

Attachment K - Social Impact Assessment

By Elton Consulting, dated 1 June 2016



Newcastle Urban Transformation and Transport Program – Rezoning of Surplus Rail Corridor Lands: Social Impact Assessment

Client:
UrbanGrowth NSW

Date:
1 June 2016

Final report

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Date	1 June 2016
Document name	Final SIA_010616
Version	Final report

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Executive Summary

UrbanGrowth NSW (UGNSW) is seeking an amendment to Newcastle Local Environmental Plan 2012 (NLEP) to enable the delivery of an ambitious urban renewal vision for Newcastle city centre.

This Social Impact Assessment (SIA) has been prepared to support the amendment to the Newcastle Local Environmental Plan (NLEP) 2012 that applies to the surplus rail corridor land ('rail corridor land') between Worth Place and Watt Street in Newcastle city centre. It aims to contribute to positive social outcomes of the Urban Renewal Concept Plan prepared by HASSELL Architects on behalf of UGNSW.

This SIA considers the social and social infrastructure impacts of the land uses proposed in the Urban Renewal Concept Plan for the rail corridor, in terms of the impacts on, and implications for, stakeholder groups within the Newcastle community.

Specific issues examined within this SIA include:

- » What will be the social impacts and benefits of the proposed rezoning of the rail corridor and how will it contribute to meeting social objectives
- » How proposed land uses within the rezoning area will impact on demand for social infrastructure within the urban renewal area.

This study was undertaken in accordance with the *Social Impact Assessment Policy for Development Applications* (City of Newcastle, November 1999). Social impacts are assessed according to the impact categories listed in the policy's Social and Economic Effects Matrix.

Newcastle City Council and NSW government social planning policies and strategies provide context to the consideration of social issues and impacts, as does an analysis of community characteristics and existing social infrastructure within and near Newcastle's city centre. The assessment also examines outcomes and feedback from community consultations undertaken by Newcastle City Council and UrbanGrowth NSW for a range of recent projects and planning initiatives relevant to this proposal.

The rezoning proposal would support mixed use development, providing dwellings in a range of sizes and price ranges. The anticipated yield provides for between 500 and 600 new dwellings, mostly one and two bedroom apartments and a sizeable number of studio apartments. In total, this proposal would result in an estimated 800-900 new residents.

The size and composition of this new community are not expected to differ significantly from existing residents in the Newcastle city centre, given the relatively young and affluent population in the area at present.

The main benefits of the proposed rezoning for the local community, wider Newcastle community, business and visitors are expected to be:

- » Provision of a range of dwelling styles, mixed uses (retail, office and business) and open spaces to revitalise this important city area
- » A diversity in dwelling prices, including affordable housing, that will appeal to a broad cross-section of households
- » Improvements to the public domain, including access to the Harbour area from the city and surrounding streets, new areas of open space and new pedestrian and cycling linkages, with the potential for community health benefits

- » Stimulation and revitalisation of local economic activity, during the day, evening, night-time and weekends
- » Preservation and enhancement of unique and valued heritage
- » New community uses and activities around the Newcastle Station precinct.

However, the analysis has highlighted the following issues that may have the potential to create some social impacts:

- » Impacts of the forecast additional population and employment levels on community services and facilities
- » Impacts on community structure, with implications for social inclusion and housing affordability
- » Community perceptions of risk, such as the potential for displacement, social exclusion and perceptions of crime and safety
- » Potential for displacement as a result of property value increases
- » Social equity impacts, particularly for people from lower income or vulnerable groups
- » Construction impacts.

Recommendations for additional measures over and above those incorporated into the rezoning and Urban Renewal Concept Plans that would minimise or manage these potential impacts include:

- » UGNSW working with the City of Newcastle to identify further opportunities to upgrade or embellish new and existing community uses within the surplus rail corridor land
- » Continuing discussions and liaison with social infrastructure providers (particularly the City of Newcastle Council, Department of Education and NSW Health) to ensure capacity issues, plans for future growth and service delivery can best accommodate the needs of this additional population and workforce
- » Strengthening design elements to formalise pedestrian and cyclist access through the city, towards the Harbour precinct and major community destinations, including planned light rail stops and heritage areas, with clear signage targeted at a culturally diverse community to help people navigate through the city
- » Liaison between UrbanGrowth NSW, the City of Newcastle Council and other key stakeholders to explore opportunities for programs or activities to foster community integration and interaction, such as activities and classes, further education, heritage and environmental groups or educational talks, which would be open to all local residents and employees
- » Creation of an attractive and safe public domain and meeting places to attract people at all times of the day and assist with social integration
- » Liaison with NSW Police and the City of Newcastle in relation to public safety and adherence to Crime Prevention Through Environmental Design (CPTED) principles in design
- » Streets and public open spaces that allow natural surveillance from windows, balconies, passing vehicles and pedestrian and cyclist traffic
- » UrbanGrowth NSW to work with the City of Newcastle Council and other interest groups to investigate opportunities to provide affordable housing options
- » UrbanGrowth NSW to work with the City of Newcastle Council and other interest groups to ensure at risk or vulnerable groups or individuals are identified and targeted as part of the stakeholder engagement strategy, so that any unintended consequences of the renewal can be addressed

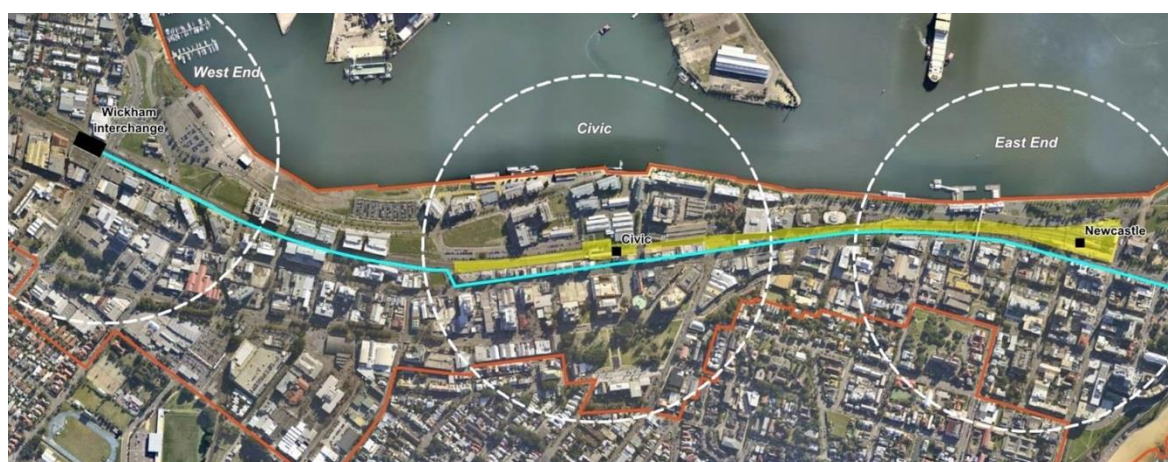
- » UrbanGrowth NSW continues to implement its communications and community engagement strategy as further planning for the Urban Renewal Concept Plan and implementation occurs.

1 Introduction

1.1 Study purpose

This report has been prepared to support the amendment to the Newcastle Local Environmental Plan (NLEP) 2012 that applies to the surplus rail corridor land ('rail corridor land') between Worth Place and Watt Street in Newcastle city centre (Figure 1).

Figure 1 Rezoning study area



Source: Hassell

The Newcastle Urban Transformation and Transport Program ('Program') has been established to deliver on NSW Government's more than \$500 million commitment to revitalise the city centre through: the truncation of the heavy rail line at Wickham and creation of the Wickham Transport Interchange; the provision of a new light rail line from Wickham to the Beach; and the delivery of a package of urban transformation initiatives.

The transformation element of the Program aims to bring people back to the city centre by strengthening connections between the city and the waterfront, creating employment opportunities, providing more public space and amenity, and delivering better transport.

The proposed rezoning of the rail corridor land forms a part of the delivery of urban transformation initiatives, comprising a package of transport, built form and public domain improvements. The proposed rezoning is described in detail in Section 3.

1.2 Purpose of this report

This SIA considers the social and social infrastructure impacts of the land uses proposed in the Urban Renewal Concept Plan for the rail corridor, in terms of the impacts on, and implications for, stakeholder groups within the Newcastle community. For the purpose of this report, social infrastructure includes community facilities, open space and recreation facilities, and health and education facilities and services.

In particular, this SIA examines:

- » What will be the social impacts and benefits of the proposed rezoning of the rail corridor and how will it contribute to meeting the social objectives identified for Newcastle city centre (as identified in the primary strategic policy for this locality, the Newcastle Urban Renewal Strategy - NURS). In particular, the SIA considers the potential impacts and benefits with regard to the needs that the rezoning is intended to address, its suitability in relation to identified needs and uses, activation of the spaces, location, accessibility and connectivity, safety considerations and contributions to the urban domain and city centre
- » How proposed land uses within the rezoning area will impact on demand for social infrastructure within the urban renewal area.

The Urban Renewal Concept Plan identifies three key precincts for Newcastle's city centre renewal: West, Civic and East. For example, Civic Precinct has been identified as the centre for civic, cultural, legal and educational facilities required to meet the needs generated by forecast population and employment growth. This SIA also considers how the land uses proposed along the disused rail corridor, and within each precinct, might impact on the proposed facilities, including issues of access and connectivity and the sections of the population that will benefit from the proposals. It also makes recommendations for measures to enhance the social benefits of the proposals.

1.3 Newcastle Council Social Impact Assessment Guidelines

This study has been undertaken in accordance with the *Social Impact Assessment Policy for Development Applications* (City of Newcastle, November 1999). Although quite dated now, the Policy and associated *Guidance Notes* set out Council's expectations and requirements for social impact assessments within the Newcastle Local Government Area (LGA). The social impacts of the proposed rezoning are assessed according to the impact categories listed in the policy's Social and Economic Effects Matrix.

1.4 Assessment process

This SIA has been prepared on the basis of information available in February 2016. The assessment process has included:

- » Analysis of documentation describing the proposed rezoning and Rezoning Concept Plan, prepared by HASSELL Architects
- » Examination of maps and plans
- » Review of Newcastle City Council documents and plans
- » Discussions with representatives from the City of Newcastle
- » Review of Australian Bureau of Statistics Census data for 2011
- » Consideration of outcomes of the Revitalising Newcastle community engagement process
- » Desktop research.

2 Policy and planning context

2.1 Policy Context

Key policy documents which set the context for the SIA are described briefly below:

Newcastle Urban Renewal Strategy (NURS) and 2014 Update

The Newcastle Urban Renewal Strategy (NURS) sets out the NSW Government's long term approach and vision for the revitalisation of Newcastle city centre to the year 2036.

The NURS identifies three character precincts in Newcastle city centre (West End, Civic and East End), within which significant housing and employment opportunities, together with built form and public domain changes and improvements exist. The NURS describes these precincts as:

- » East End: residential, retail, leisure and entertainment
- » Civic: the government, business and cultural hub of the city
- » West End: the proposed future business district including the western end of Honeysuckle (Cottage Creek).

UrbanGrowth NSW has been directed by NSW Government to deliver on NURS through the Urban Transformation and Transport Program (the Program), in partnership with Transport for NSW (TfNSW), the Hunter Development Corporation (HDC) and the City of Newcastle Council (Council).

This SIA considers the impacts of the proposed rezoning against the objectives and principles which underpin the NURS. It is noted, however, that the NURS pre-dates the Transport for NSW announcement about the truncation of heavy rail at Wickham and the light rail project.

Urban Growth NSW's Sustainability Report 2013

UrbanGrowth NSW aims to create connected, socially viable and vibrant places. This means minimising relative inequalities, supporting diversity and promoting access to opportunities.

The approach to social sustainability is based on the internationally recognised 'social determinants of health' and their application to land use. A key objective is to ensure that new development minimises inequality and does not have a negative social impact on existing and future communities. Socially sustainable developments are considered to be those which:

- » Provide opportunity for mixed communities with diversity in housing and land use. Mixed communities ensure effective use of existing housing and infrastructure, support local economic development, and provide for different life-stage groups.
- » Provide homes that will enable ageing in place. This will enable people to remain in their existing area as they get older, maintaining established networks and effectively using the housing and infrastructure provided.
- » Provide homes for moderate income households. Access to affordable housing is essential to overall social well-being and UrbanGrowth NSW is committed to this objective.
- » Integrate socially, culturally and physically with the existing community. Inclusive development promotes social and cultural harmony while providing improved access to existing services, infrastructure and community networks.

- » Ensure access between new and existing areas. This allows access to existing services and infrastructure while supporting healthy/active lifestyles and sustainable transport options.
- » Contribute towards community infrastructure which addresses community needs. These needs include lifelong learning, community health, transport, food, employment, information/technology, community safety, public art and social support services.
- » Benefit the existing community members as well as the new. This ensures sustainability through the better use and coordination of existing and future resources.

Draft Hunter Regional Plan

The *Draft Hunter Regional Plan* is a 20-year plan for the Upper and Lower Hunter and the Great Lakes region, currently on public exhibition. The Draft Plan has been developed after considering community and stakeholder input to a range of other planning documents, including the *Upper Hunter Strategic Regional Land Use Plan* and the *Your Future Lower Hunter Discussion Paper*, and targeted research.

The draft Plan identifies an area to be known as Hunter City, whose boundaries extend between Newcastle, Maitland, Raymond Terrace and Lake Macquarie communities. With 430,000 residents, this region is already the seventh largest metropolitan area in Australia. The nationally significant region is expected to grow by almost 60% over the next 40-50 years to around 750,000 residents. Hunter City will play a pivotal role in the future prosperity of the region given its network of inter-connected centres, its transport connections, its capacity for growth and its great coastal and lakeside environments. A long term and coordinated plan for the future of the City is outlined in greater detail in a *Draft Plan for a Growing Hunter City*, a companion to this draft Regional Plan. This will include:

- » An additional 60,000 homes in the City by 2036
- » Making land available for industrial and business activities.

Future growth will be achieved through renewal of some established areas, including revitalisation of the Newcastle City Centre and other release areas. This will build on the range of specialised services such as health, education and research in the region and Inner Newcastle's international sporting and cultural events and facilities.

In particular, the Plan includes:

GOAL 1: Grow Australia's next major city - Hunter City will have an internationally competitive economy that builds on its global gateways and strengths in health, education, manufacturing and research to embrace new opportunities. Hunter City will offer a high standard of living with infrastructure and services.

The NSW Government will deliver a Metropolitan Plan for Hunter City to 2036.

The Hunter Regional Plan will be delivered by a newly established Hunter Regional Plan Coordination and Monitoring Committee. Amongst its duties will be establishment of a framework to report progress on population, housing, the economy and employment.

Action 2.1.1 of the *Draft Plan for a Growing Hunter City* aims to:

"Deliver the long term aspirations and vision for Newcastle City Centre. The NSW Government has worked with Newcastle City Council to renew and revitalise Newcastle's traditional centre. The role and function of the city centre are evolving. The vision for Newcastle City Centre builds on its urban amenity, industrial heritage, river and ocean frontage and access within the region.

The long term urban renewal and revitalisation of the city centre has greater potential, to attract people, activities and investment. Five major sub-precincts have been identified:

- » East End – provides greater opportunities for residential, retail, leisure and entertainment uses, with a key focus on revitalising the Hunter Street Mall
- » Civic – focused around Wheeler Place; offers government, cultural and educational hubs, including City Hall and Newcastle Museum, as well as the new Newcastle Courthouse complex and new University of Newcastle campus
- » West End (including Cottage Creek and Wickham) – this is emerging as the city centre’s new CBD. It will provide the main shopping centre at Marketown, as well as opportunities for commercial, industrial, retail and residential uses
- » Honeysuckle – this will continue to offer mixed-use leisure, residential and retail opportunities
- » Darby Street – this will maintain its distinct food and boutique retail presence on the edge of the city centre” (NSW Planning & Environment 2015b p. 22).

This Action directly supports the Newcastle Urban Transformation and Transport Program and the Urban Renewal Concept Plan. A new Justice Precinct, a new University Campus, the Wickham Transport Interchange and the introduction of Light Rail within the City Centre will support future investment and liveability. Other actions will support new housing and improved connections within the City, including for walking and cycling, and improvements to public transport and the public domain. The NSW Government will work closely with the City of Newcastle and other government, private sector and university organisations to implement the Plan.

Newcastle 2030: Newcastle Community Strategic Plan

The *Newcastle 2030 Community Strategic Plan* (the Strategic Plan) was developed through a process of intensive community engagement undertaken in 2009-2011. The consultation identified the needs, aspirations and priorities of the Newcastle community. The Strategic Plan identifies seven strategic directions, six of which are relevant to social planning for Newcastle:

- » Connected city
- » Liveable and distinctive built environment
- » Vibrant and activated public places
- » Caring and inclusive community
- » Smart and innovative city
- » A protected and enhanced environment.

Key issues identified in the Strategic Plan were:

- » A growing and ageing population (largest proportional increases to be among residents aged 70-74 and 20-34)
- » Environmental challenges
- » Urban renewal to meet housing and employment needs
- » Revitalising the city centre including increased pedestrian connectivity, vibrant public spaces and key commercial and tourism initiatives.

Newcastle Community Assets and Open Space Policy

The Community Assets and Open Space Policy (Newcastle City Council, 2012) acknowledges that the community has expressed a strong need for a network of vibrant and activated places and spaces across the LGA.

Its Guiding Principles are:

- » Accessibility and connectedness

- » Equity and opportunity
- » Safety and security
- » Sense of place and well-being.

Relevant community asset and open space outcomes include to:

- » Encourage social connections, community participation and promote health and well being
- » Create multi-purpose, functional, safe and innovative places and spaces that are equitably distributed across the local government area
- » Create diverse places and spaces that accommodate a range of uses that are responsive to changing trends, aspirations and community needs
- » Promote co-location of community assets and open space to maximise the opportunity for long-term community connections and economies of scale.

Newcastle Access Policy

The City of Newcastle Access Policy (Newcastle City Council, 2003) aims to ensure social equity by eliminating barriers for people who have a disability, or may do so in the future. Operational principles within the Policy include:

- » All new facilities owned or occupied by Council are to be designed to be accessible to the whole community
- » Council will ensure that the rights of people with a disability are taken into account in the design of all developments to be used by the public
- » Council will include in all facility management plans procedures that allow for dignified access and participation by all members of the community.

Newcastle Community Engagement Policy

The City of Newcastle Community Engagement Policy (Newcastle City Council, 2013) is to be used as a reference for the delivery of all community engagement, designed to supplement and support statutory responsibilities and is supported by the Community Engagement Framework which identifies engagement practices and relevant tools and structures Council will utilise to ensure effective engagement.

Principles outlined in the Community Engagement Policy:

- » Be accessible and inclusive
- » Actively seek input into Council's decision making
- » Be open and transparent
- » Council recognises and abides the practices developed by the International Association for Public Participation.

Our Wonderful Life- Newcastle Cultural Framework 2005-2010

The Newcastle Cultural Framework (Newcastle City Council, 2005) aims to enhance the strategic focus of Council's various cultural activities and demonstrates Council's commitment to the importance of local culture, community cohesion and cultural diversity.

Key objectives of this Framework include:

- » Fostering community well-being
- » Promoting community diversity and acceptance

- » Enhancing cultural expression and confidence
- » Expanding participation in cultural activities.

Safe Newcastle – Alcohol Management Strategy for the City of Newcastle 2010-2013

This document outlines a strategy that seeks to reduce alcohol-related harm and anti-social activities in the Newcastle Local Government Area. Objectives of the Strategy that are relevant to this study include:

- » Create a safe enjoyable evening environment
- » Ensure the LGA entertainment areas are safe and inviting
- » Restore public perception of a safe city.

The Strategy recommends a number infrastructure and transportation measures to address some of the contributing factors related to alcohol-related harm and anti-social behaviour in the LGA. Relevant recommendations include:

- » Effectively apply the principles of CPTED to all licensed premises' development applications
- » Revise late night public toilet options
- » Implement a street lighting improvement plan
- » Identify and create clearly identified safe pedestrian routes within the City and include the following features - improved lighting, transport routes, good surveillance and ensure police presence
- » Advocate for improvement and assist in the implementation of bus and rail transport options, including: secure bus shuttle service; and buses schedule to reflect licensed premises closing time
- » Advocate for improvement in taxi transport options, including: secure taxis ranks; additional taxi services particularly on Wednesday, Friday and Saturday nights; and support implementation of appropriate infrastructure (such as guard rails)

This Strategy is currently being revised and updated by the City of Newcastle.

3 The proposal

3.1 Proposed rezoning

UrbanGrowth NSW seeks to amend the Newcastle Local Environmental Plan 2012 (NLEP) to enable the delivery of the Program and the objectives of NURS planning outcomes, described in Section 2.

Vision

The UGNSW vision for the Program has been informed by feedback from the community, Council, government agencies and urban renewal experts.

Our vision is an activated city centre and waterfront that attracts people, new enterprises and tourism. Over time, we see great opportunities to build on the strengths of the city centre to encourage innovative and enterprising industries to thrive. In the longer term, we see an opportunity to strengthen Newcastle's position on the regional, national and international stage, with a view to stronger ties with Asia Pacific.

UrbanGrowth NSW, 2015

Program objectives

The Program is underpinned by five objectives which will drive successful urban revitalisation:

- » **Bring people back to the city centre.** Reimagining the city centre as an enhanced destination, supported by new employment, educational and housing opportunities and public domain, that will attract people
- » **Connect the city to its waterfront.** Unite the city centre and the harbour to improve the experience of being in and moving around the city
- » **Help grow new jobs in the city centre.** Invest in initiatives that create jobs, with a focus on innovative industries, higher education and initiatives to encourage a range of businesses to the city centre
- » **Create great places linked to new transport.** Integrate urban transformation with new, efficient transport to activate Hunter and Scott Streets and return them to thriving main streets
- » **Creating economically sustainable public domain and community assets.** Leave a positive legacy for the people of Newcastle. Ensure that new public domain and community facilities can be maintained to a high standard into the future
- » **Preserve and enhance heritage and culture.** Respect, maintain and enhance the unique heritage and character of Newcastle city centre through the revitalisation activities.

Urban transformation proposed concept plan

Rail corridor land runs through the East End and Civic city centre precincts (established by NURS).

Based on this vision and the results of extensive stakeholder and community engagement, an overall urban transformation concept plan ('concept plan') has been prepared for the surplus rail corridor (rezoning sites), as well as surrounding areas.

The concept plan considers and integrates with the delivery of light rail. It is also coordinated with the proposed Hunter Street Mall development to create an interactive, synergised and cohesive city centre and foreshore area.

The concept plan (as shown in Figure 2) includes five key 'key moves', two that relate to the Civic precinct and three which relate to the East End.

1. **Civic link (Civic)**

This area is the civic heart of Newcastle and includes some of the region's most important civic and cultural assets, including Civic Park, City Hall, Civic Theatre and Newcastle Museum. Current investment in the area includes the law courts development and the University of Newcastle NeW Space campus – both of which are under construction.

The focus of this key 'move' is to leverage best value from new investments by creating new open space and walking and cycling connections that link Newcastle's civic buildings to the waterfront and the light rail system.

- » **Civic Green.** Creating a new civic focused public space linking Hunter Street to the Newcastle Museum that will provide direct visual and physical connection from Wheeler Place to the harbour, activate light rail on Hunter Street and meet the needs of the incoming legal and student populations
- » **Built form improvements.** Sensibly scaled mixed use development that forms part of the Honeysuckle development.

2. **Darby Plaza (Civic)**

Darby Street is Newcastle's premier 'eat street', offering a mix of shops, cafes, restaurants and night life. At present Darby Street ends at the intersection with Hunter Street, and this key 'move' seeks to create a new node of activity and linkage through to the harbour that complements the delivery of light rail.

- » **Darby Plaza.** A new community focused public space, including provision of new walking and cycling facilities from Hunter Street to the harbour.
- » **Built form improvements.** Zoning of rail corridor land between Merewether Street and Argyle Street to allow for future mixed use development in conjunction with surrounding lands in the longer term.

3. **Hunter Street Revitalisation (East End)**

Hunter Street features some of Newcastle's best heritage buildings and offers a mix of shops, cafes, restaurants and other local business. Hunter Street has experienced decline in recent years, and the opportunity exists to reinstate Hunter Street as the region's premier main street that complements the delivery of light rail.

- » **Built form improvements.** Sensibly scaled mixed use development consistent with the adjoining land uses to create an activated street with 'two edges', celebrate heritage and create new linkages from Hunter Street to the waterfront, provide activation around light rail stops and improve walking and cycling facilities.

4. **Entertainment Precinct (East End)**

This key 'move' aims to create a place where people can come to play, relax and reconnect with the harbour in a new public space stretching from Scott Street to the waterfront incorporating a new connection from Market Street to Queens Wharf. This key 'move' will assist to activate the area to create an exciting place for the East End.

- » **Recreational opportunities.** This precinct will incorporate the adaptive re-use of the signal box and provision of recreation opportunities for all ages and abilities. Public domain

will be designed to provide a thoughtful series of character areas and experiences as one traverses its length. The area will also provide opportunities for viewing and interpretation of heritage character that respect the unique qualities of place.

5. Newcastle Station (East End)

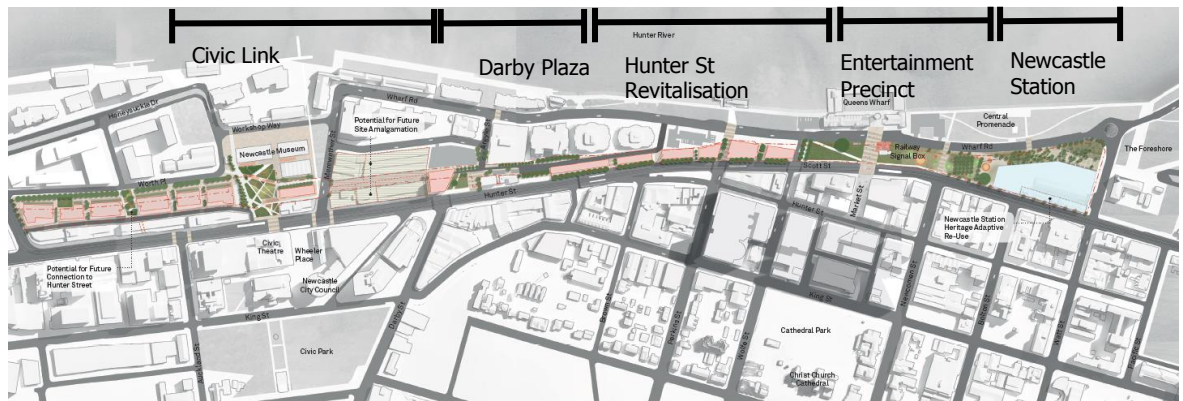
Newcastle Railway Station is proposed to be re-purposed into a hallmark destination and focal point for the new East End, accommodating enterprises and activities that attract visitors and stimulate the economy.

Refurbishment would fully respect and celebrate the heritage integrity of the Station, and could accommodate a range of different activities including community, retail, leisure and commercial uses.

Rezoning concept plan

The proposed rezoning of the surplus rail corridor lands is the focus of this report. Figure 2 provides a red line to define the site rezoning area within the broader program planning outcomes.

Figure 2 Rezoning concept plan



Source: Hassell

Amendments to the NLEP are required to deliver part of the concept plan. The proposed amendments are on surplus rail corridor land only.

Necessary amendments to the NLEP 2012 include:

- » Amend the Land Use Zoning Map to introduce new B4 Mixed Use, SP3 Tourism and RE1 Public Recreation zones
- » Amend the Height of Building and Floor Space Ratio maps to facilitate development on select parcels of land
- » Reclassification of part of the rail surplus rail corridor to Community by amending Part 3 of Schedule 4 of the NLEP to rezone land for public open space
- » Amendment to the Land Reservation Acquisition Map to enable the proposed RE1 public open space land to be acquired by Newcastle Council.
- » Amend the key maps (as referred to in Clause 7.5 of the NLEP) to include Newcastle Railway Station Heritage building.

The approach taken to the amendments is to support the NURS planning approach and to remain consistent with surrounding planning controls in terms of zones, floor space ratio (FSR) and height.

The concept plan will also form the basis for updates to the Newcastle City Centre Development Control Plan design controls to guide development and public domain works for rezoning sites.

Proposed Rezoning

This planning proposal seeks to rezone rail corridor land (rezoning sites) to enable the delivery of the proposed urban uses established in the concept plan.

The location of the land affected by the proposed rezoning is identified in the map in Figure 3.

Figure 3 Rezoning explanatory map – Parcels



Source: Hassell

The planning proposal concept plan includes public domain, entertainment, mixed use and commercial and residential development.

In general the proposed rezoning will provide a mix of uses with between 500-600 dwellings which will comprise a variety of styles and types, and around 5,000m² of commercial, restaurant and other entertainment uses. Details of the proposed rezoning sites, floor areas and dwelling yields are provided in Appendix A.

Proposed maximum building height and floor space ratio controls respect existing controls that apply to surrounding land.

3.2 Relationship to other projects

Light rail

The NSW Government is introducing light rail to Newcastle as part of a strategy to revitalise the Newcastle city centre. Light rail will travel from a new transport interchange at Wickham, through the Newcastle city centre to Pacific Park.

The truncation of heavy rail services at Wickham and the building of a new interchange are the first steps in delivering an urban transformation and transport solution for Newcastle.

Transport for NSW has been working closely with UrbanGrowth NSW, Newcastle City Council and Roads and Maritime Services in planning for light rail. Light rail will help improve public transport and access, reunite the city centre with its waterfront and improve the attractiveness of public spaces. The light rail route will travel east from the new transport interchange at Wickham along the existing rail corridor to Worth Place, before moving south to connect with Hunter Street and Scott Street before reaching Pacific Park, near the beach.

Initial geotechnical investigations have been completed and detailed design and environmental planning is well underway.

Transport for NSW and a combined team of Newcastle-based experts have prepared an environmental assessment for the Newcastle Light Rail project. The environmental assessment studies include heritage, visual and urban design, noise and vibration, social impacts, air quality and traffic, and access.

The Review of environmental assessment factors will follow its due process, including public consultation.

Hunter Street Mall

A 15,000m² landholding within Newcastle's Hunter Street Mall will be re-developed by UrbanGrowth NSW and joint venture partners GPT Group.

The project ambitions are to:

- » revitalise Hunter Street Mall
- » leverage the State Government's investment in light rail
- » provide an urban renewal catalyst for the East End Precinct, in support of Government's broader Urban Transformation and Transport Program.

A staged development, broadly bounded by Hunter, King, Perkins and Newcomen Streets will broadly include:

- » A mixed use development comprising the following approximate land use:
 - > 4,900m² Gross Floor Area (GFA) retail premises
 - > 2,700m² GFA commercial premises
 - > 47,800m² GFA residential uses comprising residential flat buildings and shop top housing.
- » Car parking with a capacity for approximately 491 vehicles to be accessed from King, Perkins, Wolfe, Thorn, Laing, Morgan and Newcomen Streets
- » Service vehicular access from Perkins, Thorn, Laing and Morgan Streets.

4 Community characteristics

4.1 Introduction

In order to consider the potential social impacts of the Planning Proposal, it is important to have a good understanding of the social profile of the area it will affect. While the proposal assessed in this SIA is for lands associated with the Rezoning Concept Plan for the Newcastle Urban Transformation and Transport Program (prepared by HASSELL Architects, 2016), the intention of the Program is to create benefits for the wider Newcastle city area. For the purposes of this SIA, the study area has therefore been defined to include both the area of the Rezoning Concept Plan and the wider Newcastle city area.

A community profile is typically based on data from the Australian Bureau of Statistics (ABS) Census of Population and Housing. The demographic profile prepared for the NURS relied on data from the 2001 and 2006 censuses for the Newcastle LGA and is now outdated. In addition, a community profile appears to have been prepared for Newcastle by the firm *Profile.id*, although it is no longer available on Council's website.

