NORTHERN BEACHES HOSPITAL CONNECTIVITY AND NETWORK ENHANCEMENTS

Concept Proposal and Stage 1 Hospital Connectivity Work

*Land Use, Social and Economic Assessment*

PREPARED FOR

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QUALITY ASSURANCE

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EXECUTIVE SUMMARY

The Director General’s Environmental Assessment Requirements (DGRs) for the Northern Beaches Hospital and Stage 1 Connectivity Enhancement Work, issued on 17 April 2014, identifies land use, social and economic matters the project’s key issues the Environmental Assessment (EA) should address. The purpose of this study is to respond to a number of the land use, social and economic matters identified in the DGRs. This study describes the land uses, social groups and businesses that are likely to be affected by the project. It assesses potential impacts during the construction phase as well as the operation phase. It also identifies measures to mitigate negative impacts and enhance the benefits of the project. Where appropriate, separate assessments are provided for Concept Proposal and the Stage 1 Connectivity Enhancement Work. The location of the Project is depicted in the figure below.

Figure 1 - Schematic of the Concept Proposal

Source: Roads and Maritime Services

1.2 WHAT IS A SOCIO-ECONOMIC IMPACT ASSESSMENT

Socio-economic impact assessment involves analysing, monitoring and managing the social and economic consequences of development. It involves identifying and evaluating changes to or impacts on, communities, business and industry that are likely to occur as a result of a proposed development, in order to mitigate or manage impacts and maximise benefits¹.

¹ RMS Environmental Impact Assessment Practice Note Socio-Economic Impact Assessment (EIA No.5)
1.3 LAND USE

A review of the existing land uses within the study area was conducted as per the requirements of the project DGRs. The land uses in the study area are diverse and include low density residential, retail uses, office buildings, light industrial warehousing (sometimes with an ancillary office component), educational establishments, open space, bushland, utilities and recreational facilities. This section provides an overview of the land uses within the study area.

**Retail and Commercial Uses**

Retail and commercial uses in the study area include the Forestway Shopping Centre, Skyline shops and a variety of commercial and light industrial uses. Forestway Shopping Centre is located on Forest Way and accessed by Russell Avenue and Forest Way. The multi-level level shopping centre and parking structure is a busy sub-regional shopping destination. The Shopping Centre is zoned B2 Local Centre under the *Warringah Local Environmental Plan 2011*. A bus stop servicing numerous routes is situated nearby the centre on Forest Way. Skyline shops are situated on the corner of Frenchs Forest Road East and Allambie Road. The shops include a newsagent, post office, food outlets and other businesses serving the day to day needs of the local community.

Another cluster of shops are located around the junction of Bantry Bay Road and Warringah Road. These business also serve the local community and include a hair salon, four restaurants, chemist, real estate agent, small medical centre, funeral parlour, bait and tackle shop and service station. The Skyline and Bantry Bay local shopping strips are zoned B1 Neighbourhood Centre under the *Warringah Local Environmental Plan 2011*.

The study area contains three distinct business park precincts. Each of these precincts are characterised by 2 to 3 storey office buildings many of which are attached to high ceiling warehouses. These business parks appear to serve as a regional headquarters and distribution hub for national and international businesses. These precincts also accommodate a range of other commercial and recreational businesses serving the needs of the surrounding local and sub-regional population. Each of these precincts are zoned B7 Business Park under the *Warringah Local Environmental Plan 2011*.

**Residential Uses**

Residential uses are prevalent throughout the study area. Most dwellings are typically one and two storey detached houses on 400+sqm lots. A small number of townhouses and flat blocks exists throughout the study area. Residential land in the study area is zoned R2 Low Density Residential under the *Warringah Local Environmental Plan 2011*.

**Special Uses**

The study area contains a wide range of social infrastructure including four schools, eleven medical facilities, eight child care centres, three places of worship, seven parks/open space and a police station.
1.4 EXISTING SOCIO-ECONOMIC ENVIRONMENT

The suburb of Frenchs Forest experienced modest population growth between 2001 and 2011. The median age is 39 which is relatively high compared to Greater Sydney (36). In 2011 the proportion of Frenchs Forest residents with a tertiary qualification was higher than the Warringah LGA and Greater Sydney. A large number of white collar work live in the study area and the median weekly income in Frenchs Forest is significantly higher than the Warringah LGA and Greater Sydney. The most common type of dwellings in Frenchs Forest are separate houses followed by semi-detached and flat units. The majority of households in Frenchs Forest are family households and the 89% of households in Frenchs Forest either own or are purchasing their home, which is significantly higher than the average for Greater Sydney.

In 2011, the study area contained around 9,700 jobs, an increase of nearly 1,900 jobs since 2001. The top three industries within the study area were manufacturing (3,326 jobs when combined), information media and telecommunications (1,401 jobs) and administrative and support services (1,057 jobs). Between 2001 and 2011 the industries with the largest increase in jobs were information media and telecommunications, other services, health care and social assistance, and arts and recreation services.

1.5 ASSESSMENT OF SOCIAL AND ECONOMIC IMPACTS

1.5.1 CONCEPT STAGE

Business and Economic Impacts

- It is anticipated that a number of businesses located within the study area would experience some impact to their operation during construction as a result of disturbances such as noise, vibration and traffic. For the most part however, the negative impacts for businesses would be confined to the construction period and eliminated upon completion of work.

- Some businesses may experience economic benefits as a result of the project. At a local level, retailers and food and beverage premises in and nearby the study area would be expected to attract increased trade from construction workers during the delivery phase of the project.

- In the case of business acquisition, the severity of impacts would vary dependant on the number of business properties acquired, the type and location of the business. It is likely that business acquisition would disrupt the turnover of the business owning to the need to relocate and the ability of the business to do so while maintaining trade and links to local patrons. If businesses that were unable or unwilling to relocate were acquired, it would likely result in job losses.

Property Impacts

- In order to enable the construction of the Stage 1 work, it would be necessary for the RMS to part or fully acquire 35 parcels of land. During acquisition there are social impacts that should be considered including the loss or disruption of community linkages, cohesion and services. It can also be a major concern for residents if they are required to relocate away from local communities and cultural network leading to isolation and social severance.
Local Amenity Impacts

During construction noise, dust, visual and traffic disturbances have the potential to adversely affect the amenity of sensitive receivers within the local area. These impacts may include:

- Increased noise and vibration generated by construction plant and equipment;
- Increased traffic noise around the areas of major construction;
- Increase noise generated by out of hours construction activity (only expected to occur when necessary to maintain network capacity and user safety);
- Visual impact of construction machinery, compounds and work; and
- Loss of existing vegetation.

During operation amenity impacts arising may include greater noise levels on account of changed traffic conditions and altered arrangements for on-street parking, cyclists and pedestrians.

Social Infrastructure

- There are a number of community facilities in and nearby the study area including schools, churches, child care centres, open space and recreational facilities. During construction, the project has the potential to impact on these facilities by way of noise, dust, overshadowing, privacy, safety and access.
- Once the project has been completed it is expected that the project would result in a number of benefits for local community services including direct and safe access to the new hospital and improved accessibility to the schools, places of worship, child care centres in the study area.

Community Health and Safety

- Road and pedestrian safety has been raised as a community concern during construction. In particular the safety of pedestrians and students attending Forest High School has been identified as an issue during construction. The Traffic and Transport Assessment states that increases in traffic volumes in the vicinity of The Forest High School and NBH, may result in potential road safety risks for students and hospital users.
- Once the project has been completed it is expected that the project would result in a number of benefits about safety and access to the new hospital and improved accessibility to the schools, churches, child care centres in the study area.

Access and Connectivity

- During construction the project would result in a number of impacts for users of the road network and those living and working in and around the study area, including:
  - Increased number of construction related vehicles on roads in the study area;
  - The potential for a temporary shift of traffic movements from roads within the project area to alternative routes;
  - Temporary impacts on pedestrian and cycle access;
Negative impact on bus travel times with consequent delays for commuters; and
Temporary disruptions and delays to traffic due to the narrowing of lanes, speed restrictions, additional spoil and truck movements and temporary road closures.

- Cumulative impacts may also arise on account of additional construction traffic associated with the concurrent construction of the hospital followed by construction of stage 2 roadwork.
- During operation potential traffic and access impacts arising from the project include:
  - Permanent changes to existing traffic movements on the road network, including Frenchs Forest Road, Wakehurst Parkway and Warringah Road;
  - Changes in vehicle movements arising from network changes;
  - Impacts on intersecting and parallel road network;
  - Improved opportunities for public transport services and improved travel times
  - Improved access to the new hospital; and
  - Improved pedestrian and cyclist accessibility.

Community Values

- Community surveys undertaken by Warringah Council have identified that residents have a very strong attachment to the study area. Demographic analysis undertaken also indicates the area is a well-established family orientated suburb with a higher than average home ownership rate.

- The construction of the hospital and supporting network and connectivity work has the potential to change the current character of parts of the study area. Hospitals often attract high density residential development to accommodate hospital workers; toward the future this has the potential to change the village character of the area. This change is likely to generate anxiety amongst the local community who have a strong attachment to the existing character of the area.

- The Statement of Heritage Impact prepared for the project identified two locally significant heritage items within the study area.

- The project’s Aboriginal Archaeological Survey Report states that two Aboriginal archaeological sites were identified within the wider concept proposal study area. Based on the existing construction impact footprint boundary, the sites would not be impacted by the proposed work.

1.5.2 Stage 1 Project Assessment

Business and Economic Impacts

- The roadwork would result in a number of potentially disruptive impacts to local businesses. The road widening of Forest Way will necessitate the acquisition of 254 square meters of the Forestway Shopping Centre’s land which may reduce the quality of pedestrian access unless properly mitigated through design measures. Pedestrian and vehicle access to the Skyline shops would be impacted during the process of widening Allambie Road and signalising of the intersection. The widening of Frenchs Forest
Road East could potentially impact existing access arrangements for some businesses located in the business park precincts north of Warringah road.

- Overall, the likely impacts of this project to individual businesses varies dependant on the stage of the project, the location of the business, the type of business and the severity of the impact. For the most part, the negative impacts of a major infrastructure project for businesses are confined to the construction period and are reduced or eliminated upon completion of work.

- Construction workers would generate in the order of $950,000 per annum in retail expenditure that could potentially be spent at shops in the study area. This equates to $2.85m over the three year construction period.

- The estimated $400m of direct construction costs would generate a further $528m of activity in production induced effects and $396m in consumption induced effects. Total economic activity generated by construction is estimated at $1,324m. Furthermore, based on $400m construction cost 1,140 job years\(^2\) would be directly generated by the proposed development in construction.

**Property Impacts**

- In order to enable the construction of the Stage 1 work, it would be necessary for the RMS to acquire 15 parcels on Forest Way, 6 parcels on Frenchs Forest Road West, 4 parcels on Frenchs Forest Road East, 2 parcel on Allambie Road and 8 parcels on Warringah Road.

- During acquisition and after relocation there are social impacts that should be considered including the loss or disruption of community linkages, cohesion and services. It can also be a major concern for residents that may be required to relocate away from local communities and cultural network leading to isolation and social severance.

- Owners of land being partially acquired have raised a number of concerns with the RMS during consultation:
  - Concerns about construction noise impacts along Forest Way on their family and the impact of any loss of water or power;
  - Loss of Former Methodist Church Hall, if it will be rebuilt and how; and
  - How acquisition will affect renovations currently occurring to commercial property on Russell Avenue.

**Local Amenity Impacts**

- During construction noise, dust, visual and traffic disturbances have the potential to adversely affect the amenity of sensitive receivers within the local area. These impacts may include: increased noise and vibration generated by construction plant and equipment; increased traffic noise around the areas of major construction; increase noise generated by out of hours construction activity (only expected to occur when necessary to maintain network capacity and user safety); and, visual impact of construction machinery, compounds and work.

\(^2\) Note: One job year equals one full-time job for one full year
Once the project has been completed a number of amenity impacts may exist, including:

- Noise sources being closer to sensitive receivers than currently occurs on account of road widening on Frenchs Forest Road, Forest Way and Warringah Road. The project’s Noise and Vibration Assessment identifies a total of 204 sensitive ‘receivers’ along these roads that are sufficiently impacted to be eligible for consideration of property treatment as part of the Stage 1 Connectivity Work.

- Loss of on-street parking on Frenchs Forest Road may affect the residents amenity and loss of parking on Patanga Road may affect access for customers and the performance of the Skyline shops;

- Changed pedestrian access arrangements to the NBH and the Forest High School.

- Widening Warringah Road and Wakehurst Parkway would result in the loss of vegetation including copses of native trees and rows of street trees;

- Many commercial properties, residences and Forest High School are surrounded by vegetation, which in its current form, partially screens views of the proposal. Vegetation loss associated with widening would tend to open up views in some locations; and

- Visual impact from additional road infrastructure and introduced noise mitigation measures (e.g. barriers).

**Social Infrastructure**

- Potential impacts on community facilities/services in the study that may arise during construction include changed pedestrian access to The Forest High School and the relocation of the school’s kiss-and-ride activities closer to Gladys Avenue.

- During operation, potential impacts on community facilities in the study area may include:
  - Improved public transport on account of proposed bus priority measures
  - Increased traffic volumes in the vicinity of The Forest High School and NBH which may result in potential road safety risks for students and hospital users.

**Community Health and Safety**

- During construction potential safety issues might arise relating to:
  - Increased heavy vehicle movements and higher traffic flows temporarily traversing lower-capacity road sections.
  - Uncertainty generated by changed road, access and parking arrangements for drivers, cyclists and pedestrians.

- During operation construction the project Traffic and Transport Assessment identifies that:
  - Increased traffic volumes in the vicinity of The Forest High School and NBH may result in potential road safety risks for students and hospital users. Mitigation measures are outlined in the Traffic and Transport Assessment Report.
The Stage 1 Connectivity Work includes the provision of pedestrian crossings as part of the upgrading and signalisation of intersections within the study area. The provision of these pedestrian facilities will improve the connectivity and provide safe crossing locations on Forest Way and along Frenchs Forest Road.

The provision of pedestrian crossings as part of the upgrade and signalisation of the Forest Way / Naree Road intersection (north of Russell Street) and the Frenchs Forest Road East / Patanga Road / Allambie Road intersection is expected to result in improvements in pedestrian safety at these two locations.

Access and Connectivity

- Traffic and access impacts are the most significant issue raised by the community. The Traffic and Transport Assessment prepared by GTA Consultants summaries the major changes as a result of the Stage 1 Connectivity Work as:
  - Widening of Naree Road, Frenchs Forest Road West and Frenchs Forest Road East between Forest Way and Allambie Road;
  - Widening of Warringah Road (eastbound) between Allambie Road and Government Road; and
  - Various intersection upgrades.

- During stage 1 construction work residents, businesses, shoppers, students and other visitors to the study area could be adversely impacted by:
  - Temporary road closures;
  - Reduced speed limits around construction sites and changed road conditions;
  - Altered property access on account of road closures and acquisition (see section property and land use section above to identify those properties impacted by acquisitions);
  - Removal of on-street parking;
  - Increased traffic volumes on account of changed road conditions and construction traffic;
  - Traffic diversions particularly along the local streets intersecting with Frenchs Forest Road;
  - Bus rerouting and bus stop relocations leading to increased walk distance for certain customers; and
  - Footpath diversions on account of construction, road closures and changed access arrangements.

  If not appropriately managed these temporary changes have the potential to: increase travel times; reduce road and pedestrian safety; make it more difficult to access residences, businesses, schools, parks; and lessen patronage to local shops.

  It is also important to note that cumulative impacts might arise on account of the construction of the Northern Beaches Hospital potentially being undertaken over a period which overlaps with the
construction of the Stage 1 work. While NBH construction activities would be limited to the NBH site, construction traffic movements generated by the NBH construction would potentially utilise spare road capacity.

- During operation it is anticipated the Stage 1 Connectivity Work will generate a number of benefits for residents, businesses, shoppers, students and road users in the study area. The work are expected to improve access and connectivity in the study area on account of improved capacity and traffic flow and safer operating conditions. The Stage 1 Connectivity Work would provide access to the NBH and maintain access to business, residences, schools and other existing land uses as well as improving road capacity for vehicles travelling through the study area.

- A number of adverse impacts on residents, businesses, shoppers, students and road users in the study area could also arise during the operational phase of the Stage 1 Connectivity Work. The Traffic and Transport Assessment identifies these as:
  
  - Increases in traffic volumes across the wider study area may result in additional congestion where some intersections are not part of the Concept Proposal; and

  - Increased traffic volumes in the vicinity of The Forest High School and NBH,

- The likely consequences of these impacts are reduced travel times for road users and potential road safety risks for students and hospital users.

Community Values

- A Statement of Heritage Impact report was prepared to assess the likely impacts of the proposed work on the heritage values of items and features identified within the Stage 1 area. The Former Methodist Church at 21A Forest Way (corner Naree Road, Frenchs Forest) is the only heritage item in the Stage 1. The report states the degree of impact on the Church would depend on which road widening option was selected for Forest Way. The report goes on to recommend the demolition of the Church to facilitate the widening of Forest Way. The demolition of the former Methodist Church could however have a social impact on the local community. According to the Heritage Impact report, the Church was built in 1918 and was one of the first churches in Frenchs Forest. The report states that Methodists within the local community are likely to have a strong or special association with the former Methodist Church and should the impact to Church include demolition or part demolition, its social significance to the community should be investigated further through consultation.

