
ADDITIONAL CROSSING OF THE CLARENCE RIVER AT GRAFTON

Appendix I – Technical Paper: Socio-economic assessment

AUGUST 2014



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ABBREVIATIONS AND GLOSSARY

ABS	Australian Bureau of Statistics
ARTC	Australian Rail Track Corporation
CBD	Central Business District
Council	Clarence Valley Council
DG	Director-General of the former Department of Planning and Infrastructure
EP&A Act	Environmental Planning and Assessment Act 1979
Grafton Urban Centre	This term is used to refer to the Grafton Urban Centre Locality as defined by the ABS. It includes the suburbs of Grafton and South Grafton.
GRP	Gross Regional Product
LGA	Local Government Area
Roads and Maritime	Roads and Maritime Services
SEIFA	Socio-Economic Indexes for Areas
TAFE	Technical and Further Education institution
The project	Additional Crossing of the Clarence River at Grafton
Project area	The area which encompasses the project during operation and construction, including: • Operational road boundary • Permanent ancillary elements such as operational detention basin and pump station in Grafton • Construction work zone, which includes temporary facilities such as South Grafton ancillary site, Pound Street ancillary site and the jetty for barge launching • Flood mitigation works construction zone, which includes temporary stockpile areas
Study area	The study area encompasses the project area and any adjoining or adjacent area where potential indirect impacts may occur

EXECUTIVE SUMMARY

This report has been prepared by BBC Consulting Planners on behalf of Roads and Maritime Services (Roads and Maritime) to assess the potential socio-economic, property and land use impacts of the Roads and Maritime proposed additional crossing of the Clarence River at Grafton (the project) on the local and regional community.

The study has been carried out to address the Director General's environmental assessment requirements including:

- An assessment of social and economic impacts on the local community and community facilities directly impacted by the project
- An assessment of impacts on:
 - Access and use of the Clarence River and its banks, including fisheries, tourism, and recreational use
 - Regionally significant farmland
 - Crown land.

The assessment focuses on the city of Grafton which includes the suburbs of South Grafton, Grafton and Junction Hill. At the regional level consideration is given to Clarence Valley Council area.

Project overview

Roads and Maritime is seeking approval for an additional crossing of the Clarence River at Grafton on the NSW Mid North Coast. The project involves:

- Construction of a new bridge over the Clarence River about 70 metres downstream (east) of the existing road and rail bridge, comprising two traffic lanes
- Construction of a new road to link the new bridge with Iolanthe Street in South Grafton
- Construction of a new road to link the new bridge with Pound Street in Grafton
- An approach viaduct, about 58 metres long, on the South Grafton side of the Clarence River and 29 metres long on the Grafton side
- Upgrades to the road network in Grafton and South Grafton to connect the new bridge to the existing road network
- Replacement of the existing three span concrete arch rail viaduct which crosses Pound Street in Grafton with a single span steel truss bridge
- Construction of a pedestrian and cycle path to provide connectivity between Grafton, South Grafton and the new bridge
- Provision of two pedestrian crossings with lights in South Grafton to improve safety for pedestrians crossing Iolanthe Street and Gwydir Highway
- Construction of new pedestrian links to connect the new bridge with the existing bridge
- Provision of designated car park spaces in Pound Street and Clarence Street, including some off street parking, to maintain a similar number of existing car park spaces currently available in those two streets
- Flood mitigation works, which include raising the height of sections of the existing levee upstream from the new bridge in Grafton and South Grafton

- Construction of a stormwater detention basin and pump station in Grafton to manage local flooding
- Public utilities adjustment
- Ancillary facilities required for the construction of the project, including some or all of the following: site compounds, concrete batching plant, pre-cast facilities, and stockpile areas for materials and temporary storage of spoil and mulch.

Existing environment

A review of the existing socio-economic environment property and land use of the study area has been conducted and is summarised below.

Key characteristics of the existing socio-economic environment of the study area include:

- The Clarence Valley Local Government Area (LGA) had a total population of 49,665 in 2011. NSW Planning and Environment has estimated that the population of the Clarence Valley LGA would reach 52,900 by 2021 and 53,900 by 2031
- The Grafton Urban Centre was recorded as having 6,404 occupied private dwellings in 2011 with the majority being separate houses (75.9 per cent)
- Average household weekly incomes in the LGA are significantly lower than the average for NSW
- Nearly 90 per cent of work trips by Grafton residents is by car either as a driver or passenger
- Similarly a high percentage of tourism trips are by car
- Around 86.2 per cent of the households in the LGA owned at least one car
- There is a slightly higher incidence of social disadvantage in the Grafton Urban Centre based on the ABS social disadvantage index
- The majority of the workforce resides within the Clarence Valley LGA (94.8 per cent)
- The gross regional product (GRP) for Clarence Valley increased by 6.7 per cent to \$2.0 billion in 2011/12, above the state average growth of 2.4 per cent. Clarence Valley contributed 16.5% and 0.4%, respectively, to the gross products of the Northern Rivers region (\$12.0 billion) and New South Wales (\$455.3 billion) in 2011/12
- Sectors employing the most people include health care and social assistance, retail trade, accommodation and food services, public administration and safety, education and training, manufacturing, construction and agriculture, forestry and fishing
- Clarence Valley has a greater industry concentration than the national economy in the agriculture, forestry and fishing, accommodation and food services, public administration and safety, retail trade, and health education and utility services
- Tourism is important to the local economy with significant employment in accommodation and food services and Grafton considered as a regional tourist hub
- A range of transport services are available in Grafton including bus, rail, road and air transport
- Road users travelling between Grafton and South Grafton, including those making both local and through trips, use the bridge as there is no practical alternative route

- Grafton functions as a major regional centre providing a focus for services to the Clarence Valley community accommodating regional educational, health, community and recreational services, and provides outreach services to smaller centres
- It provides a primary focus for commercial activity and is the administrative centre for State government with the main retail and commercial business area in Prince and Fitzroy streets
- The Clarence River at Grafton is used for a variety of commercial (extractive industry) and recreational purposes with the foreshore area used for passive recreation and river access
- The existing levee at Grafton is constructed through a variety of rural and urban land uses and comprises earth mounds, brick walls and building structures in some areas
- The study area contains minor amounts of regionally significant farmland
- Community values considered important to quality of life, sense of belonging and community diversity include maintenance of town and neighbourhood character, high quality lifestyle and amenity, good and safe accessibility and connectivity, a recognised need for infrastructure and planning and benefits of lifestyle, amenity and safety to be experienced by all.

Potential impacts

The construction and operation of the project are likely to have a range of potential impacts on the social and economic, property and land use environments as summarised below.

Socio-economic impact

- Creation of additional jobs during construction that can be partially met by the existing labour force and additional demand for temporary accommodation, materials and supplies for construction and other local businesses
- The project would enable continued growth of employment and population consistent with regional growth management strategies of State and local government
- The diversion of traffic from existing routes may have minor adverse impacts on businesses on Fitzroy Street and Bent Street
- Changes to traffic conditions on Pound Street between the new bridge embankment and Villiers Street will restrict movements into and out of existing properties
- A cluster of businesses in Pound Street (between Clarence Street and Duke Street) is likely to benefit from the diversion of traffic from existing routes

Property impact

- Direct impacts to residents affected by (whole or partial) acquisition of 48 properties to build the project.
- Direct impacts to one commercial business (community hall) and passive open space areas through acquisition
- Impacts on approximately 6.8 hectares of regionally significant farmland, located across two rural properties in South Grafton which is minor compared to the amount of regionally significant farmland
- Impact on Crown land limited to works on the bed of Clarence River and for flood mitigation on some recreation reserves

Amenity impact

- The amenity of residents along Greaves Street and Pound Street and nearby communities due to the proximity of the additional bridge and potential for increase in traffic along Pound Street
- Changes in local movement with the closure of Pound Street at Kent Street requiring choice of alternative local travel routes
- Greater physical separation between dwellings on the western side of Pound and the residential community to the east
- Temporary impacts on the amenity of residents and road users as a result of construction work (e.g. noise and vibration impacts)
- Road safety improvements from the removal of larger trucks from the existing bridge and improved access for service delivery and emergency services
- The visual and landscape character of area will be affected by changed views of the existing heritage bridge and the changed character of Pound Street north of the additional crossing

Access and connectivity impact

- Changes to access arrangements to residential and agricultural properties on Butters Lane, off Iolanthe Street in South Grafton
- Change to access arrangements and location of on-street parking for the Grafton TAFE Campus
- Reduced accessibility to the Clarence River Visitor Information Centre from proposed left in and left out access and reduced visibility of the centre from tourists entering Grafton from the north
- Reduced traffic congestion and travel time during peak hours
- Connections between Grafton and South Grafton would be improved resulting in economic and social benefits through improved access to employment, health and community services, retail and community centres and recreation sites
- Connectivity would improve between the Iolanthe Street business area in South Grafton and Grafton generally
- The project would also provide better connectivity to the Clarenza growth area, the South Grafton growth area, and between the Grafton and South Grafton CBDs.
- The project would provide opportunities for improvements to the public transport network by reduced congestion on the network and potential for additional bus routes
- Improvements to pedestrian and cyclist access across the river including the provision of pedestrian and cycle paths and linkages to existing networks.

Impact on social and recreational infrastructure

- Minor reduction in passive open space in Grafton and South Grafton as a result of property acquisition for the project
- Improved accessibility to existing community facilities
- Impacts on recreational activities on the river during construction and to a lesser extent during operation
- Impacts on access to the Clarence River Visitor Information Centre

- Access from Pound Street to the Gummyaney Aboriginal Preschool would change

Mitigation measures

The implementation of mitigation and management measures would help to avoid or mitigate potential impacts on the social and economic environment during construction and operation. This report outlines a range of measures for managing, avoiding or mitigating potential socio-economic property and land use impacts and maximising or enhancing the project's benefits.

The concept design for the project has been developed using an iterative approach based on the findings of the impact assessment, including the results of specialist studies and consultation.

As a result, a number of measures for avoiding and minimising adverse impacts have already been incorporated into the concept design. Additionally, Roads and Maritime has undertaken community and stakeholder engagement on a number of matters and will continue to consult, as required, during the detailed design and construction phases of the project (should the project be approved).

1. INTRODUCTION

1.1 The Project

NSW Roads and Maritime Services (Roads and Maritime) is seeking approval for an additional crossing of the Clarence River at Grafton (the project). This is a State Significant Infrastructure Project for which approval is sought under Part 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

A description of the project is provided in Chapter 5 and Chapter 6 of the environmental impact statement (EIS). This section provides a summary of the project.

The main components of the Grafton Bridge project are:

- Construction of a new bridge over the Clarence River about 70 metres downstream (east) of the existing road and rail bridge, comprising two traffic lanes
- Construction of a new road to link the new bridge with Iolanthe Street in South Grafton
- Construction of a new road to link the new bridge with Pound Street in Grafton
- An approach viaduct, about 58 metres long, on the South Grafton side of the Clarence River and 29 metres long on the Grafton side.
- Upgrades to the road network in South Grafton to connect the new bridge to the existing road network, including:
 - Widening Iolanthe Street to four lanes
 - Widening the Gwydir Highway to four lanes between Bent Street and the Pacific Highway
 - Realigning the existing Pacific Highway to join Iolanthe Street near Through Street
 - Providing a new roundabout at the intersection of the Pacific Highway and Gwydir Highway
 - Providing a new roundabout at the intersection of Through Street and Iolanthe Street
 - Limiting Spring Street and the Old Pacific Highway to left in and left out only where they meet Iolanthe Street
 - Realigning Butters Lane
- Upgrades to the road network in Grafton to connect the new bridge to the existing road network, including:
 - Widening Pound Street to four lanes between Villiers Street and the approach to the new bridge
 - Providing traffic signals at the intersection at Pound Street and Clarence Street
 - Closing Kent Street where it is crossed by the bridge approach road
 - Realigning and lowering Greaves Street beneath the new bridge
 - Realigning Bridge Street to join directly to the southern part of Pound Street (east of the new bridge approach). There would be no direct connection between Pound Street south and the new bridge approach
 - Widening Clarence Street to provide formal car park spaces
 - Minor modifications to the existing Dobie Street and Villiers Street roundabout.

- Replacement of the existing three span concrete arch rail viaduct which crosses Pound Street in Grafton with a single span steel truss bridge
- Construction of a pedestrian and cycle path to provide connectivity between Grafton, South Grafton and the new bridge
- Provision of two pedestrian crossings with lights in South Grafton to improve safety for pedestrians crossing Iolanthe Street and Gwydir Highway
- Construction of new pedestrian links to connect the new bridge with the existing bridge
- Provision of designated car park spaces in Pound Street and Clarence Street, including some off street parking, to maintain a similar number of existing car park spaces currently available in those two street
- Flood mitigation works, which include raising the height of sections of the existing levee upstream from the new bridge in Grafton and South Grafton
- Construction of a stormwater detention basin and pump station in Grafton to manage local flooding
- Public utilities adjustment
- Ancillary facilities required for the construction of the project, including some or all of the following: site compounds, concrete batching plant, pre-cast facilities, and stockpile areas for materials and temporary storage of spoil and mulch.

The main elements of the project including the construction footprint of the project are shown in Appendix 1.

The traffic modelling for the project documented in *Technical Paper: Traffic and Transport Assessment (Arup, 2014)* report submitted with the EIS suggests that not all of the upgrades for the South Grafton local road network would be needed at year of opening. While the overall project would be built as described above, Roads and Maritime may provide the possible initial upgrades in South Grafton at year of opening with a view to completing the ultimate upgrades as traffic volumes increase. The possible initial upgrades are shown in Appendix 1.

1.2 Background

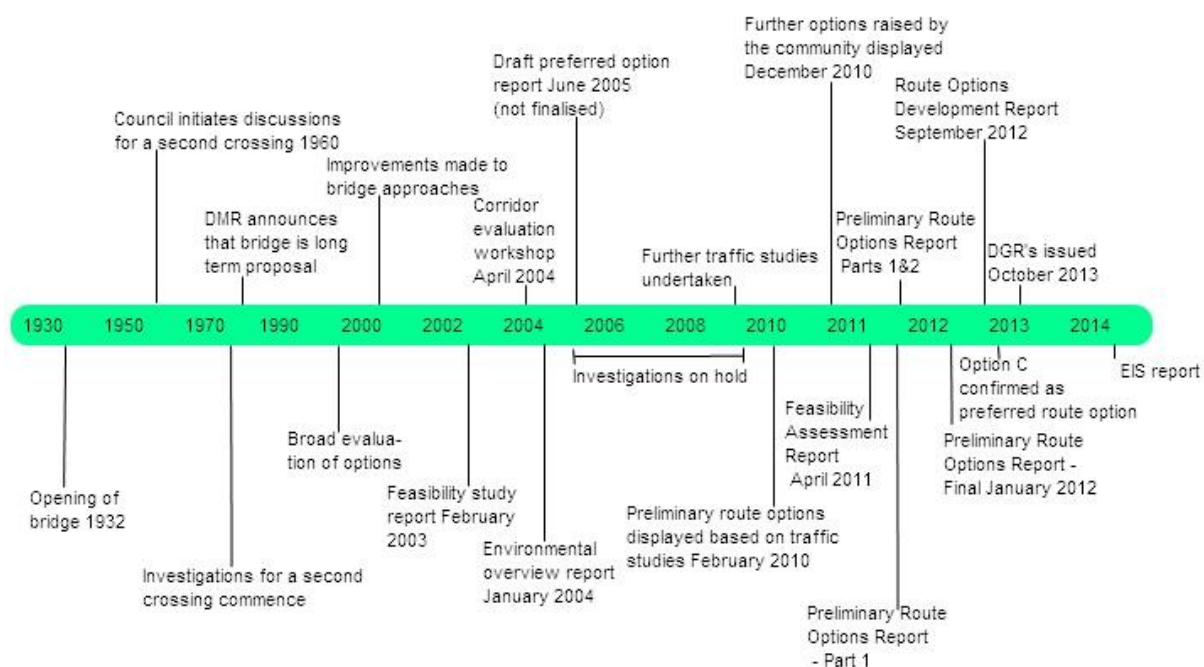
Originally opened in 1932, the Grafton Bridge was constructed as a two deck bridge to carry both vehicular and pedestrian traffic as well as a railway line across the Clarence River, connecting the town centre of Grafton with South Grafton and allowing the north coast railway line to connect NSW and Queensland.

The existing bridge is an important icon for local and regional communities. It is listed on the State Heritage Register. It was one of the largest railway bascules built in Australia and is the only bridge in NSW to carry road and rail traffic on two separate levels. It is unique as rail signals were originally used to control road traffic.

Since the early 1970s there have been various discussions and studies into an additional crossing of the Clarence River near Grafton. A number of these studies have been carried out during the past ten years. In 1977 the NSW Department of Main Roads identified that a new bridge should align along Bent Street and Fitzroy Street, recognising that at that time an additional river crossing was not an immediate priority but a long term proposal.

A timeline depicting the evolution of discussions and studies into an additional crossing of the Clarence River since the current bridge opened in 1932 is shown in Figure 1 below.

Figure 1: Timeline of discussions and studies into an additional crossing of the Clarence River



In 2002 the NSW Government began formal investigations into an additional crossing of the Clarence River in Grafton. The investigations were deferred in September 2005 and restarted in 2009.

In December 2010 Roads and Maritime announced a revised approach to engage more effectively with the community and stakeholders in identifying a preferred route for an additional crossing. A community update issued in December 2010 identified 13 preliminary route options and invited community comment via a postal survey. Subsequent phone and business surveys were also carried out.

In June 2011 RMS published the *Feasibility Assessment Report* which described the assessment undertaken of the 41 suggestions identified after the December 2010 to March 2011 community consultation period. Twenty-five preliminary route options in five corridors were identified for engineering and environmental investigation.

In January 2012 six route options were announced for further investigation. The short-listed options and short-listing process are documented in the *Preliminary Route Options Report – Final* (RMS, January 2012).

Design refinements and further field and technical investigations were undertaken on the six route options. These were documented in the *Route Options Development Report* (RMS, September 2012).

The six route options were subject to consultation and assessment process in September, October and November 2012 to identify the preferred location for the additional crossing. Based on community feedback, technical investigations and value management workshops Option C was selected as the preferred option which connects the Pacific Highway near the junction with Gwydir Highway in South Grafton to Pound Street in Grafton.

The *Recommended Preferred Option Report* (RMS, December 2012) documents the process followed for the assessment of the six short-listed route options and the identification of a recommended preferred option. It also provides information on community involvement and feedback received after the display of the Route Options Development Report (RMS, September 2012).

The *Recommended Preferred Option Report* (RMS, December 2012) was placed on exhibition from 19 December 2012 to 4 March 2013. A number of supporting consultation activities were undertaken to ensure that information was received by the wider community and opportunities were available for comment and questions. The exhibition period, during which comments on the report were invited, was initially due to finish on 18 February 2013, but was extended until 4 March 2013 to allow members of the community impacted by floods in Grafton additional time to comment.

In April 2013, Option C was confirmed as the preferred option for an additional crossing of the Clarence River at Grafton. Refinements were made to the recommended preferred option after Roads and Maritime review of the preliminary design, stakeholder consultation and feedback received during the public display of the *Recommended Preferred Option Report* (Roads and Maritime, December 2012).

The concept design for the project has been further refined to define those elements of the preferred option that are required to provide acceptable traffic performance at least to year 2039 and to take into consideration issues raised during consultation of general community and stakeholders.

1.3 Study objectives and requirements

1.3.1 Study objective

This socio-economic assessment has been carried out as a specialist component of the EIS being prepared to address the Director General's Environmental Assessment Requirements for the project (outlined below). The overall objective of this report is to identify and assess the potential socio-economic impacts to the community as a result of the construction and operation of the project and, where required, identify feasible impact mitigation measures.

1.3.2 Study requirements

On 3 October 2013, the Director General of the former Department of Planning and Infrastructure issued the Director General's Environmental Assessment Requirements for the EIS.

This report addresses the Director General's environmental assessment requirements for the social and economic environment. These requirements and where they are addressed within this report are outlined in Table 1.

Table 1: Director General's Environmental Assessment Requirements

Requirement	Where addressed
Social and economic	
An assessment of social and economic impacts on the local community and community facilities directly impacted by the project	Sections 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.2, 3.3, 3.4, 3.5, 3.6 and 3.7
An assessment of impacts on: - access and use of the Clarence River and its banks, including fisheries, tourism, and recreational use, - regionally significant farmland, and - Crown land.	Sections 2.5 and 3.3

1.3.3 Social impact definitions

There are many definitions of social impacts. Two definitions suitable to the present assessment are:

Significant events experienced by people as changes in one or all of the following:

- *People's way of life – how they live, work, play and interact with one another on a day to day basis.*
- *Their culture – shared beliefs, customs and values.*
- *Their community – its cohesion, stability, character, services and facilities.¹*

And

By social impacts we mean the consequences to human populations of any public or private actions- that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalise their cognition of themselves and their society.²

Social impact assessment is the analysis of social changes and impacts on community that are likely to occur as a result of a particular project.

¹ "Social Impact Assessment for Local Government: A Handbook for Councillors. Town Planners and Social Planners" (1995) NSW Office of Social Policy.

² "Principles and guidelines for social impact assessment in the USA" by The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment, Impact Assessment and Project Appraisal, volume 21, number 3, September 2003.

1.4 Methodology

The social impact assessment has involved the following:

1. **Scoping.** Identify the range of issues of concern relevant to the social and economic environment of the study area and the nature of the likely impact of the project.
2. **Social and economic environment.** Describe the existing social and economic environment of the study area to provide an understanding of the potentially affected groups or communities.
3. **Assessment.** Identify and assess the social and economic benefits or impacts of the project, who is affected, to what extent and for how long.
4. **Mitigation.** How can the potential impacts of this project best be managed or avoided and the potential benefits of the project maximised.

These steps are further described in the following sections.

1.4.1 Scoping

The scoping of issues involves consideration of the range of potential socio-economic impacts of the project. Factors influencing the range of potential impacts include:

- Previous social and economic assessments undertaken during the options analysis phase of the project
- The Director General's environmental assessment requirements
- Site visits of the study area including a visual survey of land uses near to the existing bridge and its approaches and near to the project
- Consultation undertaken for the project during the options analysis phase and as part of the preparation of this EIS including a survey of local businesses and other stakeholders and feedback on the preferred option.

1.4.2 Social and economic environment

A description of the existing social and economic environment provides a basis for predicting likely changes and impact management strategies. It includes:

- Review of existing State and local government strategies relevant to the existing and future land use and social and economic environment of the study area
- A description of the regional context of Grafton
- Key transport networks and travel patterns
- Key population, housing and demographic indicators, based on the review of data from the Australian Bureau of Statistics (ABS) 2011 Census and Department of Planning and Environment for the Grafton Urban Centre, the Clarence Valley LGA, Mid North Coast Statistical Area and NSW
- A review of existing land uses in the study area including agricultural land, Clarence River and riverside uses and tourist and recreational uses
- Analysis of the local and regional economy, including gross regional product, industry, employment and income and nature of local business within the study area

- Review of social infrastructure, including open space and community services and facilities closest to the project
- Identification of existing community values, including those relating to lifestyle and amenity, neighbourhood and town character, local access and connectivity, community

This report has been informed by various reports and demographic data, site inspections, targeted consultations with key stakeholders, and an understanding of relevant research and academic literature. A broad based community engagement strategy has been undertaken by Roads and Maritime which has also informed this social and economic assessment.

