysuckle has been progressively developed as a mixed use addition to the city centre since its commencement in the early 1990s.

With the appropriate allocation of land uses, Honeysuckle can complement the city centre. With sensitive establishment of public open space and the placement and design of buildings, Honeysuckle represents a strong opportunity to integrate the city centre with the Hunter River waterfront.

3.7 Urban character and built form

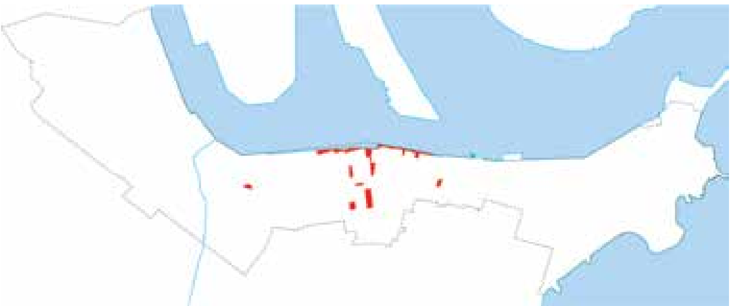


Figure 4.6 Civic spaces

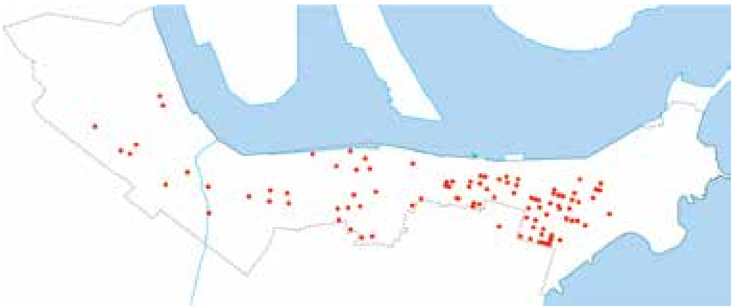


Figure 4.7 Heritage items

Civic spaces

There are only a small number of civic spaces within the city centre. The largest and most prominent of these is Wheeler Place. Wheeler Place is currently under-performing as the city centre's primary civic space as evidenced by a lack of activity. A cluster of civic spaces is located along the Hunter River waterfront at Honeysuckle. These are not well-integrated into the broader city centre fabric and are disconnected from Hunter Street. There are other lesser civic spaces such as Christie Place, which are generally under-utilised.

Heritage

Newcastle's wealth of heritage buildings, ranging from large former commercial buildings to intimately-scaled terrace houses, create a unique and valuable character for the city centre and reveal the city's history and culture. Many of these heritage buildings are concentrated in the east end, which has a large stock of relatively intact late 19th and early 20th century buildings. There are opportunities to retain and adaptively re-use these heritage buildings so that they can continue to contribute to the character of the city.

Streetscape

The city centre is highly urban, featuring a built form that is largely:

- fine grain
- low-medium rise
- minimally separated buildings
- built to boundary where fronting Hunter Street and in the east end, providing a strong sense of enclosure for the public realm.

This fine grain pattern is broken by a number of landmarks, including the Christ Church Cathedral and the Newcastle Administration Centre, which have significantly larger bulk and height.

Honeysuckle has a less urban form, with large, long, contemporary medium-rise buildings generally being set back from the principal street frontage.

While there are some streetscapes that represent a particular style or period, most streets contain buildings of a variety of styles and ages. Unsympathetic mid to late-20th century commercial buildings are dispersed throughout the city centre. Residential uses are often part of the adaptive re-use of heritage buildings, with newer additions capping the building and being set back from the dominant facade.

Interface with the public realm largely depends on the function of the street. Active frontages, often with awnings for weather protection, dominate high streets such as Hunter Street. Non-active frontages, some with small setbacks, dominate residential streets.

While building materials are varied, sandstone and red brick are dominant materials in the east end.

3.8 Transport

The private car currently dominates journey-to-work travel in Newcastle (refer to table 5). In 2006, the private car accounted for 77.4% of trips to the city centre in the morning peak. Importantly, a large proportion of these trips originated within a 5 km distance of the city centre. Correspondingly, only 14.3% of journeys were undertaken by public transport and 8.3% undertaken by active transport.