1.6 MANAGEMENT AND MITIGATION STRATEGIES

Strategies to manage potential socio-economic impacts during construction and operational phase of Stage 1 work are outlined below.
Construction Phase

Business and Economic Impacts
- Carry out ongoing communication with local land owners and businesses impacted by project about the duration, location and timing of construction and the potential impacts on business operations.
- Ensure access maintained to businesses throughout construction.
- Minimise visual obstruction to business during construction.
- Provide compensation to those businesses directly impacted by project in accordance with Land Acquisition (Just Terms Compensation) Act 1991.
- Provide signage (consistent with RMS policy) so that travelling public can access shops during construction.

Property Impacts
- Provide compensation to those property owners directly impacted by project in accordance with Land Acquisition (Just Terms Compensation) Act 1991.
- Endeavour to minimise stress to property owners during the acquisition process by ensuring regular communication.

Local Amenity Impacts
- Carry out ongoing communication with residents closest to the construction activities about the duration, location and timing of construction and the potential impacts throughout the construction phase.
- Implement traffic management measures to minimise impacts on access to local amenities.
- Construction mitigation measures identified in the Stage 1 Noise and Vibration Assessment include:
  - For construction concentrated in a single area, such as workites and compounds, temporary acoustic fencing/barriers around the site perimeter should be considered where feasible and reasonable to mitigate off-site noise levels. Noise walls are effective for receptors at or near ground level and not effective for receivers overlooking the sites.
  - Given the potentially high noise levels at residential receivers, adherence to daytime construction hours is recommended for excavation and for activities concentrated in a single area (i.e. activities that do not move along the alignment, and do not require out of hours activities for safety reasons or to minimise disruption to road network).
  - Night work should be programmed to minimise the number of consecutive nights work impacting the same receivers.
  - When working nearby to schools, particularly noisy activities should be scheduled outside normal school hours, where possible.
o Avoiding the coincidence of noisy plant working simultaneously close together and nearby to sensitive receivers would result in reduced noise emissions.

o Equipment which is used intermittently is to be shut down when not in use.

o Where possible, the offset distance between noisy plant items and nearby noise sensitive receivers should be as great as possible.

o Where possible, equipment with directional noise emissions should be oriented away from sensitive receivers.

o Regular compliance checks on the noise emissions of all plant and machinery used for the proposal would indicate whether noise emissions from plant items were higher than predicted. This also identifies defective silencing equipment on the items of plant.

o Ongoing noise monitoring during construction at sensitive receivers during critical periods to identify and help to manage high risk noise events.

o Where possible heavy vehicle movements should be limited to daytime hours.

o Reversing of equipment should be minimised so as to prevent nuisance caused by reversing alarms.

o Loading and unloading should be carried out away from sensitive receivers, where practicable.

o Relocate vibration generating plant and equipment to areas within the site in order to lower the vibration impacts.

o Investigate the feasibility of rescheduling the hours of operation of major vibration generating plant and equipment.

o Use lower vibration generating items of excavation plant and equipment eg smaller capacity rockbreaker hammers.

- The Landscape Character and Visual Impact Assessment recommends mitigating the visual impacts of the site compound by introducing mesh screening and temporary landscape treatments. Other environmental controls such as noise and dust would also be required.

Social Infrastructure

- Carry out ongoing communication with schools, child care centres, medical facilities and recreational facilities throughout construction about the duration, location and timing of construction and the potential impacts on their activities.

- Ensure access maintained to community facilities and open space throughout construction.

Community Health and Safety

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to businesses.
Access and Connectivity

- Where possible, maintain vehicle and pedestrian access to properties during construction. Provide alternate access arrangements when required.
- Develop, implement and communicate traffic management plan with the aim of minimising traffic impacts and disruptions.
- In order to mitigate traffic generated by construction the Traffic and Transport Assessment stipulates that Roads and Maritime would prepare a Construction Traffic Management Plan to manage construction traffic associated with the project. Designated access and haulage routes for construction vehicles would be along the arterial road network where practicable.
- Should work be undertaken outside of the hours mentioned above, the procedures set out in the Roads and Maritime Environmental Noise Management Manual 2001, “Practice Note vii – Roadwork Outside of Normal Working Hours” and the Interim Construction Noise Guidelines (ICNG) (DECCW) would be followed. Furthermore, local residents would be notified prior to any construction activities undertaken outside of normal construction hours.
- The construction traffic would be managed in accordance with the measures outlined in the Roads and Maritime Traffic Control at Workites (Roads and Maritime, 2010) document.
- Traffic management measures to be implemented during construction include carrying out the proposed work in a staged manner to reduce traffic impacts, and the provision of temporary access arrangements with private landowners whose property is nearby to construction activities. Local residents and business owners would be notified of traffic management procedures, and ongoing consultation would be undertaken to provide landowners with information on planned construction activities and changes to any access arrangements.
- There is potential for access to individual properties along the Stage 1 construction area and nearby connecting roads to be affected by construction activities. However, property access would be maintained throughout construction of the project, unless otherwise agreed with property owners and businesses, and any impacts would be short-term.

Community Values

- Ensure existing pedestrian and cyclist network are maintained or provide alternate arrangements where needed.
- Avoid disturbing areas of community significance or reinstate disturbed areas as soon as possible after construction.

Community Consultation

- Develop and implement a consultation program that will ensure businesses, residents and others stay informed about the type, timing and duration of construction impacts and any mitigation measures being put in place. This program should include a dedicated project webpage, phone hotline, regular project updates/newsletter available online and where appropriate distributed via flyers, doorknocking and email.
The timing of these newsletters should coincide with any significant stages of construction where impacts are increased or introduced to an area.

**Operational Phase**

*Business and Economic Impacts*

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to businesses.

- At the time of writing, the existing on-street car parks outside the Skyline shops are proposed to be removed, and a new off-street car park constructed nearby. It is proposed that this off-street car park includes 20 car parks, including a loading zone and a disabled car park.

*Local Amenity Impacts*

- The project’s Noise and Vibration Assessment considered a number of noise mitigation measures (road design/traffic management, quieter footpath surfaces and noise barriers/mounds). The assessment discounted the use of low noise footpath and noise barriers due to the anticipated low driving speeds within the stage 1 corridors and the need to maintain access to nearby properties. The assessment recommended that residual architectural treatments of existing individual dwellings be considered, where feasible and reasonable. Depending on the circumstances these treatments might include:
  - Upgraded windows and glazing and solid core doors on the exposed facades;
  - Upgrading window or door seals;
  - The sealing of wall vents;
  - The sealing of the underfloor below the bearers;
  - The sealing of eaves.

- The Urban Design Report for the project recommends a number of mitigation initiatives related to amenity impacts. The loss of vegetation may be mitigated through the planting of replacement species in key locations. Furthermore, a verge strategy for Frenchs Forest Road would see the re-establishment of street trees along the northern verge, while the southern verge would be dedicated to shared path widening to improve pedestrian and bicycle connectivity.

- In order to mitigate visual impacts the Urban Design Report states that consideration is required in all the areas of the proposal, in order to maintain the well-vegetated, pedestrian scale streetscape environment in the case of Frenchs Forest Road and Naree Road, as well maintaining the parkway character of Warringah Road. Furthermore, Forest High School require detailed mitigation measures, it is understood that these would be developed further in subsequent design stages.

*Social Infrastructure*

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to community facilities.
1.7 CONCLUSION

This study has taken a balanced approach and identified a number of potential social and economic impacts of the project based, on the research and information available. It has identified that the both the concept level and stage 1 work will result in a number of significant social and economic benefits to the local and wider community resulting from increase in road connectivity, capacity and access in the LGA.

The SEIA has also identified some of the potential adverse impacts of the project such as amenity impacts to the residential properties, businesses and community facilities during construction. It has consequently sought to identify means by which some of the impacts could be minimised or avoided.

In conclusion the SEIA has found that the proposed development would result in a range of social and economic impacts. The impacts vary in their significance and on balance are considered to be overwhelmingly positive delivering a number of significant benefits desired by local and State Government policy objectives. Furthermore, where the impacts may be negative, they are generally constrained to the construction phase or can be minimised through good design measures.
2. INTRODUCTION

2.1 PURPOSE OF THE STUDY

The Director General’s Environmental Assessment Requirements (DGRs) for the Northern Beaches Hospital and Stage 1 Connectivity Enhancement Work, issued on 17 April 2014, identifies land use, social and economic matters the project’s key issues the Environmental Assessment (EA) should address. The purpose of this study is to respond to a number of the land use, social and economic matters identified in the DGRs. This study describes the land uses, social groups and businesses that are likely to be affected by the project. It assesses potential impacts during the construction phase as well as the operation phase. It also identifies measures to mitigate negative impacts and enhance the benefits of the project. Where appropriate, separate assessments are provided for Concept Proposal and the Stage 1 Connectivity Enhancement Work. The location of the Project is depicted in the figure below.

<table>
<thead>
<tr>
<th>Table 1 - Land Use, Social and Economic DGR Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DGR Requirement</strong></td>
</tr>
<tr>
<td>Concept Proposal</td>
</tr>
<tr>
<td>A description of the existing socio-economic environment.</td>
</tr>
<tr>
<td>Potential social and economic impact to businesses in the vicinity of the project, and to the community associated with traffic, access, property, public domain and amenity related changes.</td>
</tr>
<tr>
<td>Potential impacts on utilities (including communications, electricity, gas and water) and the relocation of these utilities.</td>
</tr>
<tr>
<td>A draft Community Consultation Framework identifying relevant stakeholders, procedures for distributing information and receiving/responding to feedback and procedures for distributing information and receiving/responding to feedback and procedures for resolving stakeholder (including the proposed Northern Beaches Hospital and schools) and community complaints during construction and operation. Key issues that should be addressed in the draft Strategy shall include:</td>
</tr>
<tr>
<td>Traffic management (including property access, pedestrian access);</td>
</tr>
<tr>
<td>Landscaping/urban design matters;</td>
</tr>
<tr>
<td>Construction activities including out of hours work;</td>
</tr>
<tr>
<td>Noise and vibration mitigation and management; and</td>
</tr>
<tr>
<td>Disruption to the operation of the hospital and school facilities.</td>
</tr>
<tr>
<td>Stage 1 Hospital Connectivity Work</td>
</tr>
<tr>
<td>Indicative identification of properties required to be acquired for the Stage 1 work (full and partial acquisition) and an assessment of the scale of impact of this acquisition.</td>
</tr>
<tr>
<td>Social and economic impacts on the local community, businesses and community facilities directly impacted by the project, including but not limited to an assessment of impacts of parking changes in Frenchs Forest Road and the provision of off-street</td>
</tr>
<tr>
<td>DGR Requirement</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>parking, and amenity related changes.</td>
</tr>
<tr>
<td>Potential impacts on utilities (including communications, electricity, gas and water) and the relocation of these utilities.</td>
</tr>
</tbody>
</table>

### 2.2 WHAT IS A SOCIO-ECONOMIC IMPACT ASSESSMENT

Socio-economic impact assessment involves analysing, monitoring and managing the social and economic consequences of development. It involves identifying and evaluating changes to or impacts on, communities, business and industry that are likely to occur as a result of a proposed development, in order to mitigate or manage impacts and maximise benefits.  

### 2.3 OVERVIEW OF THE PROJECT

#### Introduction

Roads and Maritime Services (Roads and Maritime) is seeking approval for the Northern Beaches Hospital – Connectivity and Network Enhancements Project. The approval is sought under Part 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The project comprises road upgrades to enhance arterial and sub-arterial road network connectivity in the Northern Beaches Hospital (NBH) precinct at Frenchs Forest, within the Warringah local government area (LGA) on Sydney’s Northern Beaches.

#### Staged Project Application

The Northern Beaches Hospital Connectivity and Network Enhancements Project is proposed to be assessed in stages under section 115ZD of the EP&A Act. The EIS provides an assessment of the concept proposal for the whole of the project and a more detailed assessment of the Stage 1 work.

The Concept Proposal for the whole Northern Beaches Hospital Connectivity and Network Enhancements Project includes two stages:

- **Stage 1 Hospital Connectivity Work** (the project) which aim to enhance the existing road network to facilitate the opening of the proposed Northern Beaches Hospital by 2018.
- **Stage 2 Network Enhancement Work** is directed towards broader network capacity enhancement particularly along Warringah Road.

The EIS assesses both stages at a concept proposal level and provides more detailed environmental assessment of the Stage 1 work. This would enable Stage 1 to proceed to construction (subject to approval).

---

3 RMS Environmental Impact Assessment Practice Note Socio-Economic Impact Assessment (EIA No.5)
The need for the remainder of the infrastructure, which is directed towards broader network capacity enhancement (Stage 2 Network Enhancement Work), particularly along Warringah Road, has been identified at a strategic level and developed as a concept proposal only (so far).

The staged approval approach would enable construction of the Stage 1 Connectivity Work to start (subject to planning approval) in a timely fashion providing adequate connectivity to the hospital by 2018, while the design of the Network Enhancement Work is being refined and assessed.

**Concept Proposal Description**

The Northern Beaches Hospital – Connectivity and Network Enhancements Project aims to:

- Help in the management of journeys in connection with anticipated future intensification of medical, commercial and residential land uses surrounding the new hospital.
- Mitigate the worsening of traffic congestion on the Warringah Road and Wakehurst Parkway arterial road corridors and their principal feeder roads.
- Enhance access arrangements by car, bus and active transport for the NBH’s employees, patients, outpatients and visitors.
- Facilitate improved access to the NBH and the surrounding employment precincts.
- Have key infrastructure components in place for the proposed hospital opening in 2018.

The location of the Concept Proposal is shown in the Figure below.
The strategic design of the Northern Beaches Hospital Connectivity and Network Enhancements Project in its entirety - referred to in this EIS as the Concept Proposal. The Concept Proposal is proposed to be carried out generally within the specific areas of Frenchs Forest:

- Warringah Road from its intersection with Maxwell Parade to its intersection with Courtley Road.
- Forest Way from around Adams Street to its intersection with Warringah Road.
- Naree Road/Frenchs Forest Road from its intersection with Forest Way to its intersection with Warringah Road.
- Wakehurst Parkway from about 500 metres north of Frenchs Forest Road to about 500 metres south of Warringah Road.
- Allambie Road from its intersection with Frenchs Forest Road East to its intersection with Aquatic Drive.
- Rodborough Road from its intersection with Warringah Road to its intersection with Allambie Road.
- A new connection of Aquatic Drive with Wakehurst Parkway (left in left out).

The first stage of the Concept Proposal, the Stage 1 Hospital Connectivity Work (the project), comprises the provision of essential road work to enhance connectivity to the hospital. Further design development would inform a more detailed description and assessment of the project for Stage 2, comprising network enhancement work to improve the broader network capacity. An assessment of the Stage 2 concept design would be the subject of a separate EIS.
A strategic design for the Concept Proposal is described in Table 1-1. An indication of the staging of key project elements is also included.

### Table 2 - Concept Proposal scope including proposed project staging

<table>
<thead>
<tr>
<th>Key feature</th>
<th>Stage 1</th>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widening and intersection upgrades along sections of Forest Way between Warringah Road and south of Adams Street.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Upgrade of the existing bus stop fronting the Forest Way shopping centre on Forest Way, to accommodate two buses within the bay.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening of Naree Road, Frenchs Forest Road West and a section of Frenchs Forest Road East from the Wakehurst Parkway intersection to Allambie Road.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Provision of a new traffic light intersection on Naree Road and Forest Way; on Naree Road, Frenchs Forest Road West, and Rabbett Street; on Frenchs Forest Road West at a new access to the hospital opposite Gladys Avenue; on Frenchs Forest Road East and Romford Road; and on Frenchs Forest Road East, Patanga Road and Allambie Road.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Provision of dedicated kerb side bus lanes along approaches and departures to the Frenchs Forest Road intersection with Wakehurst Parkway.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening and upgrades to the intersection of Frenchs Forest Road and Wakehurst Parkway.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening of Wakehurst Parkway from about 330 metres north of the intersection with Frenchs Forest Road to the intersection with Warringah Road.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening of Allambie Road to the north of the intersection with Warringah Road.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening and upgrade to the Warringah Road and Allambie Road (north) intersection.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening of Warringah Road west of Allambie Road for about 700 metres just to the east of Courtney Road.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Widening of Warringah Road from west of Fitzpatrick Avenue East (and Fitzpatrick Avenue West) to the west of Allambie Road to include:</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Subsurface eastbound and westbound through lanes in slot (underpass), through the middle of the Warringah Road corridor, generally from west of Forest Way through to east of Wakehurst Parkway for more than one kilometre.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Surface eastbound and westbound lanes running parallel to the slot as part of the Warringah Road corridor to provide access to side roads and the Northern Beaches Hospital.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The provision of a new pedestrian overbridge across Warringah Road on the western side of the intersection with Hilmer Street.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The removal and replacement of the existing pedestrian overbridge across Warringah Road west of the intersection of Forest Way.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widening of Wakehurst Parkway from the intersection with Warringah Road to south of Aquatic Drive.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Upgrades to Warringah Road and its intersection with Forest Way, Hilmer Street and Wakehurst Parkway at surface level to provide for all traffic movements and provide for subsurface grade separated through traffic.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Upgrades or adjustments to existing intersections of Warringah Road with the identified local roads and approaches:</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Fitzpatrick Avenue East.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bantry Bay Road (including closing of the left turn into Bantry Bay Road from Warringah Road eastbound).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Rodborough Road.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Allambie Road.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Forest Way.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision of a new connection at Aquatic Drive and Wakehurst Parkway.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Substantial utility relocations, including water, sewage, telecommunication, electricity and gas services, along Warringah Road, Wakehurst Parkway and a number of surrounding local roads.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ancillary work during construction including, but not limited to, construction compounds, sedimentation basins, batch plants and stockpile sites.</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
The Stage 1 project would also include drainage work, landscaping, property acquisition and adjustments, utility relocations (which may be required to extend into surrounding streets), as well as ancillary work during construction. For the purposes of this report, the scope of the project would not include ongoing maintenance work. A schematic of the Concept Proposal is shown in Figure 3.