The geographical area covered by this report is the Clarence Valley Local Government Area (LGA). This area includes those communities likely to experience direct impacts from the project, but also the communities of surrounding villages which rely on Grafton as their service centre.

The demographic data presented in this report is based upon data provided by the Australian Bureau of Statistics (ABS) Census of Population and Housing 2011. Unless otherwise stated, data from the Census is based on place of usual residence. The data is the best available and remains an accurate basis on which to base the analysis in this socio-economic assessment.

1.4.3 Consultation

The views of the community are an important input to social and economic impact assessment. The consultation chapter of the EIS provides an overview of the community and stakeholder consultation for the project (also summarised in Section 1.2 of this report), along with key issues raised. This socio-economic assessment has been informed by the outcomes of this consultation process, including identification of community values and potential benefits and impacts of the project.

Community consultation about an additional crossing of the Clarence River has been conducted at several stages throughout the project's development. In December 2010, Roads and Maritime announced a revised approach to engage more effectively with the community and stakeholders to identify a preferred location for an additional crossing.

Roads and Maritime prepared and implemented a comprehensive community liaison plan to fully involve the community and stakeholders at all stages of the option selection process. A range of consultation methods to seek input, identify issues and help identify the preferred option were used including:

- Dedicated project website (www.rms.nsw.gov.au/graftonbridge)
- Project telephone line (1800 633 332)
- Project email address (graftonbridge@rms.nsw.gov.au)
- 'Community update' newsletters
- Project manager and project director updates
- Public display of studies and investigation reports
- Online interactive maps
- Online traffic modelling videos
- Online discussion forums

- Public forums
- Radio forums
- Staffed and unstaffed project displays at various locations
- Telephone surveys and telephone contact with property owners potentially directly affected
- Community and stakeholder briefing sessions
- Aboriginal community consultation.

Roads and Maritime has considered all issues raised by the community and stakeholders during the consultation process. Wherever possible, these issues were addressed during the route selection process and incorporated into the preferred option. The consultation process and the results of consultation are detailed in the following reports:

- *Additional Crossing of the Clarence River at Grafton – Telephone Survey of Clarence Valley Residents*, May 2011, NSW
- *Additional Crossing of the Clarence River at Grafton – Online Business Survey Report*, June 2011, NSW
- *Additional Crossing of the Clarence River at Grafton – Postal Survey December 2010 to March 2011*, June 2011, NSW
- *Preliminary Route Options Report – Final – Volume 1: Main Report and Volume 2: Social and Economic Technical Paper*, Roads and Maritime Services, January 2012
- *Route Options Development Report*. Roads and Maritime Services, September 2012.
- *Updated Community Liaison Plan*. RMS, September 2012.
- *Draft Route Options Community Feedback Report*. RMS, October 2012.
- *Recommended Preferred Option Report – Main Report*. Roads and Maritime Services, December 2012.
- *Recommended Preferred Option Report – Route Options Submissions Report*. Roads and Maritime Services, December 2012.
- *Preferred Option and Submissions Report*. Roads and Maritime Services, April 2013.
- *Additional Crossing Of The Clarence River At Grafton Community feedback summary report* Roads and Maritime Services, March 2014.

The preliminary concept design and proposed intersection treatments were displayed in November 2013 which provided an opportunity for additional community feedback.

Key issues raised during consultations included:

- The adequacy of the crossing
- Concern for future transport growth and development for the region
- Use of traffic signals and roundabouts, causing further congestion
- Concerns with heavy vehicles travelling through Grafton
- Concern with the loss of parking spaces that would impact on local business

- Potential impacts on heritage buildings
- Flooding in Pound Street
- Indirect and direct property impacts
- Timing of the construction and the changes to the state and local road network
- Connectivity and integration of the new bridge with Clarence Valley Council's cycleway plans
- Consultation process including timing, extent and matters considered as part of the investigations and review.

Specific social impacts raised in the submissions included:

- Open areas left in the vicinity of the new bridge after construction attracting antisocial behaviours
- Street closures may affect the Jacaranda Festival and Bridge to Bridge
- Lifestyle impacts of directing more traffic into the centre
- Lighting on the structure impacting residents
- Residents of Clarence Street being boxed in.

Other concerns in relation to amenity were raised and included:

- The loss of trees in Villiers Street, Pound Street and Dobie Street
- Impacts on tourism with the visual amenity impact of the new bridge on the existing bridge
- Jacaranda trees on the north side being lost
- Visual impact of the proximity of the new bridge to homes.

There were also stakeholder concerns about construction impacts, including noise, vibration, dust and privacy on homes as well as businesses.

Other concerns in relation to business and property impacts were identified as being:

- Concerns with property acquisition, size of acquisition and timing
- Concern with loss of on-street parking for business around Pound Street as well as access for loading areas.

2. EXISTING ENVIRONMENT

2.1 Policy context

This chapter provides an overview of relevant government strategies and policies relevant to the project and its socio-economic impacts.

2.1.1 Mid North Coast Regional Strategy

The primary purpose of the Mid North Coast Regional Strategy is to ensure that adequate land is available and appropriately located to accommodate the projected housing and employment needs of the region's population over a 25 year period.

The Mid North Coast Region is located between Sydney and Brisbane and extends from the Clarence Valley in the north to the Great Lakes area in the south. The Strategy identified four subregions: the Clarence (Clarence Valley LGA - centred on the major regional centre of Grafton and supported by the major town of Maclean); Coffs Coast (Coffs Harbour, Bellingen and Nambucca LGAs); Hastings-Macleay (Kempsey and Port Macquarie-Hastings LGAs); and, Manning-Great Lakes (Greater Taree and Great Lakes LGAs). Grafton is located within the Clarence subregion.

The strategy caters for a population increase of 94,000 by 2031 in the Mid North Coast Region. This would require an additional 59,600 new dwellings and 48,500 new jobs.

Grafton has been identified as one of the region's four major regional centres, the others being Coffs Harbour, Port Macquarie and Taree. The strategy proposes that the majority of residential and employment growth would occur in these major centres and the four major regional centres would be promoted as the focus of settlement, employment and regional services.

Grafton and its surrounds have been identified as having land and infrastructure available to greatly increase its employment capacity and would take the majority of future commercial development along with the other regional centres. Further, the Clarence subregion has been identified as needing a minimum of 23 hectares of additional industrial land over the life of the strategy to cater for the anticipated employment growth.

The project would reinforce Grafton as a major regional centre by enhancing transport opportunities to enable population and employment projections to be realised.

2.1.2 Interim Valley Vision 2024

The Interim Valley Vision 2024 plan is an update of the Valley Vision 2020 plan, the corporate strategic plan adopted by Council in September 2008. The Interim Valley Vision 2024 plan would be replaced by a more detailed plan (after community consultation) for adoption by June 2014.

The Clarence Valley vision is for "a sustainable Clarence Valley: Life in the Clarence Valley, now and in the future, is based on a culture of living sustainably that protects and carefully utilises the natural environment, its beauty and resources, our cultural heritage and unique identity of our valley and its communities" (Clarence Valley Council, 2013). The Valley Vision 2024 follows the format of its predecessor with identified outcomes based on the five elements of Council's Sustainability Framework as outlined in Table 7.

Table 2: Valley Vision 2024 key goals and aims

Element	Aim	Key Goals
Ecology	Protect and maintain a robust, healthy natural environment, and visually diverse natural landscape, including the rivers, wetlands, forests, floodplain and coastline, and ecological values in our settlement areas, actively protected and cared for by our whole community, supported by effective resources and environmental education.	• Protecting the land • Maintaining healthy waterways • Protecting biodiversity
Economy	Community well-being and prosperity to be supported by economic activity involving meaningful paid and voluntary work, clean green industry and business and aware consumers that use water, energy and other resources wisely.	• Healthy economic activity • Meaningful work and employment
Society & Culture	Creative valley cultures, rich in history and diversity, to be supported by good information, education, health recreation and other services, providing opportunities for quality lifestyles involving a sense of well-being, access and equity in which we value our communities and each other.	• Creative culture and recreation • Good community relations
Human Habitat	Live in sustainable communities, including a healthy natural environment supported by efficient and effective essential services and transport systems, our homes and streetscapes reflecting local heritages, character and charm	• Quality built environment and places • Efficient transport and access

2.1.3 Clarence Valley Settlement Strategy

The Clarence Valley Settlement Strategy is a rural and urban land release strategy released in March 1999. This strategy brought together the previous LGAs of Clarence Valley Council (Grafton, Copmanhurst, Pristine Waters and Maclean) to provide a framework for the future settlement pattern within the Clarence River catchment.

The strategy envisages the following changes for Grafton and South Grafton:

- Urban infill and small peripheral extensions to the Grafton and South Grafton urban areas.
- Higher densities near the central business district.
- Developer funded cycleways may help to lessen traffic impacts.

- Peripheral extension requires sensitive planning and design to manage encroachment into agricultural lands and to provide a suitable buffer at the urban/rural interface.
- Sensitive revitalisation of the South Grafton CBD including provision of a quality competitive supermarket to reduce pressure on the bridge.
- A forecasted population growth south of the river may represent a catchment for more retail services in South Grafton.

The project would contribute to meeting the long term development needs of the Clarence Valley Settlement Strategy as it would help in improving access to employment and to connect people and communities and improving local transport networks.

2.1.4 South Grafton Heights Precinct Strategy

The South Grafton Heights Precinct Strategy was adopted by Council in August 2007 and amended in April 2011. It was developed to address concerns about the lack of a strategy for this area after the receipt of two rezoning applications seeking to create additional residential land in this area.

Under the provisions of the Clarence Valley Local Environmental Plan 2011 the South Grafton Heights now contains land zoned R5 Large Lot Residential, R1 General Residential and RU2 Rural Landscape. The strategies and actions identified in the South Grafton Heights Precinct Strategy remain applicable to future development of this area.

2.1.5 Clarence Valley Cultural and Community Facilities Plan

The Clarence Valley Cultural and Community Facilities Plan (Clarence Valley Council, 2009c) provides a strategy and a plan for the future provision of cultural and community infrastructure within the Clarence Valley LGA. The recommended priorities for community facilities include:

- Upgrading and maintaining existing community halls
- Provision of a youth centre/facility that can be relocated/flexible and expanded
- Upgrade of Grafton Library
- Provision of / access to a performing arts centre for the LGA
- Provision of a Cultural/Civic Centre which could also address museum space needs
- Expansion of Treelands Drive Community Centre
- Meeting space in Maclean
- Upgrade of the Grafton Art Gallery
- Local art spaces across the valley.

Should the population reach the estimates projected by Council's Land Stock Assessment or the Mid North Coast Regional Strategy, a multipurpose community centre in Grafton which could incorporate neighbourhood centre functions would be required.

The project would facilitate access to existing and proposed community facilities.

2.1.6 Clarence Valley Social Plan 2010 - 2014

Clarence Valley Council released the Social Plan 2010-2014 in March 2010. The plan provides the framework for implementing the society and culture element of the Valley Vision 2020 by identifying key social needs and developing a series of action plans to respond to identified needs.

Council wide issues that are relevant to the project include:

- The availability of and access to employment, education and training and community support services.
- The need for improved infrastructure – roads, pathways.
- Access to cultural and recreational opportunities.

An understanding of Council's social planning initiatives is of assistance in understanding the local community and identifying potential impacts of the project.

2.1.7 Clarence Valley Affordable Housing Strategy

The Clarence Valley Council developed the Affordable Housing Strategy (Clarence Valley Council, 2007b) in response to the increasing problem of the reduced amount of affordable housing. Residents of Clarence Valley Council have a lower median income than that of NSW which impacts on their ability to tap into the home ownership market, create wealth and lift them out of the poverty cycle.

The Clarence Valley Affordable Housing Strategy has a range of actions to address different housing needs, focusing on developing partnerships to collaboratively create more housing options for low to moderate income earners.

An understanding of Council's affordable housing strategy is of assistance in understanding the local community and identifying potential impacts of the project on affordable housing.

2.1.8 Clarence Valley Economic Development Strategic Plan

The Clarence Valley Economic Development Strategic Plan was prepared by Council in June 2006 to direct and form a work program for development within the region. It contains a framework for the future economic growth of the Valley including twelve action oriented projects addressing a wide range of industry and commercial needs. The economic development strategy was compiled within the context of four economic development themes including:

1. Building on Competitive Advantage
2. Value Adding and Industry Extension
3. Business Retention and Attraction
4. Planning and Facilitation.

The project would support the implementation of the strategy by providing improved transport opportunities facilitating implementation of the plan.

2.1.9 Clarence River Way Master Plan

The Clarence River Way Masterplan was released by Council in February 2009 and involved extensive work over a 12 month period which included consultation and engagement with the Clarence community, business, industry and agency stakeholders.

The core strategic intents of the plan that are relevant to this project include:

- Refocus upon the Clarence River for destination development.
- Repositioning Grafton as a “River City” tourist destination.

Relevant initiatives include:

1. Re orient the city to the river, including both Grafton and South Grafton.
2. Simplify decision making and create a sense of arrival, gateway statement and enhance first impressions of Grafton from the Pacific Highway.
3. Improve the cityscape through investment in a main street programme for the CBD, but primarily Prince Street for its waterfront linkage and Fitzroy Street for its gateway arrival first impressions.
4. Promote the development of a waterfront precinct next to the town centre. Focus on the redevelopment and vitalisation of the core river edge from Queen Street to under the Grafton Bridge.
5. Improve the presentation of retail and commercial areas for tourism.
6. Encourage extended trading hours for restaurants and cafes.
7. Facilitate investment in new infrastructure and improve accommodation presentation levels to meet expectations of target markets.
8. Investigate options for development of the State Rail Authority land on the river’s edge on both sides of the river as public parkland.
9. Through negotiation with private land holders investigate options to provide safe public waterfront access or easements that respects privacy and security.
10. Improve public access to the waterfront through existing public open space.

The primary focus of this master plan is to the south of Victoria Street on land owned or controlled by Council. Council officers advise that talks are continuing with major private landowners with a view to achieving continuous public access along the river frontage where possible.

An understanding of this masterplan is of assistance in understanding existing foreshore access to the river and identifying potential impacts of the project on river front access.

2.2 Regional context

Grafton is located in the Clarence Valley LGA, about 630km north of Sydney and 340km south of Brisbane. Located on the banks of the Clarence River, Grafton is about 36.5km inland from the coast.

One of four major regional centres within the Mid North Coast Region, Grafton City is a focal point for regional road, river and other transport networks and focus of higher order services to the Clarence Valley sub-region. It is the sub-region’s major employment centre, in particular a focus of government administration. Its higher order services include retail and

administrative services, a base hospital, Grafton TAFE Campus, community health centre and high schools. A large number of Grafton's community and recreation facilities are located near and along the length of the Clarence River or the Summerland Way.

The Clarence Valley LGA is predominantly rural, with a dispersed settlement pattern over a sizeable area (10,440 km²). In addition to numerous small villages and rural localities, settlement is based around the City of Grafton and the townships of Yamba, Maclean and Iluka. The river provides a link between a number of rural villages and communities. The rural area is used for forestry, agriculture and grazing, including beef and sugarcane growing. Fishing is an important industry on the Clarence. Tourism and recreation has become a major industry in recent years, particularly in coastal areas, national parks, State forest and nature reserves including beaches, rainforests, mountains and rivers.

Grafton is the major urban centre for the valley and is the primary focus of commercial, industrial, institutional and administrative activities. Other main towns include Yamba, Maclean and Iluka. The LGA includes a number of smaller villages and towns along the coast or inland, particularly near to the Clarence River.

The Clarence Valley is strongly reliant on road transport, with a road system which radiates out from Grafton including the Pacific Highway, Summerland Way and Gwydir Highway. Attention has been given by Council to the role of the river as a link between settlements in Council's strategic planning initiatives.

The river separates Grafton from South Grafton with the existing bridge playing a critical role in the economic and social life of the Clarence Valley. South Grafton is smaller than Grafton on the northern side of the river (6,193 persons in 2011 compared to 12,208 in Grafton and Junction Hill). South Grafton is served by a smaller traditional commercial area focussed on Skinner Street with another shopping centre on Bent Street. South Grafton also contains business zones and industrial areas in addition to the airport, railway station and tourist office. About 25 per cent of businesses are in South Grafton with 75 per cent located in Grafton.

The main shopping area and administrative centre is located in Grafton together with a wide range of community and recreational services.

Significant future growth is planned for South Grafton including new employment and residential lands at South Grafton Heights and Clarenza.

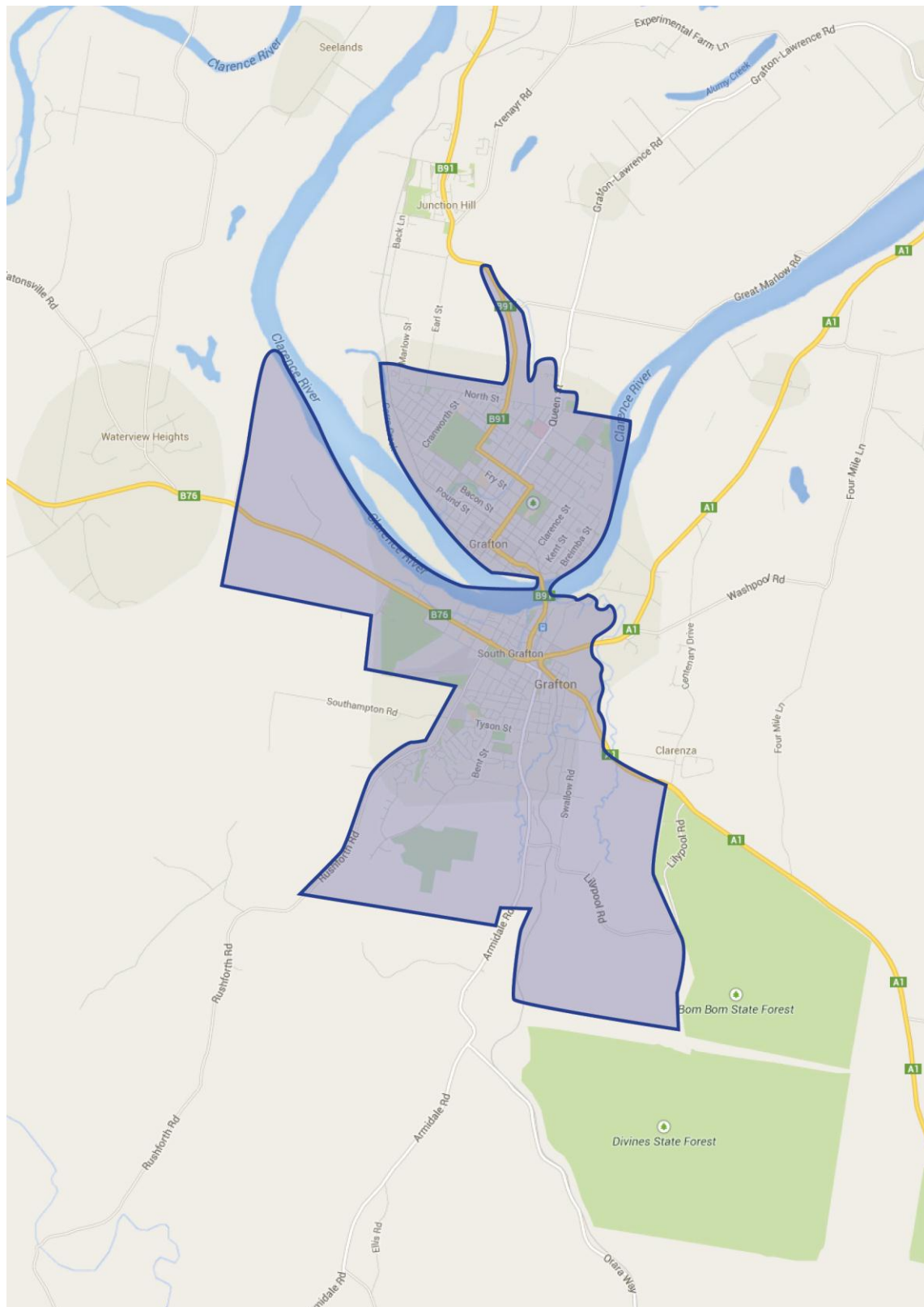
There are variations in the socio economic structure of communities in South Grafton and Grafton with South Grafton having a higher proportion of residents on low incomes and more vulnerable sections of the community. There is a growing dependence on Grafton for services to meet the needs of South Grafton.

2.3 Socio-economic profile

This section describes the key socio-economic characteristics of the area including population, demographic, housing and economic characteristics.

Data is provided for the Grafton Urban Centre (which includes Grafton and South Grafton as shown in Figure 2), the Clarence Valley LGA and NSW. The information presented is based on data from the 2011 Australian Bureau of Statistics (ABS) Census and from the NSW Planning and Environment.

Figure 2: Grafton urban centre locality



The following information provides a demographic snapshot of the Grafton Urban Centre and the Clarence Valley LGA in comparison to NSW. Population characteristics derived from the ABS 2011 Census have been compiled and are provided in Appendix 2. These indicators highlight different aspects of the social and economic structure of the community and in turn identify the relative susceptibility of the community to social impact resulting from the project. The relationship between these indicators can be complex. It is generally accepted that no single socio-economic factor can predict a person's susceptibility to impact.

2.3.1 Population and age structure

In 2011, the Grafton Urban Centre had 16,598 persons of which there was a higher proportion of younger persons, (6.8 per cent aged 0-4, 13.2 per cent 5-14, 12.7 per cent 15-24 years) compared to the broader Clarence Valley LGA, (5.7 per cent aged 0-4, 12.9 per cent aged 5-14, 10.7 per cent aged 15-24 years).

The Grafton Urban Centre generally has a lower proportion of people 65 years and older (20.4 per cent) compared to Clarence Valley LGA (21.3 per cent) and the Mid North Coast area (24.2 per cent). These statistics are still higher when compared with NSW (14.7 per cent aged 65 years and over).

The median age of the residents of Grafton Urban Centre is 40 which is lower than the median age of 46 in the LGA.

The following table shows population growth of the Grafton Urban Centre in comparison to Clarence Valley LGA and NSW between 2006 and 2011.

Table 3: Population Growth 2006-2011*

Region	Population 2006	Population 2011	Average Annual Growth
Grafton Urban Centre*	16,178	16,231	+10.6 persons (0.06%)
Clarence Valley LGA	48,147	49,673	+305.2 persons (0.62%)
NSW	6,549,175	6,917,601	+73,685.2 persons (1.07%)

* Source: Statistics compiled from Profile iD

In 2006, the population of the LGA reached 48,147. This number increased to 49,673 people in 2011 which indicates a low growth rate.

Between 2006 and 2011, about 4,551 people moved from other parts of NSW to Clarence Valley whilst about 3,301 people moved from the valley to other parts of NSW. The net migration from other parts of NSW between 2006 and 2011 was 1,250 people.

In 2011, the majority of people moving out of the Clarence Valley area were aged 18-24 years whilst the majority of people moving into the area were aged 55-64 years.