The following community profile is based on data from the ABS 2011 Census of Population and Housing. The communities that live within the boundaries of the Urban Renewal Concept Plan (HASSELL Architects, 2016) and those residents and community facilities (eg schools) most likely to be impacted directly by the rezoning are best approximated by the Newcastle – Cooks Hill SA2 ('small area 2') census geography, as shown in Figure 4 below. This area lies within Newcastle LGA.

The following sections describe the key demographic features of this locality, and compare it with the population of the wider LGA and New South Wales (NSW) as a whole.

Figure 4 SA2 Newcastle – Cooks Hill area as defined by ABS



Source:
www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/111031229?opendocument&navpos=220

4.2 Socio-economic profile

The SA2 Newcastle – Cooks Hill locality shown in Figure 4 contained around 10,135 residents at the time of the 2011 Census. Key features of this area and comparison areas are summarised in Table 1. This shows the locality has a distinctly different demographic character to that of comparison areas of Newcastle LGA and NSW as a whole. In particular, the locality has:

- » A relatively young population, as evidenced by the relatively low median age of 33 years. This is despite very small proportions of babies and school aged children. The area is instead characterised by large proportions of adults of working age (18-54 years) and relatively small proportions of people aged over 65 years, compared with the LGA and NSW.
- » A low proportion of family households and correspondingly, higher proportions of lone person and group households. Of the family households living in the area, more than half have no children and there are relatively few single parent families.
- » Due to the small proportions of households with children and relatively high proportion of lone person households, the average household size is relatively low, at 2 persons per household.
- » Around 15% of residents were born overseas, and around 10% speak a language other than English at home. This indicates the area is relatively less culturally diverse than the NSW average but consistent with Newcastle LGA.
- » High proportions of residents are university students. In addition, the proportion of residents who did not finish high school is significantly less than for the LGA and NSW.
- » Resident households have relatively high median incomes, and this is supported by the high proportions of residents in full time employment, and in professional positions. Hospital, education, café and food establishments and architectural, engineering or technical services are the main industries in which residents of this part of Newcastle City work. Overall, the level of relative disadvantage in the area is lower than for the LGA. Relatively few people need assistance because of a disability.
- » Consistent with the inner city location, the majority of dwellings are apartments and most residents rent rather than own their home. Nevertheless, there is a notable proportion of social housing, compared with the LGA and NSW average
- » A relatively high proportion of households in the area do not own a car, although most households own one or more vehicles.

Table 1 Demographic characteristics of Newcastle – Cooks Hill SA2 and comparison areas, 2011

Indicator	Newcastle – Cooks Hill (SA2)	Newcastle LGA	NSW
Population (2011)	10,135	148,535	6,917,658
Service age groups (%)			
0-4	3.9	6.1	6.6
5-11	4.4	7.8	8.8
12-17	4.1	6.5	7.7
18-24	15.4	11.5	9.0
25-54	48.4	41.6	41.4
55-64	12.2	11.2	11.7
65 and over	11.6	15.4	14.7
Median age (yrs)	33	37	38
Household type (%)			
Family households	47.8	63.8	71.9
Lone person	38.9	29.5	24.2

Indicator	Newcastle – Cooks Hill (SA2)	Newcastle LGA	NSW
Group household member	13.2	6.6	3.8
Average household size (no. people)	2.0	2.4	2.6
Family household structure (%)			
Couples with children	29.9	40.5	45.5
Couples without children	53.5	38.8	36.6
Single parent families	13.7	18.5	16.3
Cultural diversity (%)			
Aboriginal or TSI heritage	1.9	2.6	2.5
Overseas born	14.9	12.4	31.4
Speaks language other than English at home	9.5	10.1	24.5
Educational level (%)			
Attending TAFE	2.7	2.5	2.4
Attending University	12.3	7.3	4.4
Did not finish high school	34.5	53.6	50.8
Need for assistance %	2.9	5.9	4.9
Labour force status persons aged 15+			
Employed full-time	62.1	57.6	60.2
Employed part-time	27.4	30.8	28.2
Unemployed	5.3	5.7	5.9
Median household income	\$1,452	\$1,165	\$1,237
Occupation (%)			
Professionals	40.3	25.7	22.7
Clerical and administrative workers	12.0	14.1	15.1
Managers	12.6	9.9	13.3
Technicians and trade workers	9.5	13.7	13.2
Sales workers	7.8	9.8	9.3
Machinery operators and drivers	2.6	5.8	9.3
Labourers	4.4	9.0	8.7
Community and personal service workers	9.6	10.5	9.5
Top industries of employment (%)			
Hospitals	6.2%	5.2%	3.2%
Tertiary Education	5.6%	3.4%	
Cafes, restaurants, take-away food	5.3%	5.0%	3.6%
Architectural, Engineering and Technical Services	4.7%	2.9%	
School education	4.5%	4.7%	4.4%
Housing types (%)			
House	19.1	73.5	69.5
Semi-detached house	25.4	12.1	10.7
Apartment	54.6	13.9	18.8
Housing tenure (%)			
Fully owned	22.4	30.9	33.2
Being purchased	20.9	31.8	33.4
Rented – total	54.3	33.9	30.1
Rented – social housing	11.1	6.0	4.4
Vehicles (%)			
No vehicle	15.1	11.4	10.4
1 vehicle	44.2	38.6	37.8
2 or more vehicles	27.0	46.5	48.6
SEIFA - Relative Disadvantage	1040	994	996

In summary, the study area (as defined by the Newcastle – Cooks Hill SA2), shows relatively low levels of disadvantage, and is comprised of relatively high proportions of younger adult singles, couples and group households, either employed in a professional capacity or attending university. Most people live in rented apartments. These characteristics contrast with the more than 10% of dwellings in the study area rented as social housing. The study area is typical of inner city locations with a high proportion of young professionals and a low proportion of children.

When Newcastle LGA is compared with NSW as a whole, Table 1 shows:

- » Relatively fewer children and a relatively higher proportion of young adults aged 18-25 years
- » Slightly smaller proportions of family households and slightly higher proportions of group households
- » Relatively higher proportions of single parent families and relatively smaller proportions of couple families with children
- » Relatively low rates of cultural diversity
- » Relatively low median household incomes, consistent with relatively lower rates of full time employment and relatively higher rates of part time employment
- » One quarter of employed people are in professional occupations, however there are relatively small proportions of managers and relatively high proportions of people in community and personal service jobs
- » Three quarters of dwellings are detached and tenure is relatively evenly split between home owners, purchasers and renters.

4.3 Community facilities and services

Key facilities and services that are available to local residents and those who would live in the area after rezoning and subsequent development are identified and mapped within the NURS (2012), Hassell Urban Design Report (2014) and the Wickham Transport Interchange Social Impact Assessment prepared by GHD (July 2014 – accessed at <http://www.transport.nsw.gov.au/projects-wickham-transport-interchange/environment> 5 February 2016). These facilities are mapped in Figure 5 (overleaf).

Key features of these facilities include:

- » A predominance of commercial uses in the West precinct and along Hunter Street (light blue)
- » Residential uses are clustered around the eastern end of Scott Street, and along Darby Street and Stewart Avenue (pink)
- » A cluster of civic, cultural and educational buildings at Civic
- » Darby and Hunter Streets are significant retail spines (purple)
- » Northern part of Honeysuckle is predominantly mixed use with residential above small office and hospitality.

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4.3.1 Regional facilities

The Civic Precinct of the city centre includes several regionally significant civic and cultural facilities:

- » Newcastle City Hall
- » Newcastle Museum
- » Newcastle Art Gallery
- » Newcastle Regional Library
- » Civic Theatre
- » Law Courts
- » Customs House (now a bar, restaurant and conference facility with heritage value).

In addition, the following regional facilities have been identified:

Tertiary educational facilities

- » Hunter Street TAFE Campus
- » Hunter TAFE, Hamilton Campus
- » Newcastle University facilities are located in buildings across the city centre, including:
 - > Conservatorium of Music, Civic Centre
 - > Newcastle Legal Centre and Newcastle Graduate School of Business, in University House, Corner Auckland and King Streets, opposite Civic Park
 - > Northumberland House
 - > 468 Hunter Street
 - > David Maddison Building
 - > NeW Space (under construction).

Medical and community health facilities

- » James Fletcher Hospital
- » Newcastle Community Health Centre
- » Family Planning NSW.

The area also includes a number of specialist allied health and medical practices.

The city centre is home to several other **community service and disability service providers**, such as The Salvation Army, Disability Infoline advocacy, the Deaf Society, Newcastle West Lake Social Club and Castle Personnel.

Places of worship

The area also includes many places of worship such as St Andrew's and St Mary's churches, Newcastle Baptist Tabernacle and Christ Church Anglican Cathedral.

Emergency services

Emergency services such as Police and Fire and Rescue are located on the city fringe.

Transport connections

The City of Newcastle is serviced by a range of public transport options, including bus, the Stockton Ferry and train:

- » 30 bus routes pass through the city centre and terminate at Newcastle bus interchange at Newcastle station
- » Passenger rail stations provide regular access to and from the Hunter Valley and Sydney
- » The Newcastle – Stockton ferry services, run regularly between the two centres during peak periods.

Pedestrians are well catered for in and around the study area, with footpaths provided adjacent to most roadways and new connections made across the corridor since the termination of the former heavy rail line at Wickham Station. On-road bike lanes are provided on several streets in the study area, including parts of Honeysuckle Drive, King Street, and Auckland Street. Shared paths are also provided along the harbour through Honeysuckle and parallel to Wharf Road towards Nobbys Head (GHD 2015).

The Urban Renewal Concept Plan for the rail corridor and plans for the redevelopment of the Hunter Street Mall (Section 3.2) will introduce new connections and improvements to the public domain through the CBD.

Recreational and leisure activities

The Newcastle city centre is well-endowed with parks, which provide many opportunities for active or passive recreation. The main parks in the city centre are Civic Park, Cathedral Park, Pacific Park and Birdwood Park, as well as the extensive waterfront areas along the city's northern boundary, including the Queens Wharf Promenade and Foreshore Park.

In addition, National Park to the west contains the Newcastle Athletics Field and Newcastle Number 1 Sportsground which represent important sporting facilities near the city centre. Both National Park and Foreshore Park to the east provide large areas of parkland adjacent to the city centre (NURS, p. 43). The waterfront area is also home to Newcastle Ocean Baths.

As noted above, a number of regional scale cultural facilities are located in the city centre, including the Conservatorium of Music, Museum, Art Gallery, Library and Civic Theatre.

Typical of a city of Newcastle's size, the centre also offers a wide range of commercial recreational activities such as cinemas, restaurants, cafes and shops.

4.3.2 District and local facilities

Schools identified in, or in close proximity to, the city centre include:

Government schools:

- » Newcastle East Public School
- » Hamilton South Public School
- » Newcastle High School
- » ALESCO special school (9-12)
- » Hamilton Public School.

Independent schools:

- » St Joseph's Primary School (K-6)

- » St Francis Xavier's Marist Brothers College (7-12)
- » Newcastle Grammar School (K-12).

Schools nearest the city centre are shown on Figure 5.

Childcare facilities – Newcastle City Council supports 480 childcare places across the City. It leases 10 buildings to childcare providers. Within the city centre, Council directly provides services for pre-schoolers with special needs at the Beresford Childcare Centre.

The Little Unicorn, Honeysuckle is a privately operated childcare centre located within the study area.

Other childcare facilities near the study area include:

- » St Andrews Church Community Pre-school
- » Cooks Hill Pre-school
- » Samaritans Early Learning Centre
- » Brinco Childcare
- » Amana Family Day Care
- » Awabakal Newcastle Aboriginal Cooperative Childcare Centre

Other community facilities serving residents of the district include:

- » Newcastle Senior Citizens' Centre (operated by Mercy Care).

Local **level medical and allied health services** are offered by private practitioners and include GPs and medical centres, dental, physiotherapy, skin care, cancer specialists and imaging facilities.

4.3.3 Utilisation and capacity in existing facilities

Newcastle City Council has not collected information on the overall utilisation or the level of spare capacity within its existing community facilities. Discussions with Council staff confirmed that, in addition to its flagship facilities within Civic Place, Council owns a range of smaller facilities such as community halls and other buildings. The majority of these were built in the 1960s-1970s and are not purpose built for contemporary uses. Some of the older or smaller facilities are being closed, while Council also aims to balance community needs with available facilities by providing information to groups about facilities owned by other agencies (eg such as church halls, surf clubs, school halls).

In terms of schools, the NSW Department of Education is responsible for monitoring enrolments and ensuring school places are available to match demand. While there was some anecdotal evidence about pressures in some schools (such as Newcastle East Public School) at present, the Department has advised that the current facilities are adequate to meet demands into the future.

4.3.4 Plans for future facilities

Newcastle City Council's Section 94 and 94A Development Contributions Plans enable funds to be levied to contribute towards these facilities or upgrades to meet the needs of future populations. The Section 94A plans include provision for the following facilities or upgrades to provide for future population and employment growth:

- » Upgrade of the Civic Theatre, City Hall and Civic Park - \$34m scheduled for 2018-24
- » Construction of a district multi-purpose community centre - \$5m scheduled for 2017-18.

Funds for a new community centre have been allocated within Council's S94 Contributions Plan for many years. However, a new multi-purpose facility has not been a high priority, with the many smaller facilities available and the large, regional facilities within the Civic precinct.

In addition to these community facilities in the city centre, the City has made provision within its S94 Contributions Plan for open space and recreation embellishments and acquisitions in the city centre and waterfront precinct, public domain works throughout the city centre and cycling works on King and Hunter Streets.

These plans have been based on assumptions and forecasts adopted by the *Newcastle City Centre Plan – Vision* and Council's *Draft Section 94A Contributions Plan* (updated May 2015), which forecast an additional 6,500 residents and 10,000 jobs over current levels, by 2031.

The proposed rezoning of the rail corridor and associated sites would, theoretically, add to the total population and employment forecast for the city centre, and would therefore be expected to create demands over and above those previously considered.

The impact of this additional demand is considered in Section 5 of this report.

4.4 Crime and safety

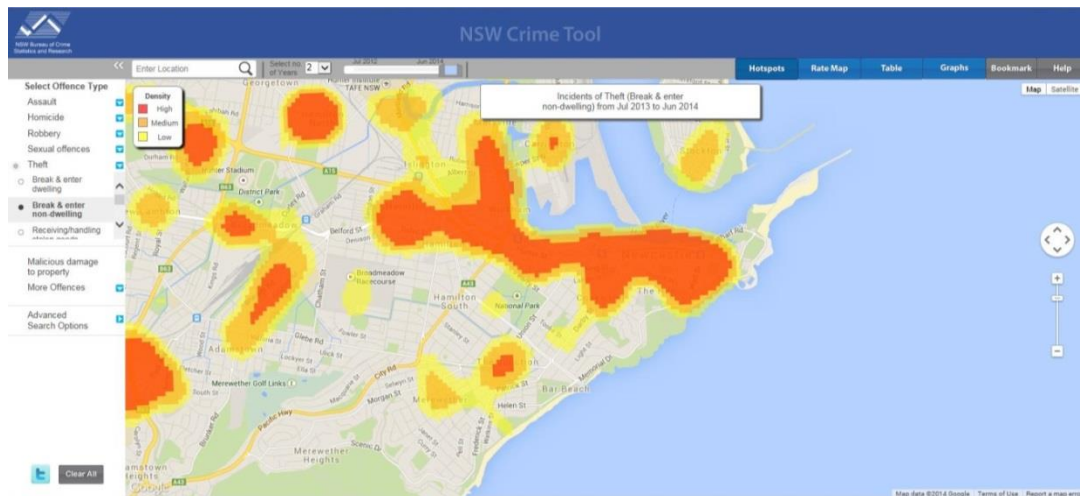
The SIA for the Wickham interchange proposal notes that "crime and safety is a significant issue in Newcastle" (GHD, 2014, p. 9). In 2013, Newcastle LGA ranked in the top twenty NSW LGAs for five of the 17 major offences:

- » Steal from person – ranked 7th
- » Steal from motor vehicle – ranked 8th
- » Robbery without a weapon – ranked 12th
- » Motor vehicle theft – ranked 13th
- » Steal from retail store – ranked 14th.

Five year LGA trends show significant reductions in crimes such as break and enter non-dwelling, malicious damage to property and motor vehicle theft, but increases in indecent assault, drugs and weapons offences and transport regulatory offences.

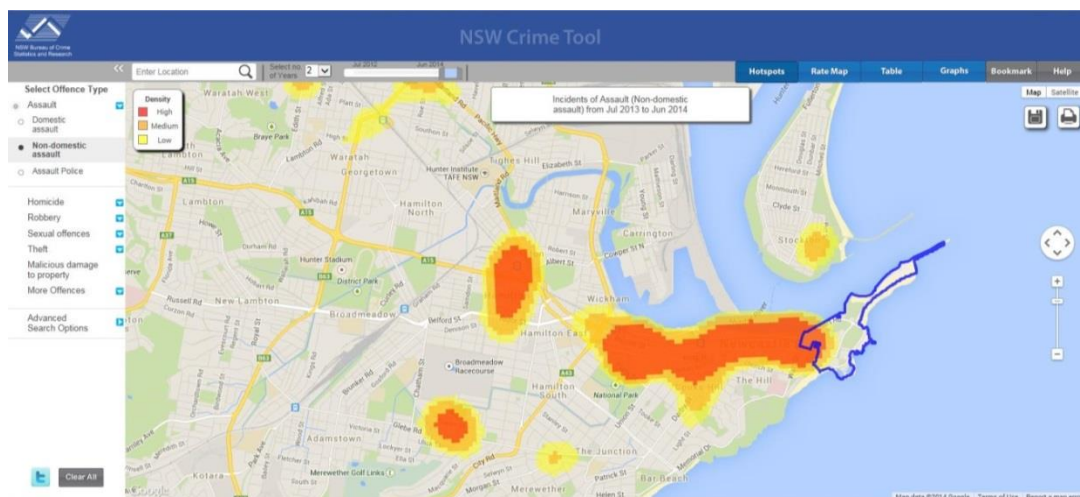
The rezoning study area is a hotspot for crimes such as domestic and non-domestic assault, break and enter (dwelling and non-dwelling), motor vehicle theft and steal from person, as shown in Figures 6 and 7.

Figure 6 Break and enter non-dwellings, incidence of theft (July 2013 to June 2014)



Source: BOCSAR <http://crimetool.bocsar.nsw.gov.au/bocsar/>

Figure 7 Assault (non-domestic), incidence (July 2013 to June 2014)



Source: BOCSAR <http://crimetool.bocsar.nsw.gov.au/bocsar/>

4.5 Summary of issues, service shortfalls and community needs

The review of available information indicates that the following issues are likely to be of particular importance to stakeholders within the Newcastle city community, and therefore need to be considered in the assessment of social impacts that may arise from the proposed rezoning:

- » Impact of additional population and employment levels on local and regional social infrastructure such as community facilities, open space and schools
- » Transport availability, accessibility to the foreshore and congestion
- » Changes to local mobility and access brought about by other aspects of the Newcastle Urban Transformation and Transport Program, including introduction of light rail to the city centre and associated improvements to the public domain

- » Relatively high rates of particular crimes, including personal and property crimes, such as assault
- » Adoption of contemporary planning principles to ensure that community facilities and open spaces are equitably distributed, can accommodate a range of uses, are functional, safe, innovative, and promote community connections, health and well being
- » Expectations that there will be community involvement at all stages of planning and implementation.

5 Community engagement process and outcomes

A key component of best practice SIA generally includes some form of community engagement to identify community values, perceptions of how the proposal might impact on the affected community and stakeholders and the opportunities to respond to local issues.

This section reviews social issues and impacts relevant to the proposed rezoning that have been identified during community consultation processes in recent years.

It is noted that there will be further opportunities for community feedback related to the rezoning during the public exhibition period, in accordance with the *Environmental Planning & Assessment Act 1979*.

NURS - 2012

Process

The NURS was prepared in 2012 by the NSW Department of Planning & Environment, in partnership with the City of Newcastle Council and Hunter Development Corporation. Other key agencies who collaborated in preparation of the Strategy included Transport for NSW, Newcastle Buses, Roads and Maritime Safety, Office of Environment and Heritage and the Mine Subsidence Board.

Outcomes and findings

Public exhibition of the NURS revealed community concerns over the truncation of the heavy rail line. Other key issues included the need for regional connectivity, potential adverse effects of increased commuter time associated with truncation of the rail line and the potential for increased traffic.

Design Newcastle engagement - 2014

Process

In June 2014, UrbanGrowth NSW initiated a two month community engagement program, which included consultations in relation to the CBD revitalisation, future uses of the vacant rail corridor land, heritage station buildings, light rail stops and open space (UrbanGrowth NSW, August 2014). These consultations built on previous engagement undertaken since 2013 to assess potential light rail routes.

As part of a Design Newcastle community consultation process, community groups and 100 randomly selected residents were invited to participate in a two-day summit to respond to State Government plans for the vacant rail corridor, heritage station buildings and activities to revitalise the CBD. The aim of the July 2014 summit was "to generate community ideas and insight that could be used to inform plans for the revitalisation of Newcastle" (Source: www.revitalisingnewcastle.com.au). A large number of ideas were generated to encourage employment, create improvements in the public domain, activate public spaces, promote sustainability and meet social infrastructure needs.

Outcomes and findings

Key issues identified by UrbanGrowth NSW through this process were:

- » Support for urban renewal in the Newcastle city centre
- » Support for the concept of three specialised city precincts: city east, city west and civic
- » Support for “big ideas” to revitalise the city centre
- » Supports a mix of housing types in the city centre
- » Strong support for the introduction of new educational facilities in the city centre
- » Support for the reuse of public buildings such as Newcastle Railway Station
- » Support for development within the rail corridor, where that development brings people into the city centre and aids in the creation of jobs
- » Support for temporary or permanent structures in the rail corridor to activate the space and create connectivity between the city and the waterfront
- » Interest in ongoing consultation regarding urban renewal and development within the city centre and corridor
- » Support for the introduction of light rail and the truncation of heavy rail.

These ideas and responses have been taken into consideration in preparation of the Urban Renewal Concept Plan.

Revitalising Newcastle engagement - 2015

Process

In August 2015, UrbanGrowth NSW initiated another community engagement program in partnership with Newcastle City Council (NCC) over a six week period. The engagement program was part of the NSW Government’s wider Newcastle Urban Transformation and Transport Program which also includes Transport for NSW (TfNSW), the Hunter Development Corporation (HDC) and NCC.

The community engagement process attracted high levels of participation from across Newcastle and the Lower Hunter region, including:

- » More than 1,400 participants from more than 40 Hunter postcodes participated in 13 face-to-face community events, including community forums, pop-up engagement stalls and door knocking city centre businesses
- » More than 2,500 people participated in phone and online surveys
- » More than 17,500 people engaging with online forums including the Revitalising Newcastle website, Facebook and Twitter channels
- » Receipt of 285 submissions through the website, email and post.

Outcomes and findings

The engagement process resulted in clear findings and direction in relation to Program Objectives and opportunities and outcomes of the Urban Transformation:

- » **“There was broad support for the Program objectives:**
 - > There was strong support for bringing people back to the city, growing new jobs and connecting the city to its waterfront.
 - > There were a range of suggestions for place making, public domain and community assets.
 - > People wanted the heritage and character of the city centre to be respected in the revitalisation. There was some feedback on making direct reference to heritage in the Program objectives.

- » **There was broad support for maintaining and enhancing the character of the city centre's three precincts by concentrating growth** as follows:
 - > West End: the commercial hub for the Hunter region, with relatively higher density commercial and residential development.
 - > Civic: the city's art, education and cultural heart, supported by some commercial and residential development.
 - > East End: a thriving urban community with tourism, entertainment, and some, sensitive residential development that respects the heritage nature of the precinct" (UGNSW December 2015).
- » People favoured the 'Harbour Play City' and 'Harbour Entertainment City' opportunities (Opportunities 3 and 4). Both combine mixed use development with open space and new community assets. People also suggested ways these opportunities could be enhanced and integrated with broader renewal of the city centre.
- » People supported other outcomes of the Revitalising, including the Civic Link, Revitalisation of Hunter Street and Entertainment Precinct. There was less support for the Regional Playspace and the inclusion of a fresh produce hub or market at Newcastle Station.

All feedback from the Revitalising Newcastle engagement is being incorporated into UrbanGrowth NSW's plans for by:

- » Adding a new Program objective that demonstrates commitment to preserving and enhancing the unique heritage and culture of Newcastle city centre
- » Beginning work in partnership with NCC to create great places for the public and improve connections between the city and the waterfront. This work will include:
 - > Opening up the area between Perkins and Newcomen Streets, remediating the land and delivering new open space and a pathway which will connect walkers and cyclists to the water, recreating the original Dangar Grid. This will include investigations in to the removal of the Market Street pedestrian bridge.
 - > Examining options to refurbish and adaptively reuse the railway signal box and introduce temporary activities, such as art and performance, for the public to enjoy.
 - > Refining ideas for Newcastle Station and the forecourt to create a drawcard destination for the community that respects the station's heritage values and investigating temporary uses while preparing a final proposal for community feedback
 - > Continuing to inform and engage with members of the public (UGNSW December 2015).

Although the focus of consultations was on proposals for Revitalising Newcastle, the *Engagement Outcomes Report* (UGNSW December 2015) noted some participants had expressed strongly held views in relation to previous Government decisions about truncation of heavy rail and introduction of light rail in the city centre. While these were outside the scope of the engagement program (and were forwarded to Transport for NSW for their review and response, where appropriate), a summary of this feedback on transport issues was included in the Report. Key areas of concern included:

- » a desire for accessible services
- » placing a high priority on public transport services connecting the Newcastle city centre, suburbs and the wider region
- » an emphasis on active transport (walking and cycling) and associate facilities to encourage use
- » opportunities and issues relating to light rail in the city centre

» concerns about inadequate parking and the potential for increased traffic congestion.

Implications for this SIA

Community feedback to date, from the inputs to the Newcastle Strategic Plan to the most recent Revitalising Newcastle engagement program, has been critical in identifying community values and preferences for the city's future. Feedback demonstrates there is a high level of interest within the community about the future shape of Newcastle's city centre and desire for renewal. Community priorities expressed the importance of preserving key aspects of the city's heritage and providing jobs, high quality public spaces, appropriate housing, educational facilities, transport and new social infrastructure. There is also a desire for, and expectations of, ongoing consultation through the renewal period.

This community feedback has helped UGNSW to refine the objectives and plans for the surplus rail corridor lands, to identify community concerns and support community benefits arising from the Urban Renewal Concept Plan. These issues are explored in the following section.

6 Assessment of social issues and impacts

6.1 Introduction

This assessment of social benefits and impacts has been undertaken in accordance with the *Social Impact Assessment Policy for Development Applications* (City of Newcastle, November 1999), addressing the relevant social and economic impacts outlined in the Social and Economic Effects Matrix (p. 14).

The assessment considers positive and negative effects, and provides a descriptive summary in sufficient detail as to facilitate effective impact management.

As noted in Section 1, the assessment focuses particularly on the potential impacts and benefits to stakeholders with regard to:

- » The needs the rezoning and the proposed Urban Renewal Concept Plan are intended to address
- » Their suitability in relation to identified needs and land uses
- » Their contributions towards the activation of spaces, accessibility and connectivity, safety considerations and contributions to the urban domain and city centre.

Impacts have been categorised in the impact display matrices according to the categories identified in Newcastle City Council's SIA Guidelines. Not all categories will be relevant.

6.2 Overview of stakeholder groups

A range of stakeholder groups would have a direct or indirect interest in the Concept Plan rezoning proposal being considered in this SIA. These would include:

- » City of Newcastle Council, both councillors and staff
- » The local business community, including retailers, commercial building owners and tenants and developers
- » The University of Newcastle
- » University and school students
- » Existing residents of the City of Newcastle and new residents who would be attracted to live in the area
- » Owners and occupiers of properties adjacent to the Urban Renewal Concept Plan boundaries
- » Employees and commuters to the central city and public transport users
- » Visitors to Newcastle City Centre and Harbour areas.

The following analysis considers the potential for impacts and benefits according to these specific groups of stakeholders.

6.3 Potential project benefits

From a social impact perspective, the proposed rezoning and the Urban Renewal Concept Plan have the potential to offer a considerable number of benefits for improved spatial planning within Newcastle City.

At a general level, from a social impact perspective the proposed rezoning has the potential to offer benefits such as an increase in the stock of dwellings in areas accessible to transport, improved housing affordability through increased supply, greater diversity in dwelling types and improved design. Other benefits include improvements to the quality and accessibility of the public domain and community uses, public safety, the preservation of valued community heritage, provision of new transport services, and (if community engagement is encouraged) improved levels of social cohesion. Induced development will support new business and employment centres, thus improving access of existing residents to employment opportunities. Improved transport links will provide improved access for existing residents to jobs in existing centres (locally and in more distant locations).

These benefits would accrue to many of the stakeholder groups listed above. A brief description of the key issues is provided in the following sections.

6.3.1 Accommodation and housing

Additional housing is an important component of the Urban Renewal Concept Plan, as it will support a larger population living and working in the city centre, which in turn support the viability of shops and services and create activated areas throughout the week (day, evening, nights and weekends), with improved safety.

Accommodation and housing provided for within this rezoning proposal would be in addition to the forecasts within Newcastle City Council's S94 Contributions Plan for 6,500 residents and 10,000 jobs to 2031. The dwelling numbers are also additional to targets included in the Newcastle Urban Renewal Strategy (NURS) of 6,000 new dwellings by 2036.

Dwelling yields that could be possible within the rezoned lands of the rail corridor and adjacent catalyst sites indicate potential for an additional 500-600 units across a range of studio, one, two and three bedroom formats. The indicative breakdown is shown below:

Table 2 Indicative development yields for residential accommodation within the proposed rezoning

Dwelling types	Indicative number	Indicative percent
Studio apartments	115	20%
One bedroom apartments	210	35%
Two bedroom apartments	210	35%
Three bedroom apartments	50	10%
Total	555	100%

Source: UrbanGrowth NSW

Applying the average household occupancy rate for apartments within the City of Newcastle of 1.6, an increase of between 500-600 dwellings would provide housing for approximately 800-900 new residents.

In some locations, apartments would be built on sites where rail corridor land can be amalgamated with adjacent government owned land. Most of the apartments would be incorporated into mixed use developments along the former rail corridor. Most of the units would be one or two bedroom apartments and another 20% would be studio apartments, which accords with the housing and demographic trends showing a predominance of single person and couple households in the locality discussed in Section 3.2 of this report.

Mixed use development, with commercial (retail, office or business uses) at ground level and residential uses above, is proposed for majority of the rezoning sites and this would be linked with associated improvements including the light rail and the redevelopment of Hunter Street mall.

An increase in the supply of housing, and particularly of smaller dwellings such as apartments, would also be expected to ease pressure on dwellings prices in the vicinity, and hence have benefits for affordability. SGS (2016) notes that the high representation of low income households in the Newcastle LGA suggests that the demand for affordable housing is expected to be strong (p. 24). This supports the inclusion of a range of smaller dwelling types, such as studio, 1 and 2 bedroom apartments.

The supply of an estimated 500-600 new apartments will also help address some shortages of supply for smaller household types and may place downward pressure on house prices in the area (assuming demand remains the same) (SGS 2016, p. 25). UGNSW is committed to providing a diversity of housing types, including a target of 5% affordable housing, to attract a broad range of households to the area. The mechanism to provide this will be developed in conjunction with Council post-gateway.

While the rezoning would permit revitalisation of the city centre, implementation of the Urban Renewal Concept Plan would create temporary construction impacts. Given the size of the study area, these impacts would be expected to be felt across a large area and over a long time period. They would be experienced by people already living or working in the city and others traveling through or visiting. Measures to alleviate these impacts are discussed in Section 7.