The provision of high levels of relatively inexpensive public carparking contributes to the dominance of the private motor vehicle. Based on research (GTA, 2006), the total daily carparking demand, both surveyed and modelled, peaks at around 7,500 spaces, whilst the overall supply is nearly 10,500 spaces. This enables more than 70% of drivers to park within a five-minute walk of a destination and with a search time of less than five minutes (GTA 2006).

Despite high levels of car use, Newcastle has a well-established and extensive public transport network, including:

- 26 bus routes servicing large areas of Newcastle and Lake Macquarie, with most terminating in the city centre
- Passenger rail stations provide regular access to and from the Hunter Valley and Sydney
- The Newcastle - Stockton ferry services, which run regularly between the two centres during peak periods
- A transport interchange located at Newcastle Station that integrates bus, rail and taxi transport, and includes a park-and-ride facility. This will be relocated to the new Wickham Station.

The city centre currently has a number of other transport challenges, including:

- traffic congestion in peak periods at key approach roads such as Stewart Avenue
- volume and speed of car traffic as well as the amount of space allocated to cars adversely impacting upon the quality of the public realm, particularly Hunter Street
- lack of connectivity between the city centre and the waterfront.

Mode	Daily	Peak period	Peak mode share %
Car	11,300	6,500	77.4%
Train	700	500	6%
Bus	800	600	7.1%
Ferry	100	100	1.2%
Cycle	100	100	1.2%
Walk	1,000	600	7.1%
TOTAL	**14,000**	**8,400**	**100%**
Public transport	1,600	1,200	
Public transport mode share %	**11.8%**	**14.1%**	

Table 5 Proportion of work trips to Newcastle city centre by type (2006) (AECOM 2008)

3.9 Public domain

Public domain is the publicly accessible space between buildings that provides opportunity for formal and informal community gathering and interaction. A quality public domain has been shown to have numerous benefits to cities and can stimulate urban renewal (Transport for London, 2006).

The Newcastle city centre public domain comprises:

- streets
- parks, squares and Hunter Street Mall
- beaches and the harbour waterfront.

The Newcastle Vision (Cities Taskforce, 2006) identified a public domain framework, strategies for public domain aspects such as paving and lighting, and a number of initiatives to improve the quality of the city centre public domain. These are to be undertaken in accordance with the adopted Hunter Street Revitalisation Master Plan and recently completed Hunter Street Public Domain Technical Manual and partly funded through development in accordance with the city centre section 94A plan.

Despite the development of this policy, investigation and analysis has shown that parts of the city centre public domain, in particular Hunter Street, remain in relatively poor condition (SCAPE Strategy, 2010). Deficits in public amenity include shade, seating and signage. In some areas, poor casual surveillance and absence of activity creates a potentially unsafe environment. Other concerns include the inconsistent application of paving, seating and street furniture.

3.10 Mine subsidence

Due to historical underground mining activities, much of the city centre is affected by mine subsidence. This has been identified by the development sector as a key constraint to redevelopment. Mine subsidence in affected areas requires remediation work and, depending on the extent of work required, this can contribute significantly to construction costs.

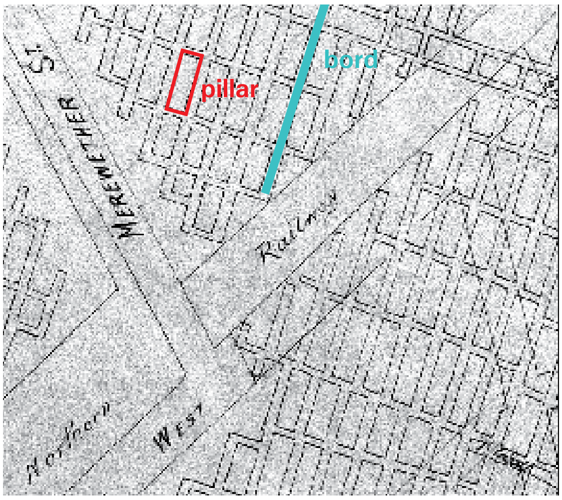
The map shown right (figure 3.8) was recently released by the government's Mine Subsidence Board and shows the extent of mine subsidence in the city centre. The map gives information about the extent of mine subsidence in different parts of the city centre and what it means for new construction of various scales. It allows a better understanding about mine subsidence than was ever previously available, and will assist prospective purchasers and developers when making investment decisions and seeking advice from geotechnical specialists.