2.3.2 Cultural diversity

In 2011, the proportion of the population who are indigenous persons living in the Grafton Urban Centre was 8.3 per cent which was significantly higher when compared with the

proportion of indigenous persons living in the Clarence Valley LGA (5.7 per cent) and NSW (2.5 per cent).

The most common Non-English Speaking Background (NESB) groupings in the Grafton Urban Centre included persons from the Philippines (0.3 per cent) and the Netherlands (0.2 per cent). This is slightly different from the Clarence Valley LGA with the most common NESB groupings being mostly from the Netherlands (0.4 per cent) and Germany (0.3 per cent) but significantly different from NSW groupings being mostly Chinese (2.3 per cent) and Indian (1.4 per cent).

2.3.3 Household and family structure

In 2011, over half of the Grafton Urban Centre population lived as a family household (65.5 per cent) with 31.4 per cent living as lone person households and 3.1 per cent living as a group household. The proportion of lone person households was higher for the Grafton Urban Centre compared with the Clarence Valley LGA (27.7 per cent) and the NSW average (24.2 per cent).

The proportion of one parent families is significantly higher in the Grafton Urban Centre (24.8 per cent) when compared with the LGA (17.9 per cent), and NSW (16.3 per cent).

The Grafton Urban Centre, Clarence Valley LGA and Mid North Coast areas all had higher proportion of couple families without children than the NSW average while proportions of one-parent families were above that for NSW.

2.3.4 Workforce, occupation, income and education

In 2011, the Grafton Urban Centre had a labour force participation of 49.4 per cent and an unemployment rate of 9.3 per cent. This is higher than that recorded for the LGA (48.2 per cent labour force participation and 8.9 per cent unemployed) and the Mid North Coast region (47 per cent labour force participation and 8.2 per cent unemployed). Conversely, the labour force participation rate was lower for Grafton Urban Centre and the LGA in comparison to NSW (59.7 per cent) whilst the unemployment rate was lower in NSW (5.9 per cent).

A profile of the workforce in the Grafton Urban Centre in comparison to the LGA and NSW is provided in Table 4 below. The health care and social assistance sector as well as the retail sector is the largest employer in the Grafton Urban Centre making up to 15.7 per cent of total employment (respectively). The health care and social assistance sector and the retail sector is also the largest employer in the LGA and NSW,

Table 4: Industrial Sector of Employment 2011

Industry	Grafton Urban Centre	LGA	NSW
Agriculture, forestry and fishing	2.0%	6.1%	2.2%
Mining	0.4%	0.5%	1.0%
Manufacturing	8.6%	7.9%	8.4%
Electricity, gas, water and waste services	2.0%	1.4%	1.1%
Construction	5.8%	7.7%	7.3%
Wholesale trade	2.6%	2.8%	4.4%
Retail trade	15.7%	13.3%	10.3%
Accommodation and food services	8.7%	8.8%	6.7%
Transport, postal and warehousing	4.4%	4.3%	4.9%
Information media and telecommunications	1.1%	0.9%	2.3%
Financial and insurance services	2.0%	1.6%	5.0%
Rental, hiring and real estate services	1.5%	1.6%	1.6%
Professional, scientific and technical services	2.9%	3.2%	7.9%
Administrative and support services	2.3%	2.6%	3.3%
Public administration and safety	10.0%	8.2%	6.1%
Education and training	7.5%	7.9%	7.9%
Health care and social assistance	15.7%	13.9%	11.6%
Arts and recreation services	1.1%	1.1%	1.5%
Other services	4.0%	3.9%	3.7%
Not stated	2.1%	2.1%	2.5%

Source: ABS 2011 Census; ID Consulting, Clarence Valley Council Community Profile

Key occupations in the Grafton Urban Centre were community service workers (15.1 per cent), labourers and professionals (13.5 per cent respectively), technicians and trades (13.4 per cent), clerical and administrative (13.3 per cent), and sales workers (13 per cent). This was similar to the LGA where the most common occupations were professionals (14.4 per cent) and technicians and trades (14.1 per cent). In NSW professionals was the most common occupation (22.7 per cent) followed by clerical and administrative (15.1 per cent).

The majority of the workforce resides within the Clarence Valley LGA (94.8 per cent). Of those that live elsewhere, most travel from the Coffs Harbour LGA. However, a large

proportion of the residents in the Clarence Valley LGA work outside its boundaries (15.1 per cent). Much of this work appears to be related to the transport/freight industry³.

In 2011, the median weekly household income for the Grafton Urban Centre was \$772. This was slightly higher than the median weekly household income for the LGA which was \$768 but significantly lower than the NSW average (\$1,237).

In 2011, the Grafton Urban Centre, Clarence Valley LGA and the Mid North Coast Region all had similar proportions of people who had completed Year 12 or equivalent (27.8 per cent, 28.3 per cent and 29.2 per cent respectively). This is significantly lower than that recorded for NSW (49.2 per cent).

2.3.5 Dwelling characteristics

The Grafton Urban Centre was recorded as having a higher proportion of occupied private dwellings in 2011 (88.4 per cent) compared with the LGA (80.6 per cent) and NSW (86.3 per cent). The majority of the dwellings in the Grafton Urban Centre were detached houses (75.9 per cent), a higher proportion than that recorded in the LGA and NSW.

The majority of homes were owned outright in the Grafton Urban Centre (36.3 per cent) or being rented (32.3 per cent) whilst a further 27.6 per cent owned their home with a mortgage. A higher proportion of residents rent in the Grafton Urban Centre when compared with the LGA (25 per cent), Mid North Coast region (26.5 per cent) and NSW (30.1 per cent).

2.3.6 Socio-Economic Indexes for Areas (SEIFA)

The Australian Bureau of Statistics (ABS) has developed four indexes, known as Socio Economic Indexes for Areas (SEIFA) which provide an indication of the socio-economic conditions of people living in an area, relative to other areas. For each index, every geographic area in Australia is given a SEIFA number which shows how disadvantaged that area is compared with other areas in Australia. Each index summarises a different aspect of the socio-economic conditions of people living in an area.

The Index of Relative Socio Economic Disadvantage is a general socio-economic index created using measures of relative disadvantage. It accounts for disadvantage within an area as it relates to income levels, degree of educational/ training attainment, unemployment, proportion of unskilled workers and variables that reflect disadvantage rather than measuring specific aspects of disadvantage (e.g., Indigenous and Separated/Divorced). All areas are ordered from lowest to highest score, the lowest ten per cent of areas are given a decile number of one and so on, up to the highest ten per cent of areas which are given a decile number of ten. A low score on this index indicates a high proportion of relatively disadvantaged people in an area. In 2011, the suburb of Grafton had an Index of Relative Socio-Economic Disadvantage of 921, placing it in the second decile of relative social disadvantage whilst South Grafton had a score of 832, placing it in the first decile of relative social disadvantage⁴. In comparison, the Clarence Valley LGA also had a high incidence of disadvantage with a score of 919, placing it in the second decile of relative social disadvantage in NSW.

³ For a large proportion of these residents, their place of work is unknown (58.8%).

⁴ Note: the 2011 SEIFA scores for the Grafton Urban Centre (as a whole) are un-available

The Index of Economic Resources summarises variables relating to the financial aspects of relative socio-economic advantage and disadvantage. These include indicators of high and low income, as well as variables that correlate with high or low wealth. Areas with higher scores have relatively greater access to economic resources than areas with lower scores. In 2011, the Clarence Valley LGA had an Index of Economic Resources of 945, placing it in the third decile whilst the suburbs of Grafton and South Grafton (which make up the Grafton Urban Centre) had indexes of 929 (2nd decile) and 877 (1st decile) respectively. This indicates that the Grafton Urban Centre had lesser access to economic resources than the LGA.

2.3.7 Need for assistance

In 2011, 7.6 per cent of the population in the Clarence Valley LGA reported needing assistance with core activities, compared with 4.9 per cent for NSW.

Overall, 14.4 per cent of the population provided unpaid care to a person with a disability, long term illness or old age, compared with 11.4 per cent for NSW. This proportion has increased since 2006.

2.3.8 Population projections

Traffic modelling for the project involved reviewing population and land use forecasts, as well as traffic volumes in Grafton and South Grafton. It was developed in consultation with Clarence Valley Council and the Department of Planning and Environment to assess the traffic impacts of existing and likely future development and to estimate future demands across the river up to 2039. The dwelling targets were informed by the NSW Department of Planning Mid North Coast Regional Strategy 2006-31 of March 2009.

The distribution of dwelling locations within Clarence Valley Local Government Area and average household occupancy rates were provided by Clarence Valley Council. The key residential growth areas were identified as Junction Hill, Waterview Heights, and Clarenza. It was assumed that take up of the development would occur in Junction Hill initially, followed by Waterview Heights and finally Clarenza.

Population forecasts based on land capacity for Grafton and its surrounding area have been developed by Clarence Valley Council and the Department of Planning and Environment. These growth forecasts are identified from the *Mid North Coast Regional Strategy* (2009) and are presented in Table 5.

Table 5: Forecast population growth in Grafton and surrounds 5

	Year			
	2010	2021	2031	2041
Grafton	10,761	11,255	11,255	11,255
Junction Hill	1,015	2,520	3,455	3,455
South Grafton	6,065	6,806	7,601	7,601
Clarenza	684	1,610	2,514	5,418
Total	18,525	21,921	24,825	27,729
Townsend, Maclean, James Creek, Gulmarrad	4,800	6,800	8,800	8,800
Coutts Crossing	613	786	955	955
Waterview Heights	769	1,974	3,150	3,150
Total other areas	6,182	9,560	12,905	12,905

The Mid North Coast Regional Strategy identifies that the LGA has significant capacity to increase both its population (through infill development and land releases such as those around Clarenza and Junction Hill) as well as its industrial capacity. Potential urban and industrial land release areas in the LGA are identified in Figure 3. Note that not all land identified within these “growth areas” would be developed for urban uses.

Within the Grafton area, the Clarence Valley Settlement Strategy 1999 predicted that by 2016 the population would reach 11,100 in Grafton and 7,250 in South Grafton. These predictions are likely to be exceeded, with the Mid North Coast Strategy establishing a minimum target of 7,100 dwellings for the Clarence Valley sub-region (council documents estimate that around a third of this would occur in Grafton City).

NSW Planning and Environment⁶ has estimated that the population of the Clarence Valley LGA would reach 52,900 by 2021 and 53,900 by 2031.

The number of older people in the Clarence Valley LGA aged 65 years and over is projected to increase by 65.8 per cent (between 2011-2031) whilst the number of younger people under the age of 15 is expected to decrease by 6.7 per cent.

The projected increase in older people and decrease in younger people is characteristic of an ageing population. However, the increase in older people could also be put down to lifestyle change and search of more affordable retirement living. These trends are consistent with State and nationwide trends of an ageing population.

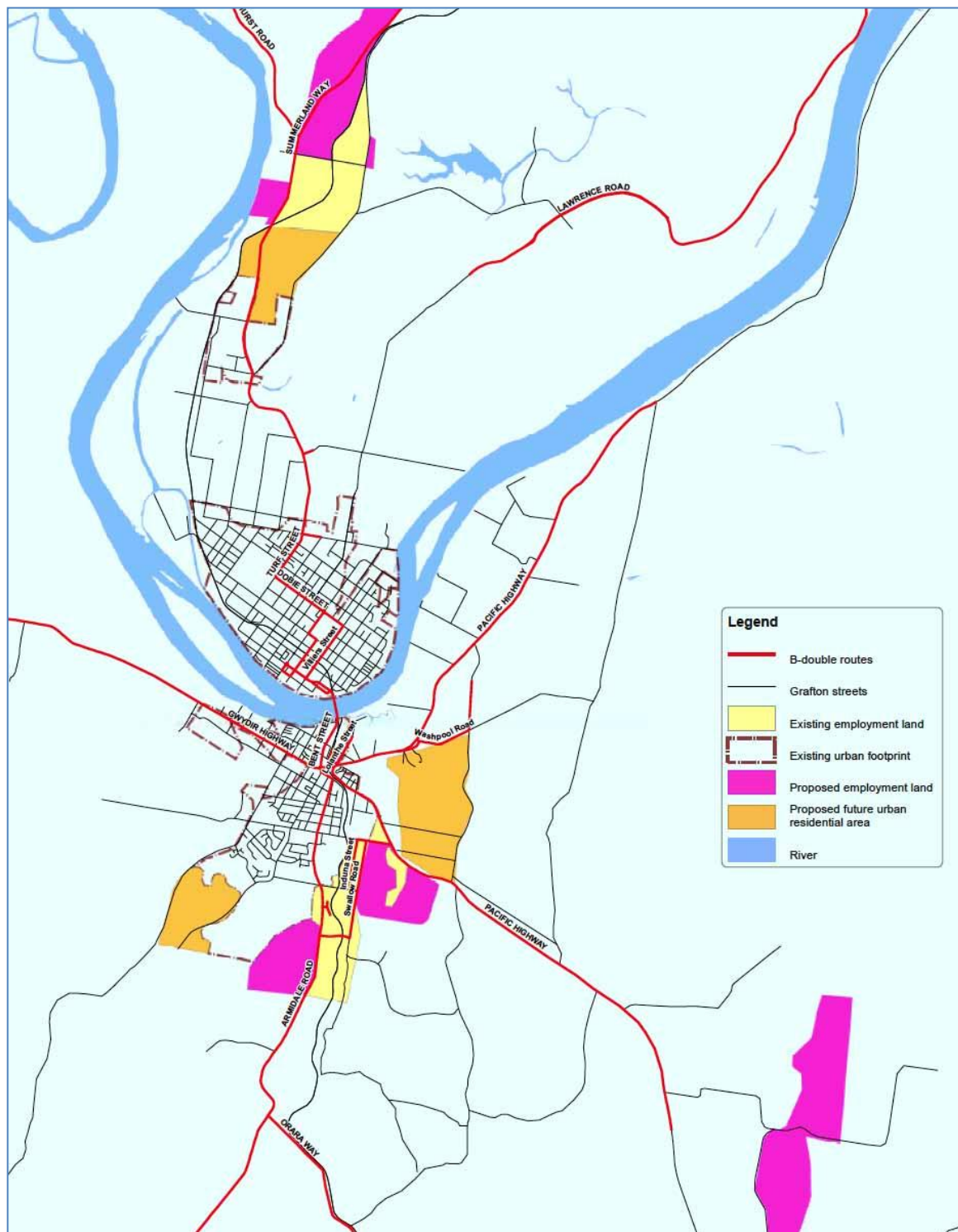
It is noted the 2013 preliminary projections are lower than the 2009 projection series across the local government area used in the traffic modelling. However, these were provided at

⁵ Additional growth is predicted in the Clarence Valley LGA beyond that in the Grafton and surrounds area shown in this table

⁶ Department of Planning and Infrastructure, *New South Wales State and Local Government Area Population Projections: 2013 preliminary revision*

local government area level only, not at a statistical local area (SLA) level required for the traffic modelling.

Figure 3: Potential urban and industrial land release areas



Source: The Mid North Coast Regional Strategy 2009

2.3.9 The Dovedale area

The area known as Dovedale is located at the south eastern end of Grafton, in the area generally north of the railway viaduct and east of Clarence Street and bordered by Hoof Street to the north and the Clarence River to the east and south. This area has been separately discussed in this report as it has been identified in discussions with the community as being significantly affected. The area has a population of about 1,200 and is characterised by large homes on generous allotments, a number of which have frontages to the Clarence River.

The Dovedale area has a median weekly income of \$940 compared to the median weekly household income for Grafton Urban Centre of \$772 and the median weekly household income for the LGA of \$768.

2.3.10 Demographic summary

In summary:

- The Clarence Valley LGA had a total population of 49,665 in 2011. Over the past five years it has had a low rate of growth of about 1.2 per cent per year and a projected annual growth rate of 0.2 per cent between 2011 and 2031. In 2011, the Grafton Urban Centre (including Grafton and South Grafton) had a population of 16,598 people⁷. NSW Planning and Environment⁸ has estimated that the population of the Clarence Valley LGA would reach 52,900 by 2021 and 53,900 by 2031.
- The Grafton Urban Centre was recorded as having 6,404 occupied private dwellings in 2011 with the majority being separate houses (75.9 per cent).
- The proportion of lone person households was higher for the Grafton Urban Centre compared with the Clarence Valley LGA (27.7 per cent) and the NSW average (24.2 per cent).
- The number of older people in the Clarence Valley LGA aged 65 years and over is projected to increase by 65.8 per cent (between 2011-2031) whilst the number of younger people under the age of 15 is expected to decrease by 6.7 per cent.
- Average household weekly incomes in the LGA are significantly lower than the average for NSW but comparable to the North Coast area.
- The Grafton Urban Centre and the LGA has one per cent higher unemployment rate than NSW.
- In 2011, there were 81 people who caught public transport to work (train, bus, tram or ferry) in Clarence Valley Council area, compared with 12,541 who drove in private vehicles. Around 86.2 per cent of the households in the LGA owned at least one car.

⁷ The 2011 Census, Grafton Urban Centre boundary has been adjusted since the 2006 Census with the 2011 locality a more targeted area, no longer including Junction Hill. The significant drop in population numbers is due to boundary changes between the 2006 and 2011 Census.

⁸ Department of Planning and Infrastructure, *New South Wales State and Local Government Area Population Projections: 2013 preliminary revision*. These figures were released in August 2013 and are the most recent available.

- The population of the Grafton Urban Centre and the LGA is less qualified compared to NSW, with low completion of Year 12 schooling and low attainment of non-school qualifications. This can in part be attributed to the age of the population and the historical requirements of the LGAs rural base.
- There is a slightly higher incidence of social disadvantage in the Grafton Urban Centre based on the ABS social disadvantage index.

2.4 Business and industry

2.4.1 Gross regional product

The gross regional product (GRP) for Clarence Valley increased by 6.7 per cent to \$2.0 billion in 2011/12, above the state average growth of 2.4 per cent. "Clarence Valley contributed 16.5% and 0.4%, respectively, to the gross regional / state products of the Northern Rivers region (\$12.0 billion) and New South Wales (\$455.3 billion) in 2011/12" (Clarence Valley Council, 2013).

The largest contribution was made by electricity, gas, water and waste services, whilst the fastest growing sectors were agriculture, forestry and fishing. Non-residential construction grew significantly by 27.4 per cent to \$23.7 million driven by an increase in public sector approvals. Industry contribution to GRP in 2011/12 is shown in Figure 4 and annual industry growth in 2011/12 is shown in Figure 5.

The 2006 Clarence Valley Economic Development Strategic Plan identifies that, in comparison with the New South Wales economy, the Clarence Valley economy is "more reliant on resources-based sectors (7.1 per cent versus 3.7 per cent); commerce-based sectors (16.8 per cent versus 15.9 per cent; and household-based sectors (15.9 per cent versus 12.6 per cent). It is less reliant on goods-based sectors (19.7 per cent versus 20.7 per cent); and information and finance based sectors (26.5 per cent versus 34.8 per cent)".

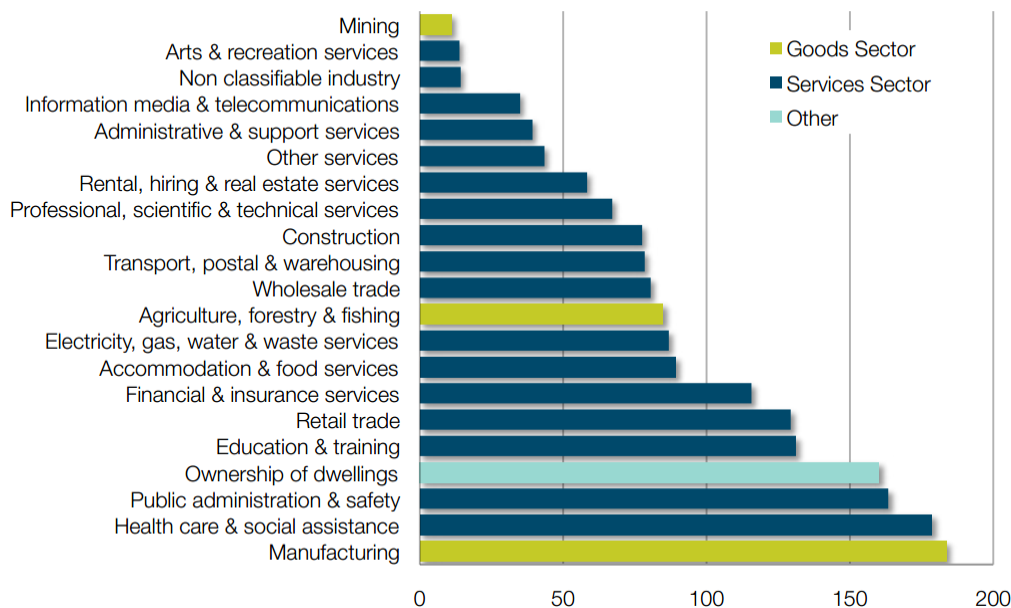
In 2004 the Grafton Business Enterprise Centre estimated that 60 per cent of businesses were located in the city CBD, 10 per cent of businesses were located in the South Grafton commercial area, 15 per cent in the South Grafton industrial area, and 15 per cent in the Junction Hill business and industrial locality. Of those businesses in the Grafton CBD, it was further estimated that 70 to 75 per cent are located in the main street (Prince Street) and surrounding areas and 25 to 30 per cent in Grafton Shopping World.

A profile of the workforce in the LGA is described in Section 2.3. The majority of the workforce resides within the Clarence Valley LGA (94.8 per cent). Of those that live elsewhere, most travel from the Coffs Harbour LGA. However, a large proportion of the residents in the Clarence Valley LGA work outside its boundaries (15.1 per cent). Much of this work appears to be related to the transport/freight industry⁹.

The health care and social assistance sector is the largest employer in the LGA, making up to 13.9 per cent of total employment. The retail sector is also important making up to 13.3 per cent of total employment.

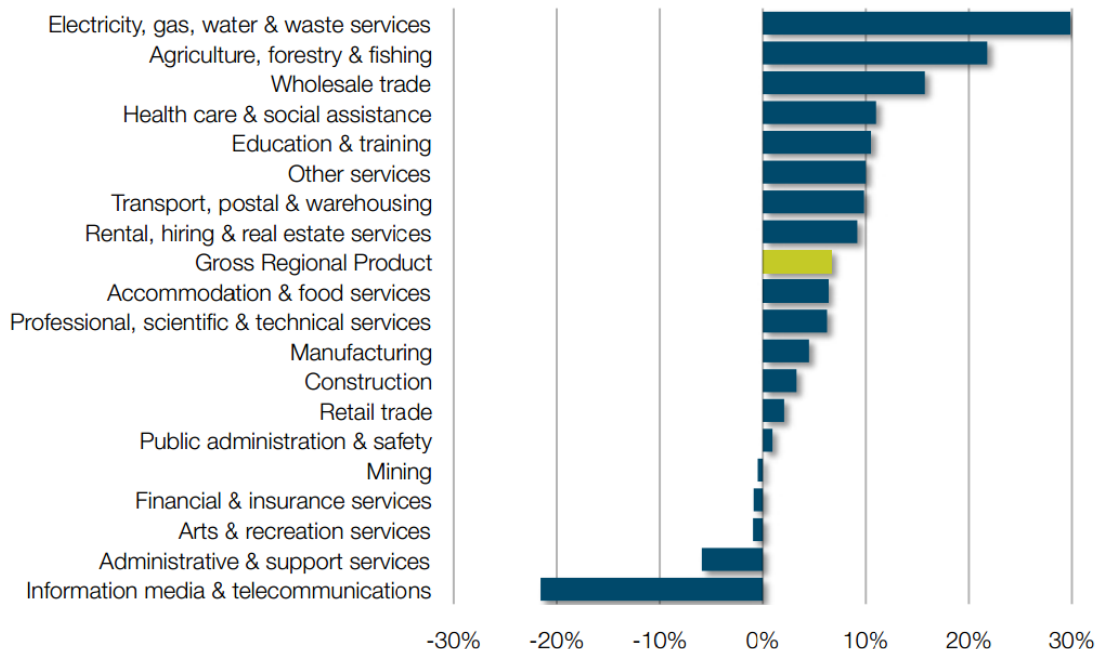
⁹ For a large proportion of these residents, their place of work is unknown (58.8%).

