

# Mona Vale Road East Upgrade – Manor Road, Ingleside to Foley Street, Mona Vale

Socio-economic impact assessment

May 2015



# IMPORTANT NOTICE

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## Document controls

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SMEC acknowledges the input from RM Planning in the preparation of the first draft of the SEIA.

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## ABBREVIATIONS AND ACRONYMS

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Abbreviation/ Acronym	Description
ABS	Australian Bureau of Statistics
CIP	Community involvement plan
CNVP	Construction noise and vibration management plans
LGA	Local government area
LOTE	Language other than English
REF	Review of environmental factors
RFS	Rural Fire Service
SA	Statistical area
SEA	Socio-economic assessment

# **1. INTRODUCTION**

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## **1.1. Background**

Mona Vale Road is the main east–west link between the Pacific Highway, Pymble and Pittwater Road at Mona Vale totalling about 20 kilometres in length and carrying about 22,000 vehicles per day (in both directions) through the proposal area.

Roads and Maritime Services (Roads and Maritime) propose to upgrade and widen about 3.2 kilometres of Mona Vale Road between Manor Road / Lane Cove Road, Ingleside and Foley Street, Mona Vale (Mona Vale Road East upgrade) (the proposal). The upgrade would be from a two lane (one in each direction) undivided road to a four lane (two lanes in each direction) divided road.

The existing two lane road has a steep vertical alignment east of Manor Road with prominent sandstone cuttings on both sides of the road. Two lanes in each direction are currently provided along Mona Vale Road at either end of the proposal area.

The proposal is stage two of a broader upgrade of Mona Vale Road between Terrey Hills and Mona Vale. Stage one involved improving the Mona Vale Road / Ponderosa Parade / Samuel Street intersection at Mona Vale and was completed in late 2014. Stage three is the Mona Vale Road West upgrade which involves an upgrading 3.2 kilometres of Mona Vale Road from two lanes to four lanes between McCarrs Creek Road, Terrey Hills and Powder Works Road, Ingleside. The Mona Vale Road West upgrade will be the subject of a separate assessment.

## **1.2. Report purpose**

This SEIA has been prepared to inform the Review of Environmental Factors (REF) for the Mona Vale Road East Upgrade. The assessment is required by Roads and Maritime to ensure all potential impacts have been adequately considered.

Socio-economic impact assessment involves the analysis, monitoring and management of 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.<sup>1</sup>

This desktop assessment describes the existing socio-economic environment for the proposal, providing a profile of the geographic localities, social groups and businesses that have the potential to be affected by the proposal. It identifies potential socio-economic impacts from the proposal, during construction as well as operation and provides measures to mitigate any potential negative impacts and enhance potential benefits.

## **1.3. Assessment methodology**

This desktop assessment has been prepared in accordance with the Roads and Maritime *Environmental Impact Assessment Practice Note on Socio-economic assessment* (EIA-05) (the Practice Note). With reference to Table 1 of the Practice Note, the proposal is expected to have several impacts (scale) of a moderate nature or duration (magnitude). Consequently, the proposal has been assessed at a “moderate level”.

Preparation of this assessment has involved:

- Preparing a profile of demographic characteristics, community infrastructure and businesses that may be influenced by the proposal
- Analysis stakeholder issues relating to potential social and economic impacts
- Identifying the scope of the likely changes and social and economic impacts that may occur as a result of the proposal
- Conducting an analysis of potential negative and positive impacts, both direct and indirect, during construction and operation
- Identifying safeguards and management measures to mitigate the impacts during construction and operation.

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<sup>1</sup> Roads and Maritime (2013) *Environmental Impact Assessment Practice Note on Socio-economic assessment* (EIA-05).

## **1.4. Data sources used to inform assessment**

Information used to inform this study has been obtained from a range of sources detailed in the references section of this report. These include:

- State and local government reports, plans, policies and web pages
- Technical consultancy reports and plans
- Australian Bureau of Statistics (ABS) 2011 Census of Population and Housing
- NSW Department of Planning and Environment population and dwelling projections
- Department of Employment Small Area Labour Markets, December Quarter 2014
- Outcomes of community consultation undertaken by Roads and Maritime for this proposal.