The west end is the least affected by mine subsidence, while parts of Civic and the east end are the most heavily affected. Due to this, the west end of the city centre would be most suited to larger and taller buildings such as those typically preferred for commercial development, and confirms the previous nominated location for the emerging CBD.

Other areas of the city centre still provide opportunities for renewal and redevelopment, however the extent will be subject to geotechnical investigations. Larger structures are likely to require mitigation strategies such as coal seam grouting. The overall achievable building heights in those parts of the city centre outside of the west end is also already generally lower in response to the existing built form, heritage character and desired urban design outcomes. It is noted that lower building forms in mine subsidence-affected areas generally require less remediation work and grouting. Masonry buildings of three storeys or less do not require approval from the Mine Subsidence Board or a grouting strategy.

To address mine subsidence in parts of the Honeysuckle Precinct, the NSW Government developed a grouting strategy that is being implemented as sites develop.

The department has worked with the Mine Subsidence Board in the preparation of this strategy. The extent of mine subsidence in the city centre has been accounted for in the analysis and feasibility considerations, which inform the recommendations of this strategy.



Historical underground mining sketch (Coffey Geotechnics)

3.11 Remediation of land

State Environmental Planning Policy 55 – Remediation of Land (SEPP55) requires consideration about whether land is contaminated if rezoning is being considered.

This strategy recommends some amendments to land zoning although does not introduce sensitive uses such as residential purposes that were not previously allowed. Therefore, a detailed contamination investigation is not necessary as part of this strategy.

However, detailed investigation may be required under SEPP 55 as part of the development assessment process once detailed plans of development are known.