Figure 3 - Schematic of the Concept Proposal

Source: Roads and Maritime Services

2.4 STUDY AREA BOUNDARIES

The project study area is located within specific parts of Frenchs Forest:

- Warringah Road from its intersection with Maxwell Parade to its intersection with Courtley Road;
- Naree Road/Frenchs Forest Road from its intersection with Forest Way to its intersection with Warringah Road;
- Wakehurst Parkway from about 500 metres north of Frenchs Forest Road to about 500 metres south of Warringah Road; and
- Forest Way from around Adams Street about 750 metres south to its intersection with Warringah Road.
2.5 **STUDY METHODOLOGY**

This study has been prepared in accordance with the Roads and Maritime Environmental Impact Assessment Practice Note on “Socio-economic assessment” (EIA-05). The report structure has been modified to incorporate the land use considerations required by the DGRs.

Preparation of this study has involved:

- Reviewing a wide range of information relevant to the social and economic assessment of the project;
- Preparing a profile of land uses, demographic characteristics, community facilities and businesses that may be influenced by the project;
- Analysing stakeholder issues relating social and economic impacts;
- Identifying the scope of the likely changes and social and economic impacts that may occur as a result of the project;
- Carrying out a concept level analysis of potential negative and positive impacts, and direct and indirect impacts during construction and operational stages; and
- Identifying broad plans and strategies for monitoring and managing the impacts during both the construction and operational stages.

The methodology to undertake the Stage 1 Connectivity Work is the same as identified above. The assessment however draws on more comprehensive data and is more detailed as a consequence.

2.6 **DATA SOURCES USED TO INFORM STUDY**


2.7 **STRUCTURE OF THE DOCUMENT**

In order to assess the social and economic impacts which would eventuate from the project, the SEIA is set out accordingly:

- Chapter 3 provides an overview of the land uses within the study area;
- Chapter 4 describes the existing socio-economic environment;
- Chapter 5 assesses the likely social and economic impacts of the project during both the construction phase and upon completion and occupation of the development;
Chapter 6 describes the management and mitigation strategies that could be applied to the project; and
Chapter 7 provides a concluding recommendation for the assessment.
3. **LAND USE**

The land uses in the study area are diverse and include low density residential, retail uses, office buildings, light industrial warehousing (sometimes with an ancillary office component), educational establishments, open space, bushland, utilities and recreational facilities. This Chapter provides an overview of the land uses within the study area.

**Figure 4 - Land Use in the Study Area**

3.2 **RETAIL AND COMMERCIAL USES**

Retail and commercial uses in the study area include the Forestway Shopping Centre, Skyline shops and a variety of commercial and light industrial uses. Forestway Shopping Centre is located on Forest Way and accessed by Russell Avenue and Forest Way. The multi-level level shopping centre and parking structure is a busy sub-regional shopping destination. The Shopping Centre is zoned B2 Local Centre under the *Warringah Local Environmental Plan 2011*. A bus stop servicing numerous routes is situated next to the centre on Forest Way. Forestway Shopping Centre has 400 parking spaces available. Access to the car parks is from Forest Way, Russell Avenue or Grace Avenue. Undercover parking is available on the lower ground and first level of the multideck car park. A number of businesses are located within the Forestway Shopping Centre.
Skyline shops are situated on the corner of Frenchs Forest Road East and Allambie Road. The shops include a newsagent, post office, food outlets and other businesses serving the day to day needs of the local community. There are 16 on-street car parks outside the Skyline Shops on the northern side of Frenchs Forest Road East. Further parking is available on the vacant lot on the eastern side of the shops.

Another cluster of shops are located around the junction of Bantry Bay Road and Warringah Road. These business also serve the local community and include a hair salon, four restaurants, chemist, real estate agent, small medical centre and service station. Both these local shopping strips are zoned B1 Neighbourhood Centre under the Warringah Local Environmental Plan 2011.

The study area contains three distinct business park precincts. Each of these precincts are characterised by 2 to 3 storey office buildings many of which are attached to high ceiling warehouses. These business parks appear to serve as a regional headquarters and distribution hub for national and international businesses. These precincts also accommodate a range of other commercial and recreational businesses serving the needs of the surrounding local and sub-regional population. More specifically:

- The first precinct is bound by Wakehurst Parkway, Warringah Road, Frenchs Forest Road East and Allambie Road. It includes Skyline Business Park and Allambie Grove Business Park and businesses such as Sportspro, Miele, Forestway Dental Practice, Olive Pub, Alcon Laboratories, Device Technologies, Howards Storage World, Roland DG, Merck Serono and Device Technologies.

- The second precinct is bound by Wakehurst Parkway, Warringah Road, Allambie Road and Aquatic Drive. It includes Forestridge Business Park and business such as Dell, Retriever Communications, Teleresources Engineering, Plus5 Media, D&D Technologies, Wannabees Family Play Centre and Maui Jim Australia.
The third precinct is situated to the south of Warringah Road and west of Allambie Road. It includes Pacific View Business Park and Telstra Business Centre and businesses such as Ricoh, Starbucks, InterAcc Software, Virgin Active Gym, Automatic Fire Services and Lifetrack Financial.

Each of these precincts are zoned B7 Business Park under the *Warringah Local Environmental Plan 2011*.

### 3.3 Residential Uses

Residential uses are prevalent throughout the study area. Most dwellings are typically one and two storey detached houses on 400+sqm lots. A small number of townhouses and flat blocks exists throughout the study area. Residential land in the study area is zoned R2 Low Density Residential under the *Warringah Local Environmental Plan 2011*.

### 3.4 Special Uses

The study area contains a wide range of social infrastructure including four schools, eleven medical facilities, eight child care centres, three places of worship, seven parks/open space and a police station.

<table>
<thead>
<tr>
<th>Table 3 - Primary and Secondary Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schools</strong></td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Primary Schools</td>
</tr>
<tr>
<td>Forestville Montessori School</td>
</tr>
<tr>
<td>Frenchs Forest Primary School</td>
</tr>
<tr>
<td>Secondary Schools</td>
</tr>
<tr>
<td>Frenchs Forest High School</td>
</tr>
<tr>
<td>Other Schools</td>
</tr>
<tr>
<td>Arranounbai Special School</td>
</tr>
</tbody>
</table>

Source: Hill PDA and My Schools Website

There are two primary schools and two secondary schools within the study area. The enrolment numbers are included in the table above. Overall, the data reveals the enrolment numbers in most of the schools has increased between 2008 and 2011.
### Table 4 - Health and Medical Facilities

<table>
<thead>
<tr>
<th>Health and Medical Facilities</th>
<th>Location</th>
<th>Distance from Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Michael Kennedy</td>
<td>28 Forest Wy, Frenchs Forest</td>
<td>500m</td>
</tr>
<tr>
<td>Dr Gillian Marcham</td>
<td>28 Forest Wy, Frenchs Forest</td>
<td>500m</td>
</tr>
<tr>
<td>Forestway Family Medical Centre (3 doctors)</td>
<td>22 Forestway St, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Warringah Road Family Medical Centre</td>
<td>449 Warringah Rd, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Frenchs Forest Medical Centre</td>
<td>24 Frenchs Forest Road, Frenchs</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr Amanda Badam</td>
<td>48 Bantry Bay Rd, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr Kate Barclay</td>
<td>Level 2, 49 Frenchs Forest Road,</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr Sue Abbott</td>
<td>449 Warringah Rd, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr James O'Brien</td>
<td>44 Bantry Bay Rd, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr Darren Paterson</td>
<td>44 Bantry Bay Rd, Frenchs Forest</td>
<td>In study area</td>
</tr>
<tr>
<td>Dr Sushmita Hunter</td>
<td>10 Tilley La, Frenchs Forest</td>
<td>In study area</td>
</tr>
</tbody>
</table>

Source: Hill PDA survey

There are a number of medical and health facilities within the study area (these facilities are listed in the table above). There are 11 medical centres/general practitioners within the study area. Each has a distinct role in regard to the services they offer. For example, the Warringah Road Medical Centre is a family medical centre whereas there is also the Northern Cancer Institute Chemotherapy Unit which provides chemotherapy for adult oncology patients.

When completed the Northern Beaches Hospital will be a Level 5 facility providing a range of services including emergency, critical care, operating theatres, acute in-patient (overnight, day, and extended day only), maternity and neonatal, paediatrics and adolescents, mental health and drug and alcohol, sub-acute, primary health care, ambulatory, clinical support, other support, and associated administrative and front of house services.

### Table 5 - Child Care Centres

<table>
<thead>
<tr>
<th>Child Care</th>
<th>Location</th>
<th>Distance from Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a Difference at Frenchs Forest</td>
<td>10 Ann St, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Kindalin Early Childhood Learning Centres</td>
<td>18 Aquatic Drv, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Rodborough Road Childrens Centre</td>
<td>U C2/ 1-3 Rodborough Rd, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>The Forset Child Care</td>
<td>5 10 Rodborough Rd, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Community Kids Frenchs Forest</td>
<td>20 Rodborough Rd, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Frenchs Forest Kindergarten</td>
<td>5 Coster Pl, Frenchs Forest</td>
<td>1.3km</td>
</tr>
<tr>
<td>Explore &amp; Develop</td>
<td>28 Rodborough Rd, Frenchs Forest</td>
<td>1.8km</td>
</tr>
<tr>
<td>Frenchs Forest Early Learning Centre</td>
<td>Lvl 3 20 Rodborough Rd, Frenchs Forest</td>
<td>1.4km</td>
</tr>
</tbody>
</table>

Source: Hill PDA survey

Finally the study area contains a police station, eight child care facilities and a number of places of worship: Karakashian Bartev Mosque, Forest Alliance Church and Uniting Church Australia.

### 3.5 Open Space and Recreation

The study area contains a range of open space and recreational facilities. The table below identifies the open space and recreational facilities in and around the study area.
Table 6 - Open Space and Recreational Facilities

<table>
<thead>
<tr>
<th>Open Space and Recreational Facilities</th>
<th>Location</th>
<th>Distance from Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wareham Reserve</td>
<td>Forest Way, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Rabbett Reserve</td>
<td>Rabbett Street, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Brick Pitt Reserve</td>
<td>Wakehurst Parkway, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Aquatic Reserve</td>
<td>Aquatic Drive, Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Manly Warringah War Memorial Park</td>
<td>Aquatic Drive, Frenchs Forest</td>
<td>2.1km</td>
</tr>
<tr>
<td>Akora Reserve</td>
<td>Frenchs Forest</td>
<td>In Study Area</td>
</tr>
<tr>
<td>Wellman Reserve</td>
<td>Wellman Road, Frenchs Forest</td>
<td>1.4km</td>
</tr>
<tr>
<td></td>
<td>33 Currie Road, Forestville</td>
<td>1.5km</td>
</tr>
</tbody>
</table>

Source: Hill PDA survey

Further to this, bushland exists on the site designated for the Northern Beaches Hospital and either side of Wakehurst Parkway. Existing Socio-Economic Environment

Chapter 4 provides a description of the existing socio-economic environment of the project study area. This includes a resident and labour force profile of Frenchs Forest. Where appropriate data from Warringah LGA and Greater Sydney has been used in order to allow for a wider set of comparisons. Note the boundaries of the Frenchs Forest suburb were refined between the 2001, 2006 and 2011 ABS Census periods. This data has been compared nonetheless as it provides a useful indicator of the broad demographic changes which have occurred between 2001 and 2011.

3.6 THE LOCAL COMMUNITY

3.6.1 POPULATION

Table 7 - Frenchs Forest, Warringah LGA and Greater Sydney Population Change 2001-2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frenchs Forest</td>
<td>12,435</td>
<td>12,557</td>
<td>13,192</td>
<td>757</td>
<td>6%</td>
<td>76</td>
<td>0.6%</td>
</tr>
<tr>
<td>Warringah LGA</td>
<td>128,839</td>
<td>133,490</td>
<td>139,935</td>
<td>11,096</td>
<td>9%</td>
<td>1110</td>
<td>0.8%</td>
</tr>
<tr>
<td>Greater Sydney</td>
<td>3,997,321</td>
<td>4,148,574</td>
<td>4,429,034</td>
<td>431,713</td>
<td>11%</td>
<td>43171</td>
<td>1.0%</td>
</tr>
</tbody>
</table>


The size of Frenchs Forest’s population is growing at a rate well below the average for Greater Sydney. Between 2001 and 2011 Frenchs Forest’s population grew from 12,435 to 13,192 which represents a 9% increase (0.8% annual average increase). The population of Greater Sydney grew by 11% over the same period (1% average annual increase).
Table 8 - Frenchs Forest Age Change 2001-2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>914</td>
<td>950</td>
<td>1,014</td>
<td>7%</td>
<td>8%</td>
<td>8%</td>
<td>100</td>
<td>11%</td>
</tr>
<tr>
<td>5-14 years</td>
<td>1,780</td>
<td>1,916</td>
<td>2,111</td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
<td>331</td>
<td>19%</td>
</tr>
<tr>
<td>15-19 years</td>
<td>868</td>
<td>832</td>
<td>889</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>21</td>
<td>2%</td>
</tr>
<tr>
<td>20-24 years</td>
<td>668</td>
<td>659</td>
<td>602</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>-66</td>
<td>-10%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>1488</td>
<td>1,193</td>
<td>970</td>
<td>12%</td>
<td>10%</td>
<td>7%</td>
<td>-498</td>
<td>-34%</td>
</tr>
<tr>
<td>35-44 years</td>
<td>1,928</td>
<td>2,121</td>
<td>2,212</td>
<td>16%</td>
<td>17%</td>
<td>17%</td>
<td>284</td>
<td>15%</td>
</tr>
<tr>
<td>45-54 years</td>
<td>1,799</td>
<td>1,742</td>
<td>1,939</td>
<td>15%</td>
<td>14%</td>
<td>15%</td>
<td>140</td>
<td>8%</td>
</tr>
<tr>
<td>55-64 years</td>
<td>1,532</td>
<td>1,546</td>
<td>1,460</td>
<td>12%</td>
<td>12%</td>
<td>11%</td>
<td>-72</td>
<td>-5%</td>
</tr>
<tr>
<td>65-74 years</td>
<td>851</td>
<td>985</td>
<td>1,263</td>
<td>7%</td>
<td>8%</td>
<td>10%</td>
<td>412</td>
<td>48%</td>
</tr>
<tr>
<td>75-84 years</td>
<td>388</td>
<td>517</td>
<td>599</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
<td>211</td>
<td>54%</td>
</tr>
<tr>
<td>85 years and over</td>
<td>97</td>
<td>96</td>
<td>133</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>36</td>
<td>37%</td>
</tr>
<tr>
<td>Total</td>
<td>12,293</td>
<td>12,557</td>
<td>13,192</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>899</td>
<td>7%</td>
</tr>
</tbody>
</table>


In 2011 the predominant age group in Frenchs Forest was 35 to 44 years which comprised 17% of the suburb's population. The table above demonstrates that Frenchs Forest has an ageing population with the most growth occurring in the 75-84 years bracket (54%). Between 2001 and 2011 there was a decrease in those aged between 20-24 (-10%) and 25-34 (-34%).

Table 9 - Frenchs Forest, Warringah LGA and Greater Sydney Age Distribution 2011

<table>
<thead>
<tr>
<th>Median Age</th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>39</td>
<td>38</td>
<td>36</td>
</tr>
<tr>
<td>5-14 years</td>
<td>16%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>15-19 years</td>
<td>7%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>20-24 years</td>
<td>5%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>7%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>35-44 years</td>
<td>17%</td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td>45-54 years</td>
<td>15%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>55-64 years</td>
<td>11%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>65-74 years</td>
<td>10%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>75-84 years</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>85 years and over</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

The table above demonstrates that the median age in Frenchs Forest (39) is higher than Greater Sydney (36). The proportion of residents aged over 45 years in Frenchs Forest (41%) is higher than the Warringah LGA (38%) and Greater Sydney (36%).

3.6.2 Educational Attainment

In 2011 the proportion of Frenchs Forest residents with a tertiary qualification (43%) was higher than for Warringah LGA (40%) and Greater Sydney (41%).
Table 10 - Frenchs Forest, Warringah LGA and Greater Sydney Educational Attainment 2011

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postgraduate Degree</td>
<td>9%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Graduate Diploma and Graduate Certificate</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>31%</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>Advanced Diploma and Diploma</td>
<td>20%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>Certificate</td>
<td>26%</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Not stated(b)</td>
<td>9%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Not applicable(c)</td>
<td>3%</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

3.6.3 Workforce Status

Table 11 - Frenchs Forest, Warringah LGA and Greater Sydney Workforce Participation 2011

<table>
<thead>
<tr>
<th>Category</th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>6,539</td>
<td>72,284</td>
<td>2,063,267</td>
</tr>
<tr>
<td>Unemployed</td>
<td>228</td>
<td>2,607</td>
<td>125,586</td>
</tr>
<tr>
<td>Total labour force</td>
<td>6,767</td>
<td>74,891</td>
<td>2,188,853</td>
</tr>
<tr>
<td>Not in the labour force</td>
<td>3,048</td>
<td>32,936</td>
<td>1,149,798</td>
</tr>
<tr>
<td>Total population aged 15 years and over</td>
<td>10,064</td>
<td>112,432</td>
<td>3,548,458</td>
</tr>
<tr>
<td>Workforce participation rate</td>
<td>67%</td>
<td>67%</td>
<td>62%</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>3.4%</td>
<td>3.5%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

The table above demonstrates that the workforce participation rate in Frenchs Forest (67%) and Warringah LGA (67%) are higher than Greater Sydney (62%). The unemployment rate in Frenchs Forest (3.4%) is lower than the Warringah LGA (3.5%) and Greater Sydney (5.7%).