## **1.5. Policy context**

In addition to the Practice Note, this assessment has been guided by a range of policies and plans prepared by local, State and Federal government agencies. Key planning and policy documents relevant to this assessment include:

- NSW 2021: A plan to make NSW number one (NSW Government, 2011)
- NSW Long Term Transport Master Plan (Transport for NSW, 2012)
- A Plan for Growing Sydney (Department of Planning and Environment, 2014)
- Northern Beaches Transport Action Plan (Transport for NSW, 2014)
- Shaping Our Future (Shore Region of Councils, 2010)
- Mona Vale to Macquarie Park Corridor Strategy (Roads and Traffic Authority, 2009)
- Connections: Towards 2017 (Transport for NSW, 2014a)
- Pittwater Council Social Plan 2012 – 2016 (Pittwater Council, 2012a)
- Pittwater Walks and Rides Strategy Masterplan (Pittwater Council, 2012b).

## **1.6. Study area**

The proposal is located within the Pittwater local government area (LGA) on Sydney's Northern Beaches. The Mona Vale Road East upgrade is located about 800 metres west of the intersection of Mona Vale Road and Pittwater Road. The proposal includes 3.2 kilometres of improvements along Mona Vale Road between Manor Road / Lane Cove Road, Ingleside and Foley Street, Mona Vale.

The proposal runs through the suburbs of Mona Vale, Warriewood and Ingleside.

The western section of the proposal between Manor Road / Lane Cove Road, Ingleside and the western edge of the urban areas of Mona Vale (about 200 metres west of Boundary Street) is primarily through bushland. Katandra Bushland Sanctuary is located on the northern side of the road and part of Ingleside Chase Reserve is situated on the southern side of the road. A small number of residential properties are adjacent to the road but generally do not have access from Mona Vale Road.

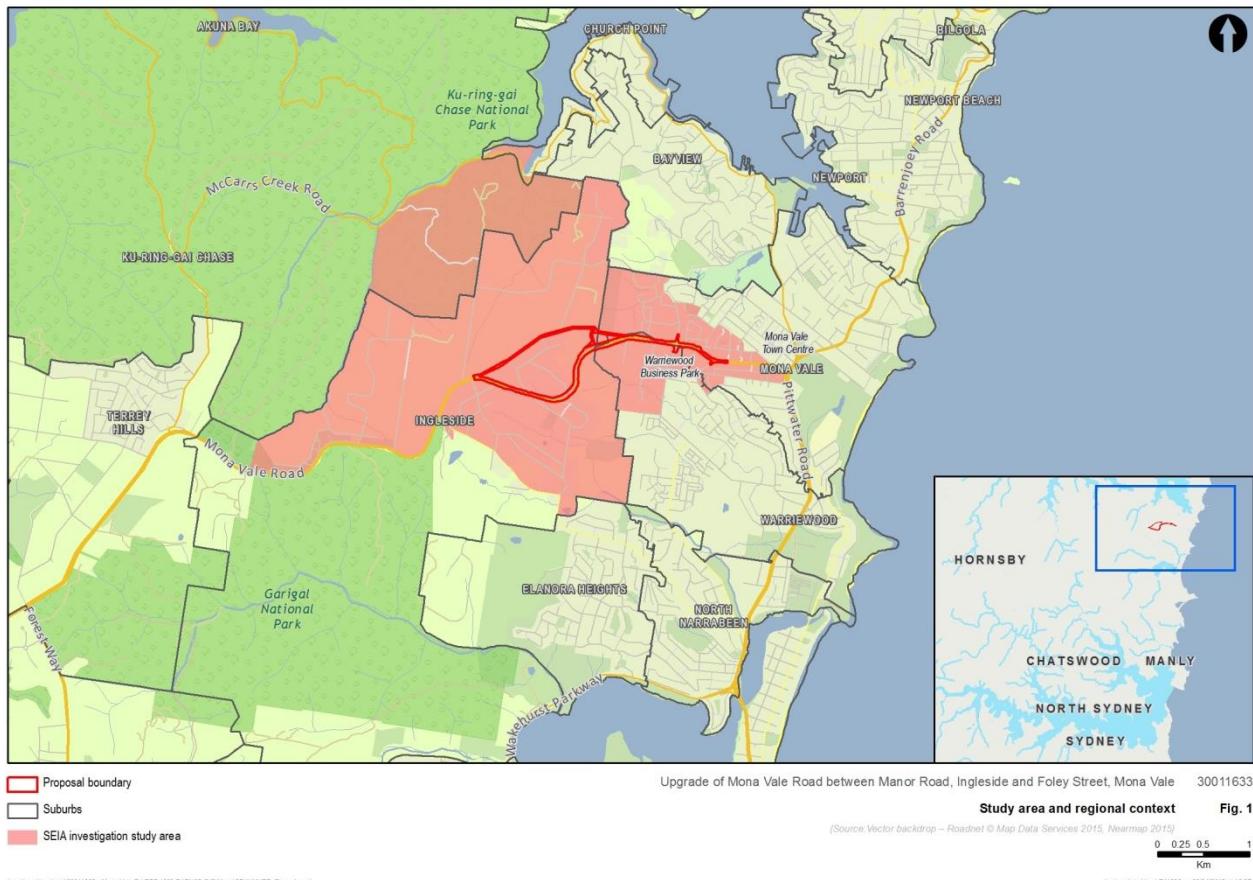
The eastern section from the Foley Street intersection to the western edge of the urban area of Mona Vale (about 200 metres west of Boundary Street) passes through the suburban residential areas and the commercial outskirts of the Mona Vale town centre. Mona Vale Cemetery is located on the northern side of Mona Vale Road at the eastern extent of the proposal. This section is a gently undulating landscape rolling down westwards to a low point at the Ponderosa Parade intersection before climbing up the Warriewood Escarpment. Many residential properties have side or rear boundaries facing the road. A number of properties, mainly to the east of Emma Street, have direct access onto Mona Vale Road.