Figure 4: Industry Contribution to GRP, Clarence Valley, 2011/12 (\$ million)



Source: Lawrence Consulting, reported in Clarence Valley Economic Monitor June 2013, Clarence Valley Council

Figure 5: Annual Industry Growth (Gross Regional Product), 2011/12



Source: Lawrence Consulting, reported in Clarence Valley Economic Monitor June 2013, Clarence Valley Council

Work for Clarence Valley Council by Lawrence Consulting shows that Clarence Valley has a greater industry concentration than the national economy in the agriculture, forestry and fishing, accommodation and food services, public administration and safety, retail trade, and health education and utility services. Some of these key sectors in the economy are discussed below.

2.4.2 Agriculture, forestry and fishing

Agriculture contributes about \$84m or 4.3 per cent to the regional economy (2011 - 2012). The sugar industry is a major contributor with a large number of farms on the lower reaches of the river surrounding Maclean and Harwood. This industry supports about 1,000 jobs and makes an estimated contribution of \$103 million to the local economy each year (including the Harwood Sugar Mill and bulk sugar refinery plant is located adjacent to the sugar mill site (Clarence Valley Council, 2009a).

The fishing industry based at Yamba and Iluka fishing in the estuary of the Clarence River is another important primary and is also diversified into processing and retail. The commercial fishing industry supports 199 fishers and in 2006 returned a catch value of \$19.9 million (Clarence Valley Council, 2009a).

Timber produced mainly in the State forests is processed at a number of mills in and around Grafton and results in traffic flows across the Clarence River at Grafton. Timber production in 2002 across the Clarence Valley was valued at \$27.5 million (Clarence Valley Council, 2009a).

Beef cattle, dairy and general farming remain important contributions to the economic base although there has been a gradual decline in the number of livestock sold through the Grafton Regional Livestock Selling Centre at South Grafton. Nonetheless the saleyard sold 36,700 head of cattle in 2012 – 2013 which was the fourteenth highest in the State. Regular sales are held with associated transport movement through Grafton.

2.4.3 Retail

The retail sector is a major contributor to the regional economy and a major employer. Grafton is identified as a major regional centre in the Mid North Coast Regional Strategy and is to be the focus of settlement. The strategy expects that Grafton would take the majority of future commercial development in the Clarence Valley as it has greatest capacity for redevelopment.

As a major regional centre, it attracts shoppers from a wide area.

The largest centre in Grafton is Grafton Shoppingworld with some 32,196 square metres of retail area. The South Grafton Shopping Centre is located on Bent Street at South Grafton is a smaller centre of 3,486 square metres.

The retail sector is the second largest employer providing 14.2 per cent of jobs within the LGA at the time of the 2011 census, behind the health care and social assistance sector employing with 15 per cent of the workforce. It contributes 6 per cent to the gross regional product for the LGA and accounts for 7.6 per cent of all businesses registered in the LGA.

2.4.4 Tourism

Clarence Valley Council area a large coastal zone and rural hinterland linked by the river and is a strong and growing sector. Grafton is positioned as a river city and tourist hub and together with Yamba are seen as the two anchor destinations (Clarence Valley Council, 2009).

Key measures of visitor activity are shown in Table 6.

Table 6: Key Visitor Measures Year to September 2013

Key Measures	Clarence Valley	NSW
Total Overnight Visitors (000's)	444	27,396
Total Visitors (overnight and domestic daytrip) (000's)	952	79,269
Total Overnight Visitors (000's)	444	27,396
Total Nights (000's)	1,879	149,488
Total Spend (overnight and domestic daytrip) (\$ Million)	317	25,645
Total Overnight Visitor Spend (\$ Million)	260	20,187

Source: Destination NSW, 2013

There are 439 tourism related businesses in the Clarence Valley, 152 of which are accommodation related with tourism infrastructure and services located in both coastal and country areas (Clarence Valley Council, 2005)

Accommodation infrastructure ranges from hotels, motels, holiday parks, bed and breakfast establishment, farm stay and holiday apartments/houses.

Festivals are an important contributor to the local economy. For example, it has been estimated that the Bridge to Bridge Ski Race and the Australian Wakeboarding Championship (held over the same weekend in 2011) were worth about \$1 million to the Grafton City economy¹⁰. The stretch of the river between the rowing club and the bridge is generally used due to its width and ease of public access to the foreshore.

Most visits are for holiday purposes or visiting friends and relatives (92 per cent compared to 82 per cent for NSW) and 90 per cent of visits are by private car. There is an established network of tourist routes that focus on Grafton. Grafton Regional Airport is located about 10 kilometres to the south of Grafton, bus companies and the railway provided alternative means of travel.

The Clarence River Way Masterplan (Clarence Valley Council, 2009) provides a number of strategies for positioning Grafton as a river city destination hub including:

- Re orient the city to the river, including both Grafton and South Grafton
- Simplify decision making and create a sense of arrival, gateway statement and enhance first impressions of Grafton from the Pacific Highway
- Promote the development of a waterfront precinct adjacent the town centre. Focus on the redevelopment and vitalisation of the core river edge from Queen Street to under the Grafton bridge.

¹⁰ SMH "Tourism operators take hit to business" January 15, 2011¹⁰

- Investigate options for development of the State Rail Authority land on the river's edge on both sides of the river as public parkland.
- Through negotiation with private land holders investigate options to provide safe public waterfront access or easements that respects privacy and security.
- Improve public access to the waterfront through existing public open space.
- Improve the cityscape through investment in a mainstreet programme for the CBD, but primarily Prince Street for its waterfront linkage and Fitzroy Street for its gateway arrival first impressions.

Presently Fitzroy Street acts as the gateway for arrival into Grafton and contains a number of motels and accommodation establishments.

2.4.5 Extractive industry

The southern channel of the Clarence River immediately adjoining the southern edge of Susan Island is subject to extraction of sand and gravel. Although small in terms of contribution to gross regional product, contributing some 0.6% of total GRP, it is important in the local Grafton context in association with the concrete batching plant located on the north bank of the river near the extraction area. The Boral barge which transports sand and gravel is the largest vessel passing under the existing bridge.

2.4.6 Local business

Local businesses in the study area that would be potentially impacted by the project include those on Bent Street and Fitzroy Streets being the approaches to the existing bridge and Iolanthe and Pound Streets being the approaches to the new bridge.

Bent Street (the Summerland Way), from the southern end of the bridge to the roundabout at the Gwydir Highway, contains a range of retail businesses, a shopping centre, service industries and light industries. Businesses include education, bulky goods, light industry, automotive, take-away liquor and food wholesale. These uses are typical of the B5 (Business Development) zone applying to much of the land along Bent Street. This street accommodates one motel and a bed and breakfast establishment and a number of dwelling houses. Very few of these businesses, with the exception of the accommodation facilities and service stations would be classified as dependent on passing trade. They are primarily businesses serving Grafton and surrounds and relying on good access to the main road network for ease of customer access.

Land on the eastern side of the railway line in the vicinity of Spring and Iolanthe Streets in South Grafton is emerging as a location for bulky goods premises that are not suited to centres because of large floor space requirements or the need for direct vehicle access to load or unload goods. Such clusters are typically located in accessible edge-of-centre locations and include large format retailing (such as Bunnings), outdoor store, care sales, tyre sales and services, transport depots and warehouse uses. Highway uses include a service station on the eastern side of the highway and nearby fast food outlets and the tourist information centre.

On the northern side of the river, Fitzroy Street from the existing bridge to the main shopping area on Villiers and Prince Streets includes a range of businesses including fast food outlets, four motels and a range of commercial and smaller retail businesses in addition to service stations, restaurants and hotels.

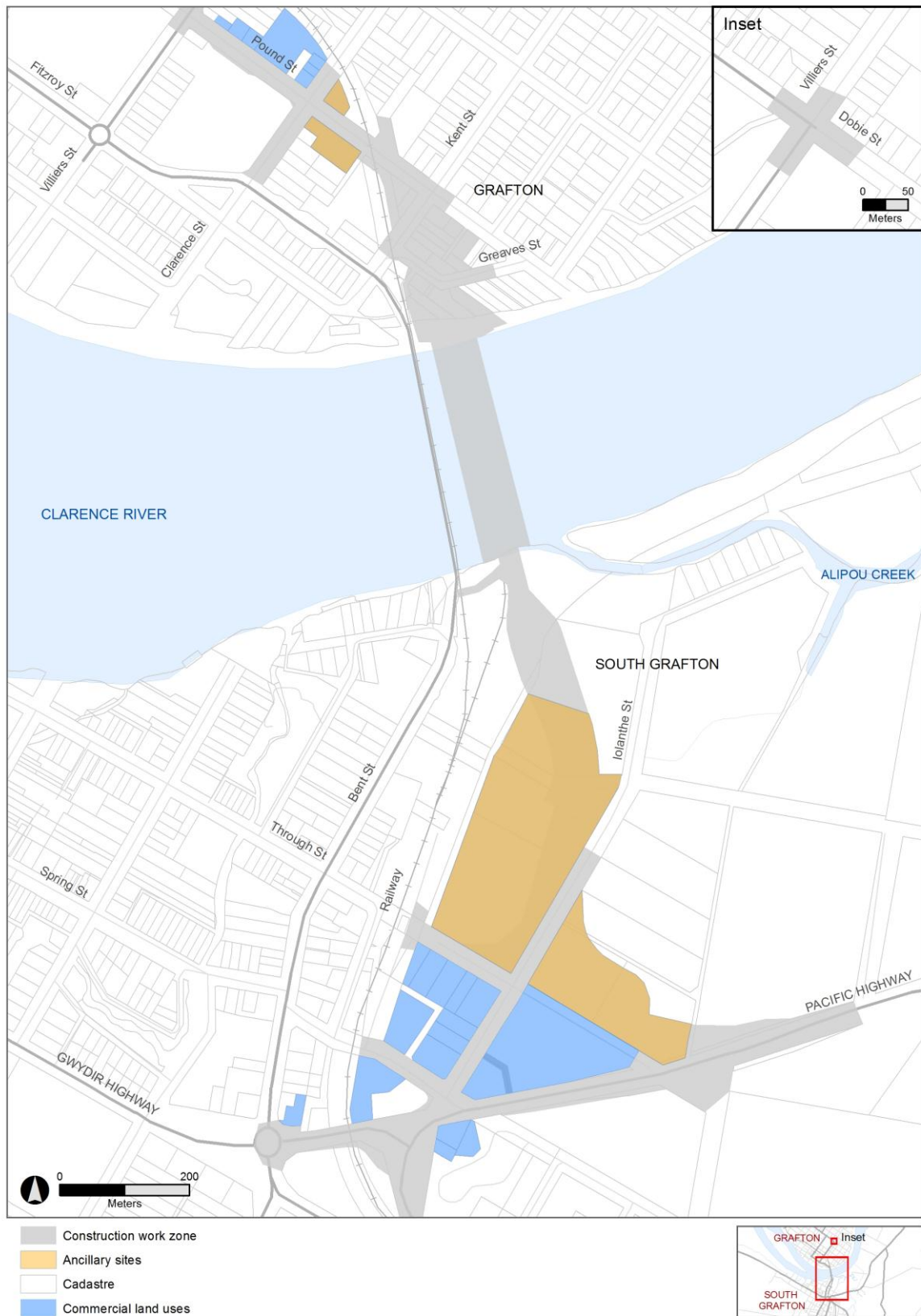
The main retail and commercial business area of Grafton is a compact area centred on Prince and Fitzroy streets. Government and administration activities have been historically

located in nearby Victoria Street (but have spread to areas around nearby King Street). Near to the retail and commercial business area is a church and school precinct. Grafton's major shopping centre, Grafton Shopping World, is accessed off Fitzroy and Duke Streets.

The north eastern side Pound Street between Clarence and Villiers Street contains a number of light industrial and service industry businesses such as vehicle service and repair (including types, windscreens, auto electricians and the like), electrician's workshop, Elgas facility, plumbing shop, pool shop, building supplies and the like. These uses are located opposite the TAFE. These uses continue to the north west along Pound Street opposite Grafton Shopping World and intensify into more retail and commercial uses closer to the city centre.

Commercial land uses in the vicinity of the project are shown on Figure 6.

Figure 6: Commercial land uses



Arup (2014)

2.5 Existing land uses

This section describes the existing land uses in Clarence Valley and Grafton. It includes an overview of land uses in the study area and in the LGA as a whole and more specific information on regionally significant farm land in and near the study area, river and riverfront uses and Crown land in the study area. It extends from the Gibraltar Ranges through fertile rural lands and river plains that drain toward about 80 kilometres of coastline.

2.5.1 Clarence Valley

The Clarence Valley Council comprises an area of 10,440 km² comprising more than 40 towns and villages and coastal rural mountain and forested environments. Thirty eight per cent of the land area is national park or state forest and about 35 per cent is cleared land. Urban areas make up less than 1% of the land area.

The Clarence River is the most significant natural feature and has been described as a living link between the rugged high country of the upper Clarence and the spectacular Clarence Coast¹¹. It connects a series of river villages and communities.

Clarence Valley supports a settlement hierarchy of a city, towns, villages and rural clusters. The subregional centre is Grafton with towns being Maclean and Yamba. The settlement pattern includes coastal and river villages of varying size and rural settlements.

Agricultural and fishing activities include:

- Sugar cane farms generally concentrated on the lower reaches of the river downstream of Grafton surrounding Maclean and Harwood and supporting a mill and refinery at Harwood
- The second largest commercial fishery in NSW is based on the Clarence River with port facilities in Yamba and Iluka for a variety of ocean and estuary product (including the famous Yamba prawns) and a fisherman's cooperative for fish receiving and processing
- Timber processing with product sources mainly from State forests transported to a number of mills in the area including Grafton
- Beef cattle, dairy and general farming make contributions to the local economy and support the Grafton Regional Livestock Selling Centre at South Grafton
- Sand and gravel extraction occurs from the river near Susan Island with material moved by barge downstream.

2.5.2 Grafton

Grafton functions as a major regional centre providing a focus for services to the Clarence Valley community. It accommodates regional educational, health, community and recreational services, and provides outreach services to smaller centres. It provides a primary focus for commercial activity and is the administrative centre for State government.

The main retail and commercial business area of Grafton is a compact area centred on Prince and Fitzroy streets. Government and administration activities have been historically located in nearby Victoria Street (but have spread to areas around nearby King Street). Near to the retail and commercial business area is a church and school precinct. There is a ribbon

¹¹ *State of the Environment Supplementary Report 2009/2010*, Clarence Valley Council

of commercial/retail development in Fitzroy Street between the existing bridge and the main city centre, with predominately highway orientated businesses. Grafton's major shopping centre, Grafton Shopping World, is accessed off Fitzroy and Duke Streets.

A smaller traditional main street retail and commercial area is located in South Grafton, focussed on Skinner Street.

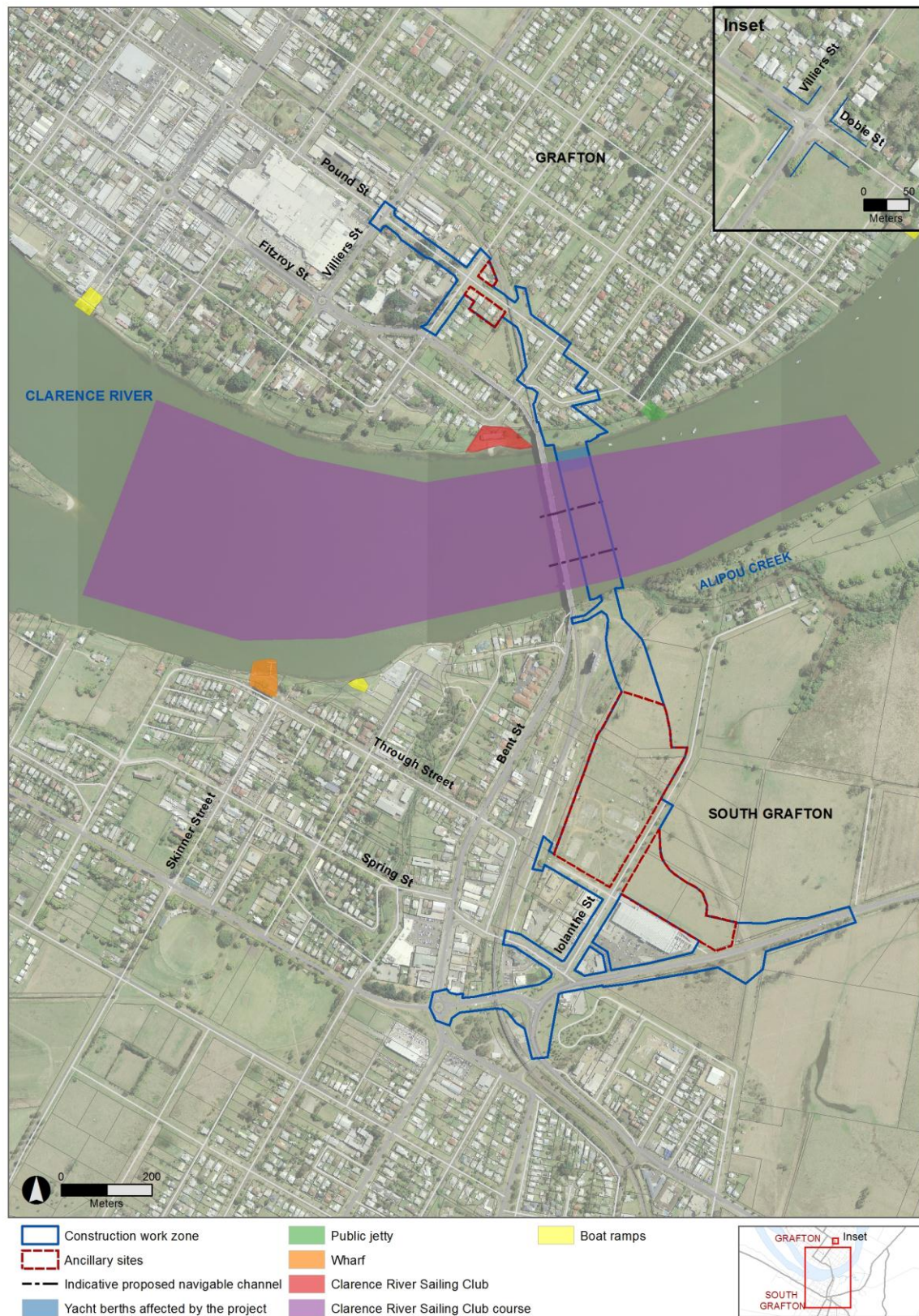
Bent Street (the Summerland Way), from the southern end of the bridge to the roundabout at the Gwydir Highway, contains a range of retail businesses, a shopping centre, service industries and light industries. These uses are typical of the B5 (Business Development) zone applying to much of the land along Bent Street.

Land on the eastern side of the railway line in the vicinity of Spring and Iolanthe Streets in South Grafton is emerging as a location for large floor plate bulky goods premises that are not suited to centres because of large floor space requirements or the need for direct vehicle access to load or unload goods. Such clusters are typically located in accessible edge-of-centre locations.

2.5.3 Clarence river uses

The River supports a range of commercial and recreational uses including fishing, prawn trawling, festivals and events, water skiing, cruising, skiing, rowing and more. Ferries and fishing trawlers operate downstream of Grafton. Figure 7 indicates maritime access in the vicinity of the project.

Figure 7: Maritime access in Grafton



Arup (2014)

Business use

The southern channel of the Clarence River immediately adjoining the southern edge of Susan Island is subject to extraction of gravel and sand. The largest vessel working on the river near Grafton is a barge associated with this extractive industry¹². It has a vertical clearance of seven metres (vertical clearance is the distance from the surface of the water to the highest point on a vessel). The Boral barge transits the river downstream from Susan Island four times per day, six days a week.

Prawn trawling and fishing takes place in the Clarence River estuary near Yamba downstream of Grafton. The primary markets for prawns harvested are Sydney and regional centres where prawns are sold either for domestic consumption or processed and packaged for bait. The fishery operates for defined seasons (generally October to May) and is confined to specific times and areas.

Recreational use

Maritime access to the Clarence River at Grafton is via a number of line moorings located along the foreshores, the yacht club located downstream of the existing bridge and the Grafton rowing club and sailing club located upstream of the bridge. Boat launching facilities provide access to recreational boats launched from trailers.

RMS (2012) describes the use of the river as follows:

“There are a number of line moorings and a yacht club downstream of the existing Grafton Bridge. The rowing club and sailing club are located upstream of the bridge, both on the inner bend (northern riverbank) of the river.”

Recreational maritime traffic is also generated from major water events such as:

- The Rowathon between Iluka and Grafton.
- The Head of the River Regatta and the Grafton Rowing Club Regatta.
- The bridge to bridge water ski race.
- The Monster Energy Pro Wakeboard Show.
- Yacht and Sailing club races.
- Cruising yachts, particularly for the annual Jacaranda Festival in November.”

The Clarence River Sailing Club (located in Salty Seller Reserve, off Fitzroy Street, Grafton) generally utilise the reach of the river directly in front of their club house/boat shed. Races are held on Saturday afternoons. There are about 28 races scheduled on the club's 2013 calendar (excluding Regatta), between September and April with racing most weekends.

Further upstream is the Grafton Rowing Club. The rowing course extends from the clubhouse (located within Memorial Park, off Prince Street, Grafton) for two kilometres upstream, towards the opposite end of Susan Island.

There are a number of moorings in the vicinity of the proposed bridge near Girl Guides Place that are accessed from the Pound Street Jetty.

¹² Roads and Maritime (2012) *Additional Crossing of the Clarence River at Grafton Preliminary Route Options Report – Final Volume 1 Main Report* January 2012

2.5.4 Clarence River foreshore use

River front open space in the vicinity of the project includes Salty Seller reserve near the sailing club, passive open space either side of the existing bridge and Girl Guide Place with the Pound Street Jetty at the end of Pound Street.

2.5.5 Existing Crown land

Crown land in the vicinity of the project includes the Grafton Showground, the bed and foreshore of the Clarence River and some original Crown road reserves. Other parcels of Crown land may be affected by the flood mitigation works.

2.5.6 Flood mitigation works area

The flood mitigation works comprises of raising 3.7 kilometres of existing levee on the north bank and 7 kilometres of existing levee on the south bank of the Clarence River upstream from the proposed bridge by up to 0.2 metres.