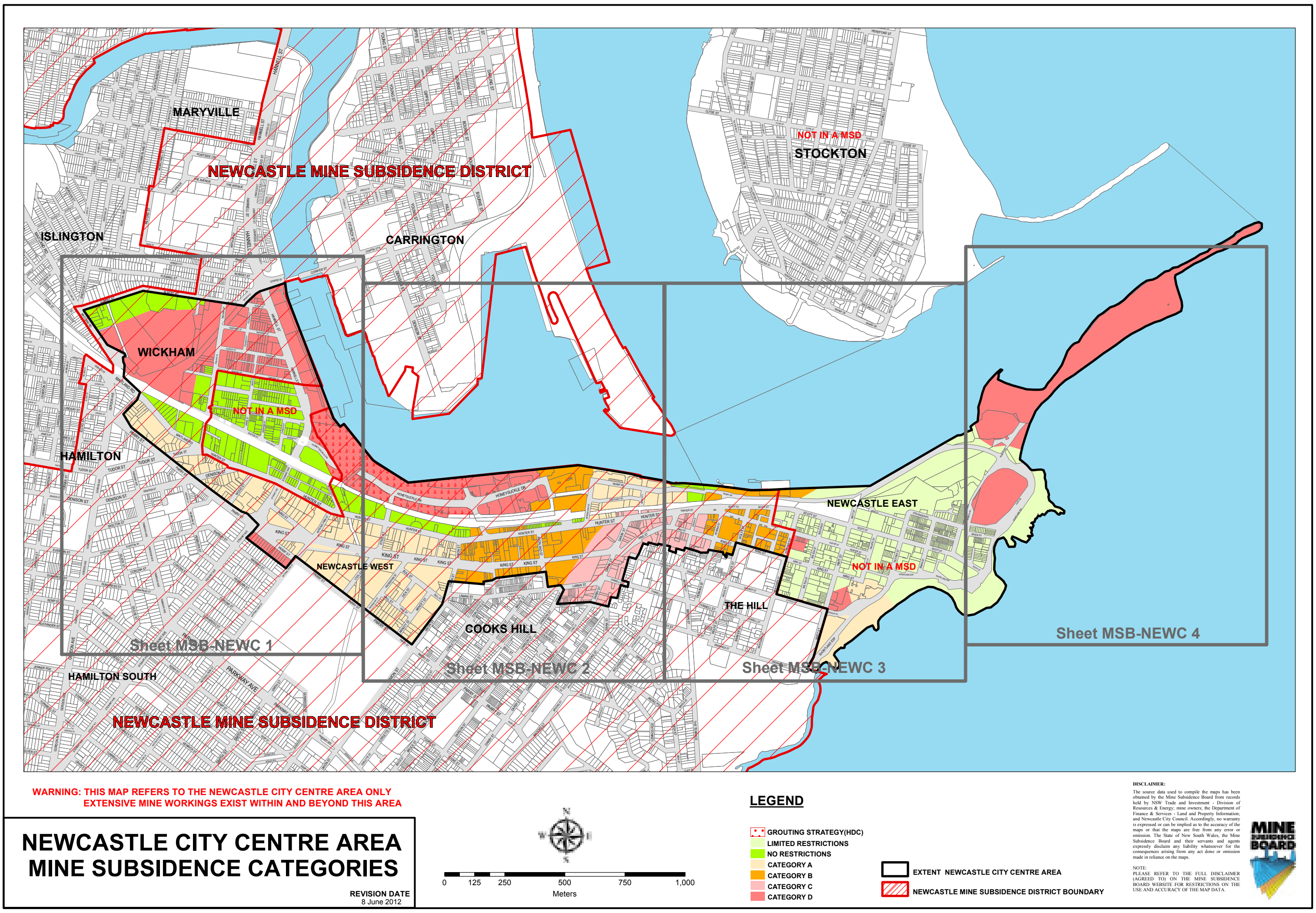


Figure 3.8 Extent of mine subsidence in the city centre (Mine Subsidence Board 2012)

3.12 Flooding

Newcastle is a river city. Consequently, parts of the city centre, including Honeysuckle and the west end, are located on flood-prone land. These areas are subject to flooding from a range of different sources, including flash flooding from Cottage Creek, river flooding from the Hunter River and ocean flooding from storm surge and potential sea level rise. In addition to being flood-prone, much of the city centre is affected by a high water table.

Figure 3.9 shows the extent of flooding in the city centre based on the 1% Annual Exceedance Probability (AEP) for flash flooding, and provides an indication of approximate flood depths.

Land in the east end and part of the civic precinct south of King Street through to National Park are the main areas not affected by flooding in the city centre.

There are three types of flood-prone areas:

1. floodways
2. flood storage
3. flood fringe.

Under the parts of Newcastle DCP for Flood Management, floodways are to be retained for the conveyance of essential flood flows. The erection of buildings or structures is prohibited in floodways. The filling of land is also not permitted, except for minor alterations to ground levels for items such as roads and parking. With the exception of land bordering Cottage Creek and low-lying land connected to Cottage Creek, in particular part of the land occupied by the Marketown shopping centre and parts of King and Steel Streets, most land in the city centre is not affected by flood flow.

Under the DCP, a number of controls apply to development in flood storage areas:

- Not more than 20% of the area of any development site in a flood storage area is filled.
- The remaining 80% is generally developed allowing for underfloor storage of floodwater by the use of suspended floor techniques such as pier and beam construction.
- Where it is proposed to fill development sites, the fill does not impede the flow of ordinary drainage from neighbouring properties, including overland flow.

Where in a flood storage area or a flood fringe area, to manage risk to property to an acceptable level, the DCP requires that the floor levels of occupiable rooms should be higher than the Flood Planning Level (FPL). The FPL is a combination of the 1% AEP plus a freeboard of 500 mm. A number of other requirements apply to development in the flood storage or flood fringe areas, including requiring electrical fixtures to be above the FPL.

To minimise risk to life and property in a flood event, residential uses should be located in flood-free areas, or where in flood-prone areas, generally located above ground level.

Draft city-wide Floodplain Management Study and Plan

Council recently commissioned the preparation of a draft city-wide Floodplain Management Study and Plan.