In total, approximately 19,484m² (46%) of land within the rail corridor is planned for development as housing or mixed uses.

6.3.2 Access and mobility

The existing heavy rail corridor creates a major barrier to pedestrian, cycle and vehicular movements in a north-south direction and blocks movements and views between Newcastle City centre and the Harbour. In 2014, there were only three wheelchair accessible crossings of the rail corridor. Crossing the rail line required access by bridge and stair structures.

Improvements to access and mobility are integral to, and a significant driver underpinning, the Urban Renewal Concept Plan. These improvements to access and mobility are incorporated into the objectives for the Newcastle Urban Transformation and Transport Program. Several new at-grade crossings have already been opened as a result of the truncation of the heavy rail line at Wickham Station and on completion there will be seven crossings of this former rail corridor.

In total, approximately 22,053m² (or 52%) of the land within the Urban Renewal Concept Plan is planned as some form of public open space or public domain, including new pedestrian and cycle connections. The specific details of the design and inclusions within the new public domain areas, and hence the benefits to the community, will be developed as part of Development Control Plans (DCPs) and Development Applications (DAs), following rezoning.

Specific transport, access and connectivity improvements associated with the Urban Renewal Concept Plan include:

- » Removal of existing heavy rail line will increase on-grade connectivity between the city and the harbour for pedestrians and cyclists
- » Introduction of light rail from Wickham to the east will link key city precincts, and provide a more active and vibrant streetscape
- » Improvements to the network of safe, cycle-friendly routes.

In addition, the proposed rezoning will support place based initiatives for public domain improvements to create new public spaces which will result in greater walkability and access for people in wheelchairs, with prams or with limited mobility, whether residents, employees or visitors to the city centre. These places and spaces will be designed in accordance with Crime Prevention Through Environmental Design (CPTED) and Safer by Design principles, to encourage public safety and security. Inclusion of a diversity of housing sizes and prices, including affordable housing, will enable households from a wide range of socio-economic backgrounds to access these spaces.

In the East End precinct, the design principles include extending the street grid, connections and views towards the Harbour, including greatly increased pedestrian access between Hunter Street and the harbour and links to the light rail. Public domain improvements where new access opportunities will be created are summarised in the Urban Renewal Concept Plan include:

- » Darby Plaza - a new community focused public space with play facilities and walking and cycling links connecting Hunter Street and Darby Street to the water
- » Civic Green - which will allow a new public space to be created linking Hunter Street to the Newcastle Museum and providing direct visual and physical connections between Wheeler Place, the waterfront and the light rail system
- » Hunter Street revitalisation – a mixed use and heritage precinct activated by connections to new pedestrian and cycling links to the waterfront
- » Entertainment Precinct – a new public space between Scott Street and the waterfront, incorporating a new connections from Market Street to Queens Wharf and a variety of opportunities to experience the area's heritage character
- » Newcastle Station – re-purposing of this important heritage focal point as a destination accommodating a range of activities.

Improvements for cyclists will include cycle paths and shared zones across the study area and linking to existing routes.

6.3.3 Recreation and leisure facilities

The Program will provide significant opportunities to improve the quality of open space and north-south connections within the rail corridor.

The proposed rezoning would enable land amalgamations and creation of new north-south linkages within the study area connecting to other east-west routes into surrounding streets and communities, thus facilitating access to existing recreation and leisure facilities (e.g. areas of open space, playgrounds and parks).

The Urban Renewal Concept Plan includes a range of new pedestrian and shared path links that would encourage active transport for recreational and leisure purposes, as well as new parks (e.g. Civic Green) and upgraded leisure areas (e.g. Entertainment Precinct). In addition, the proposed Entertainment Precinct would provide a significant new area of open space for the public adjacent to the waterfront and adjoining existing parkland in the vicinity of Newcastle Station. These facilities would appeal to existing and new residents and workers and would attract visitors to enjoy new facilities here and across Newcastle city centre.

Recreation and leisure activities would also take place within the many public plazas, cafes and streetscapes that would be created through this rezoning and revitalisation project. There will also be many opportunities for private developers to provide commercial leisure facilities suited to local needs for daytime, evening, night-time and weekend activities.

Apartments and mixed use developments would also contain areas of private open space for residents and the guests.

In addition, the Program will have cumulative benefits as Newcastle City Council has advised that the proposed recreational facilities will complement Council's planned improvements to the public domain to the east of the rail corridor.

6.3.4 Employment and economic benefits

The proposed rezoning would create employment opportunities for Newcastle residents through provision for between 5,000-6,000m² of commercial (retail, office and business) space within the disused rail corridor and adjacent lands.

In addition, SGS has estimated that the proposal would create 600 full-time equivalent jobs in the construction and development industries over the next twenty years and up to another 934 ongoing jobs in local businesses, once complete.

As well as the employment benefits outlined above, the revitalisation of the Newcastle city centre will have direct and indirect economic benefits for existing businesses within the Urban Renewal Concept Plan and adjacent areas as the local population grows, the urban public domain is transformed and rejuvenated and new activities are attracted to the older areas. This renewal will create income and employment benefits, and attraction of new businesses to support the incoming population will create cumulative benefits over time.

The contribution of new, high quality retail spaces, offices, dwellings and public places will also raise average land values.

Refer to the Economic Impact Assessment prepared by SGS (2016) for further information.

6.3.5 Public health benefits

Renewal of Newcastle's city centre and development of the light rail system would, overall, be expected to create opportunities for health benefits for residents, the city workforce, visitors and the wider Newcastle community.

Research and case study analysis undertaken by Elton Consulting for Parramatta City Council's Western Sydney Light Rail project (2013) identified a wide range of benefits that are directly attributable to either light rail projects themselves or the urban renewal associated with their development. While case study projects varied considerably in terms of their size and extent of associated urban renewal, the evidence showed that light rail and urban regeneration projects more generally, encourage active travel (ie walking, cycling and public transport), which has measurable public health benefits. For example:

- » *"Greater land use mixes, population and employment density, street connectivity and continuity of the bike and pedestrian network are all believed to increase physical activity and contribute to positive health outcomes, as are the presence of recreational facilities and parks (The Atlanta Beltline Health Impact Assessment)"* (Ross 2007 p 14)
- » Walking, particularly in pleasant urban environments that are perceived as being walkable, has been identified as contributing to social cohesion (social inclusion and community relationships) and personal wellbeing (Commonwealth of Australia 2012 p 56; Newman and Matan 2012)

- » A strong body of evidence has confirmed a relationship between higher housing densities and increased active transport for people in all age groups (particularly adult populations), as “highlighted in an evidence review of the health impacts of increasing density in Australia (Giles-Corti et al 2012). Living closer to shops and services is a consistent predictor of walking for both transport and recreational purposes for all age groups...While only limited causal links have been established, several major international health and transport agencies agree there is sufficient evidence to warrant actions aimed at improving the built environment to promote physical activity, particularly active transport (Giles-Corti et al 2012, p7). The evidence suggests that it is optimal to locate higher density housing away from roads with heavy traffic, but within easy access of public transport, shops, services and public open space (p17). High quality urban environments that integrate transport infrastructure offer a wide range of liveability benefits. These include direct health benefits, increased access, enhanced user experiences, greater affordability, increased community interaction, and benefits for the local economy and environment (Australian Government 2011)” (Elton Consulting, 2013, p. 11).
- » An open space network and quality public domain will encourage active travel and extend the spatial area across which residents experiences the benefits from a light rail network. Improvements to public areas and existing parks and greenspace provided as part of an urban regeneration area will support positive health outcomes by encouraging physical activity, active travel and enhancing amenity and liveability.
- » *"Public domain improvements (including safe and well-designed walkways and cycleways, landscaping, street furniture and way finding) will not only help to support a successful light rail system, but will support greater use of the public domain more generally – with multiple related benefits, from increased activation and passive surveillance, to stimulation of the local economy. The public domain and light rail services should be accessible to all people, including those with limited mobility"* (Elton Consulting, 2013, p. 77).

These findings are further substantiated in another recent report (Giles-Corti et al, 2014 for The Heart Foundation) about the public health benefits of high density neighbourhoods, including:

- » *"Consistent cross-sectional evidence that those living in higher density neighbourhoods undertake more walking and physical activity than those living in low density neighbourhoods.."*
- » *"Relatively consistent cross sectional evidence that...higher residential densities [are] positively associated with active transport modes"* (p. 6).

The Heart Foundation report explains that these findings arise because density, together with other built environment attributes, such as proximity to transit, accessibility to desired destinations and good design, promote walking, which creates benefits for cardio-vascular health. “It is the cumulative and combined effects of these attributes that create the pedestrian-friendly areas required to increase levels of physical activity and in turn, reduce the risk of cardio-vascular disease” (Giles-Corti et al, 2014 p. 7).

Development of active travel infrastructure such as pedestrian walkways and cycleways through Newcastle’s city centre (alone or in association with the proposed light rail) would also be consistent with the objectives of the Department of Infrastructure and Transport’s Draft Report, *Walking, Riding and Access to Public Transport* (Commonwealth of Australia, 2012). The report calls for Australian governments to work with businesses and the community in planning for land use and transport changes, building appropriate infrastructure for walking and bicycling needs and encouraging greater participation in walking, riding and public transport.

6.3.6 Heritage benefits

The Revitalising Newcastle community engagement process, outlined in Section 5, sought feedback on the Vision, Objectives, Opportunities and Outcomes for Newcastle City Centre. The

consultations demonstrated the strong community support for the city's heritage and character to be respected in the revitalisation. This included calls to balance heritage preservation and new development, and exploring opportunities to celebrate and conserve Newcastle Station's architectural and cultural heritage.

As a result, the Program's objectives have been expanded to include a specific aims to preserve and enhance the unique heritage of the city centre. Acknowledgement of the important community values and incorporation into the Concept Plan and future development will create future benefits for the Newcastle community.

6.3.7 Community uses

Closely aligned with the identified heritage values, the Urban Renewal Concept Plan will focus on ensuring that a range of new community uses and assets are created within the surplus rail corridor lands, particularly around Newcastle station.

There was clear community support through the Revitalising Newcastle engagement process for the provision of open space and community assets as part of the Program. UGNSW will continue to work with Newcastle City Council and the community to develop plans for community uses. In the Newcastle station area community uses could include creation of a tourist destination and leisure activities such as creative spaces, restaurants, a museum, arts centre or entertainment venues.

Ongoing liaison with Council and the community to develop these concepts into specific activities and community assets will provide tangible community benefits for existing and future residents, and people working in or visiting the city.

6.4 Potential social impacts

While the proposed rezoning would be expected to create significant and highly visible benefits for the general public and for people wishing to live in, or visit, the Newcastle city centre, changes in a busy and populous area may have the potential for some adverse impacts for certain groups. These impacts are considered below.

6.4.1 Population change

The proposed new population that could be attracted to the Newcastle city centre as a result of development facilitated through the rezoning would result in an additional 800-900 residents, when the average occupancy rate for apartments of 1.6 persons per household is applied to the potential 500-600 units.

The community profile outlined in Section 4 notes that the Newcastle – Cooks Hill SA2 locality presently contains high proportions of relatively young adult singles, couples and groups, many of whom are either employed in a professional capacity or attending university and living in rented apartments. There is a lower representation of families, particularly those with young children, and people aged over 65 years.

NURS (2012) notes that an ageing population and smaller households will drive residential development in this central area, together with the increasing desirability of inner city areas as preferred residential locations – for instance for students, first home buyers and downsizers / retirees.

"Factors which will influence housing demand and growth into the future, and particularly in the city centre... 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” (NURS, p. 41).

The area also contains a relatively high proportion of university students and attraction of new educational uses and housing as envisaged by the Urban Renewal Concept Plan would create an incentive for student numbers to increase further over current levels. Their attraction would depend on the availability and affordability of the new apartments.

In this way, the rezoning would allow significant numbers of new dwellings within mixed use buildings. These would be attractive to young, middle aged or established professionals, city employees and students, as well as to investors and others wanting an inner city lifestyle.

6.4.2 Community structure (severance, cohesion, identity)

The expected characteristics of the future population, outlined above, indicate that new residents would be expected to share many similarities with existing residents, including the predominance of young urban professionals and single person households. While the city is becoming increasingly attractive to residents from range of cultural backgrounds, the mix of new residents would reflect Newcastle’s diversity across age groups, socio-economic background and cultures. This would be expected to contribute towards relatively high levels of social cohesion and identity as new residents have similar characteristics to those already living in or near this area.

The area also contains a relatively high proportion of university students and some small apartments as part of the Urban Renewal Concept Plan could attract increased numbers of students to the city centre. Their attraction would depend on the availability and affordability of the new student apartments. However, given their prevalence at present, an increase alongside other population groups would not be expected to create tensions within the new community, and would instead be expected to reinforce the identity of this area as a student and education hub.

Preservation, restoration and adaptive re-use of important heritage features will reinforce the identity with Newcastle’s heritage and values, while a focus on place-making and strengthening the character of individual city precincts in planning for the new catalyst sites will further build community identity.

Nevertheless, case studies of other urban renewal projects show that increased connectivity as part of urban renewal can lead to higher land values, increased investment in communities and urban revitalisation in key centres. This could have implications for social inclusion and housing affordability, which can be adversely impacted by processes such as gentrification and urban renewal.

6.4.3 Impacts on community services and facilities

An additional residential population of around 800-900 residents by 2036 (over and above the NURS estimates) will generate a need for some new or expanded social infrastructure. With the majority of new dwellings proposed being 1 and 2 bedroom apartments, it would be expected that the new population would include relatively high proportions of small households, including single person, small group and couple families. The population may also include a relatively small proportion of couple families with small children. Most residents would be expected to be aged between 25 and 65 years, covering many stages of household formation, from singles, couples, young families through to older couples, older share households and older singles. The presence of the University could also attract a relatively high proportion of young adults, aged 18-25 years, to the area. Incorporation of a 5% component of affordable housing will also encourage diversity through attraction of households from lower income households. While there may be some babies and small children, families with older children tend to seek other forms of housing once children reach school age. Assuming the population profile of new residents is similar to that already living

within the study area, the proportion of babies and young children would comprise around 5% of the incoming population, and an additional 10% would be of school age.

An increase in population of this size would have a moderate impact on demands for social infrastructure and open space. However, most of these demands will be able to be met through the many existing facilities within the Newcastle city centre or nearby areas, particularly given the many regional level facilities and planned upgrades described in Section 4.3.

Schools demand

In relation to schools, for masterplanning in urban infill areas, Department of Education has advised that no new schools would be required in this area and all school aged children who would live in this area following rezoning could be accommodated within the facilities identified in Section 4.3. This recognises that numbers of school aged children within the population associated with the proposed new residential development are likely to be relatively small, consistent with the community profile outlined in Section 4.2

Childcare places

A modest need is likely to be generated by the new residents for childcare places, which are currently relatively limited. While future numbers of pre-school children are expected to be relatively low, there will nonetheless be some couples in the early stages of household formation and a portion of these may seek access to local childcare. A high level estimate of demand based on the assumptions above would indicate a need for around 15-25 daycare places from residents. However, there will also be demand for childcare generated by the additional workforce. As a result, the rezoning should allow opportunities for new private childcare providers to establish centre/s within this area. With the rezoning seeking to introduce new Mixed Use zones into the city centre, where childcare is a permitted use, the rezoning will therefore enable the delivery of these 'in demand' uses.

Meeting and activity spaces

A growing population with the characteristics outlined above will also generate a need for places for meeting and gathering that facilitate social interaction and the development of community networks. In addition to the community facilities already provided (or proposed for upgrade) by Newcastle City Council, these needs will be met by the provision of a range of spaces for informal interaction, such as new plazas, cafes, opening up of linkages to the waterfront and the public domain more generally.

Open space and recreational facilities

The additional population arising from the proposed rezoning will also create a need for public open space and recreation facilities for active recreation, places for quiet recreation and leisure activities, together with active transport routes along the waterfront promenade and across the city through Civic Precinct.

Decisions about the desired quantity of open space are generally contained in Council-prepared S94 Developer Contributions Plans, or Recreation and Open Space Strategies. A common rule of thumb is to provide 2.83ha per 1,000 residents, although this is more difficult to provide within established urban areas than in greenfield developments, and is heavily dependent on the quantity and quality of facilities available within the existing local area and wider district. With an expected population of around 800-900 residents, this benchmark, if it were a greenfield area, would suggest a need for just under 2.5 ha of new open space.

As noted in Sections 6.3.2 and 6.3.3, the rezoning and Urban Renewal Concept Plan provides for many new areas of public open space and public domain improvements, including new pedestrian and cycle connections to places of regional significance along the waterfront at the East End and

through the Civic precinct. The new Civic Green linking the University, Wheeler Place and the waterfront represents such regional facilities and active open space. Additional areas of open space and gardens are shown along the length of the corridor and all spaces link to established areas of local and regional open space such as Civic Park, the waterfront Promenade, Foreshore Park, Enterprise Park and Pacific Park, to name a few. In total, the Urban Renewal Concept Plan provides for approximately 2.21ha (or 52%) of high quality, new open space and greatly improved linkages between existing facilities and the Newcastle waterfront. This adds to the substantial foreshore open space area. These parks and linkages will provide recreation destinations for the wider Newcastle and regional populations, as well as meeting the open space needs of the local city centre population.

Given the site's location within inner Newcastle and its proximity to a range of regional recreational areas and open space, the open space to be provided is considered adequate and will provide benefits for Newcastle's new and existing residents through a focus on the provision of quality open spaces and embellishments. This strategy will also complement Newcastle City Council's S94 A Plan (updated 2015) which includes plans to acquire and embellish open space and public domain areas within the Honeysuckle Waterfront Precinct, as well as other public domain improvements associated with the East End Public Domain Plan and other streetscape and pedestrian / cycleway upgrades.

6.4.4 Community and public safety

The attraction of new residents and an increased workforce to this area, combined with public domain improvements arising from the rezoning and subsequent design, would be expected to activate and revive Newcastle's central city area and so contribute towards public safety.

Parts of the city centre are currently known to be hotspots for crime, and may thus present challenges for attracting new residents and enlivening older areas, particularly in the early stages of revitalisation. However, reducing currently high crime rates and overcoming perceptions of crime risk will be essential if some of the areas proposed for rezoning are to be successfully transformed into socially sustainable communities.

Incorporation of public domain improvements to support social and entertainment activities along Darby Street, together with the revitalisation of Hunter Street Mall, will attract people to the city, and create an active and lively urban boulevard along Hunter Street associated with the public transport and new mixed use development throughout the day, during evenings, nights and on weekends. The Urban Renewal Concept Plan will support public safety through improved access, increased activity, passive surveillance and lighting of the public domain – transforming the former under-utilised and poorly lit rail corridor.

Community safety will need to be directly addressed through incorporation of an explicit set of Crime Prevention Through Environmental Design (CPTED) principles and Safer by Design best practice models. These principles and models address specific architectural and design elements that are most appropriately addressed at the DCP or DA stages to ensure consistency with Council's Community Safety plans. It is envisaged that all future public domain, building and built form applications would need to ensure they address these principles. A component of CPTED involves liaison with NSW Police and opportunities for their review of plans prior to approval.

6.4.5 Cultural and community values

Community consultation undertaken for Newcastle City Council's Strategic Plan, for the NURS and as part of the Revitalising Newcastle project, has highlighted a range of community and cultural values important to the existing Newcastle residential and business communities summarised in Section 5.

These issues have been largely incorporated into UGNSW's Urban Transformation and Transport Program, through the rezoning plans and are therefore consistent with the overall community values raised. The most recent round of community engagement identified a strong community preference for the preservation and enhancement of the city's heritage values and development of community assets in areas such as Newcastle station.

It will be important to ensure that community consultation continues and reaches individuals and stakeholder groups that may otherwise feel marginalised or excluded from the benefits of the rezoning. In addition, it is important that the community feedback is incorporated into planning for the future redevelopment and revitalisation of the city centre.

While the community profile in Section 4 notes that this area is presently characterised by a relatively low level of cultural diversity compared with Newcastle LGA and NSW as a whole, discussions with the City of Newcastle noted that there appears to be an increasing cultural diversity within the city centre in recent years. The attraction of new businesses and residents to the apartments made possible through the rezoning, and ongoing development of the university precinct, would be expected to further add to levels of cultural diversity, depending on the cultural backgrounds of the students and the subjects on offer.

6.4.6 Interaction between development and existing community

As noted in the discussion of the characteristics of the existing and incoming populations above, the rezoning would be expected to enable development that would attract similar types of residents as those already living in the city centre, as well as new higher income households and students.

Growth in the resident population that will be made possible through this rezoning needs to be considered in the context of the growth that will already be possible through the 2012 rezoning of Newcastle. The 2012 rezoning will itself contribute towards significant additional residential and commercial development within the city centre. This will lead to progressive change over time, thus blurring the boundaries between the existing city residents and those attracted to the rezoned rail corridor lands.

Moreover, the focus within the Urban Renewal Concept Plan is on creating connections through urban design and transport routes to ensure the precinct is permeable and encourages movement between different parts of the city.

Although there may be differences in socio-economic or cultural backgrounds between some existing and newer residents, there is no expectation that the rezoning would create tensions between these groups. It is possible that some incoming residents could rightly or wrongly have concerns about the changes associated with new activities, such as on local crime or noise levels, particularly if newcomers are easily identified or seen as wealthy targets. At the same time, existing residents may experience resentment that new people are moving into areas which have traditionally been seen as their local community, which is now undergoing change.

Design of residential buildings and the public domain and incorporation of CPTED design elements – which limit noise, activate public spaces, encourage safety and security and ease of access to and within the city centre – should help address some of these concerns. In addition, the physical design should ideally be supplemented by activities to encourage interaction and linkages between residential communities within the city centre. A process of community engagement and liaison between UrbanGrowth NSW, Newcastle City Council, the business community and other key stakeholder groups could assist in identifying strategies to maximise the potential for social cohesion across different interests and communities and identify potential issues before they become a problem.

6.4.7 Needs of social groups

The Newcastle city centre location contains a range of significant social infrastructure, open space and recreational facilities used by a wide range of population groups, including children, young people, older people, families, people with a disability, indigenous persons and people from culturally and linguistically diverse communities.

The rezoning, and subsequent implementation of the Urban Renewal Concept Plan, aims to attract additional residents and revitalise the business environment, which will support a wider range of services and facilities and activate the area throughout the day and night.

As noted earlier, the public domain will be designed to be accessible and attractive for people with limited mobility and will enable development of attractions such as open spaces, play areas and linkages suitable for people from a wide range of age, socio-economic and culturally diverse groups. A variety of open space designs and inclusions are proposed to appeal to different age groups and abilities.

6.4.8 Risk perception in the community

The rezoning would enable development according to the Urban Renewal Concept Plan that meets the objectives of Council and State government strategic plans and incorporates many expressed community values.

While community feedback shows that some stakeholders may not support the proposed changes, many others are supportive of the potential for renewal that would be achievable with the rezoning. Nevertheless, risks brought about by this rezoning could relate to factors such as:

- » Displacement and social exclusion
- » Gentrification and changes to community character
- » Increases in property prices and reduced housing affordability
- » Potential for increases in crime and feelings of insecurity.

As noted above, some of these features are specifically addressed in the Urban Renewal Concept Plan or CPTED requirements at detailed design stage (i.e. at Development Application stage). It is difficult to determine whether or not the local area will experience some property value increases. However, provision for a range of dwellings sizes, styles and locations will ensure that some dwellings will continue to be available to those on lower incomes.

An open and inclusive engagement program should assist in communicating key messages to stakeholder groups and ensuring concerns about potential risks can be addressed. This is discussed further in Section 7.

6.4.9 Social equity

Social equity considerations relate to the relative incidence and nature of benefits and impacts that will arise from a project, such as the rezoning and implementation of development in accordance with the Urban Renewal Concept Plan.

As noted earlier, the project will make possible a large number of benefits for individuals and groups across a range of community interests. The revitalisation of the city centre aims to improve the city centre environment for everyone wishing to access it and use its facilities. The mixture of dwelling sizes and styles, including a 5% component of affordable housing for low to moderate income households, will encourage a diversity amongst new residents, and revitalisation of the city centre and public domain will support business activities, thus attracting new uses across the day and night and creating employment opportunities.

Nevertheless, large scale development projects would be expected to create some disadvantages for some people. The types of individuals or groups that may be adversely impacted could include:

- » Residents or businesses occupying existing buildings that would be subject to redevelopment, who would be displaced by the redevelopment
- » People living or working in the city who could experience prolonged disruption due to noise, dust, vibration or traffic impacts associated with major redevelopment
- » Low income people or people on pensions or with disabilities, living in specialised accommodation in this central area near services, who may be displaced as a result of the rezoning
- » People on very low or low incomes who may experience displacement as a result of progressive gentrification or loss of affordable housing options.

Proposals within the Urban Renewal Concept Plan for affordable housing, new physical connections, mobility and public domain improvements and new residential and education communities to activate the locality and draw new employment into this area, will all help to attract a diverse community to this area and hence encourage social integration and foster equity of access and opportunity.

However, there will be a need for a proactive approach to identify potential for individuals or groups to become marginalised as redevelopment proceeds. Strategies to ensure social benefits can be captured and the incidence of impacts does not fall on vulnerable or marginalised groups are outlined below in Section 7.

6.4.10 Property values

Rezoning, regeneration and revitalisation of the city centre will create opportunities for new development, housing and employment. However, revitalisation will also create the potential for housing demand from new, higher income residents to gradually displace those on low or very low incomes from the city centre. There is a risk that an increase in property values associated with new uses, desirable public domain improvements and gentrification could adversely impact on some individuals or social groups.

Housing affordability will be addressed by providing a range of smaller dwelling formats, such as studio, 1 and 2 bedroom apartments. This will increase the supply of lower or moderately priced accommodation within the Newcastle city centre and meet identified needs for apartments for people on moderate incomes.

6.4.11 Construction impacts

The rezoning and implementation of the Urban Renewal Concept Plan would create periods of construction across the city of Newcastle. Construction can create many adverse impacts in the short to medium term for people living or working near construction sites or affected by traffic and transport changes.

Measures to mitigate the impacts of construction are discussed in Section 7.

6.5 Summary of social impacts and benefits

In summary, the potential benefits and impacts of the rezoning and Urban Renewal Concept Plan approval are shown below in Table 5.

Table 3 Summary of impacts and benefits

Potential impact	Rating and effects	Impacted stakeholders
Social benefits		
Accommodation and housing	Significantly positive Rezoning will support mixed use development, providing dwellings in a range of sizes and price ranges. The Concept Plan provides for 500-600 new studio, 1, 2 and 3 bedroom dwellings. UGNSW will aim to provide 5% of dwellings as affordable housing The new residential population will help to revitalise and activate the city centre Significant increase in dwelling numbers and the affordable housing component will help to maintain affordability	New residents and investors Developers
Access and mobility improvements	Significantly positive Access and mobility improvements are integral to the Concept Plan, including removal of the barrier created by the heavy rail corridor, proposals for north-south connections and new areas of public open space that will be accessible, including to people with limited mobility and from lower socio-economic and diverse cultural backgrounds. Cycle friendly and shared pedestrian zones through the corridor, surrounding neighbourhoods and new public spaces provide improved access to the Harbour, to new parks and public areas, to places of work, university and mixed use. Rezoning would also enable introduction of the light rail route Design according to CPTED principles will address community safety	All residents, employees and visitors to the city centre City of Newcastle Light rail operator
Recreation and leisure facilities	Significantly positive Rezoning will improve access to existing facilities and create 2.21ha of new public spaces and places for recreation and leisure Site amalgamations and rezoning will help create new areas for recreation and leisure, including in Civic centre and will improve pedestrian and cycleway connections to other small and large parklands, waterfront areas and facilities	New and existing residents, employees, visitors to the Newcastle city centre

Potential impact	Rating and effects	Impacted stakeholders
	adjacent to the railway corridor lands. Design of apartments to provide areas of private open space	
Employment opportunities	Significantly positive Rezoning for new retail and office space will encourage businesses to locate in city centre and create around 934 jobs Construction workforce of around 600 jobs	Businesses, employees, local residents Developers
Local economic effects	Significantly positive Revitalisation of Newcastle's city centre will activate new areas and attract and support local economic activity, resulting in flow on benefits from new housing and office development	Businesses City of Newcastle
Public health benefits	Significantly positive New connections and public domain improvements will encourage active travel with public health benefits There is evidence that urban renewal and public transport improvements act as triggers to activate public spaces and encourage active transport and its associated public health benefits	Residents, employees and visitors to city centre using new public spaces and light rail Wider Newcastle population
Community and cultural values	Significantly positive Community values identified through engagement during planning processes are being incorporated into the rezoning and Concept Plan design Restoration of heritage features and values Potential for community uses incorporated into Concept Plan	Residents, businesses and visitors within wider Newcastle area City of Newcastle
Social impacts		
Population change	Neutral The dwelling mix and yield made possible by the rezoning and proposed in the Concept Plan would attract another 800-900 residents to the city centre The population is expected to progressively increase over the next 6-8 years. Characteristics of new residents are expected to be broadly similar to the existing community and would include	New residents Local businesses Developers

Potential impact	Rating and effects	Impacted stakeholders
	mostly young or middle aged professionals and students, as well as some lower income households. The precise makeup would be influenced by the affordability and price range New population in the city will help to revitalise and activate rundown parts of the centre and support local businesses.	
Impacts on community services and facilities	Neutral to Moderately positive The projected population will be able to access the many regional level community and open space facilities within the city centre at present, including new public spaces and connections created by this proposal and new activities generated to meet demands from residents and visitors Schools and childcare may experience a small increase in demand, although the area is not expected to attract large numbers of children. No new schools are likely to be required. Opportunities for new childcare facilities to be developed by the private sector Rezoning would provide opportunities to create places where students, residents, workers and visitors can meet and recreate	New residents Private childcare providers City of Newcastle Department of Education Transport operators
Community structure including severance, cohesion and identity	Slightly negative to Slightly positive New residents are expected to share many similarities with existing residents, including a focus on young and established professionals and students, as well as people from a range of socio-economic backgrounds and cultures Restoration and incorporation of heritage features and values would maintain community identity and sense of history and place The potential for increases in property prices, loss of affordability and gentrification could result in displacement of lower income residents	New and existing residents Lower income earners Wider community
Community safety	Moderately positive Revitalisation of the city centre and CPTED design principles will help activate public spaces where crime levels are relatively high Concerns about personal and property	New and existing residents, local businesses City of Newcastle NSW Police

Potential impact	Rating and effects	Impacted stakeholders
	safety can be addressed through appropriate design and policing	
Community interaction	Neutral to Slightly positive Growth and change is already underway within the city centre as a result of the 2012 LEP. This proposal would continue this process Access and mobility plans and quality urban design would encourage activation of city and interaction between groups	Residents, businesses and visitors to city centre
Meeting needs of different social groups	Neutral to Slightly positive Rezoning and implementation of the Concept Plan would meet the needs of most social groups Community and stakeholder engagement through the planning and development process would identify specific needs and ways to minimise adverse impacts	Residents, businesses and visitors to city centre, including children, young people, older people, families, persons with a disability, ethnic and indigenous persons and those on lower incomes
Community perception of risks associated with development and change	Slightly negative to Moderately negative Many community values have been addressed in the planning process. However, some risks remain, including: » Gentrification and changes to community character » Increases in property prices and reduced housing affordability » Potential for displacement and social exclusion » Perceptions of crime risk. Measures to address these risks are proposed in Section 7	Existing and new residents Students Other at risk groups including young people and those on very low incomes Wider Newcastle community
Potential for property value increase	Slightly negative to Slightly positive A potential increase in property values may benefit those already owning property, but for those trying to buy into the market, it could impact on the level of affordability Housing affordability will be addressed by providing a range of smaller dwelling types and a 5% component as affordable housing	New and existing residents
Social equity	Moderately negative Potential benefits for City of Newcastle and residents, businesses and visitors to	Residents or businesses who may be displaced during construction,

Potential impact	Rating and effects	Impacted stakeholders
	city centre Some lower income, vulnerable or at risk groups could be adversely impacted through gentrification and property price increases	through gentrification or loss of affordable housing options People living or working in the city who may experience prolonged disruption Low income earners, people on pensions or with disabilities, those living in social housing
Construction	Moderately to significantly negative Changes to the amenity of the city centre would occur during construction, and the changes would differ depending on the exact location and nature of development.	Existing and new residents, employees and visitors City of Newcastle

7 Mitigation and management of social impacts

Section 6 of this report highlighted the following issues as having potential to create some adverse social impacts:

- » Impacts on community services and facilities
- » Impacts on community structure for community interaction and connections
- » Community perception of risk
- » Potential for displacement as a result of property value increases
- » Social equity impacts
- » Construction impacts.