The likely construction activities for the raising of the existing levee would depend on the existing levee type and the proposed method for raising the levee. Where the levee consists of existing infrastructure (for example, the rail embankment or a building) a specific design for the upgrade would be necessary, with appropriate mitigation measures identified during detailed design.

The existing levee is located mostly on private property used for a range of purposes including farming, rural residential dwellings, residential dwellings, caravan park, recreation facilities (bowling clubs, parks, sailing club and boat ramps) and commercial church and school property and commercial or industrial land such as the Boral concrete batching plant and vacant industrial land at South Grafton.

The works would take place in Waterview and South Grafton on the south bank and Grafton on the north bank

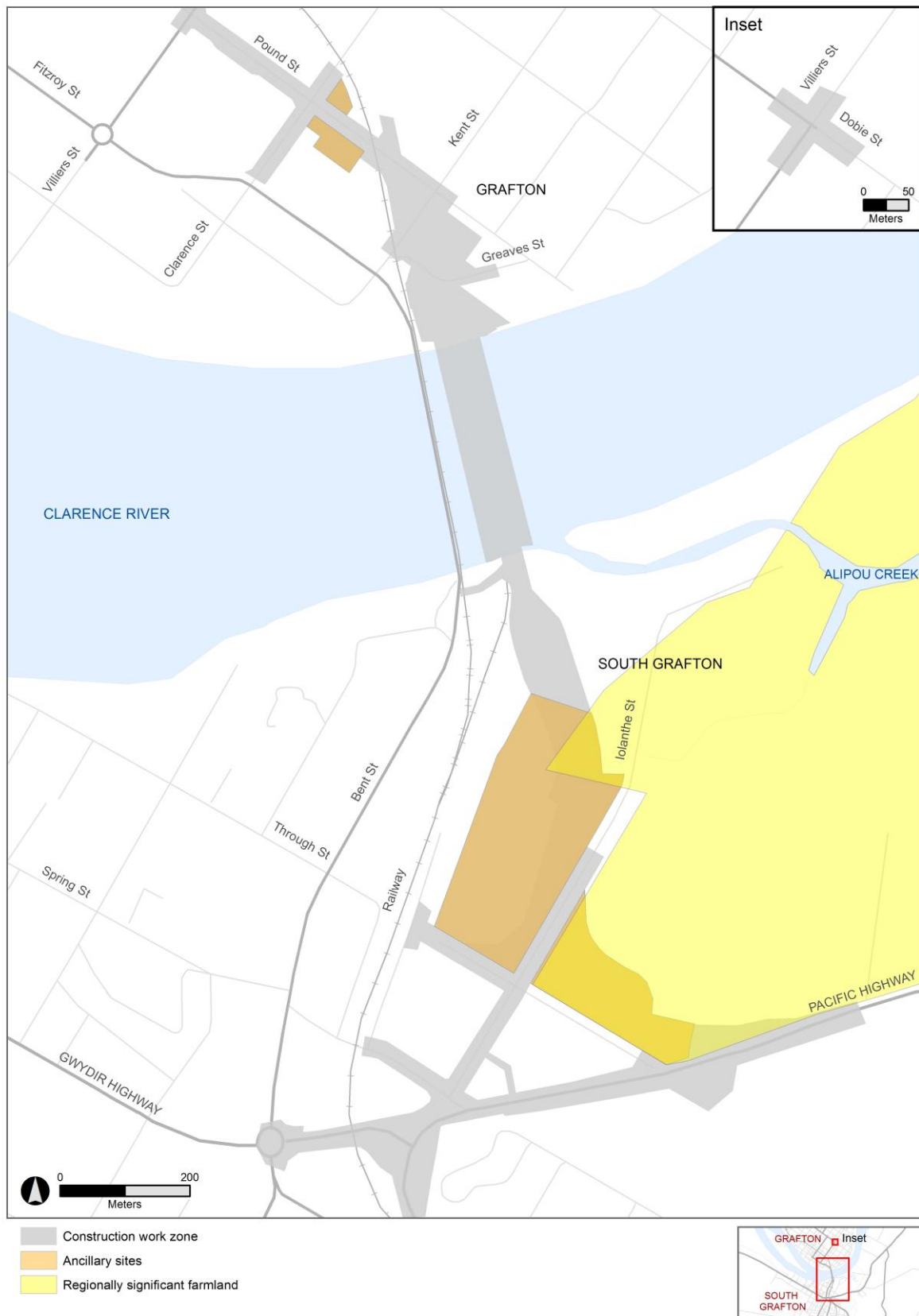
2.5.7 Regionally significant farmland

Regionally significant farmland refers to land designated as “regionally significant” by the NSW Department of Planning’s Farmland Mapping Project (2008).

As a response to the conversion of high quality agricultural land to urban and rural residential use and hobby farms, the identification of regionally significant farmland is intended to protect such lands from urban and rural encroachment and land use conflict. Regionally significant land is defined as “land capable of sustained use for agricultural production with a reasonable level of inputs and which has the potential to contribute substantially to the ongoing productivity and prosperity of a region” (Department of Planning, 2009).

Regionally significant farmland in the Grafton area is identified in the Mid North Coast Farmland Mapping Project (Department of Planning and Infrastructure, 2008) and shown in Figure 8 with the project works overlayed.

Figure 8: Regionally significant farmland with project overlaid



Source: DP&I, 2008

2.6 Access and connectivity

Consistent with its role as a major centre, Grafton is well served by a range of transport services including road, rail, bus and air.

Nearly 90 per cent of work trips by Grafton residents are by car either as a driver or passenger. Similarly a high percentage of tourism trips are by car (ABS).

The railway station and airport are located south of the river and a number of bus services run between south and north Grafton.

Currently, the Grafton Bridge is the only crossing of the Clarence River in the Grafton area. The bridge forms part of Main Road 83 Summerland Way, a classified road that provides an inland link between southern Queensland to the north, and the Richmond River and Clarence River Valleys in northern NSW.

Road users travelling between Grafton and South Grafton, including those making both local and through trips, use the bridge as there is no practical alternative route.

The bridge also forms part of the alternative regional north–south road link when the Pacific Highway is closed due to road traffic accidents or flooding.

The main access roads to the Grafton area are:

- The Summerland Way from the north
- Armidale Road and Orara Way from the south
- The Pacific Highway from the east
- The Gwydir Highway from the west.

Important roads within the local road network include:

- Bent Street (part of Summerland Way) in South Grafton, which connects Grafton via the existing bridge with South Grafton, Armidale Road and the Gwydir Highway. It is where most of the highway related businesses are located in South Grafton
- Skinner Street in South Grafton, which functions as South Grafton's main street
- Fitzroy Street (part of Summerland Way) in Grafton, which links the existing bridge with Grafton's CBD. It is where most of the highway related businesses are located in Grafton and the main access road to Grafton Shoppingworld
- Prince Street in Grafton, which functions as Grafton's main street and is also part of the Summerland Way, but not part of the designated heavy vehicle route
- Victoria Street in Grafton, where many of the administrative and institutional activities are located
- Villiers Street and Dobie Street in Grafton, which form part of the designated heavy vehicle route for vehicles that travel to and from the Summerland Way, north of Grafton.¹³

The existing bridge provides dedicated shared bicycle and pedestrian paths on either side of the bridge at the rail line level (lower deck). Regular bus services within Grafton and South Grafton are provided with connections to and from Ulmarra, Maclean, Yamba, Iluka,

¹³ Additional Crossing of the Clarence River at Grafton - State Significant Infrastructure Application Report prepared by Arup, August 2013

Copmanhurst and Jackadgery. There are also long-distance coach companies that provide services to Grafton.

Although the river plays an important role in the life and character of Grafton, there are no ferry services in the study area. Clarence River Ferries operates a daily passenger service between Yamba and Iluka.

2.7 Community and recreation infrastructure

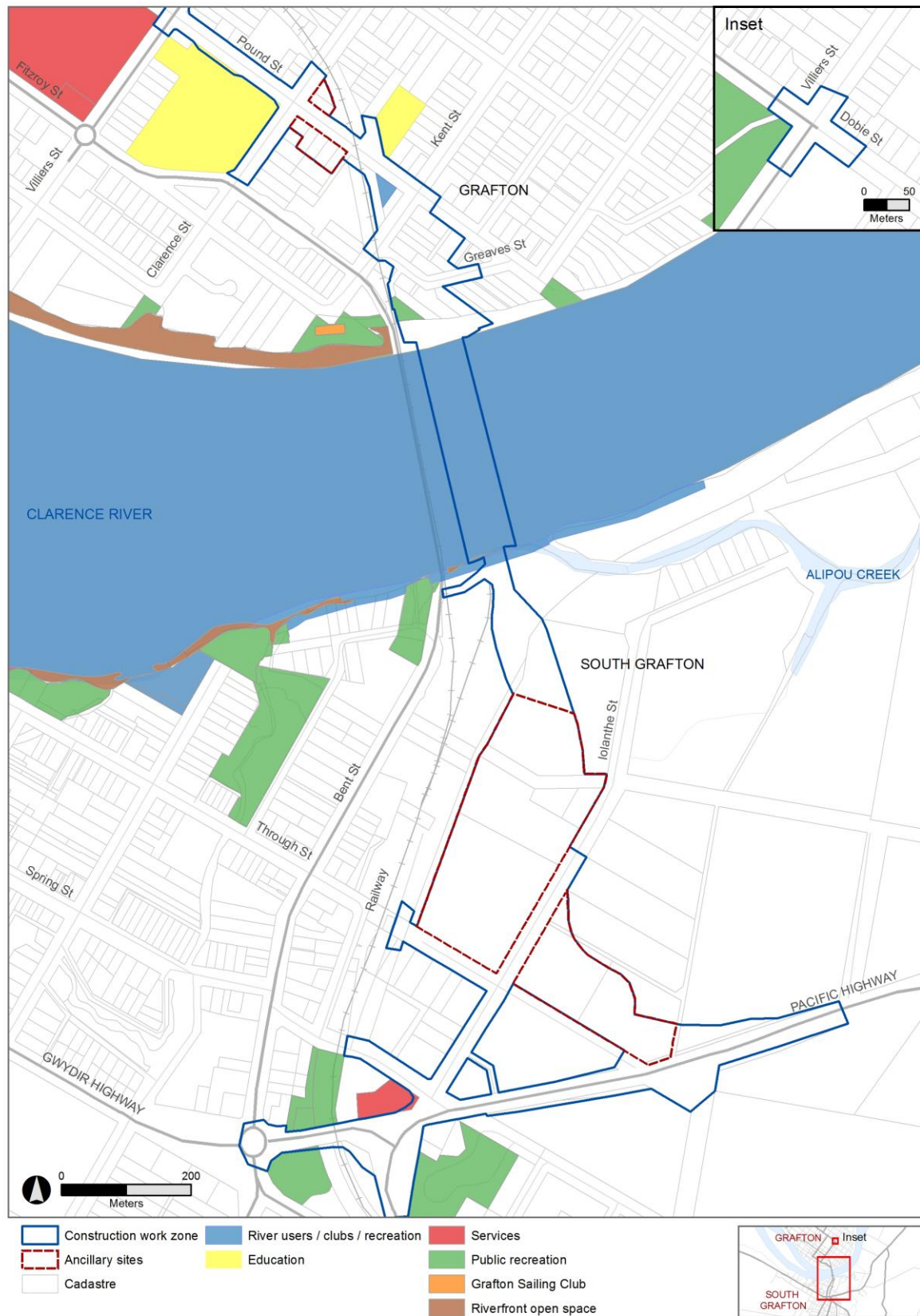
There is a wide range of community facilities services and networks available to the residents of Grafton and the Clarence Valley. A large number of Grafton City's community and recreation facilities are located near and along the length of the Clarence River or the Summerland Way. Facilities in the study area are identified in Figure 9. These include:

- Gummyaney Aboriginal Pre-school (30 Pound St, Grafton). A relatively new custom built preschool managed by the Gummyaney Aboriginal Corporation. Stakeholders report that the centre runs an important and high quality 'ready-for-school' program and has developed good links with the schools in the area (for example, establishing parent participation in primary schools' Parents and Citizens Associations).
- Grafton TAFE Campus attracts students from a wide area to courses in areas such as music, hospitality, nursing and information technology. The campus has a specialised arts and media facility, an integrated trades building (delivering courses for engineering and transport industry trades) and a learner support centre for students from Southern Cross University.
- Basmar Hall is a private facility rented out to various community groups for regular or periodic use including indoor martial arts groups. It is located on Pound Street and is a directly affected property.
- Grafton Showground and the nearby Fisher Park, a key regional sportsground catering to a variety of sports. It incorporates Lower Fisher Grass fields (hockey, minkey (children's hockey), touch and cricket), Ellem Oval (hockey, soccer, touch, AFL, cricket) as well as a skate park and playground. A \$1.8 million upgrade to facilities at Fisher Park has recently been completed and federal funding has been assured for the completion of the clubhouse of the Grafton Hockey Centre.¹⁴
- Salty Seller Reserve on Fitzroy Street is a foreshore park containing the sailing club
- Bridge Park at 2 McClymont Place, Grafton is a natural foreshore reserve on the eastern side of the existing bridge from Salty Seller Reserve
- Girl Guide Place is a park located within the Pound Street road reserve at its southern end providing access to a small jetty used to access moorings in the river
- Silver Jubilee Park at Charles Street South Grafton which is essentially a passive park with a bus interchange at its southern end containing the pedestrian and cycle path that extends north through Derek Palmer Reserve and onto the existing bridge and into Grafton
- Derek Palmer Park extending from Spring Street to Charles Street on the western side of the railway line in South Grafton which is a passive park with picnic facilities

¹⁴ The Daily Examiner , "*Hogan picks up Labor ball*", 9 August 2013

- Truck drivers memorial park fronting the Pacific Highway at South Grafton is a passive park containing a memorial wall to truck drivers
- Clarence River Visitor Information Centre and nearby supportive fast food businesses are important to the project of the tourism industry. Tourist information centres are a key mechanism to increase tourism yield. Research suggests that 20 per cent of visitors have no plans until they arrive at their destination, and 50 per cent are flexible. 30 per cent have not booked accommodation, and 50 per cent book tours after their arrival. On average, 20 per cent of all tourism visitors visit a tourist information centre during their trip.

Figure 9: Community facilities near the project



Source Arup (2014)

2.8 Community values

This section describes the community values important to residents, business owners and visitors to the study area. These have been informed by consultation with local residents undertaken for the project (either previously for the route selection or more recently as part of this assessment or the wider environmental assessment for the EIS), local government strategies and a review of literature.

Community values are those elements considered to be important to quality of life and wellbeing. They include tangible (physical) elements such as parks, buildings, and landscape, and intangible (social) elements such as sense of belonging and community diversity.

These values are summarised in Table 7 and can be categorised as:

- Town and neighbourhood character
- Lifestyle and amenity
- Access and connectivity
- Infrastructure and planning
- Equity

Table 7: Summary of key community values

Town and neighbourhood character	• Historical character of Grafton • Grafton's quiet country town character • Aboriginal and non-Aboriginal heritage values • Presence of high-quality infrastructure • Dispersed traffic maintains town amenity • Unique visual value of existing Grafton bridge • Jacarandas trees are an important part of towns character • Residential areas are peaceful and quiet • Roads in residential areas are low-key and service the surrounding neighbourhood
Lifestyle and amenity	• Timely and trouble-free car transport within and through the town • Congestion-free roads • High levels of residential and community amenity • Recreational use of the river • Ease of access to shops, businesses and workplaces • Availability of community facilities that are easily and safely accessed • Traffic that avoids places where children and elderly are likely to be
Access and connectivity	• Safe connections between Grafton and South Grafton for all vehicles, public transport, pedestrians and cyclists • Heavy vehicles travelling through and around town efficiently and safely • Traffic free quality of the CBD • Residential areas free of heavy vehicle traffic • Pedestrians and cyclists moving around Grafton City in safety • Major roads take into account the location of community facilities and residential areas • Areas with existing traffic congestion that are noted and planned for accordingly, particularly the CBD • Roads and other infrastructure that are reliable in times of flooding

Infrastructure and planning	• Infrastructure planning that accounts for future traffic and population growth • Planning that is strategic and provides benefits for the community • Community involvement in the decision-making process • Flooding is a consideration in planning process and flood mitigation structures are maintained • Planning that fully considers a range of route options • Efficiency and expediency in planning and construction
Equity	• High levels of neighbourhood amenity and quality of life for all community members • Good standards of infrastructure for all users, not just residents • Everyone who uses the roads is able to do so in safety

3. SOCIAL IMPACT ASSESSMENT

3.1 Introduction

An assessment of the project has concluded there would be social and economic impacts to the Grafton community and as required by the Director – General's Requirements assessment of the project must take into consideration the:

- Social and economic impacts on the local community and community facilities directly impacted by the project.
- Impacts on access and use of the Clarence River and its banks, including fisheries, tourism and recreational use.
- Impacts on Regionally significant farmland.
- Impacts on Crown land.
- Amenity impacts on any adjoining land owners and land owners along the foreshore of the Clarence River.
- Amenity impacts on existing and future residential properties in Grafton and South Grafton.
- Amenity impacts on the southern 'town entry'.
- Amenity impacts on the use of the Clarence River.

This section examines the social and economic impacts of the project, both during the construction phase and the operational phase of the project.

3.2 Impacts on population and employment

3.2.1 During construction

The project would take about three years to construct and over that time the average construction workforce on site would be about 55 people, including management staff and subcontractors. As is typical of other road projects, the construction contractor is likely to bring in key workers for the duration of the construction phase. Additional indirect jobs could be created as a result of multiplier effects in associated industries supplying goods and services for road and bridge construction.

The existing labour force would have some of the skills required for the project. The most common occupations in the Grafton Urban Centre and Clarence Valley (based on 2011 census results) include labourers and professionals, technicians and trades and clerical and administrative occupations. There may be direct employment opportunities during the construction phase and this would depend on the skills needed by the construction contractor.

In addition to direct employment opportunities, there would be additional demand for temporary accommodation in the form of hotel and motel accommodation and possibly dwellings leased on a short term basis. Additional employment associated with the construction of the project could decrease the availability or increase the price of short term accommodation or on labour prices.

3.2.2 Operation

The acquisition of about 23 dwellings would result in a potential relocation of up to 60 persons in the Dovedale area of Grafton potentially to other parts of Grafton and surrounding

areas. This represents a small proportion of the study area and not likely to impact on the population and demography of the study area as a whole. However, this may impact on population and demography at a local community level (and the impact would depend on what families choose to do). Some residents would stay in the area while others may relocate.

At the broader level, the improvements in connectivity and reduction in congestion would facilitate growth and development in other residential areas in Grafton consistent with the role of Grafton in the settlement strategy of the region as indicated in Section 2.1. The additional investment in transport infrastructure would facilitate growth in accordance with Council and regional growth strategies.

Similarly the improved accessibility to the CBD and South Grafton business zones would enable development and redevelopment of employment lands. This is expected to have a positive impact on the development of larger format retailing and service industries in the Bent Street and Iolanthe Street areas of South Grafton.

3.3 Property and land use impacts

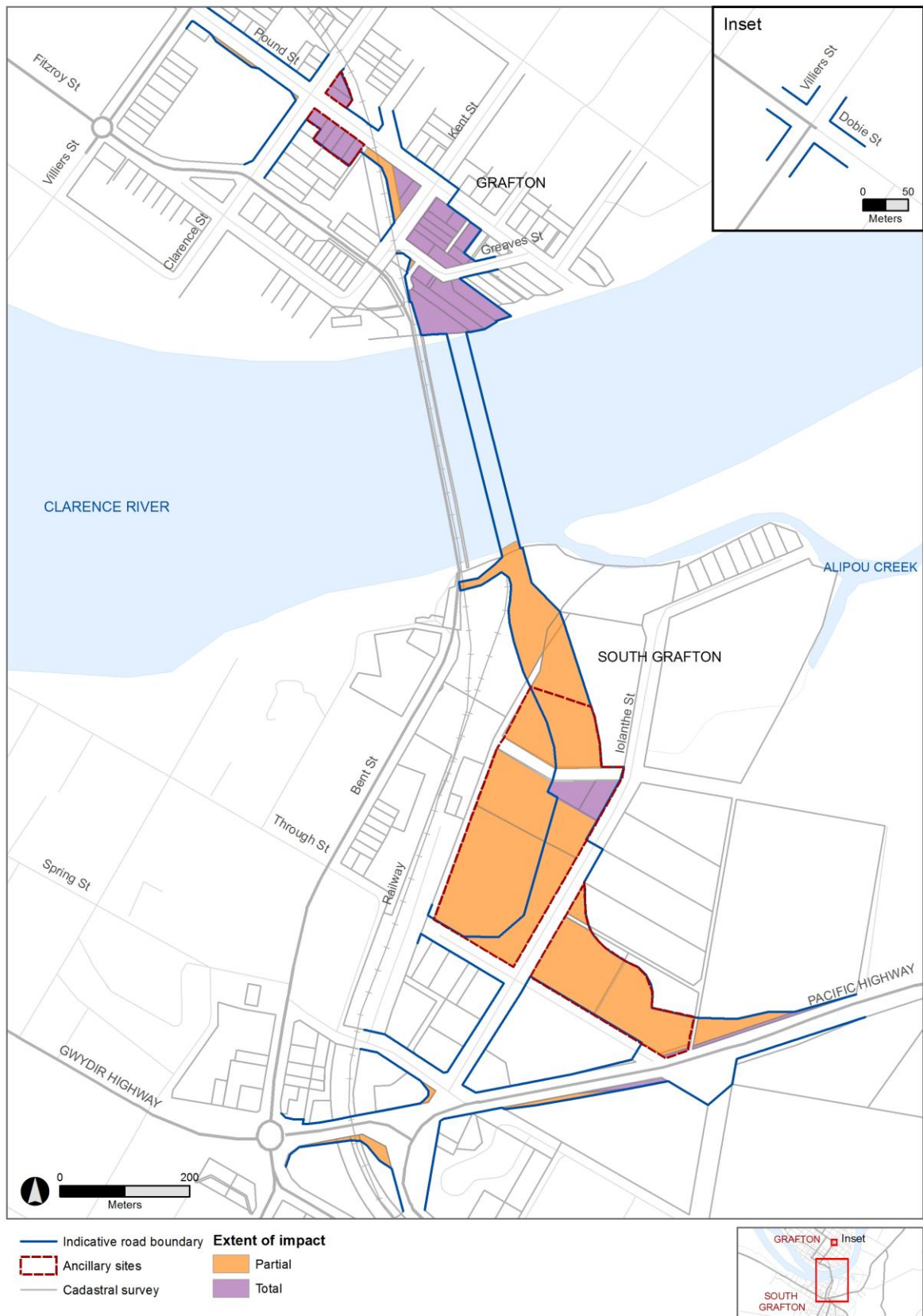
3.3.1 Directly affected properties

Directly affected properties are those that require full or partial acquisition of the property for the project. They are listed in Table 8 and the location of each property is shown on Figure 10. No property would need to be acquired for the proposed flood mitigation works given the existing levee sits within an easement.