For the purpose of this assessment, the study area has been defined as the area likely to be affected by the proposal. In defining this area consideration has been given to:

- The location of the proposed upgrade works
- The location of potential ancillary sites
- The nature of existing surrounding development
- Local travel patterns and transport routes
- Local areas of recreation and open space
- The location and distribution of community facilities and services and their accessibility
- Retail and employment area, particularly the Warriewood Business Park.

In practice it is clear that there are several scales of potential impact, ranging from the immediate impact along Mona Vale Road, the Mona Vale, Warriewood and Ingleside suburbs, the Pittwater LGA or the wider Northern Beaches region. While some impacts are likely to be experienced in the immediate locality of the proposed upgrade, some impacts and benefits may extend across the LGA or the wider Northern Beaches community.

The study area has been defined based on the Level 1 Statistical Areas (SA1) that border or intersect the route alignment (refer Figure 1-1). Statistical Areas are defined by the ABS Census 2011 and are the smallest unit for the processing and release of Census data. These statistical areas are considered to represent the directly affect area of the proposal.



*Figure 1-1: Proposal study area and regional context*

## 1.7. Proposal objectives

Roads and Maritime has established the following objectives for the proposal:

- Provide a safe road environment that reduces the frequency and severity of crashes
- Reduce congestion on Mona Vale Road between Manor Road / Lane Cove Road and Foley Street during peak periods
- Reduce delays on Mona Vale Road between Manor Road and Foley Street during peak periods
- Deliver infrastructure that provides effective network performance for at least the minimum term of ten years after opening
- Improve access to bus services. Strengthen integration between land use and all other modes of road use
- Contribute to safe and effective pedestrian and cycling infrastructure, that supports local and State Government initiatives for active transport
- To provide the best economic outcome and deliver a positive benefit-cost ratio

- Minimise impacts to the local environment including adjacent bushland, whilst enhancing urban design and transport outcomes.