This section provides recommendations to manage or avoid these potential social impacts.

Planning for new community services and facilities

An increase of around 1,200 residents over and above those planned for in the *Newcastle 2030* Strategic Plan and Council's *Section 94A Development Contributions Plan 2009* (updated 2015), would contribute to demand for some community facilities, such as school and childcare places, as well as open space and recreational facilities. There may also be impacts on higher order district and regional facilities if these are, or will be, under-provided for at present.

Under Section 94A obligations, developers are obliged to provide contributions to community infrastructure needs on site or in the local area. *Council's S94A Development Contributions Plan* (2009 updated 2015) requires the proponent to pay a levy of 1% on developments costing in excess of \$200,000. The Plan also sets out expectations for the types of community facilities and the ways in which they should be provided (pp. 12-13).

Planning for these needs is best undertaken in consultation with service providers, particularly the City of Newcastle Council, Department of Education and NSW Health Hunter New England Local Health District, and requires a detailed understanding of current capacity issues, plans for future growth and the ways in which services and facilities can best accommodate the needs of a growing population and workforce.

It is recommended that UGNSW work with the City of Newcastle to identify the preferred means of ensuring the needs of new residents and workers for community facilities and services are met by planning for embellishments or upgrades to the quality of open spaces within or near the city centre. It is further recommended that discussions with other service providers continue to monitor changes over time, identify the potential for constraints to supply and the ways in which social infrastructure can best be provided or augmented to meet these needs.

Fostering interaction and connections

While it is expected that the majority of new residents will have similar characteristics to those already living in this city area, it will be important to ensure the rezoning and implementation of the Urban Renewal Concept Plan does not displace vulnerable or lower income residents as gentrification occurs over time. Incorporation of a range of smaller dwelling types and a 5% component of affordable housing will help attract or retain some residents on lower and moderate

incomes. It will also be important to ensure that the different groups attracted to the city can interact in their daily lives and recreational activities.

The Urban Renewal Concept Plan underpinning the rezoning contains a number of specific design elements for connections and access that will encourage mobility.

Further interaction could be encouraged through liaison with Newcastle City Council to implement strategies such as:

- » Formalising pedestrian desire lines and shared pathways through the city, towards the Harbour and major community destinations, including planned light rail stops and heritage areas, with clear signage targeted at a culturally diverse community
- » Exploring and encouraging opportunities for programs or activities which would foster interaction, such as exercise classes, further education, heritage and environmental groups or educational talks, which would be open to all local residents and employees
- » Creation of an attractive and safe public domain and informal meeting places to attract people at all times of the day and assist with social integration
- » Mixing of residents will also occur in schools and the use of common facilities in the wider area.

On-going liaison between UrbanGrowth NSW, the City of Newcastle Council and other key stakeholders within the study area would be useful to identify strategies to encourage interaction.

Addressing community perceptions of risk

An analysis of community values and feedback expressed through community consultations suggests that the following risks have the potential to create community concern:

- » The potential for displacement and social exclusion as a result of gentrification and changes to community character over time
- » Increases in property prices and reduced housing affordability
- » Potential for increases in crime and safety risks.

Risks of displacement may be difficult to overcome entirely, but could be minimised through adoption of a range of dwelling types, sizes and price points across the city area. In particular, the provision of a high proportion of smaller 1 to 2 bedroom dwellings would help to satisfy housing demand and better match housing supply with demand. Other considerations include partnerships with community housing providers to provide a proportion of housing as “affordable” rental or the provision of dedicated student housing.

Public safety and crime risk have been addressed in the Urban Renewal Concept Plan and in the future DCP through quality design. The adoption of CPTED principles in the Concept Plan such as strengthening of the grid system, clear access routes, a legible public realm and activation of public spaces (in part, through proposed development that would contain activity generating uses at the ground floor) will further improve safety within the public realm, as will detailed design and liaison with NSW Police prior to lodgement of a DCP or DA. The requirement for quality finishes and the like, would also be dealt with at the detailed design stage. It is recommended that NSW Police are offered the opportunity to review future plans for this area at the DA stage, in accordance with CPTED principles.

Other factors that would contribute to community safety and security during implementation of the Urban Renewal Concept Plan include:

- » Good signage to help people to navigate through the city areas and facilitate pedestrian, cyclist and public transport movements

- » Streets and public open spaces that allow natural surveillance from window, balconies, passing vehicles and pedestrian and cyclist traffic.

Social equity impacts

Strategies to retain or encourage the development of lower priced housing, encourage interaction and engage with stakeholder groups within the community will help to minimise the potential for lower income and or other at risk groups to be adversely impacted by the changes that could occur as a result of the rezoning. UrbanGrowth NSW will aim to achieve a target of 5% affordable housing within the area and will work with the City of Newcastle Council and other interest groups to investigate opportunities to provide these housing options

It is recommended that UrbanGrowth NSW work with the City of Newcastle Council and other interest groups to ensure at risk or vulnerable groups or individuals are identified and targeted as part of the stakeholder engagement strategy, so that any unintended consequences of the renewal plans can be addressed.

Construction impacts

Construction over the next six to eight years would be expected to cause temporary, but substantial, disturbance for some local residents, businesses and other activities.

Before construction begins, construction contractors for each site should be required to prepare a construction management plan (CMP) that specifies mitigation measures for specific amenity, character and environmental impacts during construction. This would include restrictions on the times during which construction can take place. Construction management practices and consultation with Newcastle City Council and neighbours, about the timing and extent of inconvenience and timing of out-of-hours works, are standard conditions to help mitigate construction impacts at Development Application. Contractors would also need to work closely with residents to develop measures to ensure access to individual properties can continue.

Community consultation and communications

In planning the implementation of the rezoning through the Urban Renewal Concept Plan, there will be a need for UrbanGrowth NSW to continue to liaise closely with Newcastle City Council, residents, businesses and other stakeholders, and expectations within the community that consultation will occur.

Providing opportunities to involve and inform stakeholders and development partners throughout the planning process would keep the local and wider Newcastle community informed about the future of the rail corridor and catalyst sites, timing of the rezoning and subsequent construction, the nature of expected impacts (noise, vibrations, disruptions to local access etc) and will result in improved outcomes for the local community.

This process is particularly important for the acceptance of the proposal within the wider community and its integration with the surrounding area.

It is recommended that UrbanGrowth NSW continues to implement its communications and community engagement strategy as implementation occurs.

8 Conclusions and recommendations

The analysis undertaken to identify social impacts and social infrastructure needs arising from the proposed rail corridor rezoning has identified and examined ways in which social benefits and potential social impacts may arise.

The size and composition of incoming residents are not expected to differ significantly from the present population in the Newcastle city centre, given the relatively young and affluent population in the area at present.

Key social issues that may occur as a result of the rezoning and subsequent implementation of the Urban Renewal Concept Plan include:

- » The impact of the forecast additional population and employment levels on local and regional social infrastructure
- » Demand for public transport services and pedestrian / cyclist access routes through the city centre
- » Perceptions that certain areas have relatively high crime rates.

Benefits of the rezoning for the local community, wider Newcastle community, business and visitors are expected to be:

- » Provision of a range of dwelling styles, mixed uses (retail, office and business) and open spaces to revitalise this important city area
- » A diversity in dwelling prices, including affordable housing, that will appeal to a broad cross-section of households
- » Improvements to the public domain, including access to the Harbour area from the city and surrounding streets, new areas of open space and new pedestrian and cycling linkages, with the potential for community health benefits
- » Stimulation and revitalisation of local economic activity, during the day, evening, night-time and weekends
- » Preservation and enhancement of unique and valued heritage
- » New community uses and activities around the Newcastle Station precinct.

Nevertheless, the analysis has highlighted the following issues that may have the potential to create some social adverse impacts:

- » Impacts of the forecast additional population and employment levels on community services and facilities and demands for quality open space
- » Impacts on community structure
- » Community perceptions of risk
- » Potential for displacement as a result of property value increases
- » Social equity impacts
- » Construction impacts.

Recommendations for additional measures over and above those incorporated into the rezoning and Urban Renewal Concept Plans that would minimise or manage these potential impacts include:

- » UGNSW working with the City of Newcastle to identify further opportunities to upgrade or embellish new and existing areas of open space or identify suitable community uses within the surplus rail corridor land
- » Continuing discussions and liaison with social infrastructure providers (particularly the City of Newcastle Council, Department of Education and NSW Health) to ensure capacity issues, plans for future growth and service delivery can best accommodate the needs of this additional population and workforce
- » Strengthening design elements to formalise pedestrian and cyclist access through the city, towards the Harbour precinct and major community destinations, including planned light rail stops and heritage areas, with clear signage targeted at a culturally diverse community to help people navigate through the city
- » Liaison between UrbanGrowth NSW, the City of Newcastle Council and other key stakeholders to explore opportunities for programs or activities to foster community integration and interaction, such as activities and classes, further education, heritage and environmental groups or educational talks, which would be open to all local residents and employees
- » Creation of an attractive and safe public domain and meeting places to attract people at all times of the day and assist with social integration
- » Liaison with NSW Police and the City of Newcastle in relation to public safety and adherence to CPTED principles in design
- » Streets and public open spaces that allow natural surveillance from windows, balconies, passing vehicles and pedestrian and cyclist traffic
- » UrbanGrowth NSW to work with the City of Newcastle Council and other interest groups to investigate opportunities to provide affordable housing options
- » UrbanGrowth NSW to work with the City of Newcastle Council and other interest groups to ensure at risk or vulnerable groups or individuals are identified and targeted as part of the stakeholder engagement strategy, so that any unintended consequences of the renewal can be addressed
- » UrbanGrowth NSW continues to implement its communications and community engagement strategy as further planning for the Urban Renewal Concept Plan and implementation occurs.

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A Proposed rezoning sites & yields

Table A1 Sites for Rezoning – Proposed development summary

	Parcel Code*	Purpose	Site area (m ²)	Current zone	Proposed zoning	Proposed floor space ratio	Proposed maximum building height (m)
Civic Link	1	Mixed use development	3,370	SP2 Infrastructure	B4 Mixed use	3:1	30
	2	Recreation	408	SP2 Infrastructure	B4 Mixed use	3:1	30
	3	Mixed use development	3,146	SP2 Infrastructure	B4 Mixed use	3:1	30
	4	Recreation	2,464	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	5	Mixed use development	1,603	SP2 Infrastructure	B4 Mixed use	3:1	24
	6	Road	295	SP2 Infrastructure	B4 Mixed use (road)	2.5:1	30
Darby Plaza (Civic)	7	Mixed use development	2,040	SP2 Infrastructure	B4 Mixed use	2.5:1	30
	8	Mixed use development	988	SP2 Infrastructure	B4 Mixed use	4.1:1	24
	9	Recreation	467	SP2 Infrastructure	B4 Mixed use (road)	N/A	N/A
Hunter St Rev.(East End)	10	Infrastructure	386	SP2 Infrastructure	SP2 Infrastructure	N/A	N/A
	11	Mixed use development	4,542	SP2 Infrastructure	B4 Mixed use	2.5:1	14
	12	Mixed use development	1,544	SP2 Infrastructure	B4 Mixed use	3:1	17
	13	Recreation	303	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	14	Mixed use development	2,251	SP2 Infrastructure	B4 Mixed use	3:1	14
Entertainment precinct (East End)	15	Recreation	7,713	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
Newcastle Station (East	16	Recreation and mixed use	10,698	SP2 Infrastructure	SP3 Tourist	1.5:1	Part 10m and part 17m

End)		development					
TOTAL SITE AREA			42,218				

Table A2 provides an estimate of possible gross floor area and Table A3 provides possible dwelling yield for the rezoning sites.

Table A2 Anticipated gross floor area

Precinct	Parcel	Gross Floor Area		
		Total	Non-resi (m ²)	Resi (m ²)
Civic Link	01	10,000	1000	9000
	02			
	03	9000	1,000	8000
	04			
	05	4000	500	3500
	06			
Darby Plaza	07	4,000	500	3,500
	08	2,000	200	1,800
	09			
Hunter St Rev.	10			
	11	11,000	1,000	10,000
	12	4,000	500	3,500
	13			
	14	6,500	500	5,500
Entertainment	15			
Newcastle Station	16	----		
	TOTAL	50,500	5,200	44,800

* Assumed that all sites can achieve full GFA entitlement

** Assumed GFA split =10% non-residential + 90% residential

Source: Hassell

Table A3 Anticipated dwelling yields

	Parcel	Number of dwellings				
		Total	Studio	1 bed	2 bed	3 bed
			20%	35%	35%	10%
Civic Link	01	110	20	40	40	10
	02					
	03	100	20	35	35	10
	04					
	05	50	10	15	20	5
	06					
Darby Plaza	07	55	10	20	20	5
	08	25	5	10	10	
	09					
Hunter St Rev	10					
	11	125	25	45	45	10
	12	50	10	20	15	5
	13					
	14	70	15	25	25	5
Entertainment	15					
Newcastle Station	16					
	TOTAL	555	115	210	210	50

* Assumed GFA per apartment = 80m² average
Source: Hassell



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Attachment L - Economic Impact Assessment

By SGS Economics & Planning, dated April 2016

Newcastle Urban Transformation & Transport Program: Rezoning of Surplus Rail Corridor Lands Economic Assessment

Final report

UGNSW
April 2016



This report has been prepared for UGNSW. SGS Economics and Planning has taken all due care in the preparation of this report. However, SGS and its associated consultants are not liable to any person or entity for any damage or loss that has occurred, or may occur, in relation to that person or entity taking or not taking action in respect of any representation, statement, opinion or advice referred to herein.

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1 INTRODUCTION

Overview

This section provides a background and context for the economic assessment. It outlines the sites proposed for rezoning as well as the intended outcomes of the rezoning.

1.1 General

This report has been prepared to support the amendment to the Newcastle Local Environmental Plan (NLEP) 2012 that applies to the surplus rail corridor land ('rail corridor land') between Worth Place and Watt Street in Newcastle city centre (Figure 1).

FIGURE 1. REZONING STUDY AREA



Source: Elton Consulting.

The Newcastle Urban Transformation and Transport Program ('Program') has been established to deliver on NSW Government's \$460 million commitment to revitalise the city centre through: the truncation of the heavy rail line at Wickham and creation of the Wickham Transport Interchange; the provision of a new light rail line from Wickham to the Beach; and the delivery of a package of urban transformation initiatives.

The transformation element of the Program aims to bring people back to the city centre by strengthening connections between the city and the waterfront, creating employment opportunities, providing more public space and amenity, and delivering better transport.

The proposed zoning amendments applying to the rail corridor land will form part of the delivery of urban transformation, comprising a package of transport, built form and public domain improvements in and around the rail corridor lands.

1.2 Newcastle urban transformation

The Newcastle Urban Renewal Strategy (NURS) sets out the NSW Government's long term approach and vision for the revitalisation of Newcastle city centre to the year 2036.

The NURS identifies three character precincts in Newcastle city centre (West End, Civic and East End), within which significant housing and employment opportunities, together with built form and public domain changes and improvements exist. The NURS describes these precincts as:

- East end: residential, retail, leisure and entertainment
- Civic: the government, business and cultural hub of the city
- West end: the proposed future business district including the western end of Honeysuckle (Cottage Creek)

UrbanGrowth NSW has been directed by NSW Government to deliver on NURS through the Program, in partnership with Transport for NSW (TfNSW), the Hunter Development Corporation (HDC) and the City of Newcastle Council (Council).

1.3 Proposed rezoning

UrbanGrowth NSW seeks to amend the Newcastle Local Environmental Plan 2012 (NLEP) to enable the delivery of the Program and the objectives of NURS planning outcomes.

Vision

Our vision for the Program has been informed by feedback from the community, Council, government agencies and urban renewal experts.

Our vision is an activated city centre and waterfront that attracts people, new enterprises and tourism. Overtime, we see great opportunities to build on the strengths of the city centre to encourage innovative and enterprising industries to survive. In the longer term, we see an opportunity to strengthen Newcastle's position on the regional, national and international stage, with a view to stronger ties with Asia Pacific.

Program objectives

The Program is underpinned by five objectives which will drive successful urban transformation:

- **Bring people back to the city centre.** Reimagining the city centre as an enhanced destination, supported by new employment, educational and housing opportunities and public domain that will attract people
- **Connect the city to its waterfront.** Unite the city centre and the harbour to improve the experience of being in and moving around the city
- **Help grow new jobs in the city centre.** Invest in initiatives that create jobs, with a focus on innovative industries, higher education initiatives to encourage a range of businesses to the city centre
- **Create great places linked to new transport.** Integrate urban transformation with new, efficient transport to activate Hunter and Scott's Streets and return them to thriving main streets
- **Creating economically sustainable public domain and community assets.** Leave a positive legacy for the people of Newcastle. Ensure that new public domain and community facilities can be maintained to a high standard into the future
- **Preserve and enhance heritage and culture.** Respect, maintain and enhance the unique heritage and character of Newcastle city centre through the revitalisation activities.

Urban transformation concept plan

Surplus rail corridor land runs through the East End and Civic city centre precincts (established by NURS).

Based on this vision and the results of extensive stakeholder and community engagement, an overall urban transformation concept plan ('concept plan') has been prepared for rail corridor (rezoning sites), as well as surrounding areas.

The concept plan considers and integrates with the delivery of light rail. It is also coordinated with the proposed Hunter Street Mall development to create an interactive, synergised and cohesive city centre and foreshore area.

The concept plan (as shown in Figure 2) includes five key 'key moves', two that relates to the Civic precinct and three of which relate to the East End.

Entertainment precinct (East End)

1. Civic link (Civic)

This area is the civic heart of Newcastle and includes some of the region's most important civic and cultural assets, including Civic Park, City Hall, Civic Theatre and Newcastle Museum. Current investment in the area includes the law courts development and the University of Newcastle NeW Space campus – both of which are under construction.

The focus of this key 'move' is to leverage best value from new investments by creating new open space and walking and cycling connections that link Newcastle's civic buildings to the waterfront and the light rail system.

- **Civic Green.** Creating a new civic focused public space linking Hunter Street to the Newcastle Museum that will provide direct visual and physical connection from Wheeler Place to the harbour, activate light rail on Hunter Street and meet the needs of the incoming legal and student populations
- **Built form improvements.** Sensibly scaled mixed use development that forms part of the Honeysuckle development.

2. Darby Plaza (Civic)

Darby Street is Newcastle's premier 'eat street', offering a mix of shops, cafes, restaurants and night life. At present Darby Street ends at the intersection with Hunter Street, and this key 'move' seeks to create a new node of activity and linkage through to the harbour that complements the delivery of light rail.

- **Darby Plaza.** A new community focused public space with play facilities, including provision of new walking and cycling facilities from Hunter Street to the harbour.
- **Built form improvements.** Zoning of rail corridor land between Merewether Street and Argyle Street to allow for future mixed use development in conjunction with surrounding lands in the longer term.

3. Hunter Street Revitalisation (East End)

Hunter Street features some of Newcastle's best heritage buildings and offers a mix of shops, cafes, restaurants and other local business. Hunter Street has experienced decline in recent years, and the opportunity exists to reinstate Hunter Street as the regions premier main street and complements light rail.

- **Built form improvements.** Sensibly scaled mixed use development consistent with the adjoining land uses to create an activated street with 'two edges', celebrate heritage and create new linkages from

Hunter Street to the waterfront, provide activation around light rail stops and improve walking and cycling facilities.

4. Entertainment Precinct (East End)

This key 'move' aims to create a place where people can come to play, relax and reconnect with the harbour in a new public space stretching from Scott Street to the waterfront incorporating a new connection from Market Street to Queens Wharf. This key 'move' assist to activate the area with a variety of activities to create an exciting place for the East End.

- **Recreational opportunities.** This precinct will incorporate the adaptive re-use of the signal box and provision of recreation opportunities for all ages and abilities. Public domain will be, designed to provide a thoughtful series of character areas and experiences as one walks the length. The area will also provide opportunities for viewing and interpretation of heritage character that respect the unique qualities of place.

5. Newcastle Station (East End)

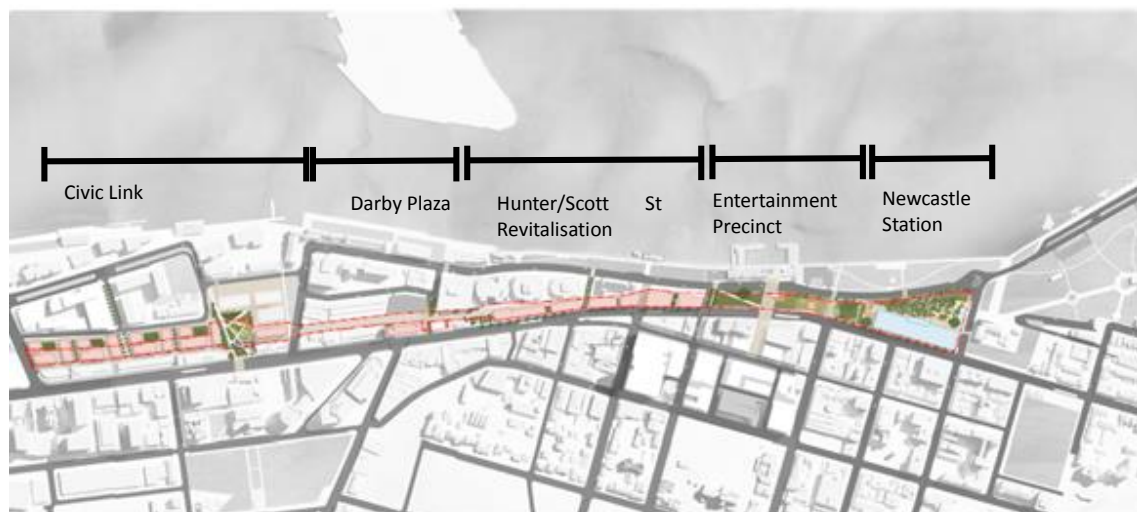
Newcastle Railway Station is proposed to be re-purposed into a hallmark destination and focal point for the new East End, accommodating enterprises and activities that attract visitors and stimulate the economy.

Refurbishment would fully respect and celebrate the heritage integrity of the Station, and could accommodate a range of different activities including community, retail, leisure and commercial uses.

Rezoning concept plan

The proposed rezoning of the rail corridor lands itself, as part of the urban transformation program concept plan, is the focus of this report. Figure 4 provides a red line to define the site rezoning area within the broader program planning outcomes.

FIGURE 2. REZONING CONCEPT PLAN



Source: Hassell

Amendments to the NLEP are required to deliver part of the concept plan. The proposed amendments are on surplus rail corridor land only.

Necessary amendments to the NLEP include:

- Amendment to the Land Use Zoning Map to introduce new B4 Mixed Use and RE1 Public Recreation zones
- Amendment to the Height of Building and Floorspace Ratio maps to facilitate development on select parcels of land
- Amendment to the Land Reservation Acquisition map and Schedule 4 of the NLEP to identify public open space as land for acquisition by Council

The approach taken to the amendments is to support the NURS planning approach and to remain consistent with surrounding planning controls in terms of zones, floor space ratio (FSR) and height.

The concept plan will also form the basis for updates to the Newcastle City Centre Development Control Plan design controls to guide development and public domain works for rezoning sites.

Proposed Rezoning

This planning proposal seeks to rezone rail corridor land (rezoning sites) to enable the delivery of the proposed urban uses established in the concept plan.

An indication of the location of the proposed rezoning parcel is indicated in the map in Figure 3.

FIGURE 3. REZONING EXPLANATORY MAP – PARCELS



Source: Hassell, 2015

The planning proposal concept plan includes public domain, entertainment, mixed use and commercial and residential development.

In general the proposed rezoning will provide a mix of uses with between 500-600 dwellings which will comprise a variety of styles and types, and up to 5,000m² of commercial, restaurant and other entertainment uses, as described in Table 3.

Proposed rezoning controls respect existing controls that apply to surrounding land. This applies to maximum building height and floor space ratio standards.

TABLE 1. SITES FOR REZONING – PROPOSED DEVELOPMENT SUMMARY

	Parcel Code*	Purpose	Site area (sqm)	Current zone	Proposed zoning	Proposed floorspace ratio	Proposed maximum building height (m)
Civic Link	1	Mixed use development	3,370	SP2 Infrastructure	B4 Mixed use	3:1	30
	2	Recreation	408	SP2 Infrastructure	B4 Mixed use	3:1	30
	3	Mixed use development	3,146	SP2 Infrastructure	B4 Mixed use	3:1	30
	4	Recreation	2,464	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	5	Mixed use development	1,603	SP2 Infrastructure	B4 Mixed use	3:1	24
	6	Road	295	SP2 Infrastructure	B4 Mixed use (road)	2.5:1	30
Darby Plaza	7	Mixed use development	2,040	SP2 Infrastructure	B4 Mixed use	2.5:1	30
	8	Mixed use development	988	SP2 Infrastructure	B4 Mixed use	4.1 :1	24
	9	Recreation	467	SP2 Infrastructure	B4 Mixed use (road)	N/A	N/A
Hunter St Rev	10	Infrastructure	386	SP2 Infrastructure	SP2 Infrastructure	N/A	N/A
	11	Mixed use development	4,542	SP2 Infrastructure	B4 Mixed use	2.5:1	14
	12	Mixed use development	1,544	SP2 Infrastructure	B4 Mixed use	2.5:1	17
	13	Recreation	303	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	14	Mixed use development	2,251	SP2 Infrastructure	B4 Mixed use	2.5:1	14
Entertainment precinct (East End)	15	Recreation	7,713	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
Newcastle Station (East End)	16	Recreation and mixed use development	10,698	SP2 Infrastructure	SP3 Tourist	1.5:1	Part 10m and part 20m
TOTAL SITE AREA			42,788				

Source: Elton, 2015.

Potential Rezoning Yields

Table 2 provide an estimate of possible gross floor area and Table 3 provides possible dwelling yield for the rezoning sites.

TABLE 2. ANTICIPATED GROSS FLOOR AREA

Precinct	Parcel	Gross Floor Area		
Civic Link		Total	Non-resi (sqm)	Resi (sqm)
	01	10,000	1,000	9,000
	02			
	03	9,000	1,000	8,000
	04			
	05	4,000	500	3,5000
	06			
Darby Plaza	07	4,000	500	3,500
	08	2,000	200	1,800
	09			
Hunter St Rev	10			
	11	11,000	1,000	10,000
	12	4,000	500	3,5000
	13			
	14	6,500	500	5,500
Entertainment precinct	15			
New Station	16			
	TOTAL	50,500	5,200	44,800

* Assumed that all sites can achieve full GFA entitlement

** Assumed GFA split =10% non-residential + 90% residential

Source: Hassell

TABLE 3. ANTICIPATED DWELLING YIELD

	Parcels	Number of dwellings				
		Total	Studio	1 bed	2 bed	3 bed
			20%	35%	35%	10%
Civic Link	01	110	20	40	40	10
	02					
	03	100	20	35	35	10
	04					
	05	50	10	15	20	5
	06					
Darby Plaza	07	55	10	20	20	5
	08	25	5	10	10	
	09					
Hunter St Rev.	10					
	11	125	25	45	45	10
	12	50	10	20	15	5
	13					
	14	70	15	25	25	5
Entertainment	15					
Newcastle Station	16					
	TOTAL	555	115	210	210	50

* Assumed GFA per apartment = 80 square metres average
Source: Hassell

1.4 Context

Newcastle is the second largest city in NSW and is the economic and social heart of the Hunter Region. Regionally significant infrastructure – including transport, government, health and education services – is located in Newcastle city centre. Key infrastructure of regional and state significance includes:

- Port of Newcastle – one of the world’s largest coal export ports and a significant driver for the state economy
- Newcastle Airport – provides regular services to and from Sydney, interstate capitals and regional NSW, with international capability being developed
- University of Newcastle – one of Australia’s leading Universities, and TAFE campus’
- Other tertiary education – TAFE campuses and business colleges
- John Hunter Hospital – the main hospital for Newcastle and much of northern NSW
- Social infrastructure such as Newcastle Regional Library, Civic Theatre, Newcastle Museum and Art Gallery and Newcastle City Hall.

Newcastle city centre is the core of this regional city and provides a range of functions including commercial, retail, entertainment, cultural, educational and transport services. It is located on a peninsula between the Pacific Ocean and the Hunter River.

The western and central parts of the city centre are largely built upon the floodplain of the Hunter River and Cottage Creek and consequently are relatively flat. By contrast, the eastern end of the city around Newcastle Station and toward the beach is located on two steep hills, providing a scenic backdrop to the city centre when viewed from the foreshore of the Hunter River.

The topography of the city centre and the gridded street network permit views from the city centre to the harbour, as well as views from the harbour back to the city where the cathedral at the crown of the hill is a recognisable landmark. It contains a rich collection of historic and significant civic buildings which give the city a distinct character.

The compact nature of the city centre, where beach and the city centre are within easy walking distance, makes Newcastle a very attractive place to live and work. The city offers the employment, educational and commercial opportunities of a big regional city with the commuting convenience and proximity of a small city.

1.5 Relationship to other projects

Light rail

The NSW Government is introducing light rail to Newcastle as part of a strategy to revitalise the Newcastle city centre. Light rail will travel from a new transport interchange at Wickham, through the Newcastle city centre to Pacific Park. The truncation of heavy rail services at Wickham and the building of a new interchange are the first steps in delivering an urban renewal and transport solution for Newcastle.

Transport for NSW has been working closely with UrbanGrowth NSW, Newcastle City Council and Roads and Maritime Services in planning for light rail. Light rail will help improve public transport and access, reunite the city centre with its waterfront and improve the attractiveness of public spaces. The light rail route will travel east from the new transport interchange at Wickham along the existing rail corridor to Worth Place, before moving south to connect with Hunter Street and Scott Street before reaching Pacific Park, near the beach.

Initial geotechnical investigations have been complete and detailed design and environmental planning is well underway. A combined team of Newcastle-based experts is preparing an environmental assessment

for the Newcastle Light Rail project. The environmental assessment studies will include heritage, visual and urban design, noise and vibration, social impacts, air quality and traffic, and access.

Public consultation will take place on the environmental assessment.

Hunter Street Mall

A 15,000 square metres landholding within Newcastle's Hunter Street Mall is proposed for re-development by UrbanGrowth NSW and joint venture partners GPT Group. A revised Concept Development Application (DA) for the mixed use project was lodged with Newcastle City Council late 2015. This application amends the previous DA (2014) to address updated planning controls and respond to Council and community feedback.

The revised Concept DA reduces the maximum height of the scheme to RL40, while proposing a masterplan framework to support the delivery of 50,000 square metres GFA comprising:

- 500 – 600 residential apartments
- 5,000 to 6,000 square metres of ground floor retail
- 1,000 to 2,000 square metres of commercial floorspace
- associated parking

The project ambitions are to:

- revitalise Hunter Street Mall
- leverage the State Government's investment in light rail
- provide an urban renewal catalyst for the East End Precinct, in support of Government's broader Urban Transformation and Transport Program

1.6 Report contents

This report provides a qualitative and quantitative economic assessment, including an analysis of market dynamics and job creation potential, arising from possible development outcomes from the rezoning of surplus rail corridor lands Worth Place to Watt Street. The contents of this report are as follows:

- This section provides an overview of the background to the study, the proposed rezoning and report contents
- Section 2 outlines the demand for commercial and retail floorspace in the Newcastle city centre. It assesses the floorspace outlined in the Proposal for mixed use development. The demand for residential dwellings will also be assessed in this section.
- Section 3 will assess the number of jobs created from the proposed rezoning and the subsequent developments. The impact of construction will also be assessed.
- Section 4 will summarise the findings of this report.