Table 8: Directly affected properties

Land use	No. of land parcels affected	Extent of impact
Residential	23	Total
Vacant	5	Total
Basmar Hall	1	Total
Park/reserve	1	Total
Subtotal	30 properties totally affected	
Residential	1	Partial
Grafton TAFE campus	1	Partial
ARTC (railway) land	4	Partial
Rural	5	Partial
Vacant	3	Partial
Clarence River Visitor Information Centre	1	Partial
Park/reserve	1	Partial
Disused petrol station	2	Partial
Subtotal	18 properties partially affected	
Total	48 properties totally or partially affected	

Figure 10: Directly affected properties



Source: ARUP

Properties would be acquired for the construction of the project and would include construction compounds and stockpile areas. Following completion of the project, residual land parcels acquired would be consolidated into sufficiently useable areas that can be reused appropriately, consistent with surrounding land uses. Excess land use strategies would be investigated during the detailed design and construction stages in consultation with Clarence Valley Council. Strategies could include land transfer to the control or ownership of the Council and/or releasing land to the public for redevelopment.

Roads and Maritime acquires land under the terms and provisions of the *Land Acquisition (Just Terms Compensation) Act 1991*. Based on the concept design assessed in the EIS, the construction of the new Grafton Bridge and associated road works (including new roads, road widening construction compounds and levee works) would require the acquisition of 48 lots (including partial and total acquisition).

The land occupied by the stockpile areas along the levee and some of the land to be used for the construction ancillary site in South Grafton could be leased for the construction period and then returned to the owners following construction. This would be subject to consultation with land owners.

Of the lots to be wholly or partially acquired:

- Thirty-seven are privately owned (some owners own more than one lot generally contiguous)
- Six lots are owned by Clarence Valley Council
- One lot is owned by TAFE NSW
- Four lots are owned by ARTC.

The properties to be wholly acquired include:

- Twenty owners of residential dwelling houses and one dwelling (part of a dual occupancy with a body corporate owner)
- One commercial property in Grafton used for community purposes (Basmar Hall)
- One lot being an open space reserve on McClymont Place, Grafton owned by Clarence Valley Council
- Three vacant road side lots next to the Pacific Highway owned by Council
- Two vacant lots within the business development zone on Iolanthe Street, South Grafton

The properties to be partially acquired include:

- One residential property located on the corner of Pound Street and Villiers Street and the TAFE affected by the road widening on the southern side of Pound Street
- Four lots owned by ARTC in South Grafton affected by the bridge southern approach (currently vacant)
- Two lots on Charles Street, South Grafton which are currently vacant but were formerly used as a petrol station and are affected by the proposed Gwydir Highway and Iolanthe Street roundabout
- The Tourist Information Office on Spring Street, South Grafton owned by Clarence Valley Council which would be affected by the works to the intersection of Spring Street and the Pacific Highway
- One lot being an open space reserve on Charles Street, South Grafton owned by Clarence Valley Council

- Four rural lots in South Grafton
- One vacant lot on Spring Street, South Grafton
- Two vacant lots within the business development zone on Through Street, South Grafton.

3.3.2 Impact of property acquisition

One of the major social impacts from the project is on the individuals and families affected by property acquisition (both owners and tenants).

Twenty two residential dwelling owners would be affected by full acquisition. All these dwellings are located in the Dovedale area. These include all properties fronting Pound Street between Clarence Street and the existing railway viaduct and a cluster of dwelling houses bounded by Pound, Greaves and Kent Streets and four dwelling houses on the river side of McClymont and Greaves Street.

Three owners of private vacant business development land would be affected by acquisition. One owner would be affected by full acquisition and two owners by partial acquisition. This land is located in South Grafton.

Three owners of private primary production land would be affected by partial acquisition. This land is located in South Grafton.

The owner of the Basmar Hall would be affected by full acquisition. The Basmar Hall is zoned as residential land but used for community activities.

Land owned or controlled by public authorities includes Clarence Valley Council, ARTC and TAFE NSW also be affected.

Acquisition would have substantial impacts on those directly affected, impacts which are both immediate and long term in nature. Impacts of this aspect indirectly affect the local community itself, and by extension the government, non-government and informal social institutions which support them.

Impacts are distributed and experienced differently amongst different groups in society.

At the individual level of assessment, the variety of personal responses to property affectation and acquisition is substantial. The social impact of property acquisition would vary according to personal circumstances (such as life stage), and the depth of connection to property, community and neighbourhood. As such, the severity of impact of acquisition at the individual level can only be properly determined by an individual.

At the individual and family level a number of impacts can potentially be experienced by residents affected by acquisition, including:

- The loss of a home - residents have a history and attachment to their properties and ties to the community
- Anxiety and stress associated with uncertainty and relocation
- The loss of established social networks and impact on social capital - residents face the loss of their friendship, support and community networks, at a time when they are needed the most
- The loss of connection to social and community services and facilities which support residents daily life, including schools, doctors, and other human services
- Relocation away from employment, necessitating increased travel times and costs
- Household finances may be negatively affected, dependent on scope of compensation package. This could include, for example, rent increases at comparable properties

- Impacts after relocation, which can include social isolation, as it can be difficult to build networks into new communities, the need to re-establish connections to a range of social, health and community services, and any unexpected financial costs increasing financial stress in households.

3.3.3 Impact on property values

Property values are driven by a range of factors. There is potential for the project to have positive and negative impacts on property values based on changes to amenity, accessibility and connectivity adjacent to the existing bridge and the new bridge, including the approach road works.

Uncertainty about the property acquisition process and timing of the project proposed works may impact property values in areas closest to the project. This would be expected to improve as certainty over the project design increases.

The median sales price for all dwellings in Clarence Valley was \$280,000 in the December quarter 2013, representing an annual decrease of 6.7 per cent and a decrease from \$289,000 in the September quarter (*Housing NSW Sale Prices - Rural Local Government Areas - All Dwellings - December Quarter 2013*). This trend is influenced by a range of factors influencing the demand and supply for housing at the national, State and local levels.

The improvement in accessibility and connectivity through additional capacity in the transport network and the reduction in congestion would potentially lead to increased levels of economic activity including land development which would have a positive impact on property values.

3.3.4 Impact on Crown land

Crown land affected includes the bed and foreshore of the Clarence River and potentially some original Crown road reserves.

3.4 Impacts on local amenity

The project is likely to have amenity impacts for both residents along the route and for the wider community including residents of Grafton and users of either the existing Grafton Bridge or the new crossing.

“Amenity” is subjective, differing according to situational and environmental factors for each person. It is broadly considered to be the ‘liveability’ or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in both the public and private domain and includes the enjoyment of sunlight, views, privacy and quiet. Socio-economic dimensions of amenity effects can include a lack of socialisation in the public realm and consequent weakening of social cohesion or downturn in commerce, and the social distribution of quality of life.

The social aspect is just as important as the physical aspect to the resident’s perception of amenity. Amenity has been considered to incorporate concepts such as “the standard or class of the neighbourhood, and the reasonable expectations of a neighbourhood” (*Broad v Brisbane City Council 1986*) or the way of life of the neighbourhood and residents’ subjective perception of their locality.

The main types of amenity impacts that may result from the project are noise impacts, impacts on visual amenity, lighting traffic and shadow impacts. These impacts are examined in detail below.

3.4.1 Visual amenity

Visual amenity may be potentially impacted by the project. Visual amenity is considered to be the 'experience' or perception of an area; under a broader approach it can be interpreted as the character of an area. Visual amenity can be an important factor in determining quality of life and people's levels of satisfaction with the places they live and work. High levels of visual amenity can help create places where people are happy to spend time and increase levels of sociability; conversely poor visual amenity can create areas that people are less likely to visit. Visual amenity impacts can be localised, with effects limited to small geographical areas or more generalised, affecting the wider community.

The historical character of Grafton and its quiet country town character supported by the unique visual value of the existing Grafton Bridge and the vegetated nature of the town and points of arrival in central Grafton are important values recognised by the community.

Views of the Grafton Bridge have been identified in community consultation as an important aspect of Grafton's identity. In addition the positive visual impact of the existing bridge spanning the Clarence River is a considerable element in the town's attractiveness to tourists. Key views of the bridge have been sought to be preserved by the project to maintain the town's strong visual identity and appeal. This includes the fig and jacaranda trees that signify the entry to Grafton and influence its visual and landscape character.

The proposed new bridge would be located relatively close to the existing Grafton Bridge (about 70 metres downstream). The concept design of the project has considered the key views from the river upstream to ensure they are not compromised and that the design compliments the existing Grafton Bridge. The new bridge would provide new views of the heritage structure.

Visual impacts are discussed in the *Technical Paper Urban Design & Landscape Concept Report (Including Landscape Character And Visual Impact Assessment)* prepared by Spackman Mossop Michaels. Changes to the landscape character of the study area resulting from the project would include:

- Altering the spatial quality of Pound Street between the railway viaduct and Villiers Street by the removal of trees and the widening of the carriageway
- Improvements to access and connectivity including the provision of additional pedestrian and cycle paths
- The removal of houses in the vicinity of Pound Street in the Dovedale area and their replacement with additional road infrastructure including batters and the new bridge;
- The removal of vegetation in the vicinity of the new structure including some jacaranda trees
- An increase in open land in this area with some potential for additional public open space and additional tree planting with the ability to provide a new sense of arrival in Grafton
- The construction of a new bridge with a scale slightly less than the existing bridge would change the existing character of the Clarence River at Grafton
- The existing rural character of the southern foreshore near the new bridge would change with the addition of the bridge

The project would have an impact on views from a number of view points. These impacts include:

- Removal of large street trees in Pound Street and in the vicinity of the new bridge approaches on the northern side of the river

- Interruption of views of existing railway viaduct from the existing bridge to Pound Street from local streets
- Replacement of railway bridge on Pound Street
- Interruption of view of existing bridge from residential areas around Greaves Street, foreshore areas and river, particularly from the east looking upstream

The community values the existing landscape qualities of Grafton and the landscape and heritage qualities of the existing bridge. The new bridge provides the opportunity to establish a point of arrival in Grafton reinforced by new plantings of character trees such as the jacaranda.

The minor (up to 200mm) increase in the height of the flood levee on the northern and southern banks of the river north west of the existing bridge has the potential for very minor changes to views and outlook.

3.4.2 Noise and vibration impacts

A potential impact upon amenity resulting from the project would be noise amenity impacts. A discussion of the social impact assessment of noise is contained in the *Technical Paper: Noise and Vibration Impact Assessment (Arup 2014)*.

Construction activities have the potential to impact upon the amenity and lifestyle of localised areas, such as changes to noise (on-site from plant and vehicles, and off-site from vehicles), vibration, visual pollution, increases in traffic levels and truck movements or changes to access and movement patterns and safety concerns. This would apply to bulk earthworks, roadwork, road surfacing and flood mitigation construction activities. There is the potential for construction noise criteria to be exceeded at times during the construction process where sensitive receivers are in close proximity to construction ancillary sites and construction work zones. Typical construction noise levels are predicted to be around 70–75 dBLA_{max} at a distance of 50 m from construction work zones, and 45–55 dBLA_{max} at a distance of 150 m.

Practices to reduce construction noise impacts would be required and would be implemented as identified in the *Technical Paper: Noise and Vibration Impact Assessment*.

One operational, there is the potential for changes to the noise environment associated with increases and decreases in traffic.

Mitigation measures are particularly important in residential areas. There is the opportunity to incorporate noise control measures into the design to protect the residential amenity of the surrounding residents. Based on the noise investigations undertaken on the concept design, both architectural treatment to some affected properties and a noise barrier for the noise catchment area around Pound Street, Kent Street and Greaves Street in Grafton would be required. The exact number and nature of noise mitigation treatments would need to be confirmed after project approval and once the project detailed design is available.

The assessment documented in the *Technical Paper: Noise and Vibration Impact Assessment (Arup, 2014)* found vibration impacts on buildings and heritage structures would not be an issue either during construction or operation.

3.4.3 Air quality impacts

Construction activities have the potential to impact upon the air quality of localised areas, particularly from dust and vehicle emissions. Air quality impacts during construction would be managed through the implementation of a construction air quality management plan.

Operational air quality modelling has been undertaken by Arup for the EIS. The modelling predicted that during the operation of the project, the air quality levels would be below the

exceedance criteria for the key pollutants (NO₂, CO and PM₁₀). A slight increase in air pollutant levels compared to the background air pollution concentrations assumed for the modelling was predicted due to higher traffic volumes in future years.

3.4.4 Lighting

If unmanaged, light spill from the bridge and bridge approaches has the potential to impact on the amenity of adjoining and nearby residents. As the bridge and bridge approach would be in close proximity to residential buildings in the Grafton approach, the lighting designed for the bridge would aim to avoid any undesirable spill light to the surrounding residential development.

3.4.5 Shadow impacts

Consideration has been given to the shadow impacts of the new bridge and its approaches. Additional shadows would be confined to the immediate vicinity of the bridge, even in the worst case mid-winter period. No residential properties would be affected.

Additional shadow would be cast on the river but would be of limited width and is not expected to affect commercial or recreational river use to any significant extent.

Shadowing under the bridge portals on the foreshore areas can create the potential for hiding or entrapment points which can affect perceptions of safety and security. These would be managed in the detailed design of the foreshore areas and landscaping and lighting proposed in these areas.

3.4.6 Traffic

The *Technical Paper: Traffic and Transport Assessment (Arup, 2014)* report submitted with the EIS found that some areas would be impacted by changes on traffic volumes and changes to traffic routes. Specifically:

- Traffic volumes along Pound Street west of the viaduct are likely to increase significantly bringing additional traffic into the commercial centre
- Traffic volumes along Pound Street east of the viaducts are likely to decrease or remain low due to the closure of Pound Street east of the viaduct
- Traffic volumes along Bent Street and Fitzroy Street are predicted to decrease by about 40 per cent as some traffic gets diverted to the new bridge
- Kent Street would be closed between Pound Street and Greaves Street to accommodate the alignment of the new bridge at its northern abutment. This would require local traffic to divert to either Bacon and Clarence Street or Greaves Street
- Pound Street would be closed east of the viaduct with access from Kent and Pound streets to Bridge Street retained
- Traffic volumes along Greaves Street are likely to increase marginally as a result of the closure of Kent Street south of Pound Street
- Traffic movements between the east-west ends of Grafton along Clarence, Villiers and Prince Street would be comparable with and without the project
- Traffic volumes along Iolanthe Street (South Grafton) are likely to increase significantly as a result of the project. Note that the land uses fronting Iolanthe Street are predominantly commercial and retail related. This would have inherent benefits for local businesses
- A reduction in traffic volumes on Villiers Street between Fitzroy and Pound streets.

3.5 Economic impacts

3.5.1 Impact on local businesses

This section considers the potential impacts on business viability, impacts on employees at these businesses and number of businesses with potential minor impacts.

For the purposes of this assessment, potentially directly affected businesses are those where full or partial acquisition of the property is required. Businesses with minor impacts are those where business viability is unlikely to be affected.

The necessary property acquisitions include land occupied by businesses, which would require the closure or relocation of the business. To the north of the river, Basmar Hall which is a hall hired on a commercial basis for community use would be directly affected by property acquisition. South of the river, no existing business are directly affected. One property containing a vacant former service station building would be directly affected.

About 4.5 hectares of vacant employment land on Iolanthe Street would be needed for the project. Of this, about 1.2 hectares would be acquired for the project with the remaining 3.3 hectares could be leased by Roads and Maritime as an ancillary site in South Grafton. Leased land would be returned to land owners and made available for development following completion of the project. Any future development would be subject to the relevant development approvals.

The businesses located within the study area on the main approaches to the new bridge and the existing bridge are described in Sections 2.4 and 2.5. Figure 6 indicates commercial land uses in the vicinity of the project and Figure 10 indicates directly affected properties. These streets would experience changes in traffic volumes and accessibility of businesses to customers, staff and suppliers.

Overall any local business bypass functions of the project would be localised as traffic growth in Grafton would be accommodated by the project with an increase in overall traffic performance and a reduction in congestion.

There would be improved access and exposure to businesses on Iolanthe Street including currently undeveloped sites next to the project. The character of Pound Street from the new bridge to Villiers Street would change because of the widening of the street and provision of additional formalised on street parking. A gradual change in the nature of businesses is expected along this area potentially associated with business improvement or redevelopment.

During construction there may be potential adverse impacts on these businesses from the effects of reduced accessibility, increased traffic disruptions and a loss in the quality of operating environment.

There would be a reduction in traffic volumes on Bent Street south of the existing bridge and Fitzroy Street north of the existing bridge. It is considered that businesses on Bent Street would benefit from a reduction in congestion and an improvement in accessibility. The nature of these businesses is such that very few of them rely on passing trade. They are primarily businesses serving Grafton and surrounds and relying on good access to the main road network for ease of customer access. Some businesses such as accommodation and service stations may be impacted by a reduction in passing traffic.

Fitzroy Street has traditionally been the main entry to Grafton and consequently accommodates a number of motels and other businesses that serve passing traffic or visitors to Grafton. Such businesses may be adversely affected by the reduction in traffic volumes along sections of Fitzroy Street. There would be a reduction in congestion and traffic with a

consequential increase in ease of movement and amenity through a reduction in localised noise.

Businesses on Fitzroy and Bent streets would not be adversely affected during construction to any significant extent.

3.5.2 Impact on regionally significant farmland

Regionally significant farmland is described in Section 2.5 and is shown on Figure 8.

Two rural properties in South Grafton identified as containing regionally significant farmland would be affected by partial acquisition. These properties are on the edge of the existing urban area (employment lands) in South Grafton between the Pacific Highway and the rail line and would be partially affected. About four hectares would be acquired from one property about 21 hectares in size. The other holding is about 5 hectares in size of which about 1.8 hectares would be acquired. The acquired lands do not contain access roads, dwellings or farm sheds or similar structures, however it is recognised this area is on the protected side of the levee wall. The larger holding is used for grazing purposes and growing feed. The smaller property is used to a lesser extent. The balance of these properties would be available for continued rural use and potentially as a safe refuge during floods.

The regionally significant farmland affected (about 6.8 hectares) adjoins the South Grafton urban area (refer to Figure 8) and represents a small overall percentage of regionally significant farmland. This land is close to the existing urban area. There is a broad range of other significant farmland available nearby in this section of the Clarence River valley.

3.5.3 Tourism

This section considers the impact of the project on tourism. A description of the tourism industry is provided in Section 2.4.

A qualitative assessment has been undertaken to assess how the project would contribute (positively or negatively) to tourism. This includes assessment of any potential direct impacts on existing major festivals or events.

Tourism is an important part of Grafton's, and the Clarence Valley's, economy. In 2006, 8.4 per cent of the Clarence Valley LGA workforce were employed in accommodation and food services; many of these jobs are likely to be directly or indirectly related to tourism (*Clarence Valley Council State of the Environment Comprehensive Report 08/09*). Grafton is an attractive destination for tourists because of its heritage character, river access and water sports, and several high-profile annual events including:

- The Bridge to Bridge Ski Race.
- The Monster Energy Pro Wakeshow (wakeboard tournament).
- The Jacaranda Festival.

Clarence Valley Council has identified tourism as one of the region's fastest growing industries, and its *Economic Development Strategic Plan* (Clarence Valley Council, 2006) recognises this importance by establishing the development of the Clarence River Way as a strategy for economic development.

The Clarence River Way Masterplan is an integrated approach to develop the tourism capacity and marketability of the Clarence Valley, with the intent of creating the region as a 'destination experience'. Strategies for its development are set out in the *Clarence River Way Masterplan: Tourism Investment and Infrastructure Plan* (Clarence Valley Council, 2009). Many of the strategies are based in Grafton, and relate to the Clarence River or the visual amenity of the town.

Given the importance of the Clarence River and the visual heritage of Grafton to the Clarence River Way Masterplan, some strategies have the potential to build upon or be negatively impacted by the additional crossing of the Clarence River. The potential impact of the project on the *Clarence River Way Masterplan* strategies are detailed in Table 9.

Table 9: Potential impact or benefit of the project on the *Clarence River Way Masterplan*

Masterplan Strategy	Potential Impact
Improve the cityscape through investment in a mainstreet program, (primarily Prince Street for waterfront linkage and Fitzroy Street)	The project would result in the removal of significant trees including some jacarandas and fig trees in Pound Street. The proposed landscape plan for the project with additional street and residual land planting to a consistent theme along Pound and Clarence streets with upgrading of roads would mitigate these impacts.
Investigate options to provide public waterfront access (including on residential and railways-owned land)	The project may potentially improve waterfront access through provision of a pedestrian and cycle link parallel to the South Grafton foreshore area. There is a future opportunity for a waterfront open space link between Salty Seller Reserve and Girl Guide Place and the Pound Street Jetty in Grafton. This is subject to further investigation and implementation outside of this project.
Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	The project would enhance the southern arrival to South Grafton with appropriate tree planting, signage to the Visitor Information Centre and Grafton CBD.

Improved accessibility into and around Grafton would have positive impacts on tourism through shorter and less congested trips and improve the potential for the city to host the major tourist events outlined above.

There is potential for some impacts on the tourism industry during construction in South Grafton relating to works on the Pacific Highway Spring Street and Charles Street. There may be potential negative impacts on businesses from the effects of reduced accessibility, temporary changes to traffic conditions and a loss in the quality of operating environment. This would include access to the tourist information centre and access to Bent Street. However, the prominence of these localities as a major regional centre suggests they would continue to be a destination of choice for highway and non-highway related needs during the construction stage. These impacts would be managed through the implementation of construction traffic management plans including appropriate wayfinding signage.

It is expected that there would be an increase in demand for short term accommodation and recreational uses from construction workers.

On completion, there is a potential positive impact on tourism in Grafton enabling the city to develop as a regional tourism hub as indicated in relevant planning policies including the *Clarence River Way Masterplan*. This would be attributed to the overall improvement in accessibility and reduction in congestion making it easier to access the facilities and services in Grafton.

3.5.4 Impacts of improvement in transport and connectivity

The project would strategically connect existing land uses and future development. It would facilitate efficient movement of people and goods between areas of strategic importance. This includes linking different employment or industrial areas – to facilitate the transport of cargo – or a connection between employment lands and current or future residential areas. Good connections are important for identified future growth sites, as they can help encourage residents or businesses to locate in these areas. Strategic connections can also include access from employment or industrial centres to the wider road network beyond Grafton. High levels of connectivity to existing and future land uses and development can provide economic benefits to businesses served by these connections, and social benefits (through reduced travel time) to their employees.

As identified in Section 2.4, the manufacturing and the agriculture, forestry and fishing sectors are goods-based sectors with a strong presence in the Clarence Valley region's economy, while retail and health sectors employ the most people. Within Grafton, employment areas are primarily located within the CBDs and industrial areas in South Grafton industrial estate (extending south along the railway), the Iolanthe Street business development area, and some scattered industrial areas in Grafton (*Clarence Valley Industrial Lands Strategy*, Clarence Valley Council, 2007). Growth areas are located in Grafton and South Grafton, while proposed future employment lands and land release areas are located in Junction Hill, Clarenza and South Grafton Heights (*Mid North Coast Regional Strategy*, NSW Department of Planning, 2009).