The documents recommend a number of initiatives relating to strategic land use planning. Principal amongst these recommendations is the identification that current zoning of some low-lying parts of the city, including Wickham and a small area near Marketown, are potentially incompatible with flood risk in the long-term (50-year horizon).

They also recommend the removal of an existing retail building at 681 Hunter Street. This building is located within the Cottage Creek floodway, and has the potential to trap large objects in a flood event, blocking flood flow and consequently worsening the impact of flooding upstream.

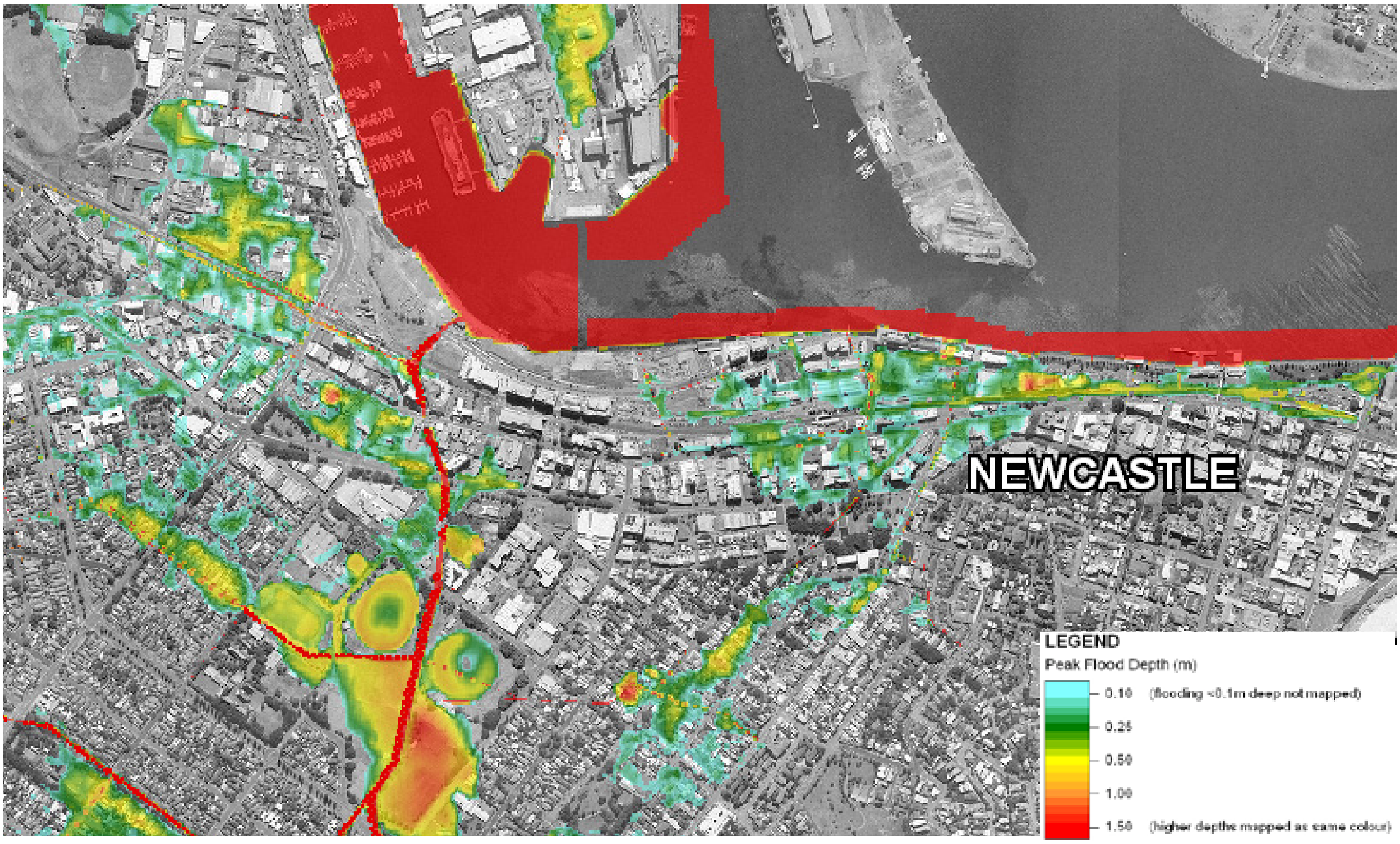


Figure 3.9 Extent of flooding in the city centre (1% AEP for flash flooding)

3.13 Development contributions

Under NSW planning legislation, councils are able to levy development contributions to fund local infrastructure and services such as community facilities and open space.