2 MARKET DYNAMICS

Overview

This section outlines the recent economic performance of the Newcastle city centre including analysis of market dynamics for retail and office development. The benefits of increasing employment and population within a city centre is discussed as the rezoning proposal is aiming to increase commercial floorspace and the number of dwellings within the Newcastle city centre.

Analysis of future demand (based on existing research completed by SGS and other organisations) has been completed to identify how the rezoned rail corridor lands could support future needs.

2.1 Recent economic performance of the Hunter and Newcastle LGA

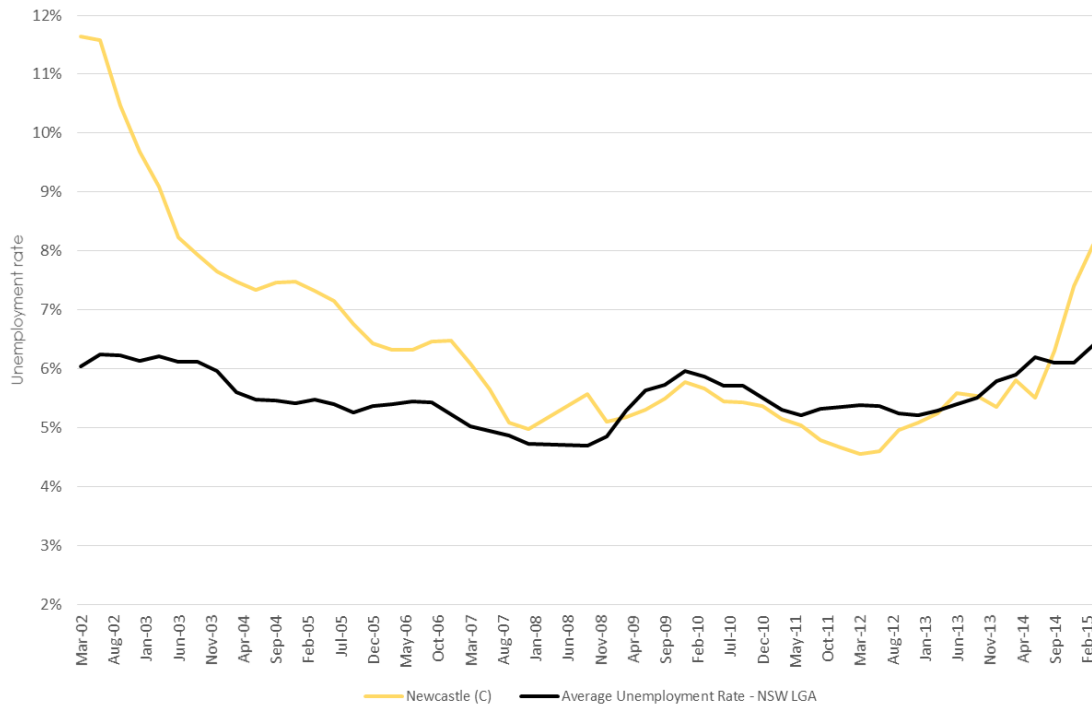
Historically the Hunter has been a resource-based economy. Since the 1950s the Hunter has experienced two structural shifts in employment. The first was from primary to secondary industry from the 1950s to 1970s. The second was from the secondary to the tertiary sector. Manufacturing generated most (regional) export activity but tariff reductions led to the loss of steel and closure of BHP. This occurred from the 1970s through to around 1995 with the final departure of BHP in 1999. The employment share in the secondary sector in the Hunter fell from 24.6% in 1976 to only 14.1% in 1996¹.

The Newcastle structural change broadly reflects Australian structural changes but the narrower economic base makes it more vulnerable to impacts on few industries.

Unemployment in Newcastle LGA has decreased significantly over the 2000s, from double the NSW average in 2002 (12%) to being below the NSW average between 2009 and 2013 (Figure 4). Recently, there has been an increase in unemployment likely related to the end of mining construction phase. This increase in unemployment reveals the continued vulnerability of the Newcastle LGA to the resource sectors and highlights the need for further diversification in its economic base.

¹ The Hunter Valley Research Foundation, 2011. Diversification of the Hunter Economy - Post BHP.

FIGURE 4. NEWCASTLE LGA UNEMPLOYMENT RATE



Source: Commonwealth Department of Employment, 2015.

2.2 Newcastle city centre²

In light of the structural change in employment in the Newcastle city centre, Table 4 highlights the industry composition and growth/decline in the city centre. The industries that changed the most dramatically are highlighted. The key findings are:

- ‘Heavier’ industries such as Manufacturing, Construction and Wholesale Trade contracted the most in percentage terms
- Retail Trade lost the highest number of jobs in the centre (292); although retail jobs also contracted in the Newcastle LGA by 1%.
- Professional, Scientific and Technical Services decreased in the centre, but increased in the LGA
- Government and education sectors increased at a faster rate in the centre, compared to the LGA

Employment in the Newcastle LGA grew by 1.7% per annum between 2006 and 2011. Over the same period employment growth in the Hunter Region was slightly higher at 2.0%. Comparatively, employment growth in the Newcastle city centre was lower at only 1% per annum. Therefore, much of the employment in the region and in the LGA was at the expense of employment growth in the Newcastle city centre.

² The Newcastle city centre is defined from the peninsula of Cooks Hill to the edge of Hamilton South.

TABLE 4. EMPLOYMENT GROWTH IN THE CITY CENTRE: 2006-2011

	2006	2011	AAGR 2006-2011	AAGR Newcastle LGA	AAGR Hunter Region
Agriculture, Forestry and Fishing	13	41	25.8%	-19.7%	-3.7%
Mining	28	121	34.0%	21.7%	8.5%
Manufacturing	554	275	-13.1%	0.8%	0.6%
Electricity, Gas, Water and Waste Services	491	444	-2.0%	4.4%	3.3%
Construction	585	397	-7.5%	3.0%	2.6%
Wholesale Trade	425	146	-19.2%	-0.9%	-0.3%
Retail Trade	1,819	1,527	-3.4%	-0.2%	-0.1%
Accommodation and Food Services	1,541	1,629	1.1%	2.0%	2.3%
Transport, Postal and Warehousing	661	734	2.1%	2.8%	1.9%
Information Media and Telecommunications	819	699	-3.1%	-4.2%	-2.8%
Financial and Insurance Services	1,804	2,541	7.1%	0.8%	1.2%
Rental, Hiring and Real Estate Services	420	405	-0.7%	-0.5%	0.6%
Professional, Scientific and Technical Services	2,755	2,718	-0.3%	3.7%	3.5%
Administrative and Support Services	748	645	-2.9%	2.4%	3.9%
Public Administration and Safety	2,377	3,096	5.4%	0.6%	1.7%
Education and Training	623	893	7.5%	2.5%	2.1%
Health Care and Social Assistance	1,810	2,232	4.3%	2.8%	3.7%
Arts and Recreation Services	98	146	8.3%	2.8%	2.9%
Other Services	627	459	-6.0%	1.8%	2.8%
Unclassified	345	318	-1.6%	1.2%	1.8%
Total	18,545	19,467	1.0%	1.7%	2.0%

Source: BTS, 2006, 2014.

Note: Industry growth rates were not available for 2001

The top three industries located in the Newcastle city centre are financial and insurance, professional services, and government. These industries account for nearly 40% of total jobs in the Newcastle city centre, indicating the study area still plays a 'higher order' central city role.

Financial and insurance services, public administration and education, and arts and recreation jobs grew significantly in comparison to the benchmark areas. Typically, professional and technical services, administration and support services and retail trade jobs would be expected to increase in a Regional City location but these sectors declined. At the same time, these industries grew or remained stable in benchmark areas – indicating that other centres in the region are cannibalising these jobs. This is inconsistent with Newcastle city centre's role as a Regional City for the Hunter region.

Manufacturing experienced a significant contraction compared to Newcastle LGA. While jobs for some industries have also decreased in the Newcastle LGA and Greater Newcastle, they have typically decreased at a much greater rate in the Newcastle city centre from 06-11.

Table 5 below shows the forecast employment for the Newcastle city centre³. Highlighted are the top 5 industries in terms of size within the Newcastle city centre. Retail, food and professional services are expected to be the largest industries within the Newcastle city centre. The increase of approximately 9,500 jobs within the centre highlights the potential demand for commercial floorspace.

³ The Newcastle centre is defined by the following BTS Travel Zones: 6317, 6350, 6351, and 6352.

TABLE 5. NEWCASTLE CITY CENTRE EMPLOYMENT FORECAST

	2011	2016	2021	2026	2031	Change 2011-2031
Agriculture, Forestry and Fishing	41	66	73	77	81	40
Mining	121	84	88	90	92	-29
Manufacturing	275	269	267	266	265	-10
Electricity, Gas, Water and Waste Services	444	399	417	443	464	20
Construction	397	411	439	468	498	100
Wholesale Trade	146	140	132	124	118	-28
Retail Trade	1,527	1,945	2,489	2,699	2,785	1,258
Accommodation and Food Services	1,629	1,887	2,188	2,353	2,486	857
Transport, Postal and Warehousing	734	871	1,038	1,101	1,144	410
Information Media and Telecommunications	699	973	1,187	1,252	1,270	571
Financial and Insurance Services	2,541	2,698	2,886	3,100	3,271	730
Rental, Hiring and Real Estate Services	405	527	642	714	751	345
Professional, Scientific and Technical Services	2,718	3,242	4,018	4,623	4,877	2,159
Administrative and Support Services	645	768	922	989	1,027	381
Public Administration and Safety	3,096	3,425	3,739	3,977	4,177	1,081
Education and Training	893	1,015	1,158	1,211	1,229	336
Health Care and Social Assistance	2,232	2,482	2,622	2,701	2,710	478
Arts and Recreation Services	146	249	347	376	381	234
Other Services	459	572	688	735	757	299
Unclassified	318	352	399	424	423	105
TOTAL	19,467	22,372	25,740	27,723	28,806	9,339

Source: BTS, 2014.

Vacancy rates

Overall commercial vacancy rates have declined over the past year in Newcastle city centre. However, observing different grades of office space shows there is an increase in the vacancy rates for lower grade spaces. A recent Property Council Australia (PCA) report found that vacancy rates for A-grade office space in the Newcastle area are at an all-time low of 2.7%. However, due to the small size of the market for this space, an uptake of one large office floorplate will have a noticeable impact on net absorption and vacancy.

TABLE 6. COMMERCIAL OFFICE VACANCY RATES: NEWCASTLE CITY CENTRE 2014-2015

Grade	Jan 14 (% of total floorspace)	Jan 15 (% of total floorspace)
A	5.0%	2.7%
B	7.0%	13.3%
C	16.5%	9.8%
D	10.2%	14.1%
Total	9.2%	8.7%

Source: Property Council Australia, 2015.

Discussions with local real estate agents⁴ revealed that there is limited demand for office space in the market, with a particularly thin market for A-grade office space (notwithstanding the low vacancy rate). The demand for new office space is driven predominantly by government tenants. At the same time, there is limited demand for low-cost, lower grade office space. The uptake of this office space is low with a lack of car parking being cited as a large deterrent to leasing. Anecdotal evidence suggests the cost of car parking in the centre can be a big share of total costs for low-cost space.

Local real estate agents revealed that financing for development in the Newcastle city centre typically requires a pre-commitment rate of at least 50%. Assembling this demand to underpin commercial office development is a major factor inhibiting feasibility. Government tenants are the biggest drivers in

⁴ Including Colliers and Knight Frank.

Newcastle for A-grade office space as they have the scale and longer term stability to provide this evidence for office space demand making development viable.

The vacancy rates for retail floorspace in Newcastle city centre have been significantly high. The closure of David Jones in the Hunter Street Mall (2011) impacted heavily on retail within the centre, with many tenants unable to sustain trade without an anchor tenant to draw in foot traffic. The efforts from organisations such as Renew Newcastle have made good use of the vacant floorspace within the centre, promoting free or discounted rent for creative uses of vacant retail shops until a permanent tenant can be found for the site, or redevelopment of the site occurs. The initiative draws people to the centre and creates desirable characteristics for potential tenants. However, it has not necessarily resulted in a 'thriving' retail trade within the centre. Retail vacancy rates are still high, likely impacted by the strong retail competition from centres such as Westfield Kotara and Charlestown – both of which have undergone recent expansion. The graph below highlights the retail vacancies within the Newcastle city centre. The vacancies have risen since 2004 and stabilised at around 28% in 2010-2013. A vacancy rate of 5 percent can be considered 'normal', based on natural attrition and turnover of businesses. A vacancy rate of 10 percent is a sign precinct centre may be under-trading, which could be a cyclical problem. A vacancy rate higher than 15 percent suggests there are likely structural problems in a centre, affecting its viability (Wood et al. 2012). Therefore, the vacancy rate in the Newcastle city centre indicates a structural problem that requires intervention to shift its fortunes.

FIGURE 5. RETAIL VACANCIES: NEWCASTLE CITY CENTRE 2004-2013



Source: Newcastle NOW, 2015.

2.3 Demand for future commercial development

Newcastle city centre contained approximately 255,166 square metres of commercial floorspace at 1 January 2015. Of this floorspace, 22,163 square metres was vacant equating to a vacancy rate of 8.7%. Vacancy rates have decreased from 2014 (9.2%) primarily from an overall positive demand for floorspace. At 1 January 2015 current commercial space in the city centre is 255,200 m². The mix of office floorspace grade was 34% (87,786 square metres) of commercial office floorspace was A-grade and 33% (84,517 square metres) was B-grade (PCA, 2015). The quantity of A-grade floorspace available on the market has

increased by 9% whilst B-grade office space has remained the same. However, the absorption of A-grade floorspace has been strong over the past year, reflecting a 2.7% vacancy rate, whilst B-grade floorspace experienced a large increase in vacancy rates. This reflects the uptake of A-grade floorspace by existing tenants upgrading from lower grade stock (Colliers, 2015). As a result, higher vacancy rates are evident in the lower floorspace grades. The tightening market as demonstrated by the decreasing vacancy rates reflects demand for office space and the need to provide new supply.

The supply of new floorspace in Newcastle has been limited over recent years. The market saw the first new A-grade supply from Watt Street Commercial since 2008 (Colliers, 2015). The demand for A-grade floorspace has spurred on new development, with DOMA Group proposing a new 7,500 square metres building in the Honeysuckle precinct (Colliers, 2015). This development will be the next major boost of prime commercial floorspace to CBD supply.

Newcastle City Council's *Employment Lands Strategy* (Hill PDA, 2013) suggests there will be need for an additional 183,000 square metres of commercial office space to satisfy demand over the period to 2031. According to the strategy, approximately 125,000 square metres of this floorspace will be developed in Honeysuckle West leaving 58,000 square metres to be supplied throughout Newcastle city centre.

The demand for retail floorspace is primarily driven by population growth, requiring increased need for more population serving retail such as supermarket and speciality food retailing. The Newcastle City Council's *Employment Lands Strategy* (Hill PDA, 2013) determined in 2011 that Newcastle LGA residents generated approximately 404,000 square metres of retail floorspace.

The *Newcastle Urban Renewal Strategy* (Department of Planning and Infrastructure, 2012) outlines significant changes to the Newcastle city centre. The proposal of a new light rail, the University of Newcastle NeW Space campus and urban renewal of the city centre have already triggered stronger demand by residential investors and owner occupiers (Colliers, 2015). It has also encouraged re-adaptive re-use of old buildings. Anecdotal evidence from agents suggests the development of the new Law courts situated on Hunter Street has been a key driver of commercial office demand within close vicinity of the new courts.

The development of a new city campus for the University of Newcastle is considered to be a major catalyst for future demand of commercial floorspace within the centre. The campus is expected to accommodate 3,000 students in the Newcastle city centre. Population serving retail jobs are likely to be stimulated by this influx of students, which will impact on demand for retail floorspace. University based research can stimulate new economic activity, and actively linking research with industry can attract concentrations of knowledge workers and demand for new office space. Universities can help drive industry growth through industry and research partnerships, knowledge transfer and work experience agreements. Subsequently, the new university campus in the centre can support demand for office floorspace.

It is estimated demand for retail floorspace will increase by 182,300 square metres by 2031 (a similar amount to commercial office floorspace). This is based on future population growth, the number of households, household expenditure and other socio-demographic factors (Hill PDA, 2013).

Impact of additional floorspace

The proposal is seeking to rezone the lands within the rail corridor to provide a total of 4,826 square metres of non-residential floorspace. The addition of adjacent lands will contribute a further 1,968 square metres of non-residential floorspace.

The split between commercial office and retail is assumed to be an even 50/50 split of total non-residential floorspace. Table 7 below shows the assumed allocation of non-residential floorspace.

TABLE 7. ALLOCATION OF NON-RESIDENTIAL FLOORSPACE

	Commercial Floorspace (square metres)	Retail Floorspace (square metres)	TOTAL (square metres)
Rail corridor land)	2,413	2,413	4,826
Adjacent land	993	993	1,968
Total	3,397	3,397	6,794

Source: UGNSW, 2015; Macroplan, 2015.

Commercial floorspace

The rezoning of the rail corridor will be able to accommodate a small proportion of total demand for commercial office floorspace. As mentioned above, there is estimated to be demand for approximately 58,000 square metres of commercial office floorspace by 2031 (Hill PDA, 2013) in the Newcastle city centre. The delivery of the rail corridor land alone will only contribute to 4.2% of total floorspace demand, and addition of the adjacent land will increase this to 5.9%. Given the forecast increase in employment within the centre – particularly for Professional services – and the findings from the Newcastle *Employment Lands Strategy*, the Newcastle city centre will be able to absorb the new commercial office floorspace proposed. Furthermore, given the difficulty in securing pre-commitments to provide new office floorspace, the provision of commercial office floorspace as a part of mixed-use development is a cost effective and viable way to deliver commercial office floorspace. In essence, the residential component of the mixed use development would assist to cross-subsidise the construction of commercial floorspace without the need to secure pre-commitments.

Retail floorspace

As with the commercial office floorspace, the rezoning proposal will accommodate a small proportion of total retail floorspace demand. As referred to above, 183,000 square metres of additional retail floorspace will be required within Newcastle LGA. The delivery of retail floorspace from the rail corridor alone is around 1.3% of total retail demand. The addition of the adjacent lands will increase this to 1.9%. The growth in population within the Newcastle city centre and the forecast of employment growth in Retail highlights the need for to provide retail floorspace to accommodate this demand.

2.4 Impact of employment development

This section qualitatively outlines the competitive impact of employment development in the city centre, focussing on the potential employment development for the rail corridor lands only.

Assessing the impact of increasing employment development in the Newcastle city centre through rezoning is important to consider as it may impact on existing and planned centres in the retail hierarchy.

Retail floorspace

The Newcastle city centre is the Regional City of the Hunter Valley region according to the Department of Planning and Environment's Lower Hunter Regional Strategy. Therefore, increasing the retail capacity in the centre is consistent with this hierarchy principle. The rezoning proposal will increase the supply of floorspace available for retail use within the CBD. It will not diminish the trading performance of the centre

overall, whilst reinforcing the strategic directions for Newcastle city centre as outlined in the Lower Hunter Regional Strategy and the Newcastle City Council's *Local Planning Strategy* (2015).

Given the expected population growth in the Newcastle city centre, there will be increased demand for non-residential floorspace for population serving jobs. For example, the additional 822-1,158 residents associated with the proposal would generate demand for up to 1,970-2,780 square metres of retail floorspace, of which 986-1,390 square metres could locate in the Newcastle city centre (see Section 3 for further details).

The NSW *Draft Centres Policy* (DPI, 2009) specifies that rezoning's that promote new retail development should contribute to, rather than detract from, the retail hierarchy. The rezoning of the rail corridor and surrounding adjacent lands would support the Newcastle city centre – the Regional City – and hence contributes to the retail hierarchy. The likely risk of impact to other centres trade performance is low given that the proposed floorspace will be accommodating existing and forecast demand for the Newcastle city centre.

Commercial floorspace

The rezoning proposal will be increasing the supply of commercial floorspace within the CBD. It will not diminish the trading performance of the centre overall, whilst reinforcing the strategic directions for Newcastle city centre as outlined in the Lower Hunter Regional Strategy and the Newcastle City Council's *Local Planning Strategy* (2015).

As outlined previously in this report, *Newcastle Employment Lands Development Strategy* suggests the Newcastle city centre will need an additional 58,000 square metres of commercial floorspace by 2031. The rezoned floorspace will deliver around 4.2%-5.9% of total commercial floorspace to the centre. In other words, the rezoning proposal will contribute only a small amount to total demand of commercial floorspace.

2.5 Benefits of increasing employment in Newcastle city centre

There are distinct benefits of increasing employment in the Newcastle city centre. The concentration of activity in the city centre contributes to more sustainable travel, enhanced agglomeration economies and optimising the use of existing infrastructure within the centre.

More sustainable travel

Activity centres play a critical role in promoting sustainable travel behaviour across a metropolitan area by providing access to goods, services and activities. Lower order activity centres provide for the day-to-day needs of residents while higher order activity centres encourage multi-purpose trips and create viable markets for public transport networks. These factors contribute to the reduced passenger Vehicle Kilometres Travelled (VKT) per year per capita, which can be broken down into the following benefits:

- reduced travel time (this may provide greater time for social and family activities)
- reduced vehicle operating costs
- reduced vehicle accidents
- reduced vehicle congestion
- reduced greenhouse gas emissions and other pollutants such as noise.

Transport mode shifts in favour of public transport can also divert private resources from non-productive car ownership/ parking provisions to more productive investments. While the relationship between urban form and travel patterns is complex, international and Australian evidence suggests that sustainable travel behaviour is encouraged by an activity centres-based urban form.

- In Portland, Oregon urban form characterised by public transport based, mixed use activity centres, are associated with greater public transport use (11.5%) and reduced vehicle miles travelled (9.8 miles per capita) compared to elsewhere in the region (1.2% and 21.8 miles per capita respectively).
- In Australia, the structural shift in the Victorian economy away from dependency on manufacturing based employment to service based employment has been a contributing factor to a reduction in the VKT. These growing sectors have relocated the 'jobs engine' of the Victorian economy to the inner urban region of Melbourne.
- Sydney, with its strengthening polycentric character, has a higher share of motorised trips for retailing by public transport (6.9%) and a much lower average length shopping trip (4.5 kilometres) compared to Melbourne (5.9% and 6.3 kilometres respectively)

A study published by the Victorian Department of Transport suggests that an urban form that is developed along the principles of activity centres and supported by necessary investments in public transport (to alleviate any capacity constraints) will lead to higher public transport mode share and lower transport energy consumption and greenhouse gas emissions, relative to the base case/ current trend urban form scenario.

Agglomeration

The most widely recognised competition and investment benefits associated with improved accessibility are those relating to agglomeration economies. An activity centres policy can enhance agglomeration by enabling greater concentrations of employment in designated activity centres and providing transport to these activity centres. This benefits firms through:

- economies of scale
- economies of scope
- The ability to achieve economies of scale and scope through specialisation given the large numbers of potential customers that are readily accessible
- The availability of numerous supply sources and potentially specialised infrastructure, and the competitive environment that stems from this, and
- Access to a deep and diverse pool of skilled labour, often complemented by high levels of technological/ knowledge transfer between firms, which helps bolster innovation.

Economies of agglomeration associated with the critical mass of larger centres confer a range of economic benefits including 'knowledge spillovers' and access to 'thick' labour markets. Larger centres are also more likely to gain 'momentum' – a circular and cumulative growth pattern, where new jobs feed off existing jobs, in turn stimulating additional jobs. This is particularly true for retail and services sectors being stimulated by the knowledge industry. The fragmentation of planned large employment precincts and centres into smaller centres (or out-of-centre development) can seriously diminish the positive economic effects of clustering. Therefore the clustering of new employment floorspace – particularly new commercial office or retail industries– would contribute to the positive externalities associated with agglomeration economies.

Optimising the centre

Across Australia there is considerable convergence in planning strategies and policies for major metropolitan areas. This is at its most obvious when it comes to activity centres policies which form a part of almost all metropolitan spatial plans. An activity centres policy provides direction for development of a metropolitan area characterised by the concentration of employment and population within a network or hierarchy of activity centres, well serviced by transport infrastructure, particularly public transport.

Activity centres vary in size and diversity within a hierarchy ranging from higher-order activity centres to lower order activity centres to serve regional to local geographic spheres of influence.

At all levels in the hierarchy, retail floorspace is the principal attractor of people; it can be conceptualized as the 'glue' which holds vibrant activity centres together. Shopping centres are a good example of how

retailers like to cluster, with supermarkets and department stores drawing in a diverse range of speciality retailers. Community and cultural facilities are ideally located in conjunction with core retail attractors for the benefit of users and to achieve acceptable rates of utilisation. A sound retail base is also essential if activity centres are to attract mutually supportive commercial and residential development.

It is argued that laissez faire planning (i.e. allowing retailers freedom to locate where they choose) would result in increased retail competition. This is based on the belief that retailers establishing where they choose would result in a much greater amount of retail floorspace and support various innovative retail forms. It is argued that this would provide more choice for consumers, greater competition for retail spending, and therefore lower costs to the consumer. However, while laissez faire planning may allow for additional retail development, this does not necessarily translate into a more competitive retail environment, or more specifically, benefits for activity centre patrons. An activity centres policy supports retailers locating near competitors, therefore supporting comparison shopping and giving consumers greater choice.

Concentrating employment within an activity centre also makes use of existing infrastructure. Establishing employment outside of a centre will mean an inefficient redistribution of resources away from the activity centre. The marginal cost of building upon the existing infrastructure is likely to be much lower than constructing something new. Encouraging employment within the city also makes best use of existing land and thus reduces the loss of valuable rural and agricultural land.

Newcastle city centre is considered to be the highest order activity centre (Regional City), which aims to serve the regional population of the Lower Hunter. The development of the rail corridor lands endeavours to maintain and promote the use of the role and function of the Newcastle city centre as a Regional City.

2.6 Residential market effects

Recent population growth in the Newcastle city centre

Population in the Newcastle city centre grew by 4.2% (CAGR) between 2001 and 2011. Over the same period, population growth in Newcastle LGA was considerably lower, growing at 0.8%. Comparatively, population growth in NSW over the same period was also 0.9% (Table 8).

TABLE 8. HISTORICAL POPULATION GROWTH: 2001-2011

	2001	2006	2011	% Change (01-11)	CAGR (2001-2011)
Newcastle city centre	4,019	4,926	6,050	50.5%	4.2%
Newcastle LGA	148,073	153,511	160,812	8.6%	0.8%
Hunter Region	550,943	567,941	604,597	9.7%	0.9%
NSW	6,575,217	6,742,690	7,218,529	9.8%	0.9%

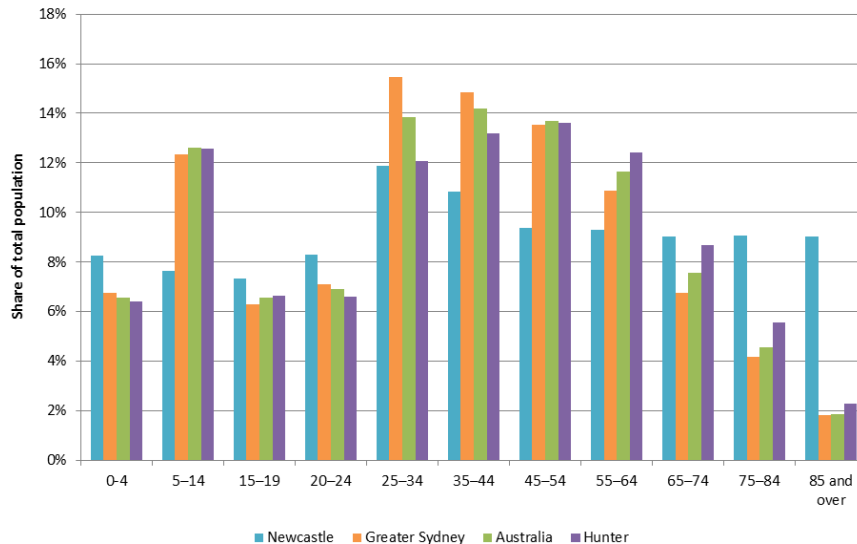
Source: Department of Planning and Environment 2011, 2014, BTS, 2014,

Demographic trends

Age profile

Analysis of the most recent Census data (2011) reveals that the Newcastle LGA has a different age profile component to Greater Sydney and the rest of Australia (Figure 6). Similar to Greater Sydney, the most represented age cohort in the Newcastle LGA is the 25-34 year old group. The Newcastle LGA has a higher share of the population aged 0-4 and 15-24 and over 65 compared to the Greater Sydney Region and Australia in general.

FIGURE 6. NEWCASTLE LGA COMPARATIVE AGE PROFILE



Source: ABS Census, 2011.

An intensifying 'dependency ratio'⁵ will have an adverse impact on the future tax and wealth base of the Newcastle LGA and Hunter Region, as older people draw down their savings, and increase the demands

⁵ The dependency ratio is an age-population ratio of those typically not in the labour force (the dependent part) and those typically in the labour force (the productive part).

on health infrastructure and services. In the absence of major and countervailing growth and investment elsewhere in the Hunter economy it can be expected that expenditure on health and aged care would lead to structural changes in the economy. The health care sector, senior living services and other services for senior citizens would increase their share of the Hunter economy.

A previous study by the University of Newcastle⁶ examining the changing demographics of the Lower Hunter also noted the increasing dependency ratio. The study observed that the major driver of population growth in the region is likely to be internal migration by older age groups. It also noted that since the Lower Hunter does not attract large numbers of overseas migrants (who are generally younger), only a significant economic 'jolt' and/or an expanding disparity in house prices between Lower Hunter and metropolitan Sydney (thereby increasing the relative attractiveness of the former) is likely to alter this projected pattern.

Migration data

Recent data released by the Department of Planning and Environment⁷ reveals that (internal and external) migration is an important driver of growth across all LGAs in NSW. For Newcastle, between 2006-07 and 2013-14 there was internal migration of 93,193 and external migration of 88,867, resulting in a net migration gain of 4,326. This increasing trend in net migration suggests there will be increased demand for housing within the Newcastle LGA.

Demand for future residential development in the city centre

This section discusses the market dynamics for residential development in the city centre, including future demand and how the rezoned rail corridor lands could address future needs.

The demand for future residential development in Newcastle city centre is influenced by future population growth and the expected mix of household types. Table 9 shows the forecast growth of population within the Newcastle city centre. Population is expected to increase by 11,000 people by 2036. This is a significant growth and will impact positively on the demand for dwellings.

TABLE 9. NEWCASTLE CITY CENTRE POPULATION FORECAST: 2011-2036

	2001	2006	2011	2031	2036	Population Change	% of Newcastle LGA Population Growth
Newcastle city centre	4,000	5,000	6,100	12,000	15,000	11,000	25%

Source: BTS, 2014.

Table 10 shows the household forecast from the Department of Planning & Environment for the Newcastle LGA. The household forecast directly reflects the expected population growth in Newcastle LGA. It highlights between 2011 and 2031 the key apartment market household types, couples only (20,000, 25%) and lone person (25,450, 31%) households will make up 56% of households in Newcastle (Table 10). That is, there could be 45,450 households who would have a high propensity to live in apartments. Newcastle LGA can also expect an increase in 16,000 dwellings.

⁶ McGuirk, P., 2007, *People in the Lower Hunter Region*. Presentation at the Biodiversity Conservation and our Region Forum, University of Newcastle, 18 May 2007.