## **1.8. Proposal scoping**

The Practice Note includes an initial scoping checklist to be used as a starting point for investigation of potential social and economic impacts of the proposal. This initial scoping exercise suggests that key social and economic issues of relevance for the proposal are likely to include:

- Property acquisition
- Changes to the character of the local area
- Changes in the way people access and use local facilities
- Changes in travel patterns for motor vehicle users, cyclists and pedestrians
- Changes to the amenity for some residents, including visual and landscape, noise, light spill, privacy and activity levels
- Changes in parking availability
- Changes that may affect local businesses.

## **2. DESCRIPTION OF THE PROPOSAL**

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The proposal generally includes:

- Widening to provide an additional two traffic lanes (one in each direction) on Mona Vale Road between Manor Road / Lane Cove Road and Foley Street
- Construction of six fill retaining walls up to six metres in height
- Construction of five cuttings up to 16 metres in height
- Provision of a central concrete safety barrier east of Manor Road to west of Daydream Street
- Provision of three metre wide shoulders between Manor Road / Lane Cove Road and Samuel Street / Ponderosa Parade to allow a safer area for broken down vehicles to stop clear of general traffic and provide on-road cyclists in a high speed environment
- Upgrade of the existing pavement and cross drainage systems including the construction, reconstruction and extension of pavement drainage lines
- Provision of a truck arrester bed, about 150 metres long, for eastbound vehicles adjacent to Walana Crescent
- Widening and upgrade to the intersection of Ponderosa Parade and Samuel Street including the provision of new traffic lights and signalised pedestrian crossings on all legs
- Provision of bus priority lanes along Mona Vale Road on the approaches to and departures from the intersection of Ponderosa Parade and Samuel Street
- Relocation of the eastbound bus stop along Mona Vale Road adjacent to the Ponderosa Parade / Samuel Street intersection further east to departure side of the intersection
- Changing the Emma Street intersection to left turn in and left turn out only
- Upgrading and widening the existing signalised T-intersection at Foley Street and Mona Vale Road to provide a westbound left turn lane into Foley Street and a westbound left turn lane out of Foley Street
- Provision of a three metre wide shared path along the southern side of Mona Vale Road between Ponderosa Parade and Foley Street for pedestrians and cyclists
- Provision of off-road pedestrian cyclist connectivity away from the Mona Vale Road corridor due to the steep descent from the Warriewood Escarpment. Connectivity would be provided via path along Lane Cove Road linking to Mona Vale Road near Walana Crescent
- Duplication of an existing culvert to provide fauna connectivity at the end of Lane Cove Road near Narrabeen Creek
- Changing the posted speed limit from 70 kilometres per hour to 80 kilometres per hour once both the proposal and the Mona Vale Road West upgrade have been completed
- Implementing a 60 kilometre per hour truck and bus speed limit for the downhill descent from near Ingleside Road to base of the escarpment
- Establishment of temporary site compounds and stockpiles during construction
- Landscaping over the length of the proposal
- Installing traffic monitoring cameras at all signalised intersections to assist with traffic management
- Undertaking utilities relocations where required and providing a utility corridor away from Mona Vale Road along Lane Cove Road.

### **3. EXISTING SOCIO-ECONOMIC ENVIRONMENT**

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In order to consider the potential social impacts of the proposed upgrade of Mona Vale Road East between Manor Road, Ingleside and Foley Street, Mona Vale, it is important to understand the social profile of the area in which it would be built and the demographic characteristics of people in the area. The following community profile is based on data from the ABS 2011 Census of Population and Housing unless otherwise indicated. The study area has been profiled by compiling data from the following Level 1 Statistical Areas (SA1): 1142301, 1142302, 1142117, 1142118, 1142310, 1142312, and 11. Comparisons are made with the population of the wider Pittwater LGA and the Greater Sydney Statistical Area.