The project would improve traffic flows and reduce congestion across the river providing a better level of connectivity to all land uses located on opposite sides of the Clarence River. Specifically, the project would:

- Improve access for large freight vehicles as they would be able to use the new bridge at any time of the day (existing bridge restricts large heavy vehicles at peak hour periods).
- Improve levels of connectivity between the Iolanthe Street industrial area in South Grafton, and Grafton; in particular better connection would be provided to the residential area to the east of Grafton, connecting an established residential area with employment lands.
- Provide better connectivity to the Clarenza growth area, the South Grafton growth area, and between the Grafton and South Grafton CBDs.
- Provide traffic relief to Bent Street facilitating development as a business development area and location for service industries and large format retailing not suitable for a CBD location.
- Improve travel times and potentially reduce trip length with resulting improvements in gross regional product.

The project would improve connectivity between strategic land uses such as employment and residential areas, and growth areas and thus contribute to the economic development of the Clarence Valley.

The proposed South Grafton road network upgrades would result in changes in access to the Visitor Information Centre and other traffic generating developments on Spring Street. The provision of roundabouts at either end of that section of Iolanthe Street and directional signage would facilitate access to these developments.

Similarly, the proposed Pacific Highway realignment in South Grafton would change the existing more direct route to the petrol station on the corner of Pacific Highway and Spring Street. These impacts can be mitigated by improved directional signage.

The possible initial upgrades would not restrict access at Spring Street, but include a roundabout, and the Pacific Highway would remain on its current alignment. With the possible initial upgrade constructed rather than the ultimate, the connectivity restriction issues discussed previously would not occur at year of opening. The possible initial upgrades are documented in Section 1 and shown in Appendix 1.

3.5.5 Impacts of construction

The project is expected to cost about \$200m. There is potential that the project would have multiplier effects for industries supplying goods and services to the project.

3.6 Impacts on access and connectivity

The project has the potential to impact on access and connectivity to community activities or plans. Works that reduce the number of connections from an area, or impose barriers that make established patterns of travel more difficult, present a potential negative impact on access and community activities and plans.

3.6.1 Community cohesion, access and mobility

The cohesion of a community refers to its ability to function and see itself as a whole, and the ease for residents to access areas outside their immediate place of residence. Disruptions to community cohesion can make travelling through an area by vehicle or on foot more difficult; a lack of community cohesion is often related to a high degree of severance in an area. As such, a lack of cohesion means that residents may be more likely to experience difficulty in accessing community facilities and services. The cohesiveness of communities can potentially be affected by:

- The presence or introduction of physical or psychological barriers (such as the Summerland Way)
- Road closures which result in changes to movement patterns (pedestrian and vehicular) and the potential severance/ increased isolation of some residential areas
- The loss of community infrastructure
- The loss of residents through property acquisition (discussed above)
- Major disruption to suburban centres

There are currently two barriers which physically and psychologically divide the communities within Grafton and South Grafton:

- The Clarence River
- Summerland Way (from Gwydir Highway to north of Turf Street).

The Summerland Way forms a barrier through the communities along its length. Its width and volume of traffic can make crossing difficult in some locations such as between Clarence and Villiers streets, and Villiers and Duke streets, particularly during periods of traffic congestion.

The Clarence River has been a division in Grafton for the town's history. Today there are socio-economic divides between residents in the Grafton and South Grafton (identified from ABS statistics in Section 2.3).

Traffic congestion on the existing Grafton Bridge exacerbates the division of urban areas with some residents reporting during consultation that they avoid crossing the bridge during peak hour periods when possible due to traffic congestion.

The railway viaduct provides an existing physical barrier although the impact of this barrier is reduced by the integration of the local movement network with the viaduct structure.

Grafton however is an economic, service, social and transport hub and identified by the Mid North Coast Regional Strategy as a major regional centre which has the greatest capacity for commercial redevelopment. The economic and social infrastructure which serves the population is located on both sides of the river and the bridge plays a crucial role in community function and social sustainability. Tighter cohesion between Grafton and South Grafton is likely to lead to social and economic benefits.

Traffic congestion is strongly associated by the community with the existing crossing, and has a number of negative social and economic consequences. For example, there is anecdotal evidence that congestion is negatively impacting on social service delivery, with providers (based in the north) delaying visits to clients (to the south) during peak periods if it can be avoided. It is understood that peak periods are seen as before 9.30am and after 3pm, a significant proportion of the working day.

Disruption to community cohesiveness and severances can occur at the local and Grafton-wide scale. Local effects may include reducing access to a small residential or business area, while more generalised effects can create larger divisions (such as those between Grafton and South Grafton created by the Clarence River). In terms of community cohesion and severance the likely adverse impacts include:

- The project would change existing local movement patterns in the southern part of the Dovedale area through the closure of Pound Street east of the viaduct and Kent Street south of Pound Street. This would require residents of the eastern end of Pound Street, Greaves Street, Bromley Street and Breimba Street to use an alternative route to Pound Street and the Grafton business district, including Greaves and Fitzroy streets and Bacon Street.
- Access to the Grafton TAFE Campus would be affected by changes to access arrangements to Pound and Clarence Streets and the provision of additional parking. Pedestrian crossings of Pound Street between Villiers and Clarence Streets would be more difficult with provision to be made for a signalised crossing point at the intersection of Pound Street and Clarence Street. Access from Pound Street would be left in only. Access from Clarence Street to Pound Street would be right out and left out only
- Clarence Street movements on the eastern approach to Pound Street would be left only
- Access to residential properties on Clarence Street between Fitzroy and Pound streets would generally be left in and left out only. Instead of turning right-in and right-out of the access driveways, residents would be required to do U-turns at each end of the median parking.
- Central median to Pound Street would generally restrict access to properties to left in and left out only south of Villiers Street
- Community members accessing the Gummaney Aboriginal Pre-school would be redirected with access to the eastern end of Pound Street via Kent and Bacon streets or Greaves and Fitzroy streets
- In South Grafton community members living along Butters Lane would need to use the priority controlled T intersection on the realigned Pacific Highway (north). If Roads and Maritime provides the possible initial upgrades in South Grafton as documented in Section 1, community members living along Butters Lane would need to use the Through Street roundabout.
- Restrictions on access to properties on Iolanthe Street to left in and left out

- If Roads and Maritime provides the possible initial upgrades in South Grafton as documented in Section 1, there would be one way westbound on Spring Street under the railway line
- The restriction to left in and left out at Spring Street would reduce access to the Visitor Information Centre and would require additional directional signage to provide appropriate wayfinding. This would not occur under the possible initial upgrade (See Section 1) which retains a roundabout at Spring Street. It is also noted that the project is based on the assumption that the Pacific Highway upgrade is in place. Appropriate Visitor Information Centre and Grafton CBD signage would need to be provided for the Pacific Highway south bound travellers. Signage would assist traveller to make a decision on whether to go to Grafton before they see the visitor information centre.

Likely benefits of the project in terms of community cohesion, access and mobility would include:

- The project would further integrate the communities of Grafton and South Grafton, economically and socially
- The project would strengthen the northern and southern commercial centres, in turn building stronger communities and improving access to community facilities. A reduction in congestion on Fitzroy Street and an increase in exposure to commercial properties along Pound Street would likely to benefit business along both streets
- The time restriction on access from Clarence Street to Craig Street could be removed benefiting access from the Grafton TAFE Campus
- A reduction in congestion along Bent Street would provide potential for additional business related development, enhance accessibility across the street and facilitate further development in this area
- Provision of improved pedestrian and cycle connections across Iolanthe Street and Pacific Highway (Charles Street) to connect to Clarenza

Pedestrian and bicycle accessibility across the river would be improved, with pedestrian and cycle paths proposed on the new bridge providing an alternative to the existing bridge and providing the opportunity for a walking loop using the old and new bridges. The pedestrian and cycle path proposed along the new bridge would be linked into the existing and future cycle/pedestrian network contributing to the completion of the local and regional cycle/pedestrian plans detailed in *Clarence Valley Council – Bike Plan and Pedestrian Accessibility and Mobility Plan* (Clarence Valley Council 2008). This would be of considerable social benefit.

Public transport services would improve by the reduction in congestion on the existing crossing making services more reliable.

Linkages along the river frontage would potentially improve with the opportunity for an open space connection between Salty Seller reserve near the sailing club and Girl Guide Place and the Pound Street Jetty to be pursued separate to the project. This would enhance the accessibility of the Dovedale area to the foreshore and to the open space system upstream of the bridges.

Consideration has also been given to potential linkages to South Grafton and to new residential areas at Clarenza. The project includes provision for pedestrian and cycle connections across Iolanthe Street and Charles Street that has the potential to link with Councils existing cycle path in South Grafton as Spring Street.

3.7 Impact on social and recreational infrastructure

This section examines the impact of the project on social and recreational infrastructure including: clubs, education, river uses, places of worship (eg churches), government, services, health and emergency, parks and reserves and major infrastructure. This includes community facilities that are currently in operation and potentially directly affected by the project.

For the purposes of this assessment, a community facility is regarded as potentially directly affected if full or partial acquisition of the property is required or would otherwise cross within its boundary (in the case of river-based activities).

A community facility is regarded as potentially indirectly affected if it adjoins the project or existing road networks affected by the project.

Some community and recreation facilities would be directly or indirectly impacted by the project. This may be through land acquisition, proximity to construction works, or increased proximity to transport infrastructure. Some facilities may also experience changes in demand or access as a result of the new infrastructure. Community facilities potentially affected or in proximity to the project are shown below (Table 10). Community facilities near the project are shown on Figure 10. Direct impacts are considered to be minor if they are unlikely to cause serious disruption to the facility's existing operations.

Table 10: Potential direct impacts upon community facilities

Community Facility	Impact
North of Clarence River	
Basmar Hall	Land to be acquired for the project requiring the loss of the building. This is a privately owned hall hired out for a range of purposes including martial arts training. Loss of community resource with tenants required to find alternative facilities in Council, school or other private facilities.
Grafton TAFE Campus	A narrow strip of property to be acquired associated with widening of Pound Street between Clarence and Villiers Streets. Access to Grafton TAFE Campus would change as a result of works to Pound Street with planned access to both Pound and Clarence Street. Pedestrian crossing with lights at Pound and Clarence Streets. No change in parking availability.
Bridge Park	Loss of land zoned for open space. Land connects under existing bridge to Salty Seller Reserve and the sailing club. This reserve is partially affected by the new overhead bridge with portals spaced to allow access under new bridge. Post construction, this park can continue to function as a passive river side park. Potential after construction for extending water frontage open space network by providing a link between Salty Seller Reserve and Girl Guide Place and the Pound Street Jetty.

Community Facility	Impact
Clarence River Sailing Club Course	Feedback from the Clarence River Sailing Club indicated that piers for the proposed bridge would impact on an existing sailing course and decrease manoeuvrability between the bridges and under the bridges. Bridge supports are to be designed to align with existing bridge supports to minimise impacts.
South of Clarence River	
Clarence River Visitor Information Centre	Minor land acquisition. Access restricted to left in and left out only at Spring Street. Some change to accessibility for southbound traffic which would be restricted from a right turn movement to the centre which can be mitigated by wayfinding signage. Traffic from the north into Grafton would not pass by the centre. It is noted that, with Pacific Highway upgrade project, this section of the highway would be bypassed in any event. These impacts would not occur if the project is staged and the possible initial upgrades are implemented at year of opening. The possible initial upgrades would maintain visibility of the centre and provide access via a roundabout at the intersection of Spring Street and Iolanthe Street.
South Grafton railway infrastructure	Partial land acquisition with no significant impact on operations.

Table 11: Potential indirect impacts upon community facilities

Community Facility	Impact
North of Clarence River	
Gummyaney Aboriginal Preschool	Potential increase in noise levels from higher traffic flows near the centre (Pound Street). Access to and from Pound Street west of the site would be redirected with access via Kent and Bacon streets or Greaves and Fitzroy streets. This would result in longer trips in some cases.
Informal open space areas near existing viaduct at Greaves Street	The railway reserve land next to the park would be partially impacted by construction activity and localised road work to Greaves Street.
Northern and southern foreshore levee	Potential minor impact during construction on riverside parks, schools on Victoria Street, bowling and recreational clubs and boat launching facilities resulting from the minor works associated with the raising of the levee. However the levee works would not impact on the access and existing operation of these facilities.
South of Clarence River	

Community Facility	Impact
Derek Palmer Place	Minimal impact, possible reduction in traffic volumes
Silver Jubilee Park	Minor reduction in size of park

3.7.1 River access and use

The existing use of the river is described in Section 2.5 (see also Figure 7). The proposed new bridge would pass close to the existing boat moorings immediately downstream of the existing Grafton Bridge. These moorings would need to be temporarily relocated during construction. Permanent mooring would be resumed after completion of the bridge, although some may be relocated away from the proposed bridge. Roads and Maritime would consult with the owners of the moorings during the detailed design stage and prior to construction.

The river is used regularly for rowing and sailing and occasionally for special events and races (see Section 2.5). These recreational activities are potentially impacted. There would be disruption during construction which would require some restrictions to navigation around the works areas. This would include impact due to the placement of barges and sediment control structures and thus speed and navigation restrictions similar to roadworks zones.

The Iluka to Grafton Rowing Race course has the potential to be impacted. The course begins at the end of Victoria Street near Susan Island. The operations of the Clarence River Sailing Club would also be impacted in this manner during construction.

During operation there would be additional bridge supports restricting manoeuvrability passing under the bridges. There is the potential to redesign or relocate the course to alternative locations as well as retain the present course.

Fisheries NSW has reported two commercial fishing licences which involve meshing from Susan Island downstream to the existing Grafton Bridge and from Grafton Bridge downstream to Elizabeth Island. Fisheries NSW believe these commercial fisherman target mullet, bull sharks, and potentially eels in the area. Further information about these activities were sought from the Professional Fishermen's Association but no feedback was received at the time this report was written. The majority of commercial fishing and prawning operations occur closer to the mouth of the Clarence River and adjoining estuaries.

Recreational fishing is not strong in the vicinity of the crossing but would be affected to a lesser extent during construction through access restrictions to the Grafton foreshore construction work zone at Bridge Reserve on the northern side of the river. After construction there is the opportunity for improved access to the river side for recreational fishing.

Temporary changes on river traffic conditions may occur during river based construction activities (eg pier installation, piling, temporary exclusion zones), however maritime access and traffic would be maintained at all times. Temporary changes on river traffic conditions would have minor impacts during construction on the Boral barge which uses the river for the movement of sand and gravel. The bridge has been designed with sufficient draft and separation between supports to enable this vessel to continue operating.

Construction impacts identified in this section can be mitigated by Road and Maritime consulting with river users, club and event organisers for alternative access arrangements during construction as required.

3.8 Distribution of social impact and housing affordability

Social impact is distributed and experienced differently amongst different groups in society. In general less advantaged residents possess less resources to cope with social impact (be it financial, educational, or to social support networks). As noted by council in its social plan (page 24): *"Socio economic disadvantage limits people's opportunities to participate in decisions affecting their lives"*.

Grafton City and the LGA have a number of indicators of relative disadvantage. The LGA has an ABS SEIFA Index of Relative Socio-economic Advantage and Disadvantage of 914. This places the LGA in the bottom 20 per cent of the most disadvantaged LGA's in Australia. The LGA is even more disadvantaged when NSW is taken on its own.

There is however significant variation within the LGA. Within Grafton City, it can generally be said that neighbourhoods are not polarised - advantaged and disadvantaged residents are mixed within the same neighbourhoods and streets. Overall, residents living to the south of the river are generally less advantaged than those living to the north.

Positive and negative impact resulting from the project would be experienced and felt differently, by different sections of the community. Some impact would be more pronounced in certain neighbourhoods and areas, while other impact may be felt more strongly by different socio-economic groups.

Direct property and residential land use impacts are focused on the southern part of the Dovedale area in the vicinity of Greaves, Kent and Pound streets. Based on the socio-economic profile documented in Section 2.3, generally the Dovedale area can be characterised as a more affluent area relative to the remainder of Grafton due to the amenity associated with a river side location with generous blocks and established houses.

Project indirect impacts include the potential for:

- Better integration of the communities of South Grafton and Grafton, economically and socially, in turn building stronger communities.
- Increased access to urban land release areas in the LGA at South Grafton, Clarenza and Junction Hill.
- Increased access to and between the LGA's seven industrial estates, which house a range of industries that rely on the crossing for the supply of goods and services.
- Improved community access to and use of the Clarence River.
- Improved pedestrian and cyclist connectivity.

There is the opportunity for potential improvements in access to employment, health and community services, retail and community centres and recreation sites through reduced congestion and the ability for residents and services to move more freely around the City.

A significant proportion of Grafton City residents have generally lower incomes which preclude home ownership. There is a limited supply of lower cost homes and rental properties for which there is keen competition. Affordability is a key issue in the region and one which is felt in Grafton City in relative terms. However it is noted that there is a significant rental market in Grafton.

There is a shortage of information on housing affordability and access to rental accommodation which has been attributed, at least in part, to a historical lack of data about the issue. Council officers report that, until recently no formal statistics were kept on waiting lists, demand, etc for housing locally. Therefore Grafton City did not show up as a location in need of more affordable housing or public housing.

The majority of public housing is concentrated in an estate to the south of Tyson Street, South Grafton which is not affected by the project. North Coast Community Housing operates via head leases, leasing where the houses are available, but aiming to disperse social housing in the community.

Council is actively seeking to promote the development of additional affordable housing in Grafton City, and has formed a development partnership with Community Housing Limited to do so.

3.9 Impact on community health and safety

The project is likely to have benefits for the health and safety of the Grafton community. These include:

- Increased possibilities for recreational activities such as walking and cycling, through the pedestrian and cycle paths provided as part of the project
- Cycling and pedestrian facilities would be provided as part of the new bridge and associated roadworks
- A safety barrier would be provided on the new bridge to physically separate the pedestrian and cycle path from traffic
- The location of the new pedestrian and cycle path may also make pedestrians feel safer due to the presence of casual surveillance (passing traffic).

3.10 Impacts on community values

Community values are identified in Section 2.8. The community in the study area values a range of qualities including:

- Town and neighbourhood character
- Lifestyle and amenity
- Access and connectivity
- Infrastructure and planning, including flood protection
- Equity

During construction there is potential to impact on community values due to:

- Changes to access and connectivity resulting in delays and disruptions to property access
- Noise and dust disturbance from construction activity
- Visual impacts of disturbance to existing conditions and tree removal

Construction management measures such as noise and vibration, air quality and traffic management plans would help in minimising these potential impacts. Impact on the landscaped character of the town would also be minimised by replacement planting of character trees such as the jacaranda.

Existing access to Grafton via the existing bridge would be retained during construction.

During operation there is the potential for a change of character to the existing residential areas near Pound Street and to the character of this street which would be subject to road widening and the provision of additional parking. This would result in the removal of significant street trees.

Community values would be enhanced by additional connectivity and more dispersed traffic flows resulting in a decrease on congestion, potentially improved access to the river improvements in infrastructure, improved accessibility to shops, businesses workplaces and community facilities.

It is expected that heavy vehicles would travel through the town with greater safety and pedestrian and cycle connections enhanced.

3.11 Social and economic benefits of the project

The project would provide a range of benefits. The majority of these benefits accrue to the broader community of Grafton, the LGA and the wider region. The benefits of the project include:

- More efficient, direct and reliable transport options
- Reduced traffic congestion and associated amenity benefits
- Reduced travel times, which are consistent and reliable
- Improved road safety outcomes, including removal of heavy vehicles from existing bridge
- Improved access for service delivery and emergency services
- Improved integration of Grafton and South Grafton, economically and socially
- Improved access to employment, health and community services, retail and community centres and recreation sites
- Potential for increased public transport patronage by increasing the convenience of the river crossing
- Improved community access to and use of the Clarence River
- Improved pedestrian and cyclist connectivity.

4. MITIGATION AND MANAGEMENT MEASURES

This section provides a range of measures for managing, avoiding or mitigating potential socio-economic impact and maximising or enhancing the project's benefits.

4.1 Objectives

The objectives of the project for managing potential socio-economic impact during construction and operation are:

- Manage impacts on amenity of residential areas in the Dovedale area through measures such as incorporation of light spill control, noise barriers as required and landscaping to include signature trees of Grafton's character such as figs and jacarandas.
- Maintain access to properties during construction.
- Construct the project in a manner that minimises impact on residents and businesses.
- Ensure effective consultation occurs at all stages of construction.
- Continue with implementation of community liaison plan during detailed design stage.
- Continued review of project during detailed design stage to further minimise project footprint and land acquisition.

4.2 Construction

Recommended strategies to minimise socio-economic impact during the construction period are provide below.

4.2.1 Community engagement

Roads and Maritime would prepare and implement a comprehensive Community Consultation Strategy to fully inform the community of works during the construction process. This may include a range of communication methods including, but not limited to:

- Dedicated project website (www.rms.nsw.gov.au/grafonbridge)
- Project telephone line (1800 633 332)
- Project email address (grafonbridge@rms.nsw.gov.au)
- 'Community update' newsletters
- Project manager and project director updates
- Online interactive maps
- Traffic change advisories
- Meetings with affected property owners
- Ongoing Aboriginal community consultation.

4.2.2 Affected residents

- Ongoing timely communication with affected residents on project timing and acquisition processes and timing
- Engage in an efficient and empathetic manner with residents during the acquisition process

- Provide compensation in accordance with Land Acquisition (Just Terms Compensation) Act 1991 and Roads and Maritime procedures
- Minimise disruption and impact during flood mitigation works.

4.2.3 Social infrastructure

- Timely communication of requirements for closure of Basmar Hall to maximise opportunity for tenants to find alternative space.
- Maintain contact and liaison with Grafton TAFE Campus to minimise impact on TAFE operations
- Maintain access to Gummyaney Aboriginal Preschool
- Maintain access to Visitors Information Centre and provide appropriate directional signage
- Maintain access to existing bridge pedestrian links
- Timely communication with river users including the Clarence River Sailing Club, and provide appropriate safety and maritime directional and safety signage on structures in the river
- Maintain communications with Police and Emergency Services in relation to changed access arrangements and traffic management plans.

4.2.4 Local business and tourism

- Ongoing timely communication with affected businesses on project timing, changes to traffic and parking conditions and access arrangements
- Provide parking opportunities
- Maintain access to affected businesses at South Grafton and Grafton including appropriate directional signage.

4.2.5 Local amenity

- Aim to minimise impact, where reasonable and feasible, on existing character trees including figs and jacarandas
- Ongoing and timely communication with nearby residents on construction works including notice on timing and duration of activities and potential localised impact
- Advise of any construction activities outside normal construction hours
- Maintain access where possible along local streets such as Greaves Street and Bridge Street and in the vicinity of flood mitigation works during construction or provide alternative access to properties if required
- Provide alternative access to properties if required
- Implement traffic management plans to minimise traffic disruption in residential and commercial areas.

4.3 Operation

Recommended strategies to minimise socio-economic impact during the operation are:

4.3.1 Local Amenity

Lighting

- Design project lighting to avoid any undesirable light spill to adjoining and nearby residents.

Noise

- Should they be deemed required, ensure any noise mitigation measures are provided where feasible and reasonable in accordance with Roads and Maritime policies and relevant government policies and guidelines.

Landscaping

- Design southern approaches to Grafton Centre to include appropriate vegetation
- Provide landscaping compatible with the character of the local residential or commercial area in consultation with Clarence Valley Council
- Ensure landscaping is provided in vicinity of flood mitigation works consistent with levee structural requirements.

4.3.2 Access

- Provide appropriate directional signage for the Visitor Information Centre from the Pacific Highway in accordance with relevant RMS and Government guidelines
- Improve access along Clarence River foreshore in accordance with CVC Clarence Foreshore Masterplan.