⁷ Department of Planning and Environment, *PopulationNSW*: Issue 4, April 2014

TABLE 10. HOUSEHOLD FORECAST FOR NEWCASTLE LGA: 2011-2031

Household types	2011	2016	2021	2026	2031	2031 Share	Growth 2011-31	Contribution to Growth
Couple only	15,200	16,500	17,850	19,000	20,000	25%	4,800	30%
Couple with children	16,550	17,300	18,200	19,050	19,750	24%	3,200	20%
Single parent	7,250	7,600	7,950	8,350	8,700	11%	1,450	9%
Other family households	700	700	750	750	800	1%	100	1%
Multiple-family households	850	900	1,000	1,050	1,050	1%	200	1%
Total family households	40,500	43,050	45,750	48,200	50,350	62%	9,850	62%
Lone person	19,850	21,150	22,500	23,950	25,450	31%	5,600	35%
Group	5,150	5,450	5,550	5,550	5,700	7%	550	3%
Total	65,500	69,600	73,750	77,700	81,500	100%	16,000	100%

Source: DP&E, 2014, SGS 2015.

The average proportion of studio, one and two bedroom dwellings in NSW is around 14.6% of total dwelling stock (Housing NSW, 2015). Census data collected in 2011 for the Newcastle LGA indicates that flats and apartments make up 14% of total dwelling stock. Table 10 above highlights there is a high proportion of couple only and lone person households who invariably have a higher preference for smaller dwelling types. Given these two categories combined will make up more than half of the population by 2031, the future dwelling mix will need to accommodate the dwelling preferences associated with this demographic change.

The low income households make up the largest share of households in Newcastle LGA (DFAC, 2015). Implicitly, the demand for affordable housing in the LGA is expected to be strong. However, only 32% of rental housing stock in Newcastle was accessible to low income households. Given this, there is clear demand for apartments. Recently, the vacancy rates in Newcastle LGA show there had been some gains in housing stock during the first quarter of 2015. An average annual vacancy rate of 3% in Newcastle LGA is indicative of a relatively 'healthy' rental market. The range is usually between 3%-4%.

TABLE 11. RENTAL VACANCY RATES: 2014-2015

	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	May-15	Jun-15	Jul-15	Aug-15
Newcastle LGA	2.7%	1.9%	1.8%	1.8%	2.4%	2.7%	3.4%	4.6%	4.2%	3.8%	3.8%	3.0%
Hunter Region	3.3%	3.1%	3.4%	3.4%	3.4%	3.3%	3.1%	3.9%	3.1%	3.5%	3.7%	3.1%

Source: REINSW, 2014 & 2015.

Housing Preferences

To better understand the specific housing preferences of residents of the Lower Hunter region, SGS undertook a phone survey of 400 households in July 2012. The purpose of the survey was to gain a better understanding of housing preferences, based on what residents might realistically be able to afford, and without restrictions imposed by the existing housing stock, in terms of its type and location.

The findings revealed that 6.8% of Lower Hunter respondents indicated that they had a preference for apartment living. Applying this rate to the Lower Hunter population projections indicates that in 2021 would be around 44,500 people wanting to live in apartments (Table 12). This increases to 50,000 by 2036. This is broadly consistent with the apartment demand from the DP&E household forecast outlined above in Table 10. The additional apartments will contribute between approximately 7% and 10% of total population growth in the Newcastle city centre.

TABLE 12. LOWER HUNTER HOUSING PREFERENCE CHECK

	2011	2016	2021	2026	2031	2036
Lower Hunter (Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock)	586,500	620,500	653,500	685,000	715,500	735,500
Potential Apartment Market (6.8%)	40,000	42,000	44,500	46,500	48,500	50,000

Source: BTS, 2014, SGS, 2015.

Impact of rezoning

As with the commercial floorspace, the residential floorspace has a lower and upper estimate of total floorspace provided. Table 13 shows breakdown of total floorspace to the number of apartments estimated to be developed on the sites.

TABLE 13. NUMBER OF APARTMENTS

	Gross Floorspace	Total apartments	Studio (20%)	1 bed (35%)	2 bed (35%)	3 bed (10%)
Rail corridor	43,430	543	109	190	190	54
Adjacent lands to corridor	17,716	221	44	78	78	22
TOTAL (Rail corridor and adjacent lands)	61,146	764	153	268	268	76

Source: UGNSW, 2015

The rezoning of the Rail corridor lands will result in 543 additional apartment dwellings in the centre. The adjacent lands will contribute an additional 221 more apartments – resulting in a total of 764 apartments.

This supply of new apartments in the Newcastle city centre will place downward pressure on house prices in the area (assuming demand remains the same). The higher proportion of apartments to be supplied that are less than 3 bedrooms could help to address some of the shortages of supply as outlined by Housing NSW for smaller household types.

From the analysis of future population growth of Newcastle LGA, it is clear that there is a strong demand for flat and apartment type dwellings in Newcastle.

2.7 Benefits of increasing residential development in Newcastle city centre

Greater housing diversity

The benefits of increasing residential density occurs in the form of saved costs in terms of land consumption and transport, and greater housing diversity.

Activity centre based urban form promotes variable densities across the urban area with concentrations of employment and population in a hierarchy or network of activity centres. In the absence of an approach or policy which concentrates dwellings and employment in activity centres, housing and jobs would need to be accommodated within existing urban areas and/or beyond the urban fringe (in greenfield developments).

If housing and jobs are located in dispersed locations or beyond the urban fringe, this would lead to less housing diversity, more extensive investment to service development (thereby greater cost) and less opportunity to develop a critical mass for innovative infrastructure investment.

An activity centres-based approach to land use planning encourages greater housing diversity by providing high density accommodation near employment, services and transport hubs. Using Sydney as an example⁸, 72% of dwellings in out-of-centre locations are single detached dwellings. By contrast, only 28% of

⁸ Data on Newcastle is not readily available.

dwellings in in-centre locations are single detached dwellings. Compared to other Australian cities with a lesser focus on activity centres based development, Sydney has much greater housing diversity (36% of housing in flats or terrace forms compared to 23% in all the other capital cities combined). The benefits of increasing residential density within the city centre is evident in this example, with greater housing diversity promoted by centre based development.

Improved retail viability and vitality

Increasing residential development in centres is particularly important for increasing safety and security (via passive surveillance). Importantly, residential dwellings will also stimulate the local immediate economy, as population serving jobs will be needed to cater for the additional residents. New residents will stimulate demand for services, such as restaurants, cafes, tourism, recreation, entertainment and cultural activities in the centre and drive associated local employment growth. Residential development contributes to activity outside of core business hours and on weekends. Successful city centres remain active outside of business hours and on weekends and therefore rely not just on business activities but also local residents. As highlighted in the *Newcastle Urban Renewal Strategy* (2013) “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”.

Put simply, additional residents will improve the retail viability and vitality of the Newcastle city centre.

Greater cost effectiveness and environmental savings

Providing new apartments in the Newcastle city centre is a form of ‘infill’ development, which is a more cost effective form of development. Trubka, Newman and Billsborough (2010) summarised a number of studies that had documented the different costs and benefits of fringe versus infill growth. The results were summarised in three different papers focussed on general infrastructure and transport, transport related greenhouse emissions, and healthcare and productivity. From the first paper (2010) they included the data in Table 14, which showed the much higher transport costs for an outer area dwelling compared to those for an inner city dwelling.

Table 14. Transportation Costs for 1000 Inner-City and Fringe Dwellings

Cost For 1,000 Dwellings	Inner	Outer
Capital cost of car ownership	\$2,990,802	\$8,628,654
Fuel costs	\$1,203,925	\$3,255,349
Other Operating car costs	\$1,476,392	\$4,259,675
Time costs (total)	\$6,158,348	\$8,210,448
Private transport	\$3,116,810	\$8,210,448
Public transport	\$3,041,538	\$0
Walking And cycling	\$0	\$0
Road costs	\$1,216,597	\$3,508,806
Parking costs	\$2,184,489	\$7,709,869
Externalities (total)	\$243,731	\$703,250
Fatalities	\$73,368	\$211,693
Injuries	\$23,627	\$68,172
Property damage	\$38,549	\$111,228
Air pollution	\$90,777	\$261,925
Noise pollution	\$17,409	\$50,232
Transit costs (capital, and operating)	\$3,136,540	\$470,481
Total	\$18,610,824	\$36,746,532

Prices shown are calculated for 2007.

* Public transport travel time costs are not allotted a value for fringe developments because like in the outermost suburbs of Sydney and Melbourne, the level of public transport service is low to non-existent. Travel time costs are not allotted to walking and cycling because the act may also be discretionary, or done for enjoyment, and little empirical evidence exists to quantify the disutility of active commuting modes.

Source: Newman and Kenworthy, 1999

One of the key points about this analysis of the relative costs of outer or inner urban development is that it depends on transformed patterns of travel. Inevitably to realise many of the benefits there is a need for 'smart' investment in transport infrastructure including managing congestion on roads and more public transport. This investment will be counted on the cost side of the ledger. The provision of centre (infill) residential development, coupled with the efficient provision of infrastructure, generally leads to reductions in congestion and the associated negative externalities associated with car-based travel including greenhouse gas emissions, fewer accidents, productivity benefits.

Compact Urban Development in the Netherlands (Geurs and Van Wee 2006) highlights that CBD and town centre based development saved significant costs in terms of land consumption and transport, and indeed the environmental consequences associated with both land consumption and transport:

"...without compact urban development policies, urban sprawl in the Netherlands is likely to have been greater, car use would have been higher at the cost of alternative modes, emissions and noise levels in residential and natural environments, and the fragmentation of wildlife habitats would have been higher" (Geurs and Van Wee 2006, p. 139).

An analysis of Melbourne 2030 which assessed the higher share of infill development proposed by that plan found that:

"The major benefits in Melbourne 2030...stem from transport savings, residential construction efficiencies and well accepted urban consolidated benefits (i.e. fringe land and network infrastructure savings).....the preliminary cost benefit analysis undertaken indicates that the reorientation towards Melbourne 2030 will provide significant resource savings...benefits are expected to outweigh the costs at least by a factor of 3" (McDougall 2007 p.25).

It is therefore critical that the planning for and provision of infrastructure occur in tandem with the land use planning. The development of residential dwellings within an activity centre will ensure synergies are met in regards to investment into infrastructure and providing greater housing diversity. The rezoning of the rail corridor in Newcastle adheres to the general principles outlined above. Residential development in activity centres will be more cost effective than greenfield development and is more likely to generate positive externalities at the same time as reducing negative externalities.

2.8 Summary

The key findings of this Section are:

- The Newcastle city centre has seen a major refocus in industry growth over the past 20 years – moving from manufacturing towards professional service jobs.
- Newcastle city centre is forecast to increase employment by approximately 9,500 jobs by 2031. The industries expected to increase include retail, food and professional service jobs. The additional workers will drive demand for commercial and retail floor space.
- The development of NeW Space campus in the Newcastle city centre is a significant catalyst for increased development in the Newcastle city centre.
- There is an estimated 183,000 square metres demand for office floor space in the Newcastle LGA. The Newcastle city centre – as the Regional City of the Hunter Valley – should be able to accommodate a 32% of this floor space.
- The rezoning of the rail corridor will contribute approximately 4.2%-5.9% of total forecast demand for commercial office floor space within the Newcastle city centre.
- The growth in population within the Newcastle city centre and the forecast of employment growth in retail highlights the need for an increase in retail floor space. The release of this floor space is likely to be absorbed by the market.
- Population and dwelling growth is the key driver for residential development in the Newcastle city centre. There is an undersupply of apartments in the Newcastle LGA.
- The Proposal will deliver between 543-764 additional apartments to the Newcastle city centre, contributing to apartment demand within the Newcastle LGA.
- The benefits of increasing the number of residents in the centre accrue in the form of better investment decisions into infrastructure, within the centre.
- Increasing the population will assist in providing a better mix of dwellings and greater housing diversity within the Newcastle LGA. It will also improve the vitality and viability of the Newcastle city centre. New residents will stimulate demand for services, such as restaurants, cafes, tourism, recreation, entertainment and cultural activities in the centre and drive associated local employment growth. Residential development contributes to activity outside of core business hours and on weekends.
- Benefits of increasing the employment in the Newcastle city centre will amount to benefits including more sustainable travel, economies of agglomeration and optimising the use of existing infrastructure.

3 JOB CREATION POTENTIAL

Overview

This section outlines the number of jobs that will result from the rezoning proposal. The use of the SGS Input-Output model estimates the number of indirect jobs. The impact of operational and construction jobs have been estimated separately given the economic impacts of construction activity are usually shorter term.

The rezoning proposal of the sites in the rail corridor assumes the following development:

- The heritage refurbishment and adaptive re-use of the Newcastle Railway Station to a hallmark destination. Job estimates based on an adaptive retail and office uses have been tested, with a potential 'Station Markets' and an 'Innovation Hub' model used for testing.
- Mixed use development in the corridor (commercial and retail floorspace)
- The development of residential apartments

A more detailed description of each action is outlined below.

Newcastle Railway Station: Heritage refurbishment and adaptive re-use

This action aims to refurbish and fit-out the existing Newcastle station to a mix of retail, business and community uses. Ultimately, the future use of the station will be subject to community consultation with the overarching goal of this heritage icon becoming an activity centre/attraction. To assess the employment potential of this option, the following assumptions have been made for this potential re-use.

If the Newcastle Station was used re-used for retail purposes it could provide multiple retail functions such as cafés, wine bar/restaurants, other food-based retail and special events. It could function as a high quality shopping and dining precinct, drawing on produce from the Hunter region (e.g. wine, cheese, chocolate, smallgoods), and assisting in creating a sense of place for the retail offer in central Newcastle.

Retail, business and community uses could serve inner-city residents, CBD workers and students, as well as residents from across broader Newcastle, the Lower Hunter region and tourists.

The refurbishment and adaptive re-use of the station has also been tested with an 'Innovation Hub' concept.

The Innovation Hub is assumed to take up 560 square metres (equivalent to taking up the first floor of the Station Building). The concept of an Innovation Hub has been adapted from a broader initiative driven by Hunter Innovation Project (a partnership between Newcastle NOW, University of Newcastle and the City of Newcastle). It would have high-speed broadband and would accommodate start-up businesses, graduate students, short-term workers, researchers and entrepreneurs. The Innovation Hub would be supported by the development of a network linking independent, micro co-working spaces in specialty creative, professional or technical businesses through industry associations, events and workshops.

The market and innovation hub is one of the potential outcomes of the reuse of the Newcastle station. For the purposes of this report, this option is modelled. The final outcome is still subject to community engagement and further development approval.

Mixed use development in the corridor

The development of mixed use buildings in the Newcastle city centre would deliver commercial floorspace to the Newcastle city centre. The delivery of commercial floorspace would ensure there is adequate supply within the centre.

The proposed amount of commercial floorspace is between 4,826-6,794 square metres reflecting the best estimate with the corridor only and with the addition of the adjacent lands respectively. It is assumed the split of this floorspace between retail and office use is an even 50/50 split, resulting in 2,413-3,397 square metres of floorspace for each use.

Development of apartment dwellings

Residential development is focussed on ensuring adequate supply of residential sites to meet future demand for city living generated by the transformation program including public domain and entertainment options.

The proposal estimates between 543-764 apartments to be developed. The best estimate for the corridor is 543 apartments. The best estimate for the adjacent lands is 221 apartments.

3.1 Estimation of direct and indirect operational jobs

The estimation of direct jobs from the actions outlined above has been completed using industry standard per capita retail demand benchmark ratios and employment floorspace densities⁹. The estimation of indirect jobs from the actions outlined have been produced using an Input-Output Model generated for Newcastle LGA.

Input-Output Model

The Input-Output (I-O) Model is a tool which quantifies the linkages of all sectors in a given economy. A region specific model for Newcastle LGA was utilised to assess economic impacts of any project during the construction and operational phases as well as from current activities on-site. A detailed breakdown of the Input-Output Model is shown in Appendix A. I-O models measure the relationships and inter-dependence between industries in the economy. The model identifies the buyer and supplier linkages in the local economy, highlighting those industries that have the greatest economic 'multipliers'. Multipliers are measures of the total impact on all industries in an economy arising from changes in the output of a particular industry. For example, an increase in output of the construction industry (i.e. more houses) would have a flow-on effect to industries related to construction.

The Input-Output model measures the effects of additional development in a particular industry. For every dollar or unit of output from one industry there are flow-on effects to other industries in the form of goods and services required. These supply-chain effects (generally referred to as 'production induced effects') are both direct (first round effects) and indirect (second round effects). For example, a housing construction firm might require the services of a bricklayer (direct round), who would in turn require the services of a brick maker (indirect effect), and so on. There are also consumer driven effects (otherwise known as 'consumption induced effects'), which are created by the additional demand in the economy generated by the wages of those employed in the production process. The focus of this analysis is on the local 'multiplier' effects associated with an increase in production in a particular industry.

⁹ For example, these benchmarks are used by Deep End Services, Location.IQ, MacroPlan, AEC Group.

Multipliers derived from the model estimate three key measures:

- Output (or income): This measures the total amount of output (or income) induced across all industries by the requirement to satisfy the additional demand from the construction work.
- Value added Gross Regional Product (GRP): This is defined as the additional wages, salaries and supplements, and Gross Operating Surplus earned by local residents and businesses in the process of producing the extra output induced by the initial stimulus from the markets.
- Full time equivalent (FTE) jobs: This refers to the full time equivalent (FTE) positions of employment generated from the economic stimulus. Both direct and indirect flow-on effects are captured from the stimulus.

Assumptions and limitations

Though a cost-effective and widely used technique for economic impact analysis, I-O modelling has some limitations. A feasible alternative to using I-O modelling for economic impact assessments is to utilise partial or general equilibrium econometric models. Hence, the I-O model is generally considered a useful starting point only. Appendix A details these limitations in more depth.

Benchmark metrics and per capita retail demand benchmarks have been used to estimate floorspace demand as a consequence of an increased number of residents in centre. The use of industry standard floorspace ratios does not account for differences in income or other socio-demographic factors. The drivers of retail floorspace may also change over the course of the forecast as alternative retail offers such as online shopping become more dominant, resulting in less floorspace demand. These factors are not captured within the generic benchmark employment densities.

3.2 Results

Newcastle Railway Station: Heritage refurbishment and adaptive re-use

The direct jobs associated with heritage refurbishment and adaptive re-use of the Newcastle Station to market stalls and innovation hub have been derived by estimates generated by MacroPlan in a separate retail analysis completed for UrbanGrowth NSW (2015). The estimates are as follows¹⁰:

- 1,200 square metres allocated for the Station Building, with an employment density of 25 square metres for every employee. Approximately 41 FTE jobs are estimated to be supported by this development.¹¹
- 1,300 square metres allocated for the Market Stalls, with an employment density of 1.5 square metres per employee. Approximately 59 FTE jobs are estimated to be supported by this development.¹²

The estimation of direct jobs associated with the development of the Innovation Hub relies on floorspace employment densities. Newcastle NOW provided an employment density estimate for a shared work space of 10 square metres per worker based on their research and similar to research report completed by Third Space. Newcastle NOW also assume the hub to have a 75% occupancy rate to account for business turnover; however, it is acknowledged that the occupancy rate may start at a lower initial level and ramp up over time. With a floorspace of 560 square metres, the Innovation Hub could support between 42-56 jobs¹³. The indirect jobs that would be supported by the hub is approximately 61 additional jobs. Table 15 below shows the total number of jobs created.

¹⁰ The final outcome of the adaptive re-use is subject to further community engagement and development approval.

¹¹ This is according to Macroplan's analysis which adjusts the initial employment calculation for FTE jobs. This analysis is a conservative estimation of total jobs expected.

¹² This is according to Macroplan's analysis where figures may not calculate as they have been rounded.

¹³ Assuming 100% occupancy rate equates to 56 jobs within the hub.

TABLE 15. TOTAL NUMBER OF JOBS CREATED FROM REFURBISHMENT OF STATION

	No. of direct jobs	No. of indirect jobs	TOTAL number jobs
Station Markets	100	66	166
Innovation Hub	42	61	103
TOTAL	142	127	269

Source: SGS, 2015.

These direct job estimates associated with the heritage refurbishment and adaptive re-use of the Newcastle Station represent just two possible scenarios of utilising this space. It is acknowledged that the Station building could be used for other uses, including community uses, and that different uses would result in different employment impacts.

Mixed Use Development

The direct jobs related to the development of commercial and retail floorspace is estimated using industry standard employment densities for land use types. It is assumed total commercial floorspace is split 50/50 between retail and commercial office space. The typical employment density for a commercial office and retail is approximately 25 square metres and 30 square metres per worker, respectively. These ratios are an average and can range depending on the nature of office or retail floorspace. Given the amount of floorspace proposed to be rezoned, approximately 249 jobs can be supported by this rezoning proposal.

The number of indirect jobs supported by retail and commercial floorspace differs as the employment multipliers are not the same for all industries as the wages and therefore disposable incomes undoubtedly vary for each industry. The total number of indirect jobs supported by the commercial floorspace is approximately 200, whilst approximately 75 indirect jobs are supported by the retail floorspace. Table 16 below shows the calculation of direct and indirect jobs for the proposed lands within the rail corridor and adjacent lands.

TABLE 16. TOTAL NUMBER OF JOBS CREATED FROM MIXED USE DEVELOPMENT

	Floorspace (square metres)	Employment density (square metres/worker)	Direct Jobs (no.)	Indirect Jobs (no.)	Total Number of Jobs
Commercial Office floorspace					
Rail corridor	2,413	25	97	141	237
Adjacent lands	984	25	39	57	97
Total	3,397	25	136	198	334
Retail floorspace					
Rail corridor	2,413	30	80	53	134
Adjacent lands	984	30	33	22	54
Total	3,397	30	113	75	188
Grand TOTAL	6,794	55	249	273	522

Source: SGS, 2015.

Development of apartment dwellings

The direct jobs associated with the development of apartment dwellings is estimated by applying benchmark ratio floorspace demand against the incoming population associated with the apartments.

Firstly, the total number of residents is estimated based on a national average housing utilisation rate. Approximately 820 (rail corridor) to 1,160 (plus adjacent lands) residents will occupy the apartments in the centre as seen in Table 17 below.

TABLE 17. ESTIMATED NUMBER OF RESIDENTS

	Number of apartments	Average number of persons/bedroom	Total Persons
Rail corridor lands			
Studio	109	1.0	109
1 Bed	190	1.3	245
2 Bed	190	1.8	334
3 Bed	54	2.5	133
Total	543	-	822
Adjacent lands			
Studio	44	1.0	44
1 Bed	78	1.3	101
2 Bed	78	1.8	137
3 Bed	22	2.5	54
Total	222	-	336
Grand TOTAL	765	-	1,158

Source: SGS, 2015.

A per capita ratio of retail spend is estimated to equate to 2.4 square metres retail demand per capita. This has been disaggregated firstly into retail spend in the Newcastle city centre and out of the centre and then further broken down into different types of retail spend. It is assumed that some retail spend will occur outside of the Newcastle city centre given that there is limited choice, particularly for department stores and bulky goods retailing within the Newcastle city centre. It is assumed 100% of food retailing expenditure will be consumed within the centre. 50% of department store and retail services will be spent outside of the Newcastle city centre whilst 100% of non-food specialities and bulky good purchases will also be made outside of the centre. The disaggregation of retail types allows for a better estimation of jobs based on employment densities as each category has a different employment density as shown in Table 18 below.

TABLE 18. PER CAPITA SPEND AND EMPLOYMENT DENSITY

Per capita spend	Ratio (square metres)	% of total number	Employment density (square metres/worker)
Retail type			
Newcastle city centre			
Food Retailing			
Supermarket floorspace	0.4	16%	30
Food retail specialities	0.2	7%	30
Food catering	0.3	11%	20
Non-food Retailing			
Dept. store	0.2	7%	40
Retail services	0.1	4%	25
Outside of the Centre			
Non-food Retailing			
Dept store.	0.2	7%	40
Non-food specialities	0.4	16%	40
Bulky goods	0.7	30%	40
Retail services	0.1	4%	25
TOTAL	2.4	100%	

Source: SGS, 2015.

Table 19 summarises the total number of jobs estimated to be created from the residential development component of the rezoning proposal. The number of retail jobs created from apartment development is approximately between 101-143 jobs.

TABLE 19. TOTAL NUMBER OF JOBS CREATED FROM APARTMENT DEVELOPMENT

	Direct Jobs within Newcastle city centre	Direct jobs outside of the Newcastle city centre	Total Number of Direct Jobs	Indirect jobs	Total number of jobs
Rail corridor	32	29	61	40	101
Adjacent lands	13	12	25	17	42
TOTAL	45	41	86	57	143

Source: SGS, 2015.

The number of direct jobs that will be supported by the development of 543-764 apartments is approximately 32-45-58 jobs within the CBD. The additional jobs created outside of the Newcastle city centre is estimated to be around 29-41 jobs. This is based on the assumption that not all retail spend will be based within the Newcastle city centre as highlighted in Table 18 above. The number of indirect jobs that will be established from the direct jobs created within the centre is approximately 40-57 jobs.

3.3 Estimation of construction jobs

The impact assessment of construction activity from the development of the sites has been completed using an Input-Output model.

Estimates of overall development costs were provided by UrbanGrowth NSW. This includes building construction, public domain construction, site infrastructure planning costs, program establishment and program delivery costs, and lastly, professional fees. These costs have been allocated to the appropriate industry represented in the Input-Output model, which uses ANZSIC categories. This breakdown was determined using ANZSIC category definitions and assumptions regarding the most suitable industry for each use.

TABLE 20. CONSTRUCTION COSTS BY INDUSTRY

	Total Cost (\$M)
Residential Building Construction	\$173.9
Non-Residential Building Construction	\$24.7
Heavy and Civil Engineering Construction	\$7.4
Construction Services	\$34.5
Professional, Scientific and Technical Services	\$22.9
Accommodation	\$0.2
Water Supply, Sewerage and Drainage Services	\$4.6
TOTAL (Exc. GST)	\$268.2

Source: UGNSW, 2015; SGS, 2015.

The BTS Journey to Work patterns were used to approximate the spatial economy linkages between the location of activity and where the source of labour is coming from. Not all labour and services will come from within the Newcastle LGA. The Journey to Work patterns have been adjusted to capture workers that do not necessarily live within the LGA but will temporarily relocate for the construction phase. Table 21 summarises the assumptions used behind each industry to determine the direct output impact for Newcastle LGA.

TABLE 21. LABOUR SOURCE INSIDE AND OUTSIDE OF THE NEWCASTLE LGA: SGS ADJUSTED

Industry	Sourced within the LGA (SGS adjusted)	Sourced outside of the LGA (SGS adjusted)	Sourced within the LGA (Unadjusted)	Sourced outside of the LGA (Unadjusted)
Residential Building Construction	52%	48%	45%	55%
Non-Residential Building Construction	52%	48%	45%	55%
Heavy and Civil Engineering Construction	42%	58%	35%	65%
Construction Services	55%	45%	50%	50%
Professional, Scientific and Technical Services	57%	43%	57%	43%
Accommodation	62%	38%	62%	38%
Water Supply, Sewerage and Drainage Services	52%	48%	45%	55%

Source: BTS, 2015.

The direct impact related to the construction phase is based on where the construction activity occurs, opposed to where labour and services were sourced. The extent to which this direct activity is contained within the Newcastle LGA is dependent on where workers, goods and services are located rather than where the activity site is. That is, determining the amount of wages and profit captured within the local economy from the labour sourced from outside of the LGA. Those who live outside of the LGA are likely to spend a portion of their income where they live rather than within the LGA.

Comparing and analysing the industry specialisation of the Newcastle LGA to the LGA's within the Lower Hunter indicated that, of the labour sourced from outside of the LGA, an average of 21% of the production induced flow-on activity would be retained within the LGA. The number of indirect jobs that will be retained within the LGA will again rely on Journey to Work patterns, unadjusted, as the best estimate of the spatial economy. As these are indirect jobs associated with the construction activity, thus further along the supply chain, the readjustment is unnecessary as it is unlikely there will be any temporary relocation of these workers.

Impact Assessment

Using Table 21, total spend on construction of this project of \$268.2 million is estimated to directly generate \$124.5 million in industry output for businesses within the Newcastle LGA. The estimations of the direct and indirect effect of this increase in industry output is shown in Table 22 below. Approximately an additional \$40 million is generated in indirect industry output from businesses.

TABLE 22. IMPACT OF CONSTRUCTION

	Direct Impacts			Indirect Impacts		
	Direct output (\$M)	Gross Value Added (\$M)	Employment	Output (\$M)	Gross Value Added (\$M)	Employment
Residential Building Construction	\$90.0	\$20.82	248	\$30.70	\$62.05	115
Non-Residential Building Construction	\$12.8	\$3.24	19	\$4.40	\$7.75	26
Heavy and Civil Engineering Construction	\$3.1	\$1.13	4	\$1.03	\$0.90	4
Construction Services	\$19.0	\$7.24	78	\$6.14	\$4.69	18
Professional, Scientific and Technical Services	\$13.1	\$7.20	58	\$4.27	\$0.78	24
Accommodation	\$0.1	\$0.05	1	\$0.03	\$0.00	0
Water Supply, Sewerage and Drainage Services	\$2.4	\$1.12	5	\$0.49	\$0.00	1
TOTAL	\$140.4	\$40.8	412	\$47.1	\$76.2	189

Source: SGS, 2015.

A total of approximately \$117 million in gross value added activity is estimated to be within Newcastle LGA over the construction phase for both direct and indirect effect of activity. It is estimated a total of approximately 600 jobs will be supported by the construction activity within the Newcastle LGA.

3.4 Summary

The key findings from this section are as follows:

- An additional 601-934 jobs will be established within the Rail corridor and adjacent lands. This is based on the development of the mixed use sites as well as demand for services from the people within the apartments.
 - Newcastle Station Markets: 166-269 total jobs
 - Mixed Use development: 334-522 total jobs
 - Residential apartments: 101-143 total jobs
- The direct impact of the anticipated increase in construction activity is estimated to contribute to an additional \$124.5 million in industry output, 600 additional construction jobs within the centre and a gross value add of \$98 million to the local economy.

4 CONCLUSION

This report considered the range of economic impacts associated with the proposed rezoning of the surplus rail corridor lands. The report included analysis of employment market dynamics within the Newcastle city centre, residential market dynamics and the job creation potential of the rezoning proposal. The key findings are displayed below.

4.1 Employment market dynamics

The Newcastle city centre has seen a major refocus in industry growth over the past 20 years – moving from manufacturing towards professional service jobs. There is forecast employment growth of approximately 9,500 jobs in the Newcastle city centre by 2031. The industries expected to increase include retail, food and professional service jobs. The additional workers will drive demand for commercial and retail floor space.

Commercial floorspace

There is an estimated 183,000 square metres demand for office floor space in the Newcastle LGA by 2031. The Newcastle city centre – as the Regional City of the Hunter Valley – should be able to accommodate 32% of this floor space; (58,000 sqm) by 2031. The development of NeW Space campus in the Newcastle city centre should be a significant catalyst for increased development in the Newcastle city centre. The rezoning of the rail corridor will contribute approximately 2,413 - 3,397 square metres – 4.2%-5.9% of total forecast demand by 2031 – for commercial office floor space within the Newcastle city centre. This is a relatively small supply contribution to the demand of commercial floorspace. However, it is likely to be a significant catalyst to further commercial floorspace development. There is potential within Newcastle to satisfy the demand. With the fairly high vacancy rates in lower grade commercial floorspace, it is conceivable that with redevelopment, these spaces could satisfy the demand.

In short:

- Current commercial space in the city centre is 255,200 sqm
- By 2031 demand will increase by 58,000 sqm
- The proposed development is estimated to deliver 2,413-3,397 sqm of commercial which contributes to a small (4.2%-5.9%) but important addition to accommodate forecast growth to 2031.