3.6.4 Workforce Industry of Employment

Table 12 - Frenchs Forest Resident Workforce Industry of Employment 2001-2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>9</td>
<td>18</td>
<td>12</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>Mining</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>167%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>583</td>
<td>427</td>
<td>362</td>
<td>-221</td>
<td>-38%</td>
</tr>
<tr>
<td>Electricity, Gas and Water Supply</td>
<td>40</td>
<td>41</td>
<td>41</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Construction</td>
<td>415</td>
<td>419</td>
<td>446</td>
<td>31</td>
<td>7%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>464</td>
<td>466</td>
<td>463</td>
<td>-1</td>
<td>0%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>1,056</td>
<td>720</td>
<td>663</td>
<td>-393</td>
<td>-37%</td>
</tr>
<tr>
<td>Accommodation, Cafes and Restaurants</td>
<td>227</td>
<td>317</td>
<td>308</td>
<td>81</td>
<td>36%</td>
</tr>
<tr>
<td>Transport and Storage</td>
<td>206</td>
<td>217</td>
<td>178</td>
<td>-28</td>
<td>-14%</td>
</tr>
<tr>
<td>Communication Services</td>
<td>145</td>
<td>274</td>
<td>278</td>
<td>133</td>
<td>92%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>415</td>
<td>437</td>
<td>422</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Property and Business Services</td>
<td>1,200</td>
<td>1,195</td>
<td>1,251</td>
<td>51</td>
<td>4%</td>
</tr>
<tr>
<td>Government Administration and Defence</td>
<td>186</td>
<td>284</td>
<td>299</td>
<td>113</td>
<td>61%</td>
</tr>
<tr>
<td>Education</td>
<td>446</td>
<td>499</td>
<td>602</td>
<td>156</td>
<td>35%</td>
</tr>
<tr>
<td>Health and Community Services</td>
<td>537</td>
<td>628</td>
<td>666</td>
<td>129</td>
<td>24%</td>
</tr>
<tr>
<td>Cultural and Recreational Services</td>
<td>239</td>
<td>88</td>
<td>121</td>
<td>-118</td>
<td>-49%</td>
</tr>
<tr>
<td>Personal and Other Services</td>
<td>241</td>
<td>308</td>
<td>287</td>
<td>46</td>
<td>19%</td>
</tr>
<tr>
<td>Non-classifiable economic units</td>
<td>32</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Not stated</td>
<td>66</td>
<td>182</td>
<td>133</td>
<td>67</td>
<td>102%</td>
</tr>
</tbody>
</table>

The tables above demonstrate that within Frenchs Forest there are a large proportion of people working in the professional, scientific and technical services industries (13.4%), health care and social assistance (10.2%) and retail trade (10.1%).

### 3.6.5 Workforce Occupation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>18%</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Professionals</td>
<td>29%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Technicians and trade workers</td>
<td>11%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Community and personal service workers</td>
<td>8%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Clerical and administrative workers</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Sales workers</td>
<td>10%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Machinery operators and drivers</td>
<td>3%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>Labourers</td>
<td>4%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Inadequately described/not stated</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>


In comparison to Greater Sydney, Frenchs Forest has a high proportion of people who are Professionals (29% versus 26%) and Managers (18% versus 13%).

### 3.6.6 Household Income, Mortgage and Rental Repayments

In 2011 the median weekly income in Frenchs Forest ($2,135) was significantly higher than the Warringah LGA ($1,722) and Greater Sydney ($1,447). In turn, the median weekly mortgage repayments and weekly rent in
Frenchs Forest are higher than the Warringah LGA and Greater Sydney. These indicators suggest Frenchs Forest is a relatively affluent suburb.

### Table 15 - Income, Mortgage and Rental Repayments 2011

<table>
<thead>
<tr>
<th></th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median weekly household income</strong></td>
<td>$1,733</td>
<td>$2,135</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Median weekly mortgage repayment</strong></td>
<td>$508</td>
<td>$670</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Median weekly rent</strong></td>
<td>$450</td>
<td>$650</td>
<td>44%</td>
</tr>
<tr>
<td><strong>% of household income spent on mortgage</strong></td>
<td>29%</td>
<td>31%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>% of household income spent on rent</strong></td>
<td>26%</td>
<td>30%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

### 3.6.7 Index of Advantage and Disadvantage

Notwithstanding the analysis provided above, it is important to note a review of weekly household incomes alone may not accurately shed light on the affluence of a resident population. By way of example, a review of weekly incomes alone fails to consider an area with an ageing population and thereby an area with a high level of retirees who have left the workforce yet still have a substantial asset base. Accordingly we have applied the Socio Economic Index for Areas (SEIFA) as an alternative means of assessing the socio economic character of Frenchs Forest.

### Table 16 - SEIFA Index of Advantage and Disadvantage – Sample of Suburbs (2011)

<table>
<thead>
<tr>
<th>Socio-Economic Index of Areas</th>
<th>Ranking with NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest in NSW - The Ponds</td>
<td>2,563</td>
</tr>
<tr>
<td>North Balgowlah</td>
<td>2,487</td>
</tr>
<tr>
<td>Frenchs Forest</td>
<td>2,481</td>
</tr>
<tr>
<td>Duffy's Forest</td>
<td>2,480</td>
</tr>
<tr>
<td>Queenscliff</td>
<td>2,408</td>
</tr>
<tr>
<td>Dee Why</td>
<td>1,824</td>
</tr>
<tr>
<td>Brookvale</td>
<td>1,656</td>
</tr>
<tr>
<td>Lowest in NSW - Cabbage Tree Island (Ballina - NSW)</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

The SEIFA is produced by the Australian Bureau of Statistics and compares geographic areas (LGAs and derived suburbs) with respect to advantage and disadvantage. The SEIFA, Index of Socio Economic Disadvantage and Advantage (the ‘Index’) is derived from the attributes of an area’s residents such as income, educational attainment, rate of unemployment and labour force skill. Accordingly, the SEIFA shows where the affluent (as opposed to just high income earning) live; where disadvantaged (as opposed to the unemployed) live; and where the highly skilled and educated (as opposed to the tertiary educated people) live.

The findings can be used to facilitate research into the relationship between socio economic status and various health and educational outcomes to determine areas that require funding and services and to identify new business opportunities. The Index refers to the area in which a person lives, not to the socioeconomic situation of the particular individual. For the Index, every geographic area in Australia is given an SEIFA score which shows how disadvantaged an area is compared with other areas in Australia. Higher scores on the Index occur when the
particular geographic area has higher family incomes and a more skilled labour force. A higher score means an area is more advantaged and accordingly a lower score indicates an area is more disadvantaged.

The table above shows the SEIFA Index of Relative Socio-economic Advantage and Disadvantage (2011) for Frenchs Forest and surrounding suburbs as well as the lowest and highest ranked suburbs in NSW. On this basis, the SEIFA Index of Relative Socio-economic Advantage and Disadvantage (2011) found Frenchs Forest was ranked 2,481 out of 2,563 suburbs. This score places Frenchs Forest within the 97th percentile ranking of suburbs within Australia (i.e. top 2% most advantaged suburb in Australia).

### 3.7 Local Households and Dwellings

#### 3.7.1 Dwelling Type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate house</td>
<td>3,883</td>
<td>3,880</td>
<td>4,036</td>
<td>153</td>
<td>4%</td>
<td>96%</td>
<td>97%</td>
<td>97%</td>
</tr>
<tr>
<td>Semi-detached, row or terrace house</td>
<td>115</td>
<td>91</td>
<td>96</td>
<td>-19</td>
<td>-17%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Flat, unit or apartment</td>
<td>36</td>
<td>40</td>
<td>32</td>
<td>-4</td>
<td>-11%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other / not stated</td>
<td>27</td>
<td>8</td>
<td>9</td>
<td>-18</td>
<td>-67%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>4,061</td>
<td>4,019</td>
<td>4,173</td>
<td>112</td>
<td>3%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


Between 2001 and 2011 the number of dwellings in the Frenchs Forest increased from 4,601 to 4,173 (+112 or 3%). In comparison, the number of dwellings in Greater Sydney increased by 11% over the same period. The most common type of dwellings in Frenchs Forest are separate houses (97%) followed by semi-detached (25) and flat units (1%).

<table>
<thead>
<tr>
<th></th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate house</td>
<td>97%</td>
<td>61%</td>
<td>61%</td>
</tr>
<tr>
<td>Semi-detached, row or terrace house</td>
<td>2%</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>Flat, unit or apartment</td>
<td>1%</td>
<td>33%</td>
<td>26%</td>
</tr>
<tr>
<td>Other / not stated</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

In comparison to the Warringah LGA (61%) and Greater Sydney (61%), Frenchs Forest has a significantly higher proportion of separate houses (97%). Frenchs Forest has a much smaller proportion of semi-detached dwellings and flats in comparison to the Warringah LGA and Greater Sydney.

#### 3.7.2 Household Size

Households in Frenchs Forest are on average larger than those across the both the LGA and Greater Sydney. In 2011 the typical household size in Frenchs Forest was 3.1 and 2.7 in the wider LGA and Greater Sydney. The higher average household size within Frenchs Forest can be attributed to the greater proportion of families households with children located in the suburb.
Table 19 - Frenchs Forest, Warringah LGA and Greater Sydney Household Size 2001, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th>2001 (#)</th>
<th>2006 (#)</th>
<th>2011 (#)</th>
<th>Change 2001-2011 (#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frenchs Forest</td>
<td>2.9</td>
<td>3.1</td>
<td>3.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Warringah LGA</td>
<td>2.6</td>
<td>2.6</td>
<td>2.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Greater Sydney</td>
<td>2.7</td>
<td>2.7</td>
<td>2.7</td>
<td>0.0</td>
</tr>
</tbody>
</table>


3.7.3 HOME OWNERSHIP

The table below shows 89% of households in Frenchs Forest either own or are purchasing their home. This is substantially higher than recorded for both the LGA (71%) and Greater Sydney (65%). In 2011 the proportion of households renting in Frenchs Forest was 11% which was around a third of that recorded for the wider LGA (26%) and a quarter of Greater Sydney (35%).

Table 20 - Frenchs Forest Home Ownership 2001, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Owned</td>
<td>2,199</td>
<td>1,725</td>
<td>1,722</td>
<td>-477</td>
<td>-21.7%</td>
</tr>
<tr>
<td>Being Purchased</td>
<td>1,286</td>
<td>1,754</td>
<td>1,944</td>
<td>658</td>
<td>51.2%</td>
</tr>
<tr>
<td>Renting</td>
<td>403</td>
<td>464</td>
<td>448</td>
<td>45</td>
<td>11.2%</td>
</tr>
<tr>
<td>Other</td>
<td>65</td>
<td>8</td>
<td>7</td>
<td>-56</td>
<td>-89.2%</td>
</tr>
<tr>
<td>Not Stated</td>
<td>112</td>
<td>68</td>
<td>53</td>
<td>-59</td>
<td>-52.7%</td>
</tr>
<tr>
<td>Total</td>
<td>4,065</td>
<td>4,019</td>
<td>4,174</td>
<td>109</td>
<td>2.7%</td>
</tr>
</tbody>
</table>


Table 21 - Frenchs Forest, Warringah LGA and Greater Sydney Home Ownership 2011

<table>
<thead>
<tr>
<th></th>
<th>Frenchs Forest</th>
<th>Warringah LGA</th>
<th>Greater Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Owned</td>
<td>41%</td>
<td>33%</td>
<td>30%</td>
</tr>
<tr>
<td>Being Purchased</td>
<td>47%</td>
<td>37%</td>
<td>35%</td>
</tr>
<tr>
<td>Renting</td>
<td>11%</td>
<td>26%</td>
<td>32%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Not Stated</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

3.7.4 HOUSEHOLD STRUCTURE

The tables below highlight the proportion of family households in Frenchs Forest (87%) is higher than that recorded for the Warringah LGA (71%) and Greater Sydney (69%). Since 2001 the proportion of family households in Frenchs Forest has remained steady.

Table 22 - Frenchs Forest Household Structure 2001, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family households</td>
<td>3,522</td>
<td>3,525</td>
<td>3,647</td>
<td>88%</td>
<td>88%</td>
<td>87%</td>
<td>125</td>
<td>4%</td>
</tr>
<tr>
<td>Single person households</td>
<td>409</td>
<td>433</td>
<td>460</td>
<td>10%</td>
<td>11%</td>
<td>11%</td>
<td>51</td>
<td>12%</td>
</tr>
<tr>
<td>Group households</td>
<td>55</td>
<td>64</td>
<td>65</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>Total</td>
<td>3,986</td>
<td>4,022</td>
<td>4,172</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>186</td>
<td>5%</td>
</tr>
</tbody>
</table>

### Table 23 - Warringah LGA Household Structure 2001, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family households</td>
<td>34,159</td>
<td>35,324</td>
<td>37,245</td>
<td>71%</td>
<td>70%</td>
<td>71%</td>
<td>3,086</td>
<td>9%</td>
</tr>
<tr>
<td>Single person households</td>
<td>10,629</td>
<td>11,246</td>
<td>11,574</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>945</td>
<td>9%</td>
</tr>
<tr>
<td>Group households</td>
<td>1,922</td>
<td>1,868</td>
<td>1,820</td>
<td>4%</td>
<td>4%</td>
<td>3%</td>
<td>-102</td>
<td>-5%</td>
</tr>
<tr>
<td>Other</td>
<td>1,673</td>
<td>2,159</td>
<td>1,799</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
<td>126</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48,383</strong></td>
<td><strong>50,597</strong></td>
<td><strong>52,438</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>4,055</strong></td>
<td><strong>8%</strong></td>
</tr>
</tbody>
</table>


### Table 24 - Greater Sydney Household Structure 2001, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family households</td>
<td>1,001,442</td>
<td>1,035,406</td>
<td>1,112,635</td>
<td>70%</td>
<td>68%</td>
<td>69%</td>
<td>111,193</td>
<td>11%</td>
</tr>
<tr>
<td>Single person households</td>
<td>305,672</td>
<td>328,517</td>
<td>343,808</td>
<td>21%</td>
<td>22%</td>
<td>21%</td>
<td>38,136</td>
<td>12%</td>
</tr>
<tr>
<td>Group households</td>
<td>59,243</td>
<td>59,613</td>
<td>64,950</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>5,707</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>72,038</td>
<td>97,929</td>
<td>80,136</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
<td>8,098</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,438,395</strong></td>
<td><strong>1,521,465</strong></td>
<td><strong>1,601,529</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>163,134</strong></td>
<td><strong>11%</strong></td>
</tr>
</tbody>
</table>