#### **3.1. Population and demographics**

##### **Population**

- In 2011 the population of the study area was 3,258 and Pittwater LGA was 57,153
- Estimated residential population at 30 June 2013 was 62,070<sup>2</sup>
- Between 2006 and 2011, the Pittwater LGA population experienced an annual growth of 1.4%<sup>3</sup>
- The proportion of population aged 14 or younger was 21.97 per cent in the study area, 19.99 per cent in the LGA and 19.2 per cent in Greater Sydney
- The proportion of population aged 65 and above was 16.88 per cent in the study area, 17.04 per cent in the LGA and 12.85 per cent in Greater Sydney
- The study area had a higher incidence of indigenous population (0.71 per cent) compared to the LGA (0.44 per cent), but lower compared to Greater Sydney (1.25 per cent)
- The overseas born population in the study area (23.08 per cent) was slightly higher than that of the LGA (22.69 per cent), but both were considerably lower than that of Greater Sydney (34.24 per cent)
- The study area had a higher incidence (12.49 per cent) of Language other than English (LOTE) spoken at home compared to the LGA (7.51 per cent), but both areas had considerably lower rates than that of Greater Sydney (32.46 per cent)
- In 2011, 3.86 per cent of population in the study area had a need for assistance, compared with 3.19 per cent in the LGA and 4.38 per cent in Greater Sydney.

##### **Housing**

- The study area had 65.80 per cent of dwellings in separate houses, compared to 64.73 per cent in the LGA and 56.46 per cent in Greater Sydney. By contrast, the study area had an above-average share (22.91 per cent) of medium density dwellings (semidetached, row, terrace, townhouses) compared to that of both the LGA (9.59 per cent) and Greater Sydney (11.84 per cent)
- The study area had a low proportion of housing in flats (3.76 per cent) compared to that of the LGA (12.5 per cent) and Greater Sydney (23.89 per cent)
- The study area had a higher average household size (2.62) than the LGA (2.34) and Greater Sydney (2.5)
- In 2011, 39.19 per cent of households in the study area owned their housing outright, compared with 39.59 per cent in the LGA and 30.38 per cent in Greater Sydney. Over one third (36.31 per cent) of households in the study area had a mortgage, compared to 38.16 per cent in the LGA and 34.83 per cent in Greater Sydney
- The proportion of rented housing was comparable in the study area and the LGA (18.83 per cent and 18.8 per cent respectively), but much lower than that of Greater Sydney (31.59 per cent). The study area had a slightly higher incidence (0.36 per cent) of public housing compared to the LGA (0.06 per cent), but both rates were considerably lower than that for Greater Sydney (4.54 per cent).

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<sup>2</sup> ABS *Regional Population Growth, Australia, 3218.0, 2013–2014*.

<sup>3</sup> NSW Planning and Environment, *State and Local Government Area Population Projections, 2014*

### **Travel patterns**

- Vehicle ownership: 6.23 per cent of households in the study area had no vehicle, compared with 4.09 per cent in the LGA and 12.11 per cent in Greater Sydney. The proportion of households with one vehicle was similar in the study area and LGA (29.39 per cent and 29.77 per cent respectively), but lower than that for Greater Sydney (38.4 per cent). The study area had 61.62 per cent of households with two vehicles compared with 63.71 per cent in the LGA and 46.5 per cent in Greater Sydney. The relatively high vehicle ownership in the study area reflects its location and lack of public transport options
- Travel to work (single method only): 82.04 per cent of the study area's population travelled to work by car as driver or passenger, compared to 83.86 per cent in the LGA and 72.58 per cent in Greater Sydney. The study area population who travelled to work by train or bus was 0.23 per cent and 5.8 per cent respectively; this compared to 0.17 per cent and 7.51 per cent respectively in the LGA, and 11.35 per cent and 6.52 per cent respectively in Greater Sydney. By contrast, the incidence of population in the study area who walked or cycled to work (6.97 per cent) was higher than the rate in both the LGA (4.79 per cent) and Greater Sydney (6.06 per cent)

### **Economic**

- In 2011, the individual statistical areas within the study area had a median weekly household income range of \$1,196 to \$2,111, compared to \$1,819 for the LGA and \$1,447 for Greater Sydney
- The Socio-economic Index for Areas (SEIFA) relative measure of aspects of socio-economic advantage and disadvantage for Pittwater LGA was 1114 in 2011, one of the highest ranking areas in NSW. The NSW average is 1000. Individual statistical areas within the study area had relative SEIFA scores ranging from 1064 to 1115. Higher scores indicate a relative lack of disadvantage and greater advantage in general.