Retail floorspace

The growth in population within the Newcastle city centre and the forecast of employment growth in Retail highlights the need for an increase in retail floor space. It is estimated 182,300 square metres of retail floorspace will be needed by 2031 in the Newcastle centre. The release of the 2,413-3,397 square metres of retail floorspace in the city centre is likely to be absorbed by the market.

In short:

- By 2031 demand will grow to be a total of 182,300 sqm in Newcastle¹⁴.

¹⁴ Data is not available for Newcastle centre

- The proposed development is estimated to deliver 2,413-3,397 sqm of retail floorspace to the centre which contributes to a small (1.3%-1.9%) but valuable addition to accommodate forecast growth within the LGA by 2031.

4.2 Residential market dynamics

Population growth is the key driver for residential development in the Newcastle city centre. The household forecast expects by 2031, lone persons and couple with children households will account for more than half of the households in Newcastle LGA. However, Census data (2011) shows apartments account for only 14% of total dwelling mix. Therefore, the rezoning proposal will deliver an estimated 543 additional apartments within the corridor. A further 221 apartments will be delivered by land adjacent to the corridor that is already zoned.

There are a range of benefits associated with residential development in and around centres. The benefits accrue in the form of more sustainable travel, economies of agglomeration and optimal use of infrastructure. It will also improve the vitality and viability of the Newcastle city centre, given that new residents will stimulate demand for services, such as restaurants, cafes, tourism, recreation, entertainment and cultural activities in the centre and drive associated local employment growth. Residential development contributes to activity outside of core business hours and on weekends.

Increasing the population will assist in providing a better mix of dwellings and greater housing diversity within the Newcastle LGA.

4.3 Job creation potential

An additional 601 jobs will be established within the rail corridor and a further 333 jobs within adjacent lands. This is based on the development of the mixed use sites as well as demand for services from the people within the apartments:

- Newcastle Railway Station – Heritage refurbishment and adaptive re-use: 166-269 total jobs
- Mixed Use development: 334-522 total jobs
- Residential apartments: 101-143 total jobs

The direct impact of the anticipated increase in construction activity is estimated to contribute to an additional \$124.5 million in industry output, 600 additional construction jobs within the centre and a gross value add of \$98 million to the local economy.

4.4 Consistency with s117 Directions

The NSW Minister for Planning and Environment issues a list of Directions (s117 Directions) to relevant planning authorities under section 117(2) of the *Environmental Planning and Assessment Act 1979*. These directions apply to planning proposals lodged with the Department of Planning and Environment on or after the date the particular direction was issued. Given that much of the proposed rezoning is for a B4 Mixed Use zone, the consistency of this proposal was considered against the objectives and requirements for the s117 Directions for 1.1 Business and Industrial Zones (Table 23 and Table 24).

TABLE 23. CONSISTENCY WITH OBJECTIVES

No.	Objective	Addressed by the Proposal
1	Encourage employment growth in suitable locations	The proposal would deliver additional land zoned for commercial and retail use inside the current Regional centre. The delivery of additional employment in the Newcastle city centre optimises the existing infrastructure assets and will further bolster the role of the Newcastle city centre as the economic centre of the Hunter.
2	Protect employment land in business and industrial zones	- The proposal will increase in the supply of commercial floorspace within the Newcastle city centre, which is identified as the Regional Centre and the most important employment centre in the Hunter. Therefore, the proposal will protect and promote employment land. - Delivering commercial and retail floorspace will accommodate some of the future growth in demand. - Delivering residential dwellings, will increase the local population in the centre and in turn will generate demand for retail uses in the centre; thus enhancing the role of existing employment lands within the centre.
3	Support the viability of identified strategic centres	- Delivering dwellings, jobs and providing a catalyst for increased investments in the Newcastle city centre – the Regional centre – in accordance with the planning policy - The proposal will promote employment in the strategic Newcastle city centre via the addition of commercial floorspace and new residents. The proposal therefore will support the viability of the Newcastle city centre.

Source: SGS, 2015.

TABLE 24. CONSISTENCY WITH THE REQUIREMENTS

No.	Requirement	Addressed by the Proposal
1	Give effect to the objectives of this direction	Delivered and described in the above Table 23
2	Retain the areas and locations for existing business and industrial zones	This requirement will be met by the Proposal as the delivery of the additional business floorspace will be provided in a suitable location, retaining and supporting the employment role of the Newcastle city centre. The proposal does not result in the loss of areas and locations for existing business and industrial zones.
3	Not reduce the total potential floorspace area for employment uses and related public services in business zones	- Again, this requirement will be met by the proposal as it would deliver additional retail and commercial office floorspace in the Newcastle city centre. This floorspace is not expected to be dependent on the transfer of investment from existing employment lands. - Demand for floorspace is considerable and the proposal will not meet the demand to its entirety. Therefore the remaining demand will adequately support the current businesses within the existing employment lands.
4	Not reduce the total potential floorspace for industrial uses in industrial zones	This requirement will be met by the proposal as the rezoning of lands does not involve the rezoning away from industrially zoned land. It will not have any negative impacts on the existing industrial lands. Increased economic activity within the Newcastle city centre is likely to result in positive flow-on effects generating demand for industrial lands in the region. Furthermore, the reinforcing of the Newcastle city centre as the primary location for office commercial office and retail development in the region, reinforces the role of centres for these types of uses and of industrial zones for industrial uses (i.e. commercial office and retail are not encroaching on industrial areas).
5	Ensure that proposed new employment areas are in accordance with a strategy that is approved by the Director-General of the Department of Planning	This requirement is met by the proposal which is line with the Lower Hunter Regional Strategy, which outlines the Newcastle city centre as the Regional City. It also supports local City of Newcastle strategies which outline the importance of Newcastle city centre as the primary location for centre based employment.

Source: SGS, 2015.

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6 APPENDIX A – INPUT-OUTPUT METHODOLOGY

SGS utilises an input-output (IO) econometric modelling technique to convert the direct impacts of construction and operation of the construction works into indirect impacts in terms of employment, output and wealth generation at a regional level. For the purposes of this analysis, the regional economy is defined as the Newcastle LGA.

In essence, SGS takes the inter-industry relationships (buyer-supplier transaction) that are measured by the Australian Bureau of Statistics in the National Accounts, and scales these relationships down to a state level, i.e. using available datasets and accepted mathematical techniques. The results of this scaling process are a set of regional industry specific multipliers which estimate how spending in a specific regional industry, via the assessed direct impacts (stimuli), flows through to total regional:

- Output (or income): This measures the total amount of output (or income) induced across all industries by the requirement to satisfy the additional demand from the construction work.
- Value added Gross Regional Product (GRP): This is defined as the additional wages, salaries and supplements, and Gross Operating Surplus earned by local residents and businesses in the process of producing the extra output induced by the initial stimulus from the markets.
- Full time equivalent (FTE) jobs: This refers to the full time equivalent (FTE) positions of employment generated from the economic stimulus. Both direct and indirect flow-on effects are captured from the stimulus.

Key qualifications

Though a cost-effective and widely used technique for economic impact analysis, IO modelling has some limitations, as follows. The only feasible alternative to using IO modelling for economic impact assessments is to utilise partial or general equilibrium econometric models.

- The input output (econometric) model assumes relationships between industries are static over the forecast period. That is, productivity improvements are not factored in and historic relationships are assumed to hold.
- The input output (econometric) model derives relationships between industries using total production estimates. Consequently, the relationships are ‘average’, whereas the stimulus used as an input is ‘marginal’. Such an approach does not account for any ‘underutilised capacity’ at the industry level or additional economies of scale that might ensue, as production expands from its existing base.
- As already mentioned, all of the stimuli are assumed to be ‘new’ economic activities for each regional economy. That is, crowding out or industry substitution effects are assumed to be negligible, meaning that key economic inputs such as labour and capital are assumed to be unconstrained, i.e. there is sufficient slack in the economy to service these stimuli without transferring significant resources from other productive uses. It also means that the activities that are promoted by the subject project do not adversely affect operations elsewhere.

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Servicing Investigation

Newcastle Urban Transformation and Transport Program

Rezoning of Surplus Corridor Lands

Date:
May 2016

Document Control Sheet

Issue No.	Amendment	Date	Prepared By	Checked By
Draft	Preliminary Issue	26/06/2015	HW	AC
A	Draft	20/07/2015	HW	AC
B	Rezoning Submission	2/12/2015	HW	AC
C	Draft Report for client review	5/2/2016	HW	MK
D	Final Report	1/4/2016	MK	MK
E	Final Report	2/5/2016	MK	MK

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APPENDICES

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Appendix B	Cost Estimates
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1.0 Introduction

1.1 GENERAL

This report has been prepared to support the amendment to the Newcastle Local Environmental Plan (NLEP) 2012 that applies to the surplus rail corridor land ('rail corridor land') between Worth Place and Watt Street in Newcastle city centre (Figure 1).



Source: Hassell

Figure 1 – Rezoning Study Area

The Newcastle Urban Transformation and Transport Program ('Program') has been established to deliver on NSW Government's more than \$500 million commitment to revitalise the city centre through: the truncation of the heavy rail line at Wickham and creation of the Wickham Transport Interchange; the provision of a new light rail line from Wickham to the Beach; and the delivery of a package of urban transformation initiatives.

The transformation element of the Program aims to bring people back to the city centre by strengthening connections between the city and the waterfront, creating employment opportunities, providing more public space and amenity, and delivering better transport.

The proposed rezoning of the rail corridor land forms a part of the delivery of urban transformation initiatives, comprising a package of transport, built form and public domain improvements.

1.2 NEWCASTLE URBAN TRANSFORMATION

The Newcastle Urban Renewal Strategy (NURS) sets out the NSW Government's long term approach and vision for the revitalisation of Newcastle city centre to the year 2036.

The NURS identifies three character precincts in Newcastle city centre (West End, Civic and East End), within which significant housing and employment opportunities, together with built form and public domain changes and improvements exist. The NURS describes these precincts as:

- East End: residential, retail, leisure and entertainment;
- Civic: the government, business and cultural hub of the city;

- West End: the proposed future business district including the western end of Honeysuckle (Cottage Creek).

UrbanGrowth NSW has been directed by NSW Government to deliver on NURS through the Program, in partnership with Transport for NSW (TfNSW), the Hunter Development Corporation (HDC) and the City of Newcastle Council (Council).

1.3 SITE LOCATION

The rezoning site is located in Newcastle city centre and comprises a collection of land holdings within the surplus rail corridor lands.

The site is approximately 2.1km in length generally bounded by Wharf Road to the north, Watt Street to the east, Hunter and Scott Streets to the south and Worth Street to the west. The site includes Civic and Newcastle Stations.

Current Zoning

All rezoning sites are affected by the SP2 Infrastructure (Railway) zone under NLEP.

1.4 PROPOSED REZONING

UrbanGrowth NSW seeks to amend the Newcastle Local Environmental Plan 2012 (NLEP) to enable the delivery of the Program and the objectives of NURS planning outcomes.

Vision

The vision for the Program has been informed by feedback from the community, Council, government agencies and urban renewal experts.

Our vision is an activated city centre and waterfront that attracts people, new enterprises and tourism. Overtime, we see great opportunities to build on the strengths of the city centre to encourage innovative and enterprising industries to survive. In the longer term, we see an opportunity to strengthen Newcastle's position on the regional, national and international stage, with a view to stronger ties with Asia Pacific.

Program Objectives

The Program is underpinned by five objectives which will drive successful urban revitalisation:

- **Bring people back to the city centre.** Reimagining the city centre as an enhanced destination, supported by new employment, educational and housing opportunities and public domain that will attract people;
- **Connect the city to its waterfront.** Unite the city centre and the harbour to improve the experience of being in and moving around the city;
- **Help grow new jobs in the city centre.** Invest in initiatives that create jobs, with a focus on innovative industries, higher education initiatives to encourage a range of businesses to the city centre;

- **Create great places linked to new transport.** Integrate urban transformation with new, efficient transport to activate Hunter and Scott's Streets and return them to thriving main streets;
- **Creating economically sustainable public domain and community assets.** Leave a positive legacy for the people of Newcastle. Ensure that new public domain and community facilities can be maintained to a high standard into the future;
- **Preserve and enhance Heritage and culture.** Respect, maintain and enhance the unique heritage and character of Newcastle city centre through the revitalisation activities.

Urban Transformation Proposed Concept Plan

Rail corridor land runs through the East End and Civic city centre precincts (established by NURS).

Based on this vision and the results of extensive stakeholder and community engagement, an overall urban transformation concept plan ('concept plan') has been prepared for rail corridor (rezoning sites), as well as surrounding areas.

The concept plan considers and integrates with the delivery of light rail. It is also coordinated with the proposed Hunter Street Mall development to create an interactive, synergised and cohesive city centre and foreshore area.

The concept plan (as shown in Figure 4) includes five key 'key moves', two that relates to the Civic precinct and three of which relate to the East End.

1. Civic Link (Civic)

This area is the civic heart of Newcastle and includes some of the regions most important civic and cultural assets, including Civic Park, City Hall, Civic Theatre and Newcastle Museum. Current investment in the area includes the law courts development and the University of Newcastle NeW Space campus – both of which are under construction.

The focus of this key 'move' is to leverage best value from new investments by creating new open space and walking and cycling connections that link Newcastle's civic buildings to the waterfront and the light rail system.

- **Civic Green.** Creating a new civic focused public space linking Hunter Street to the Newcastle Museum that will provide direct visual and physical connection from Wheeler Place to the harbour, activate light rail on Hunter Street and meet the needs of the incoming legal and student populations;
- **Built form improvements.** Sensibly scaled mixed use development that forms part of the Honeysuckle development.

2. Darby Park (Civic)

Darby Street is Newcastle's premier 'eat street', offering a mix of shops, cafes, restaurants and night life. At present Darby Street ends at the intersection with Hunter Street, and this key 'move' seeks to create a new node of activity and linkage through to the harbour that complements the delivery of light rail.

- **Darby Park.** A new community focused public space with play facilities, including provision of new walking and cycling facilities from Hunter Street to the harbour;
- **Built form improvements.** Zoning of rail corridor land between Merewether Street and Argyle Street to allow for future mixed use development in conjunction with surrounding lands in the longer term.

3. Hunter Street Revitalisation (East End)

Hunter Street features some of Newcastle's best heritage buildings and offers a mix of shops, cafes, restaurants and other local business. Hunter Street has experienced decline in recent years, and the opportunity exists to reinstate Hunter Street as the regions premier main street and complements light rail.

- **Built form improvements.** Sensibly scaled mixed use development consistent with the adjoining land uses to create an activated street with 'two edges', celebrate heritage and create new linkages from Hunter Street to the waterfront, provide activation around light rail stops and improve walking and cycling facilities.

4. Entertainment Precinct (East End)

This key 'move' aims to create a place where people can come to play, relax and reconnect with the harbour in a new public space stretching from Scott Street to the waterfront incorporating a new connection from Market Street to Queens Wharf. This key 'move' assist to activate the area with a variety of activities to create an exciting place for the East End.

- **Recreational opportunities.** This precinct will incorporate the adaptive re-use of the signal box and provision of recreation opportunities for all ages and abilities. Public domain will be, designed to provide a thoughtful series of character areas and experiences as one walks the length. The area will also provide opportunities for viewing and interpretation of heritage character that respect the unique qualities of place.

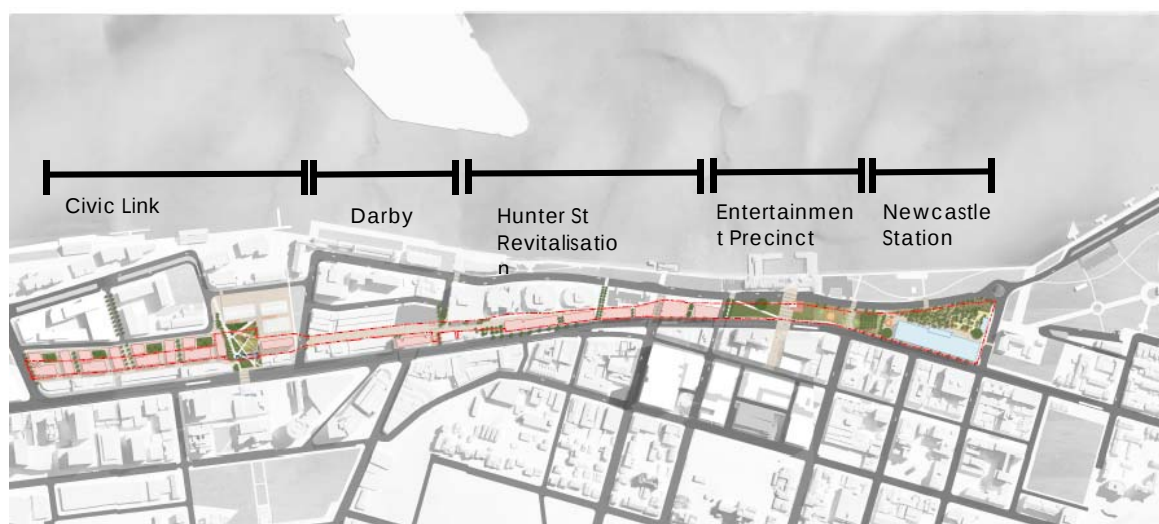
5. Newcastle Station (East End)

Newcastle Railway Station is proposed to be re-purposed into a hallmark destination and focal point for the new East End, accommodating enterprises and activities that attract visitors and stimulate the economy.

Refurbishment would fully respect and celebrate the heritage integrity of the Station, and could accommodate a range of different activities including community, retail, leisure and commercial uses.

Rezoning Concept Plan

The proposed rezoning of the rail corridor lands is the focus of this report. Figure 2 provides a red line to define the site rezoning area within the broader program planning outcomes.



Source: Hassell

Figure 2 – Rezoning Concept Plan

Amendments to the NLEP are required to deliver part of the concept plan. The proposed amendments are on surplus rail corridor land only.

Necessary amendments to the NLEP include:

- Amend the Land Use Zoning Map to introduce new B4 Mixed Use, SP3 Tourism and RE1 Public Recreation zones;
- Amend the Height of Building and Floor Space Ratio maps to facilitate development on select parcels of land;
- Reclassification of part of the rail surplus rail corridor to Community by amending Part 3 of Schedule 4 of the NLEP to rezone land for public open space;
- Amendment to the Land Reservation Acquisition Map to enable the proposed RE1 public open space land to be acquired by Newcastle Council;
- Amend the key maps (as referred to in Clause 7.5 of the NLEP) to include Newcastle Railway Station Heritage building.

The approach taken to the amendments is to support the NURS planning approach and to remain consistent with surrounding planning controls in terms of zones, floor space ratio (FSR) and height.

The concept plan will also form the basis for updates to the Newcastle City Centre Development Control Plan design controls to guide development and public domain works for rezoning sites.

Proposed Rezoning

This planning proposal seeks to rezone rail corridor land (rezoning sites) to enable the delivery of the proposed urban uses established in the concept plan.

An indication of the location of the proposed rezoning parcel is indicated in the map in Figure 3.



Source: Hassell

Figure 3 – Rezoning Explanatory Map – Parcels

The planning proposal concept plan includes public domain, entertainment, mixed use and commercial and residential development.

In general the proposed rezoning will provide a mix of uses with between 500-600 dwellings which will comprise a variety of styles and types, and around 5,000m² of commercial, restaurant and other entertainment uses, as described in Table 3.

Proposed rezoning controls respect existing controls that apply to surrounding land. This applies to maximum building height and floor space ratio standards.

Table 1 – Sites for Rezoning – Proposed Development Summary

	Parcel Code*	Purpose	Site area (m ²)	Current zone	Proposed zoning	Proposed floor space ratio	Proposed maximum building height (m)
Civic Link	1	Mixed use development	3,370	SP2 Infrastructure	B4 Mixed use	3:1	30
	2	Recreation	408	SP2 Infrastructure	B4 Mixed use	3:1	30
	3	Mixed use development	3,146	SP2 Infrastructure	B4 Mixed use	3:1	30
	4	Recreation	2,464	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	5	Mixed use development	1,603	SP2 Infrastructure	B4 Mixed use	3:1	24
	6	Road	295	SP2 Infrastructure	B4 Mixed use (road)	2.5:1	24
Darby Plaza	7	Mixed use development	2,040	SP2 Infrastructure	B4 Mixed use	2.5:1	30
	8	Mixed use development	988	SP2 Infrastructure	B4 Mixed use	4.1:1	N/A
	9	Recreation	467	SP2 Infrastructure	B4 Mixed use (road)	N/A	N/A
Hunter St Rev.	10	Infrastructure	386	SP2 Infrastructure	SP2 Infrastructure	N/A	N/A
	11	Mixed use development	4,542	SP2 Infrastructure	B4 Mixed use	2.5:1	14
	12	Mixed use development	1,544	SP2 Infrastructure	B4 Mixed use	2.5:1	17
	13	Recreation	303	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
	14	Mixed use development	2,251	SP2 Infrastructure	B4 Mixed use	2.5:1	14
Entertainment precinct	15	Recreation	7,713	SP2 Infrastructure	RE1 Public recreation	N/A	N/A
Newcastle Station	16	Recreation and mixed use development	10,698	SP2 Infrastructure	SP3 Tourist	1.5:1	Part 10m and 20m

Potential Rezoning Yields

Table 2 provide an estimate of possible gross floor area and Table 3 provides possible dwelling yield for the rezoning sites.

Table 2 – Anticipated Gross Floor Area

Precinct	Parcel	Gross Floor Area		
		Total	Non-resi (m ²)	Resi (m ²)
Civic Link	01	10,000	1,000	9,000
	02			
	03	9,000	1,000	8,000
	04			
	05	4,000	500	3,500
	06			
Darby Plaza	07	4,000	500	3,500
	08	2,000	200	1,800
	09			
Hunter Revitalisation St	10			
	11	11,000	1,000	10,000
	12	4,000	500	3,500
	13			
	14	6,500	500	5,500
Entertainment	15			
Newcastle Station	16			
	TOTAL	50,500	5,200	44,800

* Assumed that all sites can achieve full GFA entitlement

** Assumed GFA split =10% non-residential + 90% residential

Source: Hassell

***The end use of Newcastle Station is not yet known. For the purposes of load calculations it has been assumed that 100% of this Precinct will be developed. Loads have been based off commercial yields.

Table 3 – Anticipated Dwelling Yield

	Parcel	Number of Dwellings				
		Total	Studio	1 bed	2 bed	3 bed
			20%	35%	35%	10%
Civic Link	01	110	20	40	40	10
	02					
	03	100	20	35	35	10
	04					
	05	50	10	15	20	5
	06					
Darby Plaza	07	55	10	20	20	5
	08	25	5	10	10	
	09					
Hunter Revitalisation St	10					
	11	125	25	45	45	10
	12	50	10	20	15	5
	13					
	14	70	15	25	25	5
Entertainment	15					
Newcastle Station	16					
	TOTAL	555	115	210	210	50

* Assumed GFA per apartment = 80m² average (Source: Hassall)

UrbanGrowth NSW has been tasked to play a coordinating role in the repurposing of surplus land along the former heavy rail corridor between Wickham and Newcastle Beach. This entails the delivery of significant public domain spaces along with retail and residential development to support the revitalisation of Newcastle. The scale and mix of the redevelopment is subject to ongoing refinement based on community and stakeholder engagement.

ADW Johnson has been engaged to investigate available services to support this project and to identify any existing system constraints in terms of water, wastewater, electricity and communications.

For the purposes of investigation, the overall development site was broken down into seven (7) discrete catchments representing areas proposed for retail and residential development.

On the basis of the above, assessment of the existing services available to the site was undertaken and is presented below.

2.0 Development Mix

Based on the rezoning proposal, the development footprint was broken into wastewater and water servicing catchments. These areas are shown on Exhibit 1 along with surrounding existing water and wastewater infrastructure and the rezoning parcels.

It is noted that at this point in time development types and yields are indicative only for the purposes of estimating preliminary demands and are subject to ongoing community engagement and refinement. The estimated development Equivalent Tenements (ET) are summarised in Table 4 below.

Table 4 – Assumed Development Demand

Catchment	Rezoning Parcel	ET
1	1, 2, 3, 15, 16 & 17	149
2	4, 5 & 6	37
3	7, 8 & 18	-
4	9	94
5	10 & 11	35
6	12 & 13	55
7	14	15*
TOTAL		385

*The end use of Newcastle Station is not yet known. For the purposes of load calculations it has been assumed that 100% of this Precinct will be developed. Loads have been based off commercial yields.

Based on this development proposal, indicative water demand, wastewater loads and electrical and communications demands were determined. The water and wastewater demands calculated were referred to Hunter Water Corporation (HWC) for their advice on system capacity and Ausgrid and NBN Co were consulted in relation to the electrical and communications demands.

3.0 Water and Wastewater

3.1 DESIGN FLOWS

Design sewer and water flows based on the development proposal were estimated in accordance with the Water and Sewer Codes of Australia – Hunter Water Corporation Editions. These estimates are presented in Table 5 below. The location of the proposed development sites and a full breakdown of the calculated flows is shown in Exhibit 2.

Table 5 – Design Water and Wastewater Flows

Catchment	Water 95% ile + fire flow (l/s)	Wastewater Peak wet weather sewer flow (l/s)
1	22.5	13.9
2	20.7	3.7
3	0	0
4	21.7	8.8
5	20.7	3.6
6	21.0	5.4
7	20	0.8

Previous estimates of demands were forwarded to HWC to determine if the existing system is capable of supporting the proposed development. The HWC response is presented in Appendix A and is summarised below noting that the current development yields (approx. 385 ET) are lower than those referred to HWC (600 ET).

3.2 SERVICING CONSTRAINTS TO DEVELOPMENT - WATER

Based on the advice from HWC, water servicing for the redevelopment area is straightforward. Small reticulation upgrades are required to service some of the catchments as outlined in Table 6 below and as shown on Exhibit 3.

Table 6 – Indicative Upgrade Requirements

Catchment	Required Works ⁽¹⁾
1	DN150 x 400m watermain along Wright Lane. Thrust bore
2	No leadin works. Connect to ND200 PE main fronting site.
3	No leadin works. Connect to ND150 main fronting site.
4	Link DN250 to DN150 Hunter St to Wharf Road. DN150 x 150m. Thrust bore Hunter Street
5	DN150 x 100m watermain
6	DN150 x 150m watermain
7	No leadin. Connect to ND150 main fronting site.

⁽¹⁾ Pressure and fire requirements within the future buildings are subject to building hydraulic analyses. Works listed above are the requirements to supply in accordance with HWC licence obligations at the boundary of the development.

3.3 SERVICING CONSTRAINTS TO DEVELOPMENT - WASTEWATER

The majority of the proposed development sites sit within the wastewater pumping station area of Newcastle 2 Waste Water Pumping Station (WWPS). These are Catchments 2 – 7 with Catchment 1 located within Newcastle 12 WWPS. The location of these pumping stations is shown on Exhibit 1.

Advice received from HWC is that there will be no requirement for Pump Station upgrades, other than potentially minor reticulation upgrades to transfer flows to the pump stations.

4.0 Electrical

Power Solutions has been engaged to undertake an assessment of electrical and communications services for the Newcastle Urban Transformation project. Their report is attached at Appendix C. On the basis of preliminary discussions with Ausgrid, the load from the proposed development mix could be serviced off the existing 11kV HV network via a number of substations. The scale and type of likely substations is summarised from the Power Solutions report in Table 4 below. It is noted that the below upgrades are based on a higher demand than what is currently proposed.

Table 7 – Indicative Electrical Substation Requirements

Catchment	Suggested substation type	Indicative substation size (kVA)
1	Chamber	2 x 1,000
2	Kiosk	400
3	Chamber	750
4	Kiosk	600
5	Kiosk	600
6	Kiosk	600
7	Kiosk	600

There is an existing Ausgrid substation located on the northern side of the Hunter Street and Darby Street intersection. As part of the redevelopment of Catchment 3, this substation would either be relocated or incorporated into the proposed development. It should be noted that further investigation will be required to determine where the substation could be relocated considering the length of cable required and the subsequent voltage drops. Ausgrid would also need access arrangements and a potential easement created as part of any relocation.

5.0 Communications

NBN Co have been approached in relation to the communications servicing for the precinct. Whilst their policy is to not indicate service availability until a formal application is received, their preliminary advice is that servicing of the precinct with high bandwidth fibre can be installed as part of the development.

6.0 Gas

Gas services are readily available at the site. Jemena has advised that they will consider servicing the site once the full details are known. Due to the high density of the development and proximity of the site to existing services it is considered likely that Gas service will be provided as part of the development.

7.0 Conclusion

Based on the anticipated land uses and densities, the total proposed development footprint can be supplied with water with limited upgrades to the existing system as outlined above.

Advice received from HWC is that there will be no requirement for Pump Station upgrades. Minor upgrades to reticulation mains may be required.

Ausgrid have advised that there is sufficient capacity within their high voltage network to cater for the scale and type of development envisaged. It is noted that substations will be required off the high voltage network to service the individual catchments as outlined in the Power Solutions Report.

NBN Co were approached and provided preliminary advice that their network can be extended to provide broadband and communications servicing to the proposed development sites.

On the basis of those analyses, there are no significant issues that would preclude the proposed rezoning on the basis of water and wastewater infrastructure servicing, electricity and communications.

Appendix A

HWC RESPONSE



Hunter Water Corporation
ABN 46 228 513 446

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
(02) 4979 9468 (F)
enquiries@hunterwater.com.au
hunterwater.com.au

21 April 2016

HW2014-1017/1.020

UrbanGrowth NSW
PO Box 33
Newcastle NSW 2300

Attention: Steve Aebi

Dear Steve

CAPACITY REVIEW ASSESSMENT – NEWCASTLE INNER CITY – RAIL CORRIDOR AND NEWCASTLE MALL DEVELOPMENTS

I refer to our ongoing discussions regarding the provision of water and sewer services to the Newcastle Urban Renewal Project (Newcastle Urban Transformation and Transport Program). Due to the complex nature of system analysis Hunter Water undertook to carry out a detailed review of the potential servicing options within the inner city area, followed by a feasibility assessment of those potential options.

The information in this correspondence outlines potential servicing options based on the amended development proposals provided by UrbanGrowth for the inner Newcastle CBD.

Please note investigation undertaken is based on Hunter Water's knowledge of its system performance and other potential development in the area at the present time. Water and sewer systems are dynamic by nature and, as such, capacity availability and system performance vary over time. As a consequence, the advice provided herein regarding servicing availability is indicative only. A detailed analysis of available capacity will be undertaken upon lodgement of an application for a Notice of Formal Requirements.

The revised growth projections provided by UrbanGrowth are estimated to place an additional 600 Equivalent Tenements (ET) on the water supply and 600 ET on the wastewater systems. As a result of this analysis, the following information is offered: -

Water Supply

The site of the proposed developments is located in the Newcastle Water Supply System, and is supplied from the North Lambton and The Hill 2 Reservoirs. The development area has frontage to several DN100, DN150 and DN200 water mains, as shown in Figure 1 attached.

There is currently sufficient capacity within the local water supply zones for the proposed development. Small reticulation water main upgrades may be required to ensure adequate firefighting pressures to each building within the proposed development area. This will be determined for each stage of the developments upon lodgement of an application for a Notice of Formal Requirements.

Wastewater Transportation

The site of the proposed developments (as shown in Figure 2 attached) are located in the Newcastle 2 Wastewater Pumping Station (WWPS) and Newcastle 12 WWPS catchment areas.

The nearest sewer connection points to service these developments are the adjacent sewer mains along the length of the rail corridor and throughout the Newcastle Mall. It appears that flows from the developments may gravitate to these mains, although you should confirm by survey the suitability or otherwise of these points of connection to drain the whole development site.

An analysis of the sewer mains within the development area indicates that capacity may be available for the proposed development. Hunter Water is currently completing de-scaling and relining works on cast iron mains to which the proposed development may connect, which should increase capacity and reliability within these mains.