Development in the city centre is covered by a section 94A plan. Contributions obtained from development under the plan are used to fund the range of public domain and social infrastructure projects shown in Table 6.

Development contributions are levied from development that has an estimated cost of more than $250,000 at a flat rate of 3% of construction cost.

The 3% rate is generally consistent with the levies in other regional city centres, including Parramatta (3%) and Gosford (4%).

The contribution is imposed as a condition of approval and is payable prior to the issue of a Construction Certificate. Payment is indexed in line with the Consumer Price Index.

The City of Newcastle administers funds obtained under the Plan, with funds being pooled and decisions on expenditure being determined annually in accordance with council's Management Plan.

Item	Cost $
Public Domain Plan and Technical Manual	250,000
Urban furniture, interpretation signage, paving, lighting, public art, trees and landscaping, transit precinct improvements and access	7,250,000
Burwood Street carpark	5,000,000
Park-and-ride facility, western end of the city centre	5,000,000
Hunter Street Mall refurbishment	8,000,000
Local open space embellishments	1,000,000
District open space embellishments	1,000,000
Honeysuckle waterfront precinct	7,500,000
Civic Park landscaping improvements	1,500,000
District multi-purpose centre	1,500,000
Child care centre	1,600,000
Library extension	3,000,000
Civic Theatre extension	2,000,000
City Hall upgrade	5,000,000
Art Gallery extension	6,000,000
TOTAL	**55,000,000**

Table 6 Works schedule for expenditure in the city centre

3.14 Social infrastructure

The city centre currently provides a range of social infrastructure for its residents, including:

- Newcastle Museum
- Newcastle Art Gallery
- Newcastle Regional Library
- The Loft Youth Centre
- Newcastle Senior Citizens Centre
- Newcastle Ocean Baths.

The forecast population and employment growth in the city centre will create a need for additional social infrastructure in the future. The City of Newcastle has identified the following additional facilities:

- district multipurpose centre
- library extension
- civic theatre extension
- city hall upgrade
- art gallery extension.

Funds are being levied from development under council's section 94A contributions plan to provide for these facilities.

3.15 Sustainability

The City of Newcastle has an established framework to address sustainability. Sustainability measures are included in five principal documents:

- Newcastle Vision, Cities Taskforce, 2006
- Newcastle 2030, City of Newcastle, 2011
- Newcastle Environmental Management Plan, City of Newcastle 2003
- Carbon and Water Management Plan, City of Newcastle, 2010
- the parts of the current DCP covering the city centre.

The Newcastle Vision includes improving the natural environment as a key vision statement. This statement focuses on achieving sustainability by positioning Newcastle to have a greater reliance on public transport, encourage increased density, and incorporate energy and water efficiency and sustainable building practices into new building design.

Newcastle 2030 seeks to achieve three environmental objectives:

- greater efficiency in the use of resources
- maintenance, enhancement and connection of the unique natural environment
- environment and climate change risks and impacts are understood and managed.

Supporting these objectives are a number of strategies, including:

- improvement of waste minimisation and recycling practices in homes, work places, development sites and public places
- investigate and implement alternative energy technologies, such as wind, solar and harnessing landfill gas
- maximise water efficiency and recycling through a number of means including capturing stormwater, encouraging substitution of potable water with alternative supply and improving water usage behaviour.

The Newcastle Environmental Management Plan provides guidance on actions to protect and enhance the environment under ten key themes, including air, biodiversity and water.

The Carbon and Water Management Plan seeks to minimise carbon emissions, use water more wisely and position Newcastle as an innovation centre and a global showcase for carbon and water management. Underpinning these objectives are a range of goals and actions for the council, residential, education and business sectors.

The current DCP includes sections on water and waste management, and the city centre provisions encourage sustainability initiatives such as energy efficiency and minimising waste through recycling.