### **Employment**

- In 2011, the study area had an unemployment rate of 3.01 per cent compared to 3.5 per cent for the LGA and 5.7 per cent for Greater Sydney. At December 2014, the unemployment rate for Pittwater LGA was 2.8 per cent and 5.2 per cent for Greater Sydney<sup>4</sup>
- The workforce in the study area was characterised by employment in construction (12.02 per cent) followed by healthcare and social assistance (10.42 per cent) and professional, scientific and technical (10.03 per cent). Professional, scientific and technical dominated the LGA's workforce (12.03 per cent), followed by construction (10.3 per cent) and healthcare and social assistance (10.24 per cent). Healthcare and social assistance led Greater Sydney's workforce (10.9 per cent), followed by retail trade (9.83 per cent) and professional, scientific and technical (9.6 per cent).

## **3.2. Future growth**

The population of Pittwater LGA is projected to increase by 1.2 per cent annually to 77,600 in 2031.<sup>5</sup> The number of dwellings will increase from 25,200 in 2011 to 33,300 in 2031.<sup>6</sup> Part of this growth will be accommodated in the study area, in the Ingleside Release Area.

The Department of Planning and Environment and Pittwater Council commenced the Ingleside Precinct Planning Project in July 2013 to investigate the development potential of Ingleside. The intent is to identify opportunities for development in the area, taking into account the environment, economic viability, housing types, community consultation and infrastructure needs<sup>7</sup> (Pittwater Council, 2015). The precinct comprises around 700 hectares of land and includes a part of the proposal study area. Currently, an additional 3,000 dwellings are envisaged within the Ingleside precinct and it is likely that a portion of these dwellings will be accommodated within the study area. The draft Structure Plan includes areas for low and medium density residential development as well as rural lots and environmental living. New open space, a school and community facilities are also proposed.

<sup>4</sup> Department of Employment, *Small Area Labour Markets December Quarter 2014*.

<sup>5</sup> NSW Planning and Environment, *State and Local Government Area Population Projections, 2014*.

<sup>6</sup> NSW Planning and Environment, *State and Local Government Area Dwelling Projections, 2014*.

<sup>7</sup> Pittwater Council (2015) Greenfield release area – Ingleside, accessed from <http://www.pittwater.nsw.gov.au/ingleside/about> on 18 February 2015.

Based on the average number of people per household in the Pittwater LGA in 2011, the Ingleside Release Area could introduce around 8,100 new residents into the community, contributing to traffic volumes and cycle and pedestrian volumes.

Gazettal of the final Precinct Plan is proposed for mid-2015. It is likely that any lands that are released for development would be done so in stages over a number of years. It is likely that South Ingleside (to the south of Mona Vale Road) would be one of the first areas released.

The proposal has been designed with consideration for the proposed future land release and the traffic modelling undertaken as part of the proposal impact assessment has included full development of the Ingleside Release Area in the 2036 ultimate development scenario.

Once completed, the proposal is also likely to contribute to the improved attractiveness of the new precinct for future development opportunities.

The Warriewood Valley Urban Land Release Area was announced in 1997, comprising 110 hectares of land with a preliminary project of 1,510 new dwellings, five hectares of industrial and commercial land and associated community facilities and infrastructure.<sup>8</sup> In the intervening years, substantial areas of the valley have been redeveloped to accommodate a range of new uses and the final areas are currently being rezoned. The majority of the remaining areas are outside of the study area, primarily located to the south of the proposal study area. Development is likely to proceed slowly over time and no time frames or quantifiable population or employment targets have been indicated. Nevertheless, the ongoing planning illustrates that some future population and employment growth is expected to occur.

The Warriewood Business Park, located on the southern side of Mona Vale Road within the study area, forms part of the employment lands area within the Warriewood Valley Urban Land Release Area. Most of the land in the Business Park has been now been developed. Stage 2 of the Peninsula Business Estate is currently being developed at 2 Daydream Street and will provide 12,000m<sup>2</sup> of commercial, office and warehouse space. The three-stage development, of which Stage 1 is complete and occupied, comprises 29,000m<sup>2</sup> of floor space.