### 3.8 THE LOCAL ECONOMY

#### 3.8.1 JOBS IN STUDY AREA

The table below shows the number and type of jobs in the study area. In 2011, the top three industries within the study area were manufacturing (3,326 jobs when combined), information media and telecommunications (1,401 jobs) and administrative and support services (1,057 jobs). Between 2001 and 2011 the industries with the largest increase in jobs were information media and telecommunications, other services, health care and social assistance, and arts and recreation services.
Table 25 - Jobs in Study Area 2001 and 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>387</td>
<td>524</td>
<td>137</td>
<td>35%</td>
</tr>
<tr>
<td>Mining</td>
<td>198</td>
<td>207</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Food Product Manufacturing</td>
<td>4</td>
<td>15</td>
<td>11</td>
<td>268%</td>
</tr>
<tr>
<td>Beverage and Tobacco Product Manufacturing</td>
<td>136</td>
<td>160</td>
<td>25</td>
<td>18%</td>
</tr>
<tr>
<td>Textile, Leather, Clothing and Footwear Manufacturing</td>
<td>119</td>
<td>74</td>
<td>-45</td>
<td>-38%</td>
</tr>
<tr>
<td>Wood Product Manufacturing</td>
<td>40</td>
<td>26</td>
<td>-14</td>
<td>-36%</td>
</tr>
<tr>
<td>Pulp, Paper and Converted Paper Product Manufacturing</td>
<td>238</td>
<td>333</td>
<td>94</td>
<td>39%</td>
</tr>
<tr>
<td>Printing (including the Reproduction of Recorded Media)</td>
<td>238</td>
<td>311</td>
<td>72</td>
<td>30%</td>
</tr>
<tr>
<td>Petroleum and Coal Product Manufacturing</td>
<td>167</td>
<td>53</td>
<td>-114</td>
<td>-68%</td>
</tr>
<tr>
<td>Basic Chemical and Chemical Product Manufacturing</td>
<td>25</td>
<td>71</td>
<td>45</td>
<td>177%</td>
</tr>
<tr>
<td>Polymer Product and Rubber Product Manufacturing</td>
<td>124</td>
<td>171</td>
<td>47</td>
<td>38%</td>
</tr>
<tr>
<td>Non-Metallic Mineral Product Manufacturing</td>
<td>29</td>
<td>78</td>
<td>48</td>
<td>165%</td>
</tr>
<tr>
<td>Primary Metal and Metal Product Manufacturing</td>
<td>93</td>
<td>113</td>
<td>20</td>
<td>22%</td>
</tr>
<tr>
<td>Fabricated Metal Product Manufacturing</td>
<td>695</td>
<td>1,184</td>
<td>489</td>
<td>70%</td>
</tr>
<tr>
<td>Transport Equipment Manufacturing</td>
<td>559</td>
<td>465</td>
<td>-94</td>
<td>-17%</td>
</tr>
<tr>
<td>Machinery and Equipment Manufacturing</td>
<td>527</td>
<td>263</td>
<td>-264</td>
<td>-50%</td>
</tr>
<tr>
<td>Furniture and Other Manufacturing</td>
<td>2</td>
<td>9</td>
<td>7</td>
<td>262%</td>
</tr>
<tr>
<td>Electricity, Gas, Water and Waste Services</td>
<td>3</td>
<td>9</td>
<td>6</td>
<td>193%</td>
</tr>
<tr>
<td>Construction</td>
<td>164</td>
<td>245</td>
<td>81</td>
<td>49%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>9</td>
<td>0</td>
<td>-9</td>
<td>-100%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>7</td>
<td>5</td>
<td>-2</td>
<td>-24%</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>9</td>
<td>29</td>
<td>19</td>
<td>205%</td>
</tr>
<tr>
<td>Transport, Postal and Warehousing</td>
<td>118</td>
<td>128</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>Information Media and Telecommunications</td>
<td>866</td>
<td>1,401</td>
<td>534</td>
<td>62%</td>
</tr>
<tr>
<td>Financial and Insurance Services</td>
<td>63</td>
<td>108</td>
<td>45</td>
<td>71%</td>
</tr>
<tr>
<td>Rental, Hiring and Real Estate Services</td>
<td>7</td>
<td>0</td>
<td>-7</td>
<td>-100%</td>
</tr>
<tr>
<td>Professional, Scientific and Technical Services</td>
<td>85</td>
<td>119</td>
<td>34</td>
<td>40%</td>
</tr>
<tr>
<td>Administrative and Support Services</td>
<td>1,061</td>
<td>1,057</td>
<td>-3</td>
<td>0%</td>
</tr>
<tr>
<td>Public Administration and Safety</td>
<td>23</td>
<td>3</td>
<td>-20</td>
<td>-87%</td>
</tr>
<tr>
<td>Education and Training</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>154</td>
<td>365</td>
<td>211</td>
<td>137%</td>
</tr>
<tr>
<td>Arts and Recreation Services</td>
<td>222</td>
<td>403</td>
<td>181</td>
<td>82%</td>
</tr>
<tr>
<td>Other Services</td>
<td>1,453</td>
<td>1,668</td>
<td>216</td>
<td>15%</td>
</tr>
<tr>
<td>Unclassified</td>
<td>2</td>
<td>0</td>
<td>-2</td>
<td>-100%</td>
</tr>
<tr>
<td><strong>Total Jobs in Study Area</strong></td>
<td><strong>7,829</strong></td>
<td><strong>9,700</strong></td>
<td><strong>1,871</strong></td>
<td><strong>24%</strong></td>
</tr>
</tbody>
</table>

Source: BTS 2001 and 2011. (Travel Zones - 2901, 2902, 2905, 2909, 2914 - note these are 2006 TZ boundaries)

**Strategic Planning/Policy Direction**

The *draft Metropolitan Strategy for Sydney* (2013) identifies Frenchs Forest as a Health Potential Specialised Precinct. The Frenchs Forest Health Potential Specialised Health Precinct is located in the North Subregion. It is anticipated that the North Subregion will grow significantly, the Strategy sets out a population target of 610,000 and a housing target of 241,000 towards 2031. The Strategy states that strategic direction for the Precinct is to “capitalise on the growing cluster of hospital and health-related uses with associated research/ business park opportunities to stimulate local jobs”.

The State Government’s *Northern Beaches Regional Action Plan* (2012) includes a requirement for agencies to facilitate the delivery of the Northern Beaches Hospital. This includes managing additional transport pressures in the area, improving community access and reviewing bus timetables and routes to ensure maximum access and usage for commuters.

The State Government and Warringah Council are also working together to prepare a Northern Beaches Hospital Precinct Structure Plan. Recognising that the hospital will act as a catalyst to broader change in the precinct, the
plan will investigate and recommend changes to land uses including housing densities, open space and complementary medical and business enterprises.

3.9 Key Findings

The suburb of Frenchs Forest experienced modest population growth between 2001 and 2011. The median age is 39 which is relatively high compared to Greater Sydney (36). In 2011 the proportion of Frenchs Forest residents with a tertiary qualification was higher than the Warringah LGA and Greater Sydney. A large number of white collar workers live in the study area and the median weekly income in Frenchs Forest is significantly higher than the Warringah LGA and Greater Sydney. The most common type of dwellings in Frenchs Forest are separate houses followed by semi-detached and flat units. The majority of households in Frenchs Forest are family households and the 89% of households in Frenchs Forest either own or are purchasing their home, which is significantly higher than the average for Greater Sydney.
4. ASSESSMENT OF SOCIAL & ECONOMIC IMPACTS

This chapter assesses land use and the social and economic impacts of the Northern Beaches Hospital Concept and Stage 1 Connectivity Enhancement Work. It identifies and analyses the likely changes to the existing conditions of the study area during construction and operational phases of the project.

4.1 BUSINESS AND ECONOMIC IMPACTS

4.1.1 CONSIDERATION:

Is the project likely to have direct or indirect effects on the regional economy? Does the project impact (either directly or indirectly) on businesses/commercial enterprises? Are impacts on businesses likely to have flow on effects for employees?

4.1.2 VIEWS EXPRESSED DURING COMMUNITY ENGAGEMENT:

- Concern raised about Bantry Bay Road properties fronting Warringah Road and the impact the proposed road work would have on current tenants who had recently re-signed long term leases.
- Concern from properties near Hilmer Street about the Stage 2 work and the potential for impacts on their properties as part of that.
- There was overwhelming support from workers in the business parks that Allambie Road needed to be widened or replaced with traffic lights as wait times in peak hours are extensive.
- Concerns with parking on Frenchs Forest Road in the vicinity of Skyline Business Park, which currently reaches parking capacity during business hours.
- Businesses located at the Patanga Road shops raised concerns about the potential loss of parking after the Patanga Road intersection upgrade.
- There was overwhelming support for the Aquatic Drive/Wakehurst Parkway connection, even if it was limited only to a left in/left out option. The need for an access point here was supported by both businesses in the Allambie industrial park and local residents.

4.1.3 CONCEPT IMPACT ASSESSMENT

A number of businesses are anticipated to be impacted by the Concept Proposal. These impacts would range from minor changes to access for some of these properties, through to the impacts associated with potential acquisitions resulting in impacts both on business owners and patrons of those businesses. Anticipated impacted businesses include Forestway Shopping Centre, Skyline Shops and business parks along Frenchs Forest Road...
East. While the precise alignment of the Stage 2 Project is not yet confirmed, it could include impacts to the Bantry Bay Road shopping strip or developable land in the southern area of the proposed hospital site.

It is anticipated that a number of businesses located within the study area would experience some impact to their operation during construction as a result of disturbances such as noise, vibration and traffic. For the most part however, the negative impacts for businesses would be confined to the construction period and eliminated upon completion of work. Measures to mitigate these impacts could include ensuring customers are still aware local business are still operating, via signage at appropriate location, and remain accessible.

Notwithstanding the potential for adverse impacts to some business during the construction phase, other businesses may experience economic benefits as a result of the construction process. At the broadest level, businesses are most likely to experience positive impacts during the construction phase are those servicing the construction industry including construction companies, suppliers and development consultants. At a local level, retailers and food and beverage premises in and nearby to the study area would be expected to attract increased trade from construction workers during the delivery phase of the project.

In the case of business acquisitions, the severity of impacts would vary dependant on the number of business properties acquired, the type of business, and the location of the business. It is likely that business acquisition would disrupt the turnover of the business owning to the need to relocate and the ability of the business to do so while maintaining trade and links to local patrons. If businesses were unable or unwilling to relocate were acquired, it would likely result in job losses.

4.1.4 STAGE 1 PROJECT IMPACT ASSESSMENT

The project’s Staged Infrastructure Application report (March 2014) identifies a number of important project aims that stand to impact businesses and the economy. Of particular note are the identified aims:

- Help in the management of journeys in connection with anticipated future intensification of medical, commercial and residential land uses surrounding the new hospital.
- Mitigate the worsening of traffic congestion on the Warringah Road and Wakehurst Parkway arterial road corridors and their principal feeder roads.
- Mitigate intersection delays to facilitate improved access to the NBH and the surrounding employment precincts.

By achieving these aims the project can have a positive impact to local and broader economies through the generation of employment through construction and the multiplier effect of investment to the broader economy (including job generation and demand for services and goods such as food and materials). Significant benefits can also be achieved through time savings / efficiencies gained by freight, private and public transport as a result of road layout efficiencies and reduced congestion.

---

*Northern Beaches Hospital – Connectivity and Network Enhancements, Concept Proposal and Stage 1 Hospital Connectivity Work, Staged infrastructure application report, March 2014, RMS*
This section discusses the economic matters that are relevant during both the construction and operational phases of the project:

- The likely economic impacts to the function of local businesses; and
- The likely impacts on economic activity, job generation and investment stimulus.

**Potential Business Impacts**

The Study Area contains a number of businesses that would be impacted by the project during construction:

**Forestway Shopping Centre**

- During construction the road widening of Forest Way will necessitate the acquisition of 254sqm of the Centre’s land which may reduce the quality of pedestrian access unless properly mitigated through design measures. During construction, measures should be planned and implemented to ensure convenient access is maintained to the Centre.
- Upon completion the project should provide safe and convenient pedestrian, public transport and vehicle access to the Centre so as to maximise the potential benefits from greater trade driven by the new hospital.

**Skyline Shops**

- During construction the pedestrian and vehicle access to these shops would be impacted during the process of widening Allambie Road and signalising of the intersection. Construction management measures should be planned and implemented to ensure convenient access is maintained to the Skyline shops. The Traffic and Transport Assessment for the Concept Proposal and Stage 1 Hospital Connectivity Work identifies 16 on-street car parks in front of the Skyline Shops would be removed as part of the upgrade to the Frenchs Forest Road East / Patanga Road / Allambie Road intersection. Additional off-street parking would be constructed on the adjoining vacant lot providing 20 car parking spaces, a loading zone and a disabled car park.
- Once constructed it is expected this work would improve pedestrian access and vehicle circulation.

**Business Parks**

- The widening of Frenchs Forest Road East could potentially impact existing access arrangements for some businesses located in the business park precincts north of Warringah road. Construction management measures should be planned and implemented to ensure convenient access is maintained to the businesses in this area.
- Once constructed it is expected this work would improve pedestrian access and restate vehicle access to the properties.

Overall, the likely impacts of this project to individual businesses varies dependant on the stage of the project, the location of the business, the type of business and the severity of the impact. For the most part, the negative impacts of a major infrastructure project for businesses are confined to the construction period and are reduced or eliminated upon completion of work. During construction some businesses may benefit (i.e. those servicing the construction industry such as food and drink premises as well as local suppliers).
Expenditure from Workers

Construction workers on the project would generate demand for certain good and services in the local area. Workers spend on average between $2,000 to $3,000 per annum ($2014) on retail goods and services close to their place of work. This would be spent predominately on convenience-related expenditure such as lunches, coffees, snacks etc.

In quantifying these potential benefits we have assumed:

- Construction workers would on average spend $2,500 per annum;
- Construction would occur between 2015 and 2017 and jobs would be distributed evenly across the three year period; and
- Stage 1 work would require around 380 construction workers per year over the estimated 3 year construction phase.

Based on this approach we estimate construction workers would generate in the order of $950,000 per annum in retail expenditure which could potentially be spent at shops in the Study Area. This equates to $2.85m over the three year construction period.

Potential Impacts on Economic Activity

This section considers and where possible quantifies economic impacts which would be associated with the project related to the construction stage. An estimated construction cost of $400m has been assumed.

The construction industry is a significant component of the economy accounting for 7.3% of Gross Domestic Product (GDP) and employing almost one million workers across Australia. The industry has strong linkages with other sectors, so its impacts on the economy go further than the direct contribution of construction. Multipliers refer to the level of additional economic activity generated by a source industry. There are two types of multipliers:

- Production induced: which is made up of:
  - first round effect: which is all outputs and employment required to produce the inputs for construction; and
  - an industrial support effect: which is the induced extra output and employment from all industries to support the production of the first round effect.

- Consumption induced: which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment.

The source of the multipliers adopted in this report is ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0). These tables identify first round effects, industrial support effects and consumption effects.
induced multiplier effects at rates of 0.6463, 0.6734 and 0.9891 respectively to every dollar of construction. The table below quantifies associated economic multipliers resulting from the construction process.

Table 26 - Construction Multipliers ($m)

<table>
<thead>
<tr>
<th>Direct Effects</th>
<th>Production Induced Effects</th>
<th>Consumption Induced Effects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Round Effects</td>
<td>Industrial Support Effects</td>
<td></td>
</tr>
<tr>
<td>Output multipliers</td>
<td>$400</td>
<td>$259</td>
<td>$269</td>
</tr>
<tr>
<td>Output ($million)</td>
<td>$400</td>
<td>1</td>
<td>0.6463</td>
</tr>
</tbody>
</table>


The estimated $400m of direct construction costs would generate a further $528m of activity in production induced effects and $396m in consumption induced effects. Total economic activity generated by construction is estimated at $1,324m.

Note that the multiplier effects are national, and not necessarily local. The ABS states:

“Care is needed in interpreting multiplier effects; their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction activity to the rest of the economy. Clearly, through its multipliers, construction activity has a high impact on the economy.”

In particular the multiplier impacts can leave the impression that resources would not have been used elsewhere in the economy had the development not proceeding. In reality many of these resources would have been employed elsewhere. It should also be noted, as stated in the NSW Treasury guidelines:

“Direct or flow on jobs will not necessarily occur in the immediate vicinity of the project – they may be located in head office of the supplier or in a factory in another region or State that supplies the project.”

Nevertheless, economic multiplier impacts represent additional value add to the Australian economy resulting from this proposed development.

**Potential Impacts Job Generation**

It is estimated that the equivalent of 2.85 construction positions within 1 year are created for every one million dollars of construction work undertaken. Based on $400m construction cost, 1,140 job years would be directly generated by the proposed development in construction as shown in the table below.

---

8 Source: Office of Financial Management Policy & Guidelines Paper: Policy & Guidelines: Guidelines for estimating employment supported by the actions, programs and policies of the NSW Government (TPP 09-7) NSW Treasury
9 Source: ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0)
10 Note: One job year equals one full-time job for one full year

---
Table 27 - Employment Generation from Construction (Job Years)

<table>
<thead>
<tr>
<th></th>
<th>Direct Effects</th>
<th>Production Induced Effects</th>
<th>Consumption Induced Effects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Round Effects</td>
<td>Industrial Support Effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipliers</td>
<td>1</td>
<td>0.64</td>
<td>0.70</td>
<td>1.34</td>
</tr>
<tr>
<td>Employment No. per $million</td>
<td>2.85</td>
<td>1.83</td>
<td>1.98</td>
<td>3.81</td>
</tr>
<tr>
<td>Total job years created</td>
<td>1,140</td>
<td>733</td>
<td>793</td>
<td>1,526</td>
</tr>
</tbody>
</table>


The ABS Australian National Accounts: Input-Output Tables 2008-09 identified employment multipliers for first round, industrial support and consumption induced effects of 0.64, 0.70 and 1.34 respectively for every job year in direct construction. Including the multiplier impacts the proposal is estimated to generate a total of 4,192 job years directly and indirectly.

Potential Impacts Investment Stimulus

Where a significant investment decision has been made it is generally viewed as a strong positive commitment for the local area. Such an investment can in turn stimulate and attract further investment. In this instance both the new hospital and to a lesser extent the Stage 1 work represents such a commitment.

The proposed Stage 1 work would not directly lead to further residential and non-residential development, however, in supporting the provision of additional jobs in surrounding businesses and the new hospital, it would support the commercial viability of new development in the immediate area. This would benefit new and existing residents and businesses alike.

Improving connectivity and reducing traffic congestion would increase the attractiveness of the Warringah LGA as a place to live and work which in turn would support its economic competitiveness and may encourage investment in existing and new industries across the broader LGA.