Depending on final hydraulic loads at the connection points and condition of the assets, some minor reticulation main upgrades may be required to transport flows to the pump stations. This will be determined for each stage of the development upon lodgement of an application for a Notice of Formal Requirements.

Newcastle 2 WWPS

Based on current growth forecasts, there is sufficient pumping capacity in Newcastle 2 WWPS for the proposed developments. The performance of Newcastle 2 WWPS will be monitored to ensure that growth connecting to this asset does not trigger an increase in overflows. Should an increase in capacity of Newcastle 2 be required, this would be funded by Hunter Water.

Newcastle 12 WWPS

There is sufficient capacity within the Newcastle 12 WWPS to allow connection from the proposed development.

Please note that components of the proposed development may be located over and/or adjacent to existing sewer mains. As such Hunter Water requires, that all buildings, structures, landscaping and improvements to the land which are located over or adjacent to the sewer main must not impose any loading on the sewer main nor interfere with or obstruct the sewer in conveying flows. It may also be necessary to replace or relocate sewer mains depending on the circumstances. Structures will need to comply with Hunter Water's Act with respect to the design and construction of all building, structures, landscaping and improvements (refer to the Commercial Build over Sewer main Policy attached). Build over sewer requirements will be determined upon lodgement of an application for a Notice of Formal Requirements.

Should you require further clarification or assistance please do not hesitate to contact me on 02 4979 9717.

Yours Sincerely



Brett Lewis
Manager Developer Services

21. 4. 16.

Figure 1 – Newcastle CBD water network

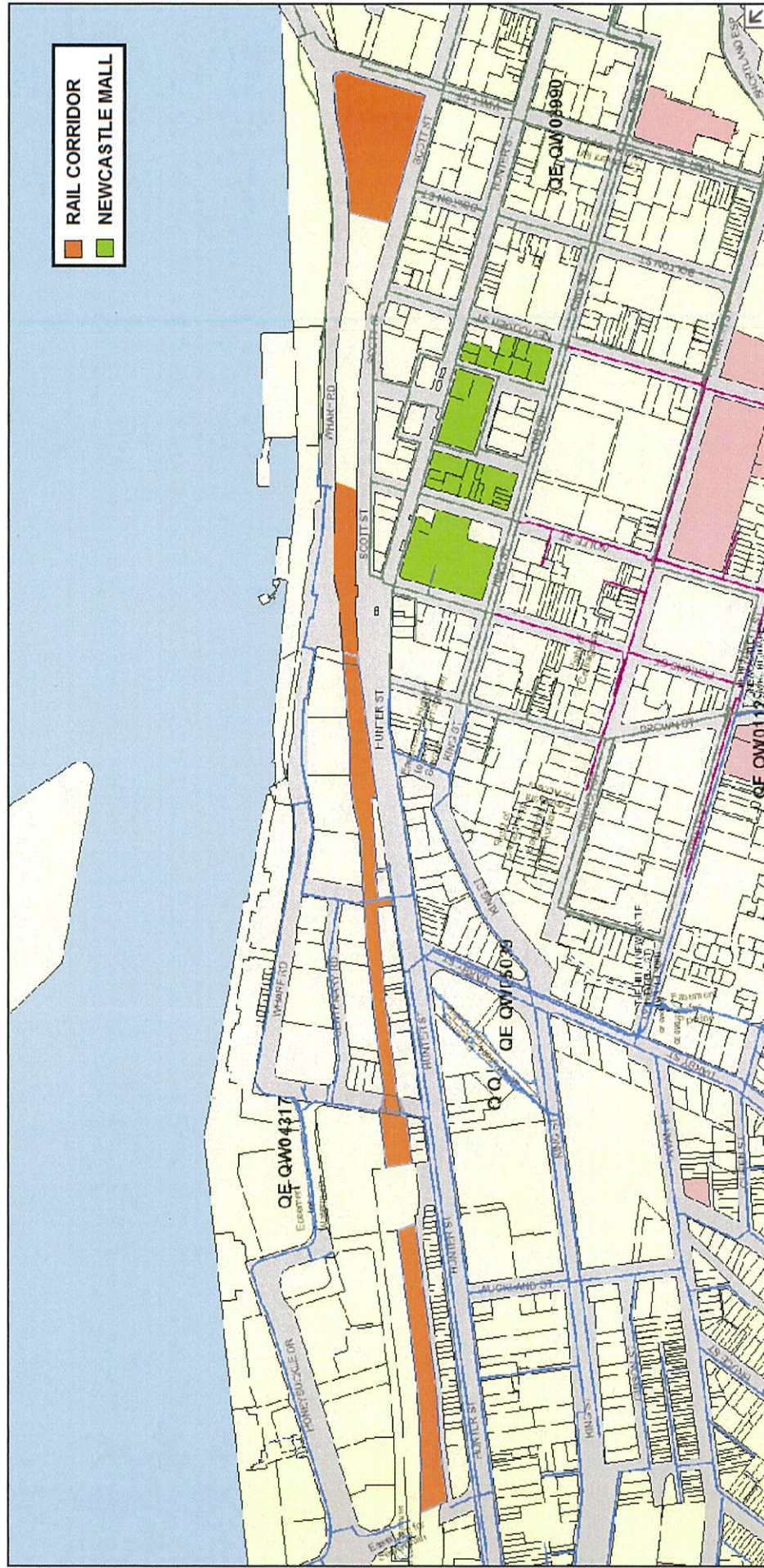


Figure 2 – Newcastle CBD wastewater network





BUILDING OVER SEWER ASSETS

PURPOSE

Hunter Water maintains a network of sewer mains within its area of operation. Under its Operating Licence Hunter Water is required to meet specified levels of performance with respect to the operation of this sewerage system. The sewerage network requires regular maintenance to ensure its continued operation. Access to underground pipelines is a key factor in providing prompt and cost effective maintenance. The presence of a building or structure over a sewer main restricts or may preclude Hunter Water from accessing the asset for repairs.

SCOPE

This policy applies to all developments proposing to build over or adjacent to Hunter Water's sewer network assets.

POLICY STATEMENT

The policy of Hunter Water is to ensure compliance with the legislation (Hunter Water Act, 1991, as amended) and requires all sewer network assets to be diverted clear of proposed buildings, structures, landscaping and improvements so as to ensure ongoing access to operate and maintain the asset.

Where Hunter Water agrees that there may be a suitably low residual risk, Hunter Water may require that the asset be replaced in-situ with flexible and more durable plastic pipe prior to building works commencing. This work is at the landowner's expense and can usually be carried out by an accredited contractor. Where existing sewer mains are located on the development lot, the landowner is required to undertake work so that the sewer mains comply with the latest Hunter Water Edition, WSAA Design Manual guidelines.

APPLICATION OF POLICY

This policy applies to any development, subdivision, building (residential, commercial or industrial), or any structure proposed to be placed over or adjacent to a sewer asset of Hunter Water.

Where subdivision is proposed and the future building alignments are not known, Hunter Water requires the existing sewer mains to be relocated adjacent to boundaries in accordance with the latest Hunter Water Edition WSAA Design Manual

All footings crossing or adjacent to a sewer main should be strengthened or underpinned to prevent loading upon the sewer and to protect the stability of the structure in the event of subsidence of the sewer trench, collapse of the sewer, or excavation by Hunter Water to repair or maintain the sewer. In this regard, it may be necessary to consult a competent designer or structural engineer.

Special consideration to footing design should extend to land within the Zone of Influence. This is a nominal strip of land (usually about twice as wide as the sewer is deep) within which the sewer main is centrally located. Ground conditions are an important consideration in determining the likely zone of influence and it may be necessary for you to engage a qualified Geotechnical Engineer to determine the appropriate design parameters influencing

the structural performance of proposed foundations, footings or piers. Hunter Water requires a minimum working clearance of 1.5 metres from the centre of any access chamber to a building wall.

The location of the sewer main can be determined from the plan attached to the Section 50 Notice of Requirements. A surveyor or building contractor engaged by the developer will confirm this location.

Hunter Water Corporation will not accept responsibility for future maintenance on the shaft and/or branch contained in or under the structure. Conversion of the structure to a habitable area, with or without plumbing fixtures, is not compliant with Plumbing Code of Australia and Australian/New Zealand Standard 3500 (AS/NZS 3500:1).

Enquiries on Hunter Water Corporation's Building Over Sewer Assets Policy should be directed to Hunter Water's 1300 657 657 number.

Appendix B

COST ESTIMATES

PROJECT DESCRIPTION: Catchment 1

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	All work not included elsewhere in this schedule	Item	Lump Sum	\$ 4,842.00	\$ 4,842.00	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0002	Site Establishment <Insert Max \$>	Item	Lump Sum	\$ 12,000.00	\$ 12,000.00	Payment: 100% after completion.
HW0003	Site Disestablishment <Insert Min \$>	Item	Lump Sum	\$ 12,000.00	\$ 12,000.00	Payment: 100% after completion.
HW0004	Preparation and implementation of the Construction EMP	Item	Lump Sum	\$ 4,000.00	\$ 4,000.00	Payment: Maximum of 30% on submission of complying Construction EMP; then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Construction EMP
HW0005	Preparation and implementation of the Safety Management Plan.	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: Maximum of 30% on submission of complying plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Safety Management Plan.
HW0006	Preparation and implementation of the Traffic Control Plan.	Item	Lump Sum	\$ 2,500.00	\$ 2,500.00	Payment: Maximum of 30% on submission of complying Traffic Control Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.
HW0007	Preparation and Implementation of Quality Management Plan	Item	Lump Sum	\$ 3,571.18	\$ 3,571.18	Payment: Maximum of 30% on submission of complying Quality Management Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.

Water Pipeline - Reticulation - section will be present if one or more reticulation watermain are specified

Item	Construction of Reticulation Watermain	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	Service Location	Item	Lump Sum	\$ 2,234.40	\$ 2,234.40	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0004	Supply all pipes materials including detector tape, pipe protection wrapping, rubber rings and lubricant for following pipe sizes:					Measurement: Actual metres (effective length) of pipe delivered to site. Submit: Relevant Quality Records including Compliance Certificates. Note: Limits of Accuracy to be inserted for each pipe size.
20FVSS	Nominal DN150 PVC pipe	400	m	\$ 34.00	\$ 13,600.00	
HW0005	Clear, excavate, lay, join, bed, backfill & test pipelines (installation). Up to 1.5 m depth to invert in OTR.					Measurement: Actual metres of pipe installed to design depth of excavation up to and including 1.5m. Retention: 10% <or other appropriate percentage> until satisfactory testing. Submit: Relevant Quality Records including as constructed lengths, levels and coordinates. Limits of Accuracy: <To be inserted>
20FVSS	Nominal DN150 PVC (Trench type B)	400	m	\$ 278.20	\$ 111,280.00	
HW0015	Supply & place ballast			\$ 90.00		Measurement: Actual tonnes placed as directed. Submit: Relevant Quality Records including certified weighbridge dockets. Limits of Accuracy: <To be inserted>
HW0018	Road / creek crossings					Measurement: Length in metres of casing installed. Submit: Relevant Quality Records. Limits of Accuracy: <To be inserted>
HW0018.01	DN150 Thrustbore Soil	30	m	\$ 598.67	\$ 17,960.00	
HW0027	Preparation of line sheets	400	m	\$ 1.16	\$ 464.00	Measurement: Length of pipelines constructed as per design. Limits of Accuracy: <To be inserted>
HW0029	Miscellaneous					
HW0000	Sub Total				\$145,538	

Item No.	Item Description	Qty	Unit	Amount \$	Application of Schedule of Rates
HW0009	Restoration - Pipelines:				Payment: 100% after completion.
HW0009.04	Concrete footpath	472	m2	\$ 165.00	\$ 77,880.00 Measurement: Square metres restored based on actual length by Minimum Trench Width. Limits of Accuracy: <To be inserted>
HW0013	Work as Constructed Information <Insert Min \$>	Item	Lump Sum	\$ 3,200.00	\$ 3,200.00 Payment: 100% at Practical Completion.

A. TOTAL ESTIMATED CONTRACT AWARD SUM \$ 274,531.58

B. PRE-CONSTRUCTION COST (Table 10)	
HW0016 Design	\$ 54,906.32
HW0017 Project Management of Design	\$ 20,981.26
HW0024 Community Consultation	
Sub Total (B1)	\$ 75,887.58
Pre construction contingency (30% of B1)	\$ 22,766.27
TOTAL PRE-CONSTRUCTION COST (B)	\$ 98,653.85

C. CONSTRUCTION COST	
Total Estimated Contract Award Sum (A)	\$ 274,531.58
HW0023 Construction Management (Table 11)	\$ 60,396.95
Sub Total (C1)	\$ 334,928.53
Construction contingency (Table 12) (30% of C1)	\$ 100,478.56
TOTAL CONSTRUCTION COST (C)	\$ 435,407.09

TOTAL PRELIMINARY PROJECT ESTIMATE (B+C) (Preliminary Estimate) \$ 534,060.94

PROJECT DESCRIPTION: Catchment 4

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	All work not included elsewhere in this schedule	Item	Lump Sum	\$ 2,327.00	\$ 2,327.00	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0002	Site Establishment <Insert Max \$>	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: 100% after completion.
HW0003	Site Disestablishment <Insert Min \$>	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: 100% after completion.
HW0004	Preparation and implementation of the Construction EMP	Item	Lump Sum	\$ 4,000.00	\$ 4,000.00	Payment: Maximum of 30% on submission of complying Construction EMP; then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Construction EMP
HW0005	Preparation and implementation of the Safety Management Plan.	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: Maximum of 30% on submission of complying plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Safety Management Plan.
HW0006	Preparation and implementation of the Traffic Control Plan.	Item	Lump Sum	\$ 2,500.00	\$ 2,500.00	Payment: Maximum of 30% on submission of complying Traffic Control Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.
HW0007	Preparation and Implementation of Quality Management Plan	Item	Lump Sum	\$ 2,313.67	\$ 2,313.67	Payment: Maximum of 30% on submission of complying Quality Management Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.

Water Pipeline - Reticulation - section will be present if one or more reticulation watermain are specified

Item	Construction of Reticulation Watermain	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	Service Location	Item	Lump Sum	\$ 837.90	\$ 837.90	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0004	Supply all pipes materials including detector tape, pipe protection wrapping, rubber rings and lubricant for following pipe sizes:					Measurement: Actual metres (effective length) of pipe delivered to site. Submit: Relevant Quality Records including Compliance Certificates. Note: Limits of Accuracy to be inserted for each pipe size.
20FVSS	Nominal DN150 PVC pipe	150	m	\$ 34.00	\$ 5,100.00	
HW0005	Clear, excavate, lay, join, bed, backfill & test pipelines (installation). Up to 1.5 m depth to invert in OTR.					Measurement: Actual metres of pipe installed to design depth of excavation up to and including 1.5m. Retention: 10% <or other appropriate percentage> until satisfactory testing. Submit: Relevant Quality Records including as constructed lengths, levels and coordinates. Limits of Accuracy: <To be inserted>
20FVSS	Nominal DN150 PVC (Trench type B)	150	m	\$ 278.20	\$ 41,730.00	
HW0015	Supply & place ballast			\$ 90.00		Measurement: Actual tonnes placed as directed. Submit: Relevant Quality Records including certified weighbridge dockets. Limits of Accuracy: <To be inserted>
HW0018	Road / creek crossings					Measurement: Length in metres of casing installed. Submit: Relevant Quality Records. Limits of Accuracy: <To be inserted>
HW0018.01	DN150 Thrustbore Soil	40	m	\$ 565.50	\$ 22,620.00	
HW0027	Preparation of line sheets	150	m	\$ 1.16	\$ 174.00	Measurement: Length of pipelines constructed as per design. Limits of Accuracy: <To be inserted>
HW0029	Miscellaneous					
HW0000	Sub Total				\$70,462	

Item No.	Item Description	Qty	Unit	Amount \$	Application of Schedule of Rates
HW0009	Restoration - Pipelines:				Payment: 100% after completion.
HW0009.04	Concrete footpath	177	m2	\$ 165.00	\$ 29,205.00 Measurement: Square metres restored based on actual length by Minimum Trench Width. Limits of Accuracy: <To be inserted>
HW0013	Work as Constructed Information <Insert Min \$>	Item	Lump Sum	\$ 1,200.00	\$ 1,200.00 Payment: 100% at Practical Completion.

A. TOTAL ESTIMATED CONTRACT AWARD SUM \$ 139,007.57

B. PRE-CONSTRUCTION COST (Table 10)	
HW0016 Design	\$ 27,801.51
HW0017 Project Management of Design	\$ 15,560.30
HW0024 Community Consultation	
Sub Total (B1)	\$ 43,361.82
Pre construction contingency (30% of B1)	\$ 13,008.55
TOTAL PRE-CONSTRUCTION COST (B)	\$ 56,370.36

C. CONSTRUCTION COST	
Total Estimated Contract Award Sum (A)	\$ 139,007.57
HW0023 Construction Management (Table 11)	\$ 5,000.00
Sub Total (C1)	\$ 144,007.57
Construction contingency (Table 12) (30% of C1)	\$ 43,202.27
TOTAL CONSTRUCTION COST (C)	\$ 187,209.84

TOTAL PRELIMINARY PROJECT ESTIMATE (B+C) (Preliminary Estimate) \$ 243,580.20

PROJECT DESCRIPTION: Catchment 5

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	All work not included elsewhere in this schedule	Item	Lump Sum	\$ 1,353.00	\$ 1,353.00	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0002	Site Establishment <Insert Max \$>	Item	Lump Sum	\$ 6,000.00	\$ 6,000.00	Payment: 100% after completion.
HW0003	Site Disestablishment <Insert Min \$>	Item	Lump Sum	\$ 6,000.00	\$ 6,000.00	Payment: 100% after completion.
HW0004	Preparation and implementation of the Construction EMP	Item	Lump Sum	\$ 4,000.00	\$ 4,000.00	Payment: Maximum of 30% on submission of complying Construction EMP; then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Construction EMP
HW0005	Preparation and implementation of the Safety Management Plan.	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: Maximum of 30% on submission of complying plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Safety Management Plan.
HW0006	Preparation and implementation of the Traffic Control Plan.	Item	Lump Sum	\$ 2,500.00	\$ 2,500.00	Payment: Maximum of 30% on submission of complying Traffic Control Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.
HW0007	Preparation and Implementation of Quality Management Plan	Item	Lump Sum	\$ 1,826.65	\$ 1,826.65	Payment: Maximum of 30% on submission of complying Quality Management Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.

Water Pipeline - Reticulation - section will be present if one or more reticulation watermain are specified

Item	Construction of Reticulation Watermain	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	Service Location	Item	Lump Sum	\$ 558.60	\$ 558.60	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0004	Supply all pipes materials including detector tape, pipe protection wrapping, rubber rings and lubricant for following pipe sizes:					Measurement: Actual metres (effective length) of pipe delivered to site. Submit: Relevant Quality Records including Compliance Certificates. Note: Limits of Accuracy to be inserted for each pipe size.
20FVSS	Nominal DN150 PVC pipe	100	m	\$ 34.00	\$ 3,400.00	
HW0005	Clear, excavate, lay, join, bed, backfill & test pipelines (installation). Up to 1.5 m depth to invert in OTR.					Measurement: Actual metres of pipe installed to design depth of excavation up to and including 1.5m. Retention: 10% <or other appropriate percentage> until satisfactory testing. Submit: Relevant Quality Records including as constructed lengths, levels and coordinates. Limits of Accuracy: <To be inserted>
20FVSS	Nominal DN150 PVC (Trench type B)	100	m	\$ 278.20	\$ 27,820.00	
HW0015	Supply & place ballast			\$ 90.00		Measurement: Actual tonnes placed as directed. Submit: Relevant Quality Records including certified weighbridge dockets. Limits of Accuracy: <To be inserted>
HW0027	Preparation of line sheets	100	m	\$ 1.16	\$ 116.00	Measurement: Length of pipelines constructed as per design. Limits of Accuracy: <To be inserted>
HW0029	Miscellaneous					
HW0000	Sub Total				\$31,895	

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0009	Restoration - Pipelines:					Payment: 100% after completion.
HW0009.04	Concrete footpath	118	m2	\$ 165.00	\$ 19,470.00	Measurement: Square metres restored based on actual length by Minimum Trench Width. Limits of Accuracy: <To be inserted>
HW0013	Work as Constructed Information <Insert Min \$>	Item	Lump Sum	\$ 800.00	\$ 800.00	Payment: 100% at Practical Completion.

A. TOTAL ESTIMATED CONTRACT AWARD SUM \$ 82,844.25

B. PRE-CONSTRUCTION COST (Table 10)	
HW0016 Design	\$ 16,568.85
HW0017 Project Management of Design	\$ 13,313.77
HW0024 Community Consultation	
Sub Total(B1)	\$ 29,882.62
Pre construction contingency (30% of B1)	\$ 8,964.79
TOTAL PRE-CONSTRUCTION COST (B)	\$ 38,847.41

C. CONSTRUCTION COST	
Total Estimated Contract Award Sum (A)	\$ 82,844.25
HW0023 Construction Management (Table 11)	\$ 5,000.00
Sub Total (C1)	\$ 87,844.25
Construction contingency (Table 12) (30% of C1)	\$ 26,353.28
TOTAL CONSTRUCTION COST (C)	\$ 114,197.53

TOTAL PRELIMINARY PROJECT ESTIMATE (B+C) (Preliminary Estimate) \$ 153,044.93

PROJECT DESCRIPTION: Catchment 6

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	All work not included elsewhere in this schedule	Item	Lump Sum	\$ 1,875.00	\$ 1,875.00	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0002	Site Establishment <Insert Max \$>	Item	Lump Sum	\$ 6,000.00	\$ 6,000.00	Payment: 100% after completion.
HW0003	Site Disestablishment <Insert Min \$>	Item	Lump Sum	\$ 6,000.00	\$ 6,000.00	Payment: 100% after completion.
HW0004	Preparation and implementation of the Construction EMP	Item	Lump Sum	\$ 4,000.00	\$ 4,000.00	Payment: Maximum of 30% on submission of complying Construction EMP; then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Construction EMP
HW0005	Preparation and implementation of the Safety Management Plan.	Item	Lump Sum	\$ 9,000.00	\$ 9,000.00	Payment: Maximum of 30% on submission of complying plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion. Submit: Safety Management Plan.
HW0006	Preparation and implementation of the Traffic Control Plan.	Item	Lump Sum	\$ 2,500.00	\$ 2,500.00	Payment: Maximum of 30% on submission of complying Traffic Control Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.
HW0007	Preparation and Implementation of Quality Management Plan	Item	Lump Sum	\$ 2,087.47	\$ 2,087.47	Payment: Maximum of 30% on submission of complying Quality Management Plan, then 10% per month up to maximum of 80%. Remainder at Practical Completion.

Water Pipeline - Reticulation - section will be present if one or more reticulation watermain are specified

Item	Construction of Reticulation Watermain	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0001	Service Location	Item	Lump Sum	\$ 837.90	\$ 837.90	Payment: Maximum of 10% shall be due each month until 70% of the amount has been paid. Remainder at Practical Completion.
HW0004	Supply all pipes materials including detector tape, pipe protection wrapping, rubber rings and lubricant for following pipe sizes:					Measurement: Actual metres (effective length) of pipe delivered to site. Submit: Relevant Quality Records including Compliance Certificates. Note: Limits of Accuracy to be inserted for each pipe size.
20FVSS	Nominal DN150 PVC pipe	150	m	\$ 34.00	\$ 5,100.00	
HW0005	Clear, excavate, lay, join, bed, backfill & test pipelines (installation). Up to 1.5 m depth to invert in OTR.					Measurement: Actual metres of pipe installed to design depth of excavation up to and including 1.5m. Retention: 10% <or other appropriate percentage> until satisfactory testing. Submit: Relevant Quality Records including as constructed lengths, levels and coordinates. Limits of Accuracy: <To be inserted>
20FVSS	Nominal DN150 PVC (Trench type B)	150	m	\$ 278.20	\$ 41,730.00	
HW0015	Supply & place ballast			\$ 90.00		Measurement: Actual tonnes placed as directed. Submit: Relevant Quality Records including certified weighbridge dockets. Limits of Accuracy: <To be inserted>
HW0027	Preparation of line sheets	150	m	\$ 1.16	\$ 174.00	Measurement: Length of pipelines constructed as per design. Limits of Accuracy: <To be inserted>
HW0029	Miscellaneous					
HW0000	Sub Total				\$47,842	

Item No.	Item Description	Qty	Unit	Rate \$/Unit	Amount \$	Application of Schedule of Rates
HW0009	Restoration - Pipelines:					Payment: 100% after completion.
HW0009.04	Concrete footpath	177	m2	\$ 165.00	\$ 29,205.00	Measurement: Square metres restored based on actual length by Minimum Trench Width. Limits of Accuracy: <To be inserted>
HW0013	Work as Constructed Information <Insert Min \$>	Item	Lump Sum	\$ 1,200.00	\$ 1,200.00	Payment: 100% at Practical Completion.

A. TOTAL ESTIMATED CONTRACT AWARD SUM \$ 109,709.37

B. PRE-CONSTRUCTION COST (Table 10)	
HW0016 Design	\$ 21,941.87
HW0017 Project Management of Design	\$ 14,388.37
HW0024 Community Consultation	
Sub Total(B1)	\$ 36,330.25
Pre construction contingency (30% of B1)	\$ 10,899.07
TOTAL PRE-CONSTRUCTION COST (B)	\$ 47,229.32

C. CONSTRUCTION COST	
Total Estimated Contract Award Sum (A)	\$ 109,709.37
HW0023 Construction Management (Table 11)	\$ 5,000.00
Sub Total (C1)	\$ 114,709.37
Construction contingency (Table 12) (30% of C1)	\$ 34,412.81
TOTAL CONSTRUCTION COST (C)	\$ 149,122.18

TOTAL PRELIMINARY PROJECT ESTIMATE (B+C) (Preliminary Estimate) \$ 196,351.50

Appendix C

ELECTRICAL AND COMMUNICATIONS SUPPLY REPORT



Newcastle Urban Transformation CBD Infrastructure Servicing Electrical & Telecommunications



215 Pacific Hwy CHALESTOWN NSW
810 Pacific Hwy GORDON NSW
PO BOX 278 CHARLESTOWN NSW 2290
1300 732 293 f: (02) 4923 8199
office@powersol.com.au

1. ELECTRICAL

1.1 Electrical Maximum Demand Estimates

The concept plans for the 7 nominated sites indicate an estimated total electrical load in the order of 3,300 kVA as detailed in the table below.

<i>Site</i>	<i>Approx Location</i>	<i>No of Apartments</i>	<i>Commercial Space m2</i>	<i>Est. Load (kVA)</i>
1C	Worth Place	380	7000	1600
2C	Merewether St	40	500	200
3C	Darby St	50	500	300
4D	Crown St	120	1500	500
5E	Brown St	140	2000	600
6E	Perkins St	100	1000	400
7F	Scott St	80	2000	500
Sum				4100
Diversity				0.8
Total				3280

1.2 Existing Services

Adjacent to the sites there are several existing Ausgrid 11kV underground cables which can be utilised to supply new substations at the development sites.

Preliminary advice from Ausgrid has been received indicating that at the present time their HV network has capacity to supply the proposed loads, subject to confirmation once formal connection applications are made.

Refer to Appendix A for full details of the advice they provided.

1.3 Proposed Substations

Each site is likely to require a dedicated substation to provide the required electrical service to the buildings. These substations, including the connection to the HV cables, are fully funded by the developer.

Until the building layouts and footprint on the development lots are determined, final details of the substations cannot be provided.

To assist in high level concept planning, we provide the following preliminary estimate of the likely substation types and rating.

<i>Site</i>	<i>Suggested Substation Type</i>	<i>Substation Size (kVA)</i>
1C	Chamber	2 x 1000 kVA
2C	Kiosk	400 kVA
3C	Chamber	750 kVA
4D	Kiosk	600 kVA
5E	Kiosk	600 kVA
6E	Kiosk	600 kVA
7F	Kiosk	600 kVA

1.4 Summary

Ausgrid has capacity in their existing HV network near the development sites to provide electrical servicing. This would be confirmed by them once load estimates are firmed up and formal connection applications are submitted.

To supply the proposed developments, dedicated substations will be required on each development lot.

These would be connected to the existing 11kV underground cables in the vicinity of the sites.

2. TELECOMMUNICATIONS – NBNCO

Under current Federal Government policy, NBN Co is to be the standard provider of telecommunications services to new larger developments.

2.1 NBNco Servicing Advice

Comment from NBNco regarding their potential servicing of the developments was requested.

As their policy is not to indicate service availability until a formal application for service is made, they would only provide a general response as listed in Appendix B.

NBNco has given preliminary advice that provision of high bandwidth optical fibre broadband can be installed as part of the developments.

APPENDIX A – RESPONSE FROM AUSGRID

APPENDIX B – RESPONSE FROM NBN CO



Address all relevant correspondence to:

Ausgrid Contestability Section
PO Box 487
Newcastle NSW 2300

E: Contestability@ausgrid.com.au
F: 02 49101842

05.05.2015

Power Solutions Pty Ltd
PO Box 278
Charlestown NSW 2290

Project Number: 700001816

Dear Dave

Electricity Network Connection Application at: Multiple locations along the Newcastle CBD Rail Corridor.

I refer to your preliminary enquiry received regarding the electricity connection at the above address and provide the following information.

The proposed Newcastle CBD rail corridor development is classified as urban type load and may require an alternate 11kV supply for the proposed development stages.

Outcome

- ☐ All sites have access to feeders that can supply the proposed load. Minor network alterations will be needed for connections.
- ☐ The future network capacity is also dependant on other developments in the area.
- ☐ The proposed Newcastle CBD rail corridor development will be classified as an 'Urban' development and will require further analysis for the proposed stages/sites.
- ☐ The 11kV connection options and network upgrade works will be dependent upon the final arrangement and staging of the development. Additional information is required from the developer to determine a preferred 11kV supply strategy.
- ☐ We advise that you need to submit a Connection Application Form, which will then be managed by the Contestability group.

The information presented is based on high level analysis. Further information on designs and loading are required for a detailed analysis.

Planning Considerations

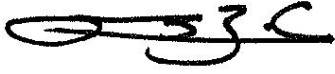
There are many influencing factors that could affect the available supply capacity including but not limited to other developments, future network augmentation, load growth and policy changes. This preliminary response is based on information available at the time and may change into the future.

It should be noted that the above advise is based on Ausgrid's policies and network status as of today. Both of these are subject to change.

Connections to the Ausgrid network are governed by a set of laws and rules referred to as the National Energy Customer Framework (NECF). Included in the NECF is the National Electricity Rules (NER). Under these rules, a binding contract may only be formed after a connection application is lodged and Ausgrid has made a connection offer in response to that application. Accordingly, to make arrangements for the electricity connection of the development to the Ausgrid network you should lodge a completed connection application.

Should you require any further information please contact me on the phone number or email address detailed below.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'JB', with a horizontal line extending to the right.

Jacob Bayley
Contestability Project Coordinator
Ausgrid

Direct Telephone Number: 02 43258582
Email: jbayley@ausgrid.com.au
Facsimile: 02 49101842

Tuesday 26 May 2015

Steve Goman
Powersol
sgoman@powersol.com.au

Dear Developer,

You have contacted NBN Co in relation to the possible installation of fibre infrastructure at **Hunter St, Newcastle NSW**.

NBN Co has determined that your new development is within the NBN fibre footprint.

Once Powersol has submitted a formal application and we have concluded an agreement on NBN Co's terms and conditions (including in relation to the construction of pit and pipe infrastructure at the development), then provided you comply with the terms and conditions of that agreement, NBN Co will agree to procure the installation of fibre infrastructure at the development.

Regards,



NBN Co New Developments

Erica Kearnes
Contracts Administrator