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<sup>8</sup> [http://www.pittwater.nsw.gov.au/building\\_and\\_development/land\\_release\\_projects](http://www.pittwater.nsw.gov.au/building_and_development/land_release_projects)

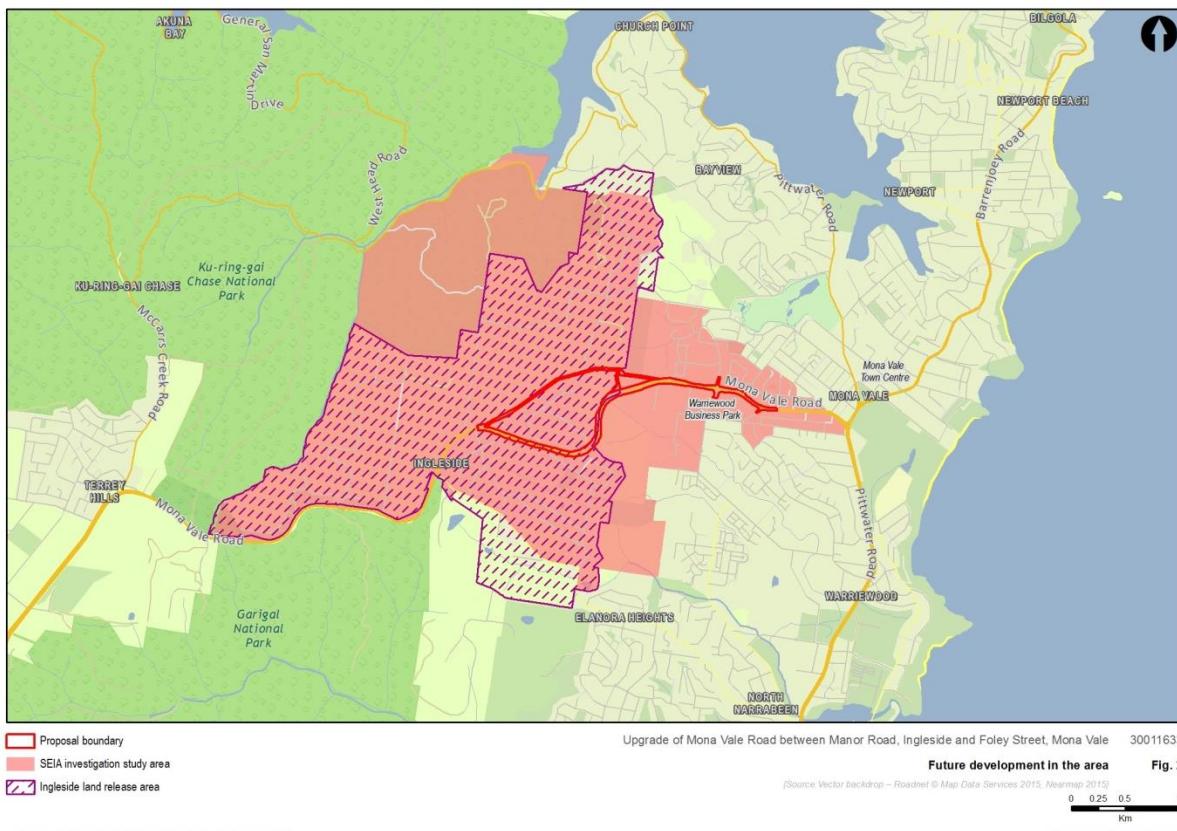


Figure 3-1: Future development in the area

### 3.3. Local and regional context

European settlement of the Pittwater area dates back to Governor Hunter's survey of Broken Bay in 1796. Early use of the area focussed on timber-getting and farming. Poor access was a major inhibitor of development.

Towards the end of the 1800s, improved access allowed growth to occur at a quicker pace. Land continued to be used mainly for farming, grazing and orchards, but industries in fishing, boat building and timber-cutting were also established.