4.2 PROPERTY AND LAND USE IMPACTS

4.2.1 CONSIDERATION:

*Number of properties directly affected by the project, including totally or in part? Properties affected by changes in access or severance impacts? Ownership of properties directly affected by the project (i.e. private, Local Government, State Government)?*

4.2.2 VIEWS EXPRESSED DURING COMMUNITY ENGAGEMENT:

- Concerns raised about potential property (strip or full) acquisitions along Frenchs Forest Road (more so Frenchs Forest Road west), Warringah Road and in the vicinity of the retail/light industrial area next to and between Bantry Bay Road and Hilmer Street.
- Residents living near or on Hilmer Street are concerned about the impact of proposed changes to the Hilmer Street/Warringah Road intersection, particularly about potential property acquisition.
4.2.3 Concept Impact Assessment

In order to enable the construction of the Stage 1 work it would be necessary for the RMS to acquire parts of land within 35 parcels. This would impact 15 parcels on Forest Way, 6 parcels on Frenchs Forest Road West, 4 parcels on Frenchs Forest Road East, 2 parcels on Allambie Road and 8 parcels on Warringah Road. The acquisition of residential, business or community properties for infrastructure work can have significant social impact to property owners and / or tenants as well as clients or user groups. The prospect of one's property being acquired can be a daunting matter and requires careful management to minimise any associated stress. Anxiety and social stress can be created as a result of the process owing to:

- Uncertainty with respect to why the property in question is, or may be, acquired;
- The brevity of time in which the property is acquired;
- The brevity of time in which existing uses and services are required to relocate;
- The need to find alternative, suitable properties, at affordable costs and in appropriate locations; and
- The cost and inconvenience associated with relocation.

During acquisition social impact should be considered including the loss or disruption of community linkages, cohesion and services. It can also be a major concern for residents if they are required to relocate away from local communities and cultural network leading to isolation and social severance. In all cases, to minimise negative social impact as a result of acquisition, it is recommended RMS engage with affected parties as soon as practical, to share relevant information and to work cooperatively.

There could be an adverse impact to residential and land and rental values on account of perceived or actual amenity impact resulting from the project. These amenity impact are discussed in more detail below but may include greater noise and traffic generation during construction and operational phases of the project.

4.2.4 Stage 1 Project Impact Assessment

This section discusses the impact on property and land owners during both the construction and operational phases of the project. To accommodate construction of the project, the acquisition of about 1.8 hectares of property is required. Acquisition would be required across 35 separate properties (refer to the table below) land acquisition would be undertaken in accordance with the Roads and Maritime Land Acquisition Guide (RTA, 2010) and the conditions outlined in the Roads Act 1993 and Land Acquisition (Just Terms Compensation) Act 1991.

During acquisition and after relocation social impact should be considered including the loss or disruption of community linkages, cohesion and services. It can also be a major concern for residents that may be required to relocate away from local communities and cultural network leading to isolation and social severance.

Owners of land being acquired have raised a number of concerns with the RMS during consultation:

- **Impact on family amenity** – Concerns about construction noise impact along Forest Way on their family and the impact of any loss of water or power;
- **Impact on social infrastructure** – Loss of Former Methodist Church Hall, if it will be rebuilt and how; and
- **Implications for current renovations** – How acquisition will affect renovations currently occurring to commercial property on Russell Avenue;

- **Impact on businesses** – Concerns about loss of income and essential services on account of acquisitions on Warringah Road.

Overall, RMS consultation found those property owners impacted by acquisitions are concerned with the timeframe for acquisition, the size of the strip requested, the new kerb line in relation to the front of their house, noise and pollution impact of increased traffic and reduced street frontage, certainty of acquisition and compensation.

Acquisition of properties would be conducted by RMS either through negotiation or compulsory acquisition. Generally it is considered desirable for public acquisition to be handled through negotiation wherever possible and only where negotiation breaks down to resort to compulsory acquisition. As a result the RMS has confirmed it would make every effort to negotiate a mutually acceptable offer and equitable price with property owners.

Compulsory acquisition is possible in NSW as all property in the State is held through a grant from the Crown and the Crown retains the right to resume land when required for public purposes. The owners of property are protected by the provisions of the *Land Acquisition (Just Terms Compensation)* Act 1991. Compensation would be provided to landowners in accordance with the Act. In the situation whereby only part of the property is required for acquisition, where appropriate, RMS may choose to adjust services or public utilities, relocate fences and complete any other property adjustments at its expense.
<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>25229</td>
<td>R2 Low Density Residential</td>
<td>4</td>
<td>partial</td>
<td>Yes – acquisition includes informal driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence.</td>
</tr>
<tr>
<td>51</td>
<td>25229</td>
<td>R2 Low Density Residential</td>
<td>34</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence.</td>
</tr>
<tr>
<td>52</td>
<td>20461</td>
<td>R2 Low Density Residential</td>
<td>48</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>53</td>
<td>20461</td>
<td>R2 Low Density Residential</td>
<td>53</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>54</td>
<td>20461</td>
<td>R2 Low Density Residential</td>
<td>73</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to building. Potential loss of vegetation.</td>
</tr>
<tr>
<td>B</td>
<td>401416</td>
<td>R2 Low Density Residential</td>
<td>90</td>
<td>partial</td>
<td>Yes – acquisition includes driveway and pedestrian access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to property line. Potential loss of vegetation</td>
</tr>
<tr>
<td>100</td>
<td>1110653</td>
<td>B2 Local Centre</td>
<td>255</td>
<td>partial</td>
<td>Yes – pedestrian access along footpath impacted</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation. Public telephone may need to be relocated.</td>
</tr>
<tr>
<td>4A</td>
<td>417240</td>
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<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>1</td>
<td>846819</td>
<td>R2 Low Density Residential</td>
<td>28</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>2</td>
<td>846819</td>
<td>R2 Low Density Residential</td>
<td>27</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>3</td>
<td>846819</td>
<td>R2 Low Density Residential</td>
<td>29</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
</tbody>
</table>
### Northern Beaches Hospital Concept and Stage 1 Connectivity Enhancement Work SEIA

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>410352</td>
<td>R2 Low Density Residential</td>
<td>21</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence. Potential loss of vegetation</td>
</tr>
<tr>
<td>2</td>
<td>868934</td>
<td>R2 Low Density Residential</td>
<td>3</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence.</td>
</tr>
<tr>
<td>1</td>
<td>868934</td>
<td>R2 Low Density Residential</td>
<td>5</td>
<td>partial</td>
<td>Yes – acquisition includes driveway access to property</td>
<td>no</td>
<td>no</td>
<td>Partial loss of nature strip and front property line. Increased noise and safety risk from road and footpath being closer to residence.</td>
</tr>
<tr>
<td>2Y</td>
<td>417241</td>
<td>R2 Low Density Residential</td>
<td>105</td>
<td>partial</td>
<td>Yes – pedestrian access along footpath impacted</td>
<td>no</td>
<td>no</td>
<td>Increased noise and safety risk from road and footpath being closer to buildings. Potential loss of some parking on-site.</td>
</tr>
</tbody>
</table>

### Frenchs Forest Road West ( * properties owned by Health Administration Corporation)

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 *</td>
<td>1179362</td>
<td>RE1 Public Recreation</td>
<td>975</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Altered arrangements at intersection &amp; loss of vegetation</td>
</tr>
<tr>
<td>3 *</td>
<td>26087</td>
<td>R2 Low Density Residential</td>
<td>296</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>2 *</td>
<td>26087</td>
<td>R2 Low Density Residential</td>
<td>300</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>1 *</td>
<td>26087</td>
<td>R2 Low Density Residential</td>
<td>300</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>15 *</td>
<td>792918</td>
<td>R2 Low Density Residential</td>
<td>2875</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>2 *</td>
<td>746670</td>
<td>R2 Low Density Residential</td>
<td>425</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
</tbody>
</table>

### Frenchs Forest Road East

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP49558</td>
<td>B7 Business Park</td>
<td>60</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>11</td>
<td>730473</td>
<td>B7 Business Park</td>
<td>277</td>
<td>partial</td>
<td>Yes – pedestrian access along footpath impacted</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td></td>
<td>SP31111</td>
<td>B7 Business Park</td>
<td>305</td>
<td>partial</td>
<td>Yes – acquisition includes driveway and pedestrian access points to property</td>
<td>Electricity infrastructure is situated near the driveway access point to property</td>
<td>no</td>
<td>Loss of vegetation. Some parking area within business property boundary may be lost.</td>
</tr>
<tr>
<td>Lot</td>
<td>DP or SP</td>
<td>Zoning / Land use</td>
<td>Area (square metres)</td>
<td>Full or partial acquisition?</td>
<td>Access impacted by acquisition?</td>
<td>Do structures need to be demolished?</td>
<td>Do residents or businesses need to relocate as a result of acquisition?</td>
<td>Other potential impact from acquisition?</td>
</tr>
<tr>
<td>-----</td>
<td>----------</td>
<td>------------------</td>
<td>----------------------</td>
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</tr>
<tr>
<td>2 *</td>
<td>746670</td>
<td>R2 Low Density Residential</td>
<td>425</td>
<td>partial</td>
<td>Yes – acquisition includes driveway and pedestrian access points to The Forest High School</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
</tbody>
</table>

### Allambie Road

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>785104</td>
<td>B7 Business Park</td>
<td>875</td>
<td>partial</td>
<td>Yes – pedestrian access along footpath impacted and pedestrian access to business car park from Allambie Road</td>
<td>no</td>
<td>no</td>
<td>Some parking area within business property boundary will be lost. Loss of vegetation on Allambie and Frenchs Forest Roads. Loss of bus stop.</td>
</tr>
<tr>
<td>10</td>
<td>605161</td>
<td>B7 Business Park</td>
<td>124</td>
<td>partial</td>
<td>Yes – pedestrian access may be impacted</td>
<td>no</td>
<td>no</td>
<td>Current buffer between Allambie Road and drive through component of fast food restaurant which may impact its operation. Some vegetation may be removed. Loss of bus stop.</td>
</tr>
</tbody>
</table>

### Warringah Road

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP or SP</th>
<th>Zoning / Land use</th>
<th>Area (square metres)</th>
<th>Full or partial acquisition?</th>
<th>Access impacted by acquisition?</th>
<th>Do structures need to be demolished?</th>
<th>Do residents or businesses need to relocate as a result of acquisition?</th>
<th>Other potential impact from acquisition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>715557</td>
<td>RE1 Public Recreation</td>
<td>470</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>2</td>
<td>549574</td>
<td>RE1 Public Recreation</td>
<td>185</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>15</td>
<td>792918</td>
<td>R2 Low Density Residential</td>
<td>915</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>3</td>
<td>220541</td>
<td>RE1 Public Recreation</td>
<td>372</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>3</td>
<td>245508</td>
<td>RE1 Public Recreation</td>
<td>16</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>2</td>
<td>245508</td>
<td>RE1 Public Recreation</td>
<td>53</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>11</td>
<td>605161</td>
<td>RE1 Public Recreation</td>
<td>176</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
<tr>
<td>2</td>
<td>737409</td>
<td>B7 Business Park</td>
<td>560</td>
<td>partial</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Loss of vegetation</td>
</tr>
</tbody>
</table>

Source: RMS 2014
4.3 LOCAL AMENITY

4.3.1 CONSIDERATION:

Will the project change the amenity for residents, businesses, or community facilities during construction and operation? (i.e. visual and landscape impact, noise and vibration)?

4.3.2 VIEWS EXPRESSED DURING COMMUNITY ENGAGEMENT:

- Construction - common concern raised about the construction period included:
  - Potential traffic chaos during simultaneous construction periods of the hospital and roadwork;
  - Noise and pollution (particularly for the school); and
  - Increased chaos at school drop off and pick up times when numerous buses come to Frenchs Forest Road.
- Noise and Vibration - comments about noise were largely focused on construction noise and its impact on Forest High School students.
- Impact on High School - the Forest High School and their Parents Citizens Committee have noted major concerns with many aspects of the road proposal from public transport provisions, urban design, road safety, property acquisition impact, noise during and after construction, environmental destruction, air quality, access and parking.
- Loss of Parking - residents living along Frenchs Forest Road or on side streets running off Frenchs Forest Road were concerned about lost on-street parking on Frenchs Forest Road after the proposed road upgrade work. Some residents were supportive of the removal of Frenchs Forest Road street parking during peak times, even without any road upgrades as parked vehicles on Frenchs Forest Road block the flow of traffic and contribute to massive vehicle delays.

4.3.3 CONCEPT IMPACT ASSESSMENT

Local amenity relates to appearance, comfort and convenience of a place and the way the local community experience it. During construction noise, dust, visual and traffic disturbances have the potential to adversely affect the amenity of residents, businesses and visitors in the local area. These impact may include:

- Increased noise and vibration generated by construction plant and equipment;
- Increased traffic noise around the areas of major construction;
- Increase noise generated by out of hours construction activity (only expected to occur when necessary to maintain network capacity and user safety);
- Visual impact of construction machinery, compounds and work; and
- Loss of existing vegetation.

Amenity impact arising on completion of the Stage 1 work may include greater noise levels on account of changed traffic conditions and altered arrangements for on-street parking, cyclists and pedestrians.

4.3.4 **Stage 1 Project Impact Assessment**

During stage 1 work the amenity of residents, businesses, shoppers, students and other visitors to the study area could be adversely impacted by:

- Noise and vibration created by construction activity – The Noise and Vibration Assessment prepared for the project identifies the worst-case impact on sensitive receivers in the study area. Sensitive receivers generally relate to residents but also include schools, child care centres, community, recreational facilities and businesses. Sensitive receivers in the study area are identified in section 3 of this report. Drawing on the findings from the Noise and Vibration Assessment, the table below identifies those sensitive receivers in the study likely to be impacted by *moderately or highly intrusive* noise levels during the project’s construction phase. Most of the construction activities would take place Monday to Friday 7:00 am to 6:00 pm and Saturdays 8:00 am to 1:00 pm. However, certain construction activities would occur outside these hours (e.g. during signalling work).

<table>
<thead>
<tr>
<th>Location and type of sensitive receivers</th>
<th>Distance to Stage 1 Work</th>
<th>Type of Construction Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential receivers west of Forest Way, north of Russell Avenue</td>
<td>6m</td>
<td>Main corridor work in Stage 1, traffic signal work</td>
</tr>
<tr>
<td>Residential receivers north of Naree Road and Frenchs Forest Road West, between Forest Way and Sylvia Place. Also includes passive open spaces of Wareham Reserve and Rabbett Reserve.</td>
<td>9m</td>
<td>Main corridor work in Stage 1, traffic signal work, landscaping and car park work, drainage amplification work</td>
</tr>
<tr>
<td>Residential receivers east of Forest Way, between Naree Road, Frenchs Forest Road West, Warringah Road, and The Forest High School. Also includes Forest Alliance Church.</td>
<td>11m</td>
<td>Main corridor work in Stage 1, traffic signal work, landscaping and car park work, drainage amplification work</td>
</tr>
<tr>
<td>Residential receivers north of Frenchs Forest Road West, between Wakehurst Parkway, Sylvia Place the dwellings south of Epping Drive.</td>
<td>7m</td>
<td>Main corridor work in Stage 1, traffic signal work, landscaping and car park work, drainage amplification work</td>
</tr>
<tr>
<td>Residential receivers west of Wakehurst Parkway</td>
<td>70m</td>
<td>Main corridor work in Stage 1, traffic signal work, drainage amplification work</td>
</tr>
<tr>
<td>Open space, commercial and residential receivers east of Wakehurst Parkway, south of Aquatic Drive. Includes Valerie Smith Stage School.</td>
<td>430m</td>
<td>Establishment and operation of site compound.</td>
</tr>
<tr>
<td>Residential receivers north of Frenchs Forest Road East, between Wakehurst Parkway and Patanga Road. Also includes passive open space of Patanga Reserve.</td>
<td>5m</td>
<td>Main corridor work in Stage 1, traffic signal work, landscaping and car park work, drainage amplification work</td>
</tr>
<tr>
<td>Residential receivers north of Warringah Road, east of Patanga Road. Also includes St. Andrew’s Presbyterian Church.</td>
<td>7m</td>
<td>Main corridor work in Stage 1, traffic signal work, landscaping and car park work, drainage amplification work</td>
</tr>
<tr>
<td>Residential receivers south of Warringah Road. Also includes passive open space of Mills Reserve.</td>
<td>25m</td>
<td>Main corridor work in Stage 1</td>
</tr>
</tbody>
</table>
Change in landscape character and visual amenity – During the construction phase a site compound would be located to the south east of the proposal at the corner of Allambie Road and Aquatic Drive. The project’s Landscape Character and Visual Impact Assessment identifies the impact of the compound being: erection of temporary offices and ancillary structures, carparking and large vehicle parking, stockpiles and stockpile management processes and heavy vehicle traffic increased. It is anticipated the compound and stockpile areas would be located behind the existing industrial and commercial properties and would be screened by vegetation from most viewpoints.

If not appropriately managed these construction impact could reduce the level of comfort, convenience and attachment enjoyed by residents, workers and others in the study area. Excessive noise and vibration impact can also lead to anxiety and sleeplessness which in turn can have significant health impact.

During operation, the Stage 1 work may generate a number of positive and negative amenity impact, including:

- Noise sources being closer to sensitive receivers than currently occurs on account of road widening on Frenchs Forest Road, Forest Way and Warringah Road. The project’s Noise and Vibration Assessment identifies a total of 204 sensitive ‘receivers’ along these roads that are sufficiently impacted to be eligible for consideration of property treatment as part of the Stage 1 Connectivity Work.
- Loss of on-street parking on Frenchs Forest Road may affect the residents amenity and loss of parking on Patanga Road may affect access for customers and the performance of the Skyline shops;
- Changed pedestrian access arrangements to the NBH and the Forest High School. The project Traffic and Transport Assessment identifies “The existing unsignalised pedestrian crossing on Frenchs Forest Road West in front of The Forest High School will be removed and replaced by a pedestrian crossing at the intersection of the proposed NBH access with Gladys Avenue and Frenchs Forest Road West, about 100 metres further to the east. This would potentially increase walk distance for a number of current users of the existing pedestrian crossing”\(^{11}\).
- Widening Warringah Road and Wakehurst Parkway would result in the loss of vegetation including copses of native trees and rows of street trees;
- Many commercial properties, residences and Forest High School are surrounded by vegetation, which in its current form, partially screens views of the proposal. Vegetation loss associated with widening would tend to open up views in some locations; and
- Visual impact from additional road infrastructure and introduced noise mitigation measures (e.g. barriers).