5. CONCLUSION

This report provides an assessment of potential social and economic impact associated with the design and construction of a new bridge over the Clarence River at Grafton. The assessment of social and economic impact included:

- Scoping the potentially affected groups and individuals and their issues of concern and the nature of the likely impact, including consideration of the Director-Generals' Environmental Assessment Requirements
- Profiling the nature of the groups likely to be affected
- Identifying the social impact associated with the project, who is affected and to what extent
- Assessing the likelihood of the impact and its significance
- Identifying measures to manage, mitigate or avoid potential impact.
- Recommend strategies and actions to produce the best outcomes for groups or individuals impacted by the project

Overall, the project is expected to provide a range of benefits for the social and economic environments of the broader community of Grafton, the LGA and the wider region, including:

- More efficient, direct and reliable transport options
- Reduced traffic congestion and associated amenity benefits
- Reduced travel times, which are consistent and reliable
- Improved road safety outcomes, including removal of heavy vehicles from existing bridge
- Improved access for service delivery and emergency services
- Improved integration of Grafton and South Grafton, economically and socially
- Improved access to employment, health and community services, retail and community centres and recreation sites
- Potential for increased public transport patronage by increasing the convenience of the river crossing
- Maintain and improved community access to and use of the Clarence River
- Improved pedestrian and cyclist connectivity.

The implementation of mitigation and management measures would help in avoiding or mitigating potential impact on the social and economic environment during construction and operation, and maximise or enhance the project's benefits.

In particular, early and ongoing consultation with affected property owners, businesses and communities as well as community participation in the ongoing planning, environmental management and monitoring would be important in avoiding and minimising potential socio-economic impact of the project's construction and operation.

The implementation of environmental management measures would also be important in mitigating potential impacts near the project during construction.

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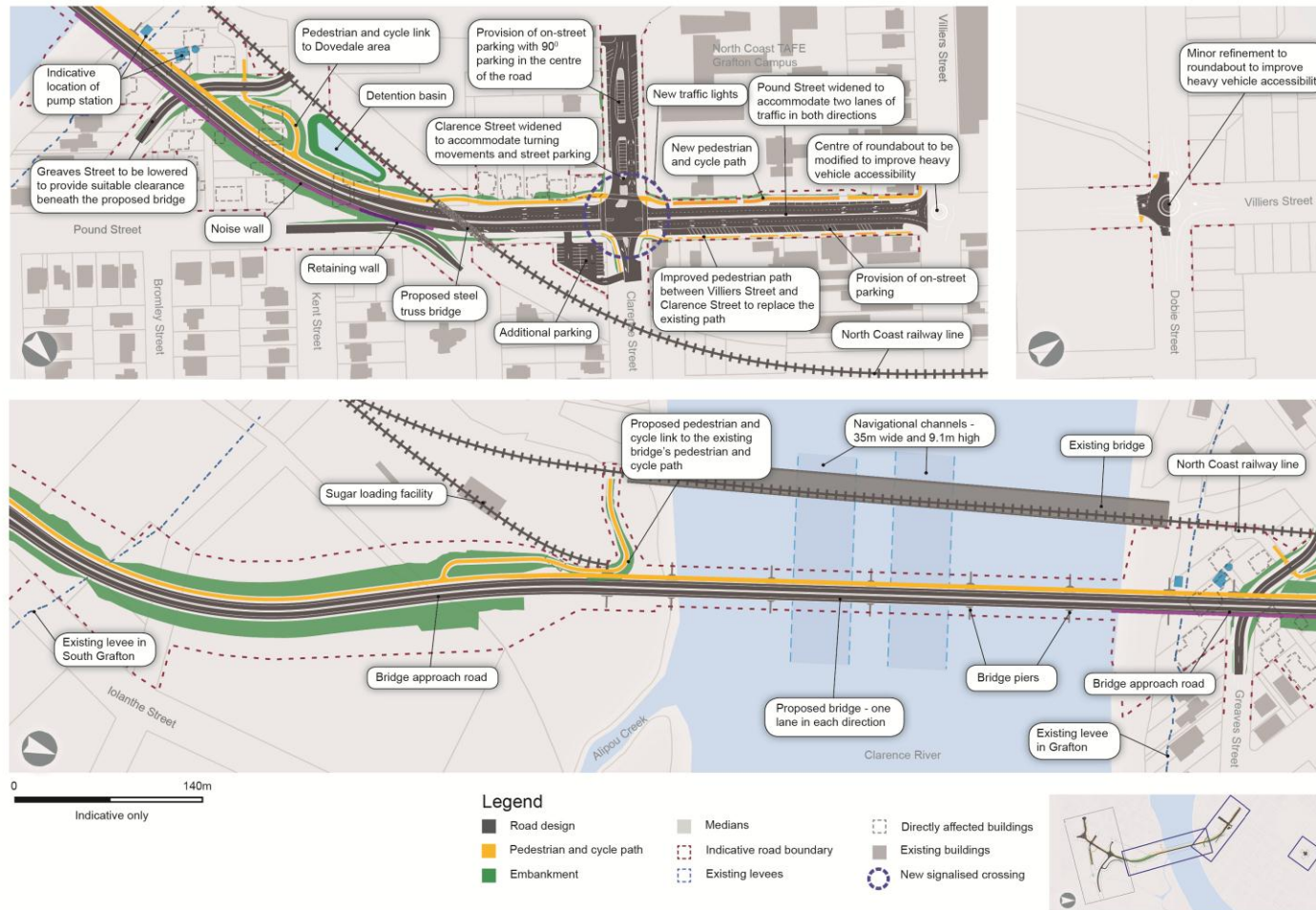
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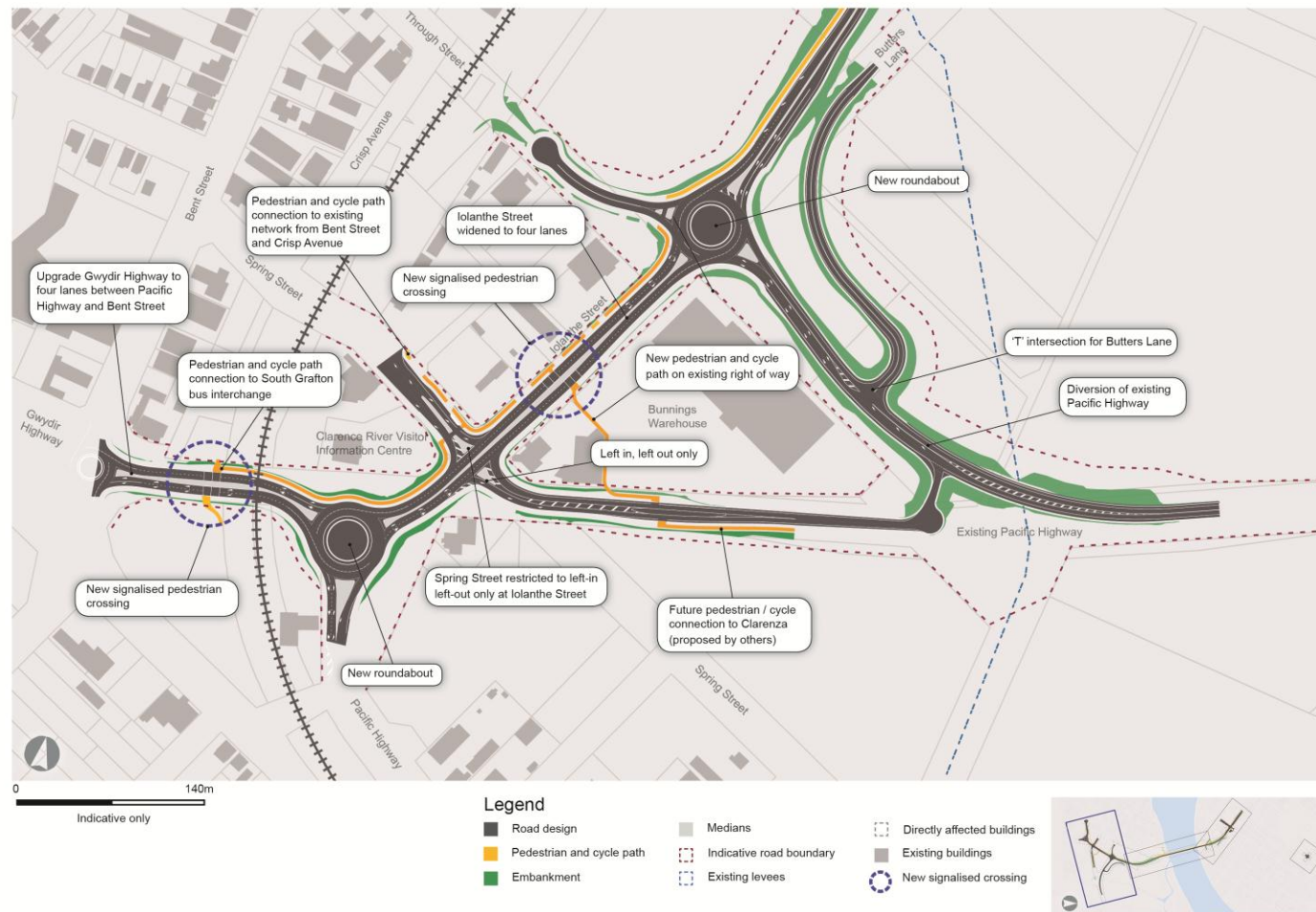
APPENDICES

APPENDIX 1

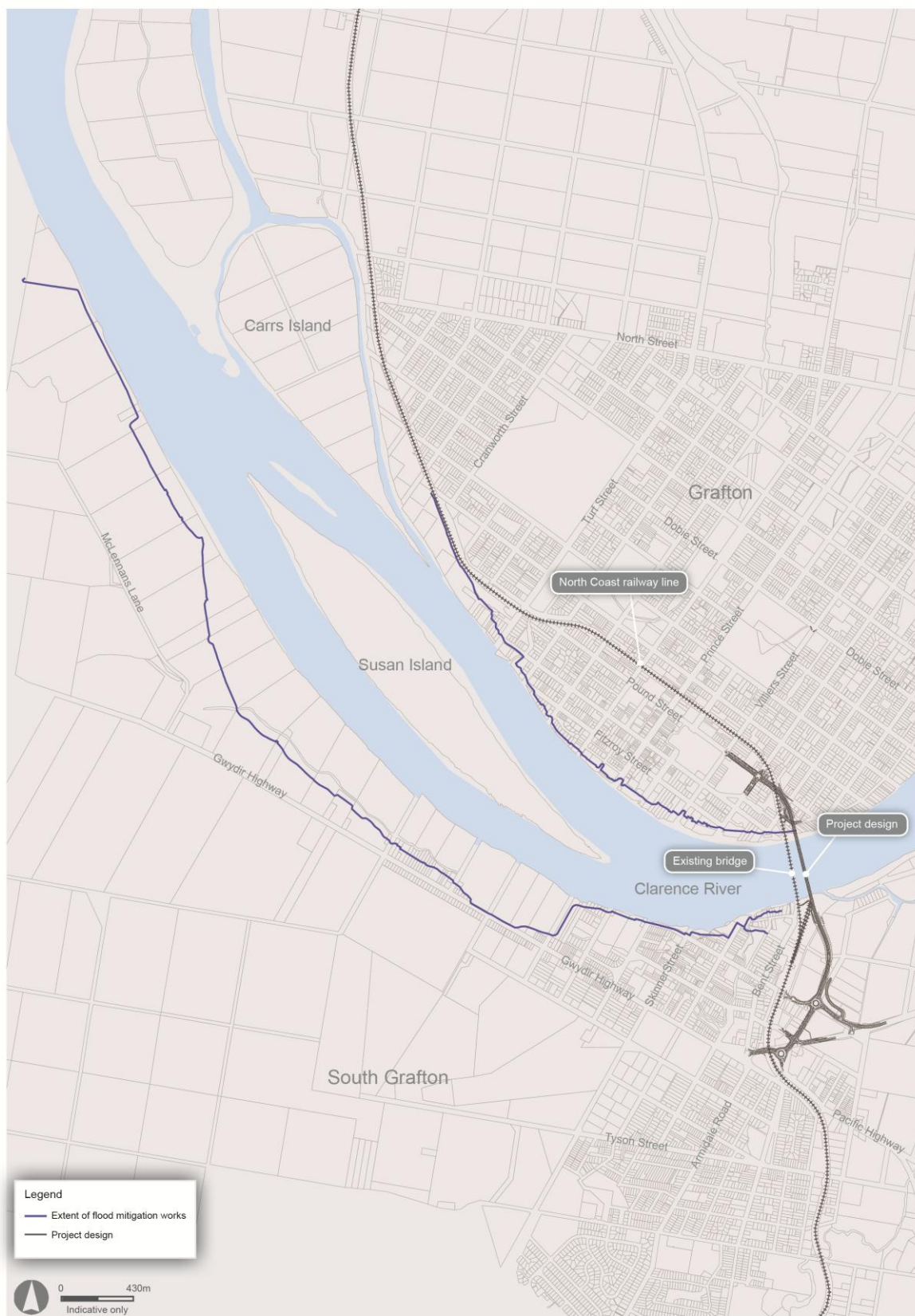
Project Concept Design



Key project elements – Grafton



Key project elements – South Grafton



Key project elements – flood mitigation works

APPENDIX 2

Population Characteristics, ABS 2011 Census

2011	Grafton Urban Centre Locality	%	Clarence Valley LGA	%	Mid North Coast Statistical Area	%	NSW	%
Population								
Total Persons	16,598	-	49,665	-	201,110	-	6,917,658	-
Age groups:								
0-4 years	1,126	6.8%	2,819	5.7%	11,120	5.5%	458,735	6.6%
5-14 years	2,199	13.2%	6,408	12.9%	24,795	12.3%	873,776	12.6%
15-24 years	2110	12.7%	5,317	10.7%	20,083	10.0%	893,103	12.9%
25-54 years	5,798	34.9%	16,808	33.8%	65,847	32.7%	2,863,576	41.4%
55-64 years	1,983	11.9%	7,750	15.6%	30,544	15.2%	810,290	11.7%
65+ years	3,382	20.4%	10,563	21.3%	48,721	24.2%	1,018,178	14.7%
Under 18 years	4,017	24.2%	11,283	22.7%	44,088	21.9%	1,600,844	23.1%
Median Age	40	-	46	-	47	-	38	-
Cultural Diversity:								
Indigenous persons	1,379	8.3%	2,845	5.7%	10,797	5.4%	172,621	2.5%
Persons from non-English speaking background (NESB)	371	2.2%	1,290	2.6%	6,471	3.2%	1,288,852	18.6%
Common NESB groupings (1)	Philippines (47)	0.3%	Netherlands (174)	0.4%	Germany (848)	0.4%	Chinese (156,034)	2.3%
Common NESB groupings (2)	Netherlands (36)	0.2%	Germany (155)	0.3%	Netherlands (777)	0.4%	Indian (95,386)	1.4%
Religion:								
Anglican	5,422	32.7%	15,210	30.6%	60,575	30.1%	1,378,386	19.9%
Buddhism	59	0.4%	347	0.7%	1,471	0.7%	201,034	2.9%
Catholic	3,851	23.2%	10,983	22.1%	45,449	22.6%	1,902,393	27.5%

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Other Christian	2,706	16.3%	8,877	17.9%	37,689	18.7%	1,181,573	17.1%
Hinduism	6	0.0%	35	0.1%	225	0.1%	119,802	1.7%
Islam	19	0.1%	43	0.1%	247	0.1%	219,377	3.2%
Other Religious Affiliations	194	1.2%	637	1.3%	2,378	1.2%	140,093	2.0%
No Religious Affiliations	2,794	16.8%	9,452	19.0%	36,708	18.3%	1,240,532	17.9%
Religion not stated	1,545	9.3%	4,082	8.2%	16,368	8.1%	534,468	7.7%
Household Characteristics								
Family household	4,196	65.5%	13,409	69.6%	54,968	68.8%	1,777,398	71.9%
Lone Person household	2,010	31.4%	5,327	27.7%	22,832	28.6%	599,148	24.2%
Group household	198	3.1%	521	2.7%	2,125	2.7%	94,750	3.8%
Family Characteristics								
Total Families	4,273	-	13,678	-	55,980	-	1,829,553	-
Couple family with children	1,470	34.4%	4,654	34.0%	18,190	32.5%	831,850	45.5%
Couple family without children	1,665	39.0%	6,381	46.7%	27,139	48.5%	669,019	36.6%
One parent families	1,058	24.8%	2,454	17.9%	9,998	17.9%	297,904	16.3%
Other families	80	1.9%	189	1.4%	653	1.2%	30,780	1.7%
Dwelling Characteristics								
Total Private Dwellings	7,248	-	23,881	-	98,427	-	2,864,530	-
Unoccupied Private Dwellings	620	8.6%	3,384	14.2%	14,271	14.5%	265,338	9.3%
Total Occupied Private Dwellings (including visitor-only and other non-classifiable households)	6,628	91.4%	20,497	85.8%	84,156	85.5%	2,599,192	90.7%
(-) Visitor-only households	74	1.0%	825	3.5%	2,167	2.2%	34,997	1.2%

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(-) Other non-classifiable households	150	2.1%	413	1.7%	2,064	2.1%	92,896	3.2%
Total Occupied Private Dwellings (excluding visitor-only and other non- classifiable households)	6,404	88.4%	19,259	80.6%	79,925	81.2%	2,471,299	86.3%
Occupancy Rate	2.4	-	2.4	-	2.3	-	2.6	-
Non-private dwellings	39	-	80	-	306	-	6,990	-
Occupied Private Dwellings:								
Separate House	5,332	75.9%	16,802	74.2%	64,619	68.6%	1,717,701	62.8%
Semi-detached, row or terrace house,	355	5.1%	792	3.5%	6,985	7.4%	263,926	9.6%
Flat, unit or apartment	598	8.5%	1,104	4.9%	6,406	6.8%	465,188	17.0%
Other dwellings	97	1.4%	529	2.3%	1,860	2.0%	21,141	0.8%
Not stated	22	0.3%	32	0.1%	55	0.1%	3,343	0.1%
Tenure Type:								
Owned outright	2,325	36.3%	8,417	43.7%	34,614	43.3%	820,006	33.2%
Owned with a mortgage	1,770	27.6%	5,391	28.0%	20,903	26.2%	824,293	33.4%
Rented (Total):	2,068	32.3%	4,811	25.0%	21,146	26.5%	743,050	30.1%
Real estate agent	995	15.5%	2,421	12.6%	11,551	14.5%	430,133	17.4%
State Housing Authority	365	5.7%	431	2.2%	2,444	3.1%	108,841	4.4%
Other tenure type	31	0.5%	135	0.7%	895	1.1%	20,418	0.8%
Not stated	211	3.3%	504	2.6%	2,368	3.0%	63,529	2.6%
Income								
Median Individual Income (\$/weekly)	\$424	-	\$396	-	\$405	-	\$561	-
Median Household income (\$/weekly)	\$772	-	\$768	-	\$774	-	\$1,237	-

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Labour Force:								
Labour force participation	6,558	49.4%	19,500	48.2%	77,670	47.0%	3,334,857	59.7%
Unemployed persons	613	9.3%	1,738	8.9%	6,366	8.2%	196,526	5.9%
Occupation:								
Managers	549	9.2%	2,191	12.3%	8,870	12.4%	418,333	13.3%
Professionals	800	13.5%	2,563	14.4%	11,762	16.5%	713,547	22.7%
Technicians and trades	795	13.4%	2,507	14.1%	10,532	14.8%	414,669	13.2%
Community and personal service	895	15.1%	2,355	13.3%	8,688	12.2%	297,668	9.5%
Clerical and administrative	793	13.3%	2,139	12.0%	9,089	12.7%	473,140	15.1%
Sales workers	775	13.0%	2,018	11.4%	8,039	11.3%	290,497	9.3%
Machinery operators and drivers	426	7.2%	1,286	7.2%	4,496	6.3%	199,438	6.4%
Labourers	803	13.5%	2,404	13.5%	8,753	12.3%	273,129	8.7%
Not stated	107	1.8%	298	1.7%	1,075	1.5%	57,909	1.8%
Industry:								
Agriculture, forestry and fishing	117	2.0%	1,083	12.3%	3,085	4.3%	69,576	2.2%
Mining	24	0.4%	97	14.4%	561	0.8%	31,185	1.0%
Manufacturing	510	8.6%	1,402	14.1%	4,785	6.7%	264,864	8.4%
Electricity, gas, water and waste services	116	2.0%	247	13.3%	1,773	2.5%	34,205	1.1%
Construction	346	5.8%	1,372	12.0%	6,387	9.0%	230,058	7.3%
Wholesale trade	153	2.6%	495	11.4%	1,755	2.5%	138,890	4.4%
Retail trade	932	15.7%	2,357	7.2%	9,651	13.5%	324,725	10.3%
Accommodation and food services	518	8.7%	1,559	13.5%	6,386	9.0%	210,378	6.7%

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Transport, postal and warehousing	259	4.4%	760	1.7%	2,777	3.9%	155,025	4.9%
Information media and telecommunications	64	1.1%	168	0.9%	650	0.9%	72,489	2.3%
Financial and insurance services	118	2.0%	290	1.6%	1,300	1.8%	158,425	5.0%
Rental, hiring and real estate services	88	1.5%	293	1.6%	1,196	1.7%	51,553	1.6%
Professional, scientific and technical services	171	2.9%	572	3.2%	2,682	3.8%	247,293	7.9%
Administrative and support services	134	2.3%	460	2.6%	2,249	3.2%	102,355	3.3%
Public administration and safety	596	10.0%	1,464	8.2%	3,698	5.2%	192,632	6.1%
Education and training	443	7.5%	1,406	7.9%	5,988	8.4%	248,951	7.9%
Health care and social assistance	931	15.7%	2,472	13.9%	11,164	15.7%	364,322	11.6%
Arts and recreation services	63	1.1%	202	1.1%	923	1.3%	46,332	1.5%
Other services	237	4.0%	695	3.9%	2,818	4.0%	117,616	3.7%
Not stated	123	2.1%	367	2.1%	1,476	2.1%	77,456	2.5%
Education								
Completion of Year 12 (or equivalent)	3,535	27.8%	10,956	28.3%	46,202	29.2%	2,631,287	49.2%
Without post-school qualifications	6,342	49.9%	18,647	48.2%	71,720	45.4%	2,147,190	40.2%
One Method of Travel to Work								
Total Persons (15 & over) travelling to work by one method of transport	4,869	-	14,000	-	56,507	-	2,516,427	-
Car	4,122	84.7%	12,105	86.5%	50,318	89.0%	1,964,718	78.1%
Train	6	0.1%	11	0.1%	38	0.1%	193,098	7.7%
Bus	27	0.6%	79	0.6%	339	0.6%	116,657	4.6%
Motorcycle/scooter	63	1.3%	123	0.9%	521	0.9%	19,629	0.8%

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Bicycle	151	3.1%	262	1.9%	426	0.8%	23,358	0.9%
Walked	364	7.5%	920	6.6%	3,017	5.3%	128,340	5.1%
SEIFA								
Index of Relative Socio-Economic Disadvantage	921	2	919	2	-	-	-	-