More specifically, the Landscape Character and Visual Impact Assessment prepared for the project identifies a range likely impact on the study area’s landscape character and visual amenity as a result of the project. The findings of the study are summarised in the table below.

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\(^{11}\) Northern Beaches Hospital – Connectivity and network enhancement work Traffic and Transport Assessment, page 74
4.4 Social Infrastructure

4.4.1 Consideration:

Will the project impact (directly or indirectly) any community services such as hospitals, schools, recreational facilities, etc?

4.4.2 Views expressed during community engagement:

- Impact on Forest High School - the Forest High School and their Parents Citizens Committee have noted major concerns with many aspects of the road proposal from public transport provisions, urban design, road safety, property acquisition impact, noise during and after construction, environmental destruction, air quality, access and parking. Furthermore, concerns have been raised about school pick up and drop off times as vehicles park the length of the Frenchs Forest Road. Where will they park if the lanes are clear for rat run and hospital traffic?

- Access to new hospital - many local residents, particularly those close to the hospital site strongly believe Frenchs Forest Road is unsuitable as the hospital's main entry as the road was simply too narrow to accommodate four lanes of traffic.
4.4.3 CONCEPT IMPACT ASSESSMENT

There are a number of community facilities in and nearby the study area including schools, churches, child care centres, open space and recreational facilities. During construction, the project has the potential to impact on these facilities by way of noise, dust, overshadowing, privacy, safety and access. In particular, there may be impact on users of Frenchs Forest High School, Frenchs Forest Primary School, Making A Difference at Frenchs Forest child care centre (co-located with Frenchs Forest Public School) due to increased dust and noise from construction activities. Furthermore, according the property acquisition data 1,259sqm of RE1 Public Recreation space is set to be acquired. It is considered the impact of this would be minimal.

In order to address the issues and concerns raised by the Forest High School a working group including senior school staff, Health Infrastructure and Roads and Maritime has now been formed and meets monthly at the school to ensure their issues are considered and possible solutions are thoroughly investigated.

It is considered that potential access constraints associated with the construction work could be mitigated through the implementation of a Construction Management Plan that ensures access to community services is maintained at all times and there are efficient alternative connections to community services.

Once the project has been completed it is expected a number of benefits for local community services including direct and safe access to the new hospital and improved accessibility to the schools, places of worship, child care centres in the study area.

4.4.4 STAGE 1 PROJECT IMPACT ASSESSMENT

There are a number of community facilities in and nearby the study area. In relation to Stage 1 of the project, the community has raised concerns about accessing the school once Frenchs Forest Road becomes a clear way as well as access to the new hospital.

Potential impact on community facilities/services in the study may arise during construction including changed pedestrian access to The Forest High School and the relocation of the school's kiss-and-ride activities closer to Gladys Avenue.

During operation, potential impact on community facilities in the study area may include:

- Improved public transport on account of proposed bus priority measures
- Increased traffic volumes in the vicinity of The Forest High School and NBH which may result in potential road safety risks for students and hospital users.

Furthermore, the Forest Alliance Church is located on the corner of Naree Road and Forest Way at the western end of Stage 1. One of the buildings is known as the Former Methodist Church building and is identified on the Warringah Local Environment Plan as an item of heritage significance. The widening of Forest Way and Naree Road would see encroachment and partial acquisition of this property, as well modified vehicular and pedestrian access. The Former Methodist Church building would need to be the subject of further investigation as its proximity to the widened road corridor is potentially unsafe.
4.5 **COMMUNITY HEALTH AND SAFETY**

4.5.1 **CONSIDERATION:**

*Is there a potential for impact (real or perceived) on community health or safety due to emissions to air or water, noise or other hazards?*

4.5.2 **VIEWS EXPRESSED DURING COMMUNITY ENGAGEMENT:**

- The Forest High School Pedestrian Safety - The Forest High School and their Parents Citizens Committee have noted major concerns about road safety.
- Noise and Vibration - Comments about noise were largely focused on construction noise and its impact on Forest High School students.
- Pedestrian safety and pedestrian bridges - need and desire for pedestrian bridges was raised by the community both as a means of improving pedestrian safety and traffic flow.

4.5.3 **CONCEPT IMPACT ASSESSMENT**

During construction, road and pedestrian safety has been raised as a community concern. In particular the safety of pedestrians and students attending Forest High School has been identified as an issue during construction. The project can mitigate these matters through the implementation of a Construction Environment Management Plan and measures such as on pedestrian safety measures and the securing of work related machinery and tools.

It is understood that the construction of the proposal would be undertaken in stages to minimise disruption on road users and maintain safety of pedestrians, however, staging details are unknown at this time. Safety of students attending Forest High School is to be a major priority during construction. Particular consideration should be paid to site fencing and staging of the work to ensure safety and pedestrian connectivity is maintained during construction.

Once completed it is expected the project would result in a number of benefits with respect to safety and access to the new hospital and improved accessibility to the schools, churches, child care centres in the study area.

4.5.4 **STAGE 1 PROJECT IMPACT ASSESSMENT**

As stated above there are a number of community facilities in and nearby the study area which may be affected by noise and other hazards during construction and operation.

During construction potential safety issues might arise relating to:

- Increased heavy vehicle movements and higher traffic flows temporarily traversing lower-capacity road sections.

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12 Northern Beaches Hospital Connectivity and Network Enhancements: Stages 1 and 2 Environmental Impact Statement – Urban Design Report
Uncertainty generated by changed road, access and parking arrangements for drivers, cyclists and pedestrians.

During operation construction the project Traffic and Transport Assessment identifies:

- Increased traffic volumes in the vicinity of The Forest High School and NBH, may result in potential road safety risks for students and hospital users
- The Stage 1 Connectivity Work are predicted to improve road safety through:
  - the widening of Frenchs Forest Road which would provide two lanes in each direction, may reduce the frequency of rear end collisions, where traffic are waiting to turn into the residential streets along the corridor
  - the upgrading and signalisation of the Forest Way / Naree Road intersection which should reduce the occurrences of turning collisions as the signalisation of the intersection will remove the conflict between the turning movements
- The Stage 1 Connectivity Work includes the provision of pedestrian crossings as part of the upgrading and signalisation of intersections within the study area. The provision of these pedestrian facilities will improve the connectivity and provide safe crossing locations on Forest Way and along Frenchs Forest Road
- The provision of pedestrian crossings as part of the upgrade and signalisation of the Forest Way / Naree Road intersection (north of Russell Street) and the Frenchs Forest Road East / Patanga Road / Allambie Road intersection is expected to result in improvements in pedestrian safety at these two locations.

4.6 ACCESS AND CONNECTIVITY

4.6.1 CONSIDERATION:

Will the project generate traffic or impact access to properties during construction and operation?

4.6.2 VIEWS EXPRESSED DURING COMMUNITY ENGAGEMENT:

The community's views about traffic issues for Stage and Stage 2 are set out below.

**Stage 1**

**Frenchs Forest Road** - objections to road widening were mainly linked to the loss of on-street parking and the likely increase in rat runners in the area (see chapter 5 for more details).

**Rat running** - the local community has described rat runners in specific areas trying to perform a variety of vehicle movements:

- Frenchs Forest Road east: Motorists travelling west (in the AM peak) from the coast use the route parallel to and north of Frenchs Forest Road and then attempt to access Frenchs Forest Road to head
west via various side streets, mainly by a right hand turn movement which takes longer to complete than a left turn.

- Frenchs Forest Road west: Local residents living on or just off Frenchs Forest Road or on side streets were annoyed at delays caused by rat runners.

**Frenchs Forest Road /Wakehurst Parkway intersection** - some were in favour of the provision for a right turn movement, which is currently banned, as it would improve direct access for local residents. There were also many strongly opposed to fears it would add to the rat run problem along Frenchs Forest Road and increased traffic.

**Hospital entrance locations on Frenchs Forest Road** - many local residents, particularly those close to the hospital site strongly believe Frenchs Forest Road is unsuitable as the hospital’s main entry as the road was simply too narrow to accommodate four lanes of traffic.

**Congestion and exiting from side streets** - in Frenchs Forest Road east, in the westbound direction, comments were received describing traffic queues back from Wakehurst Parkway to Allambie Road. Residents living on side streets are very concerned that after the proposed road widening along Frenchs Forest Road, traffic would significantly increase leading to even longer delays as the motorists attempt to exit their streets and get on to Frenchs Forest Road.

**Keep clear zone** - the community asked that the "keep clear zone" at 112a Frenchs Forest Road (Bantry Bay Track) opposite the hospital site is maintained and lengthened.

**Forest Way/ Naree Road intersection** - the community appears to be in favour of this upgrade believing that it would significantly improve road safety and traffic flow at this location. Some also felt that improving traffic flow on Forest Way would reduce the number of motorists opting to rat run down Frenchs Forest Road.

**Patanga Road** - there were five requests for a roundabout at this location putting traffic signals at Romford Road instead.

**Allambie Road** - support from workers in the business parks that Allambie Road needed to be widened or replaced with traffic lights as wait times in peak hours are extensive.

**Forest Way** - majority of community members were fully supportive of a grade-separated intersection at the Forest Way/Warringah Road intersection.

**Stage 2**

**Grade separation** - majority of the community strongly support the proposed grade separated intersections currently under investigation for Forest Way/Warringah Road and Wakehurst Parkway/ Warringah Road.

**Aquatic Drive/Wakehurst Parkway connection** - support for the Aquatic Drive/Wakehurst Parkway connection, even if it was limited only to a left in/left out option. The need for an access point here was supported by both businesses in the Allambie industrial park and local residents.

**Hilmer Street** - residents living near or on Hilmer Street are concerned about the impact of proposed changes to the Hilmer Street/Warringah Road intersection, particularly about potential property acquisition.
Bantry Bay Road residential precinct - residents felt access in and out of their homes was already limited and would be even worse if egress out of Hilmer Street were restricted.

4.6.3 Concept Impact Assessment

The project would involve work on a number of major and secondary roads including Wakehurst Parkway, Warringah Road, Forest Way and Frenchs Forest Road. Warringah Road currently suffers from high levels of congestion during peak times while the intersections of Warringah Road/Wakehurst Parkway and Warringah Road/Forest Way are operating at their maximum limit.

The Traffic and Transport Assessment prepared by GTA Consultants states that during construction the project would result in a number of impact for users of the road network and those living and working in and around the study area, including:

- Temporary road closures;
- Traffic diversions for general traffic and for bus routes;
- Footpath and shared path diversions;
- Temporary restrictions to property access;
- Increased travel times due to road work restrictions and thus reduced speed limits around construction sites;
- Increased travel times due to increased truck and construction machinery movements;
- Increased travel times due to potential rerouting/diversion to alternative routes;
- Temporary partial or complete closure of roads and altered property access during construction;
- Temporary changes to bus access arrangements, including stop relocation, resulting in increased walk distance for certain customers;
- Temporary or permanent decrease in kerbside parking availability;
- Potential safety issues relating to increased heavy vehicle movements, as well as to higher traffic flows temporarily traversing lower-capacity road sections; and
- Cumulative impact may also arise on account of additional construction traffic associated with the concurrent construction of the hospital.

The Traffic and Transport Assessment notes the above mentioned construction impact would be temporary and when construction of the concept proposal is completed there may be improvements in transport capacity which would result from the project's operation.

The Traffic and Transport Assessment states that in order to mitigate the impact of the concept proposal during construction, a detailed construction traffic and transport impact assessment will need to be undertaken during the detailed design stage (for both Stage 1 and Stage 2), when construction staging and activities are more defined. In addition the Assessment recommends Construction Traffic Management Plans would need to be prepared.
During operation potential traffic and access impact arising from the project include:

- Increases in through traffic capacity as part of the Concept Proposal;
- Proposed bus priority measures would benefit public transport customers in the wider precinct in general, not just those accessing the proposed Northern Beaches Hospital.
- Improved pedestrian connectivity across the study area;
- Increases in traffic volumes across the wider study area may result in additional congestion where some intersections are not part of the Concept Proposal; and
- Increased traffic volumes in the vicinity of The Forest High School and NBH, may result in potential road safety risks for students and hospital users.

### 4.6.4 Stage 1 Project Impact Assessment

Traffic and access impact are the most significant issue raised by the community. The Traffic and Transport Assessment prepared by GTA Consultants summaries the major changes as a result of the Stage 1 Connectivity Work as:

- Widening of Naree Road, Frenchs Forest Road West and Frenchs Forest Road East between Forest Way and Allambie Road
- Widening of Warringah Road (eastbound) between Allambie Road and Government Road
- Intersection upgrades at:
  - Forest Way/Naree Road
  - Naree Road/Frenchs Forest Road West/Rabbett Street
  - Wakehurst Parkway/Frenchs Forest Road East/Frenchs Forest Road West
  - Frenchs Forest Road East/Romford Road
  - Frenchs Forest Road East/Patanga Road/Allambie Road
  - Warringah Road/Allambie Road.

During stage 1 construction work residents, businesses, shoppers, students and other visitors to the study area could be adversely impacted by:

- Temporary road closures – The Traffic and Transport Assessment identifies partial and staged road closures would potentially be required along a number of roads:
  - Warringah Road, between Government Road/Ellis Road and Fitzpatrick Avenue
  - Wakehurst Parkway, between north of Frenchs Forest Road and south of Aquatic Drive
  - Forest Way between south of Naree Road and Warringah Road
  - Frenchs Forest Road West
Naree Road
- Frenchs Forest Road East
- Forest Way between south of Naree Road and Warringah Road;
  - Reduced speed limits around construction sites and changed road conditions;
  - Altered property access on account of road closures and acquisition (see section property and land use section above to identify those properties impacted by acquisitions);
  - Removal of on-street parking – The Traffic and Transport Assessment states:
    - As part of the Stage 1 Connectivity Work, parking on Frenchs Forest Road would only be permitted along the northern side, between Rabbett Street and Bluegum Crescent West during off-peak hours and along the northern side, between Romford Road and Inverness Avenue during off-peak hours.
    - Peak period kerbside parking restrictions, particularly along Frenchs Forest Road, are expected to be put in place in order to optimise the additional traffic capacity provided by the project.
    - As part of the upgrade to the Frenchs Forest Road East / Patanga Road / Allambie Road intersection, 16 on-street car parks (including one disabled car park) on the northern side of Frenchs Forest Road East, outside the Skyline Shops would be removed. A new off-street car park would be constructed on the adjoining vacant lot.

- Increased traffic volumes on account of changed road conditions and construction traffic – The Traffic and Transport Assessment states there would be around 30 to 40 heavy vehicle movements on average per day, increasing to between 60 and 100 during peak periods of construction such as during footpath and road work. Furthermore, there would be about 20 to 30 light vehicle movements associated with construction personnel travelling to and from the project site during construction, as well as up to 100 onsite light vehicle movements;
- Traffic diversions particularly along the local streets intersecting with Frenchs Forest Road;
- Bus rerouting and bus stop relocations leading to increased walk distance for certain customers;
- Footpath diversions on account of construction, road closures and changed access arrangements.

If not appropriately managed these temporary changes have the potential to: increase travel times; reduce road and pedestrian safety; make it more difficult to access residences, businesses, schools, parks; and lessen patronage to local shops.

The Traffic and Transport Assessment stipulates it is critical to consider these potential impact during the development of detailed design of the project in order to inform construction staging and the construction traffic management plans to be prepared to define details of how transport and traffic impact are to be mitigated. It is noted that construction traffic would be managed in accordance with the measures outlined in the Roads and Maritime Traffic Control at Workites (Roads and Maritime, 2010) document.

The Traffic and Transport Assessment states:
Traffic management measures to be implemented during construction include undertaking the proposed work in a staged manner to reduce traffic impact, and the provision of temporary access arrangements with private landowners whose property is nearby construction activities. Local residents and business owners would be notified of traffic management procedures, and ongoing consultation would be undertaken to provide landowners with information on planned construction activities and changes to any access arrangements.

There is potential for access to individual properties along the Stage 1 construction area and nearby connecting roads to be affected by construction activities. However, property access would be maintained throughout construction of the project, unless otherwise agreed with property owners and businesses, and any impact would be short-term.

It is also important to note cumulative impacts might arise on account of the construction of the Northern Beaches Hospital potentially being undertaken over a period which overlaps with the construction of the Stage 1 work. While NBH construction activities would be limited to the NBH site, construction traffic movements generated by the NBH construction would potentially utilise spare road capacity.

During operation it is anticipated the Stage 1 Connectivity Work will generate a number of benefits for residents, businesses, shoppers, students and road users in the study area. The work are expected to improve access and connectivity in the study area on account of improved capacity and traffic flow and safer operating conditions. The Stage 1 Connectivity Work would provide access to the NBH and maintain access to business, residences, schools and other existing land uses as well as improving road capacity for vehicles travelling through the study area.

Specific additional improvements that would benefit residents, employers, students and other visitors to the study area include:

- Improved safety for road users and pedestrians – The Traffic and Transport Assessment states the widening of Frenchs Forest Road may reduce the frequency of rear end collisions while the upgrading and signalisation of the Forest Way/ Naree Road intersection should reduce the occurrences of turning collisions. The Assessment also identifies pedestrian safety and connectivity should be improved by the provision of pedestrian crossings as part of the upgrade and signalisation of the intersections within the study area.

- Improved public transport – Transport for NSW is proposing to modify the bus routes within the study area and provide more frequent services for these routes in the AM and PM peak periods. These improvements are documented in the Traffic and Transport Assessment and are expected to benefit public transport users accessing the hospital as well as those in the wider precinct. The capacity of the northbound bus stop on Forest Way outside the Forestway Shopping Centre will also be improved. It should be noted that two existing bus stops on Allambie Road will be removed and replaced with a new southbound bus stop, on Allambie Road north of Rodborough Road. This may prove an inconvenience for some users.

- Improve road capacity for through traffic – The traffic modelling undertaken for the Stage 1 Connectivity Work Traffic and Transport Assessment indicates these road and intersection upgrades will provide a significant improvement in network capacity and performance. This will generate travel time savings for drivers and public transport users. This has the potential to make it easier to access the NBH as well as
residences, schools and other land uses in the study area. The network improvements could also make it easier to access local shops and in turn improve patronage to those businesses.

A number of adverse impact on residents, businesses, shoppers, students and road users in the study area could also arise during the operational phase of the Stage 1 Connectivity Work. The Traffic and Transport Assessment identifies these as:

- Increases in traffic volumes across the wider study area may result in additional congestion where some intersections are not part of the Concept Proposal; and
- Increased traffic volumes in the vicinity of The Forest High School and NBH,

The likely consequences of these impact are reduced travel times for road users and potential road safety risks for students and hospital users.

### 4.7 Community Values

#### 4.7.1 Consideration:

*Does the project impact on any places of Aboriginal or non-Aboriginal heritage? Does the project impact on any places likely to be of importance to the local community (i.e. environmental areas, local parks, local monuments, etc)?* Do sections of the community have a strong attachment to place? Will the project change the unique character of the place or community in which it is located?

#### 4.7.2 Views Expressed During Community Engagement:

- Concern that area will lose its village feel.
- Community perceptions about increased severance or segregation between the north and south of Warringah Road, due to the intensification of use on the arterial road.

#### 4.7.3 Concept Impact Assessment

Community surveys undertaken by Warringah Council have identified residents living in the study area have a very strong attachment to it. Demographic analysis undertaken in Chapter 3 also indicates the area is a well-established family orientated suburb with a higher than average home ownership rate. Furthermore, the landscape contextual studies have demonstrated the study area has an identifiable sense of place. Consultation suggests there are a considerable amount of people in and around the study area who consider the bushland environment, recreational amenities and proximity to natural features as an important component of their day-to-day life.

The construction of the hospital and supporting network and connectivity work has the potential to change the current character of parts of the study area. Hospitals often attract high density residential development to accommodate hospital workers; toward the future this has the potential to change the village character of the area. This change is likely to generate anxiety amongst the local community who have a strong attachment to the existing character of the area.
Community cohesion is also likely to be affected by the divisive nature of the widened and intensified arterial road. Community cohesion is a broad term that may be used to describe a strong sense of community, facilitated by the accessibility of the local area. A socially cohesive environment is one that can be accessed by a broad spectrum of the community thereby facilitating social interaction, engagement and equity. Any reduction in access within the study area (as stated in the sections above) or change in the area’s local character may detrimentally impact community cohesion.

The Statement of Heritage Impact prepared for the project identified two locally significant heritage items within the study area.

**Table 29 - Locally significant heritage items within Study Area**

<table>
<thead>
<tr>
<th>Item</th>
<th>Address</th>
<th>Significance</th>
<th>Part of Concept Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former Methodist Church</td>
<td>21A Forest Way (corner Naree Road, Frenchs Forest)</td>
<td>Local – Warringah LEP 2011</td>
<td>Stage 1 area</td>
</tr>
<tr>
<td>Former Holland’s Orchard Trees</td>
<td>Warringah Road, Frenchs Forest</td>
<td>Local – Warringah LEP 2011</td>
<td>Stage 2 area</td>
</tr>
</tbody>
</table>

RPS, Statement of Heritage Impact: Stage 1 Area Heritage Constraints, Concept Proposal, 2014

The impact on the Former Methodist Church is discussed below while a second Statement of Heritage Impact report will be prepared at a later date to assess the impact of the Stage 2 work on the Former Holland’s Orchard Trees.

The project’s Aboriginal Archaeological Survey Report identifies two Aboriginal archaeological sites were identified within the wider concept proposal study area. Trefoil Creek 1 and Trefoil Creek 2 were identified to the east of Wakehurst Parkway, north of Frenchs Forest Road. Planned work in this part of the Stage 1 work study area include the road widening of Wakehurst Parkway. The majority of the road widening construction work is expected to take place on the western side of Wakehurst Parkway, on the opposite side of the road to identified sites Trefoil Creek 1 and Trefoil Creek 2. Based on the existing construction impact footprint boundary, the sites would not be impacted by the proposed work.

### 4.7.4 Stage 1 Impact Assessment

A Statement of Heritage Impact report was prepared to assess the likely impact of the proposed work on the heritage values of items and features identified within the Stage 1 area. As mentioned above the Former Methodist Church at 21A Forest Way (corner Naree Road, Frenchs Forest) is the only heritage item in the Stage 1 area however a number of heritage items exist within 200m of the study area boundaries.

**Table 30 - Locally significant heritage items within 200 metres of the Study Area boundaries**

<table>
<thead>
<tr>
<th>Item</th>
<th>Address</th>
<th>Significance</th>
<th>Distance from study area boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>45 Grace Avenue, Frenchs Forest</td>
<td>Local – Warringah LEP 2011</td>
<td>190m</td>
</tr>
<tr>
<td>House</td>
<td>15 Adams Street, Frenchs Forest</td>
<td>Local – Warringah LEP 2011</td>
<td>190m</td>
</tr>
<tr>
<td>House</td>
<td>2 Wareham Crescent, Frenchs Forest</td>
<td>Local – Warringah LEP 2011</td>
<td>190m</td>
</tr>
<tr>
<td>Betty Maloney Garden</td>
<td>18 Hurdis Avenue, Frenchs Forest</td>
<td>Local – Warringah LEP 2011</td>
<td>145m</td>
</tr>
</tbody>
</table>

RPS, Statement of Heritage Impact: Stage 1 Area Heritage Constraints, Concept Proposal, 2014
The Heritage Impact report states of these items the only one impacted by the Stage 1 work would be the former Methodist Church on Forest Way as a consequence of road widening work along sections of Forest Way.

The assessment of the former Methodist Church determined its historical significance is the primary reason for its listing as a local heritage item. While the assessment found the church aesthetically significant at a local level, its fabric, which had been previously altered to accommodate the widening of Forest Way in 1950, was deemed to be of secondary importance. It was also noted in the project Heritage Impact report states “The former Methodist Church is no longer used as a place of worship, but is occasionally used as an ancillary space to the current church, generally for children’s activities”.

The report goes on to say the degree of impact of the Stage 1 work on the former Methodist Church would depend on which road widening option was selected for Forest Way. These options and their impact are summarised in the table below.

<table>
<thead>
<tr>
<th>Option #</th>
<th>Description</th>
<th>Likely Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>Widen Forest Way on both the eastern and western sides</td>
<td>This option would require minor land acquisition on both sides. While the former Methodist Church would be affected, this option would allow for the least acquisition and safest road alignment.</td>
</tr>
<tr>
<td>Option 2</td>
<td>Widen Forest Way wholly to the west (opposite side to the former Methodist Church)</td>
<td>Option 2 would result in extensive land acquisition but would not affect the former Methodist Church.</td>
</tr>
<tr>
<td>Option 3</td>
<td>Widen Forest Way wholly to the east, resulting in a negative impact to the former Methodist Church</td>
<td>Option 3 would result in the former Methodist Church being affected through extensive land acquisition.</td>
</tr>
</tbody>
</table>

While option 1 is identified as the preferred option the Heritage Impact report concludes:

“that demolition of the Church is the preferred option. This is owing to the adverse impact on the former Church regardless of the option pursued, the lack of heritage significance in the former Church’s fabric and the already compromised significance from previous truncation, as well as its change of use from as a place of worship for Methodists to that of the Forest Church Alliance and its current limited use as a place of worship, balanced against the necessity for adequate access to the proposed Northern Beaches hospital and the subsequent need for the widening of Forest Way.”

It is possible however that the demolition of the former Methodist Church could generate concern in the local community. According to the Heritage Impact report, the Church was built in 1918 and was one of the first churches in Frenchs Forest. The Heritage Impact report states Methodists within the local community are likely to have a strong or special association with the former Methodist Church and should the impact to Church include demolition or part demolition, its social significance to the community should be investigated further through consultation.

Based on the assessment of the study area in the Aboriginal Archaeological Survey Report, no potential impact were identified to Aboriginal archaeological sites or heritage values by the wider concept proposal or the proposed Stage 1 work of the proposed Northern Beaches Hospital Connectivity and Network Enhancement Work project.
However, if changes to the current construction impact footprint are made during the detailed design phase and the proposed changes would cause an impact to identified sites Trefoil Creek 1 and/or Trefoil Creek 2, an updated impact assessment should be undertaken and appropriate management and mitigation measures formulated at that time.
5. MANAGEMENT AND MITIGATION STRATEGIES

5.1 STAGE 1 MANAGEMENT AND MITIGATION STRATEGIES

Strategies to manage potential socio-economic impact during construction and operational phases are outlined below.

Construction Phase

Business and Economic Impact

- Carry out ongoing communication with local land owners and businesses impacted by project about the duration, location and timing of construction and the potential impact on business operations.
- Ensure access maintained to businesses throughout construction.
- Minimise visual obstruction to business during construction.
- Provide compensation to those businesses directly impacted by project in accordance with Land Acquisition (Just Terms Compensation) Act 1991.
- Provide signage (consistent with RMS policy) so the travelling public can access shops during construction.

Property Impact

- Provide compensation to those property owners directly impacted by project in accordance with Land Acquisition (Just Terms Compensation) Act 1991.
- Endeavour to minimise stress to property owners during the acquisition process by ensuring regular communication.

Local Amenity Impact

- Carry out ongoing communication with residents closest to the construction activities about the duration, location and timing of construction and the potential impact throughout the construction phase.
- Implement traffic management measures to minimise impact on access to local amenities.
- Construction mitigation measures identified in the Stage 1 Noise and Vibration Assessment include:
  - For construction concentrated in a single area, such as workites and compounds, temporary acoustic fencing/barriers around the site perimeter should be considered where feasible and reasonable to mitigate off-site noise levels. Noise walls are effective for receptors at or near ground level and not effective for receivers overlooking the sites.
  - Given the potentially high noise levels at residential receivers, adherence to daytime construction hours is recommended for excavation and for activities concentrated in a single
area (i.e. activities that do not move along the alignment, and do not require out of hours activities for safety reasons or to minimise disruption to road network).

- Night work should be programmed to minimise the number of consecutive nights work impacting the same receivers.
- When working near to schools, particularly noisy activities should be scheduled outside normal school hours, where possible.
- Avoiding the coincidence of noisy plant working simultaneously close together and near to sensitive receivers would result in reduced noise emissions.
- Equipment which is used intermittently is to be shut down when not in use.
- Where possible, the offset distance between noisy plant items and nearby noise sensitive receivers should be as great as possible.
- Where possible, equipment with directional noise emissions should be oriented away from sensitive receivers.
- Regular compliance checks on the noise emissions of all plant and machinery used for the proposal would indicate whether noise emissions from plant items were higher than predicted. This also identifies defective silencing equipment on the items of plant.
- Ongoing noise monitoring during construction at sensitive receivers during critical periods to identify and help to manage high risk noise events.
- Where possible heavy vehicle movements should be limited to daytime hours.
- Reversing of equipment should be minimised so as to prevent nuisance caused by reversing alarms.
- Loading and unloading should be carried out away from sensitive receivers, where practicable.
- Relocate vibration generating plant and equipment to areas within the site in order to lower the vibration impact.
- Investigate the feasibility of rescheduling the hours of operation of major vibration generating plant and equipment.
- Use lower vibration generating items of excavation plant and equipment e.g. smaller capacity rockbreaker hammers.

- The Landscape Character and Visual Impact Assessment recommends mitigating the visual impact of the site compound by introducing mesh screening and temporary landscape treatments. Other environmental controls such as noise and dust would also be required.
Social Infrastructure

- Carry out ongoing communication with schools, child care centres, medical facilities and recreational facilities throughout construction about the duration, location and timing of construction and the potential impact on their activities.
- Ensure access maintained to community facilities and open space throughout construction.

Community Health and Safety

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to businesses.

Access and Connectivity

- Where possible, maintain vehicle and pedestrian access to properties during construction. Provide alternate access arrangements when required.
- Develop, implement and communicate traffic management plan with the aim of minimising traffic impact and disruptions.
- In order to mitigate traffic generated by construction the Traffic and Transport Assessment stipulates Roads and Maritime would prepare a Construction Traffic Management Plan to manage construction traffic associated with the project. Designated access and haulage routes for construction vehicles would be along the arterial road network were practicable.
- Should work be undertaken outside of the hours mentioned above, the procedures set out in the Roads and Maritime Environmental Noise Management Manual 2001, “Practice Note vii – Roadwork Outside of Normal Working Hours” and the Interim Construction Noise Guidelines (ICNG) (DECCW) would be followed. Furthermore, local residents would be notified before any construction activities undertaken outside of normal construction hours.
- The construction traffic would be managed in accordance with the measures outlined in the Roads and Maritime Traffic Control at Workites (Roads and Maritime, 2010) document.
- Traffic management measures to be implemented during construction include carrying out the proposed work in a staged manner to reduce traffic impact, and the provision of temporary access arrangements with private landowners whose property is near to construction activities. Local residents and business owners would be notified of traffic management procedures, and ongoing consultation would be undertaken to provide landowners with information on planned construction activities and changes to any access arrangements.
- There is potential for access to individual properties along the Stage 1 construction area and near connecting roads to be affected by construction activities. However, property access would be maintained throughout construction of the project, unless otherwise agreed with property owners and businesses, and any impact would be short-term.
Community Values

- Ensure existing pedestrian and cyclist network are maintained or provide alternate arrangements where needed.
- Avoid disturbing areas of community significance or reinstate disturbed areas as soon as possible after construction.

Community Consultation

- Develop and implement a consultation program to ensure businesses, residents and others stay informed about the type, timing and duration of construction impact and any mitigation measures being put in place. This program should include a dedicated project webpage, phone hotline, regular project updates/newsletter available online and where appropriate distributed via flyers, doorknocking and email. The timing of these newsletters should coincide with any significant stages of construction where impact are increased or introduced to an area.

Operational Phase

Business and Economic Impact

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to businesses.
- The existing on-street car parks outside the Skyline shops are proposed to be removed, and a new off-street car park constructed on the adjoining vacant lot. It is proposed this off-street car park includes 20 car parks, including a loading zone and a disabled car park.

Local Amenity Impact

- The project’s Noise and Vibration Assessment considered a number of noise mitigation measures (road design/traffic management, quieter footpath surfaces and noise barriers/mounds). The assessment discounted the use of low noise footpath and noise barriers due to the anticipated low driving speeds within the stage 1 corridors and the need to maintain access to nearby properties. The assessment recommended residual architectural treatments of existing individual dwellings be considered, where feasible and reasonable. Depending on the circumstances these treatments might include:
  - Upgraded windows and glazing and solid core doors on the exposed facades;
  - Upgrading window or door seals;
  - The sealing of wall vents;
  - The sealing of the underfloor below the bearers;
  - The sealing of eaves.
- The Urban Design Report for the project recommends a number of mitigation initiatives related to amenity impact. The loss of vegetation may be mitigated through the planting of replacement species in key locations. Furthermore, a verge strategy for Frenchs Forest Road would see the re-establishment of
street trees along the northern verge, while the southern verge would be dedicated to shared path widening to improve pedestrian and bicycle connectivity.

- In order to mitigate visual impact the Urban Design Report states consideration is required in all the areas of the proposal, in order to maintain the well-vegetated, pedestrian scale streetscape environment in the case of Frenchs Forest Road and Naree Road, as well maintaining the parkway character of Warringah Road. Furthermore, Forest High School require detailed mitigation measures, it is understood these would be developed further in subsequent design stages.

**Social Infrastructure**

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to community facilities.

**Community Values**

- Where deemed appropriate, implement directional signage strategy in accordance with RMS Policy to explain new traffic and access arrangements to businesses.
This study has taken a balanced approach and identified a number of potential social and economic impact of the project based, on the research and information available. It has identified the concept level and stage 1 work would result in a number of significant social and economic benefits to the local and wider community resulting from increase in road connectivity, capacity and access in the LGA.

The SEIA has also identified some of the potential adverse impact of the project such as: amenity impact to the residential properties, businesses and community facilities during construction. It has consequently sought to identify means by which some of the impact could be minimised or avoided.

In conclusion the SEIA has found that the proposed development would result in a range of social and economic impact. The impact vary in their significance and on balance are considered to be overwhelmingly positive delivering a number of significant benefits desired by local and State Government policy objectives. Furthermore, where the impact may be negative, they are generally constrained to the construction phase or can be minimised through good design measures.