The Pittwater area became a popular holiday destination in the early 1900s and inter-war period, with many guesthouses and holiday homes built at this time. Significant residential development took place from the 1950s, assisted by the construction of roads and bridges. Urban development continued from this time, concentrated largely in the coastal part of the Pittwater region.

The origins of Mona Vale Road can be traced to 1840, with a road in this vicinity being depicted on a County of Cumberland map. The road departed from its present-day alignment at Lane Cove Road, from where it travelled north along Lane Cove Road before joining Mona Vale Road east of Foley's Hill. Major works on the road occurred between 1938 and 1942, suggesting that it was at this time that the current section of Mona Vale Road, east of its intersection with Lane Cove Road, may have been built; at the latest, this section was completed before 1970.<sup>9</sup>

Today the western part of the study area is characterised primarily as a bushland setting, with Katandra Bushland Sanctuary located on the northern side of Mona Vale Road and part of Ingleside Chase Reserve on the southern side.

<sup>9</sup> Kelleher Nightingale Consulting (2014) *Mona Vale Road Upgrade from Manor Road, Ingleside, to Foley Street, Mona Vale: Aboriginal Archaeological Survey Report Stage 2 PACHCI*.

The eastern section of the study area is more urbanised and is characterised by adjacent residential development, light industry, commercial land uses, recreational areas and Mona Vale General Cemetery. The residential suburb of Mona Vale abuts the northern alignment of Mona Vale Road and wraps around to the east, while the Warriewood Business Park is immediately to the south.

The Mona Vale town centre is approximately two kilometres east of Foley Street, and Warriewood Square shopping centre is about three kilometres to the south-east.

Mona Vale Road is the main east-west link between the Pacific Highway, Pymble and Pittwater Road at Mona Vale, totalling about 20 kilometres in length and carrying about 22,000 vehicles per day through the proposal area. The road is an integral component of the transport network in the north-east region of Sydney and plays a crucial role in linking major urban areas.

### 3.4. Amenity and land use

Amenity refers to the quality of a place, its appearance, feel and sound, and the way its community experiences the place. Aesthetic qualities are an important part of amenity, but the broader concept of amenity is determined also by the physical design of a place and the human activity that takes place within it. Amenity is a characteristic of a community that is determined by the physical environment yet it depends on the human response to that environment. A place that has 'amenity' is regarded as pleasant and attractive, as well as convenient and comfortable.<sup>10</sup>

The amenity of the study area derives from its natural character and developed areas, and the way the community uses these areas.

The western 2.1 kilometres of the study area consists primarily of bushland areas, with Katandra Bushland Sanctuary on the northern side of Mona Vale Road and part of Ingleside Chase Reserve on the southern side. This native bushland is considered to have high visual amenity value for motorists travelling in both directions along Mona Vale Road. A small number of residential properties are located adjacent to the road through this area, but do not have access from it. Motorists driving along Mona Vale Road and some residents on either side of Mona Vale Road have views to the south-east towards Mona Vale and the coastline; these views are considered to have high visual amenity value, together with district views along the route. The road passes over the escarpment and through a number of deep sandstone cuttings, flanked by tall trees, before descending to the eastern section of the study area. Further detail on the landscape character of the study area can be found in the Landscape Character, Visual Impact Assessment and Urban Design Study<sup>11</sup> prepared for the proposal.

The eastern 1.1 kilometres of the study area is gently undulating and predominantly urban in character, and includes residential development, light industry, commercial, recreational areas and the Mona Vale General Cemetery. Views west towards the escarpment are continuous from a high point at the intersection of Foley Street. Most residential properties have side or rear boundaries facing Mona Vale Road, however, between Emma and Foley Streets, the dwellings have street frontage and driveway access. This area includes three intersections connecting local roads to Mona Vale Road – a signalised intersection at Foley Street, an unsignalised intersection with Emma Street and a roundabout at Ponderosa Parade. Limited opportunities for crossings, coupled with heavy traffic flows and steep inclines towards the escarpment, have resulted in Mona Vale Road becoming a barrier to movement between the northern and southern halves of the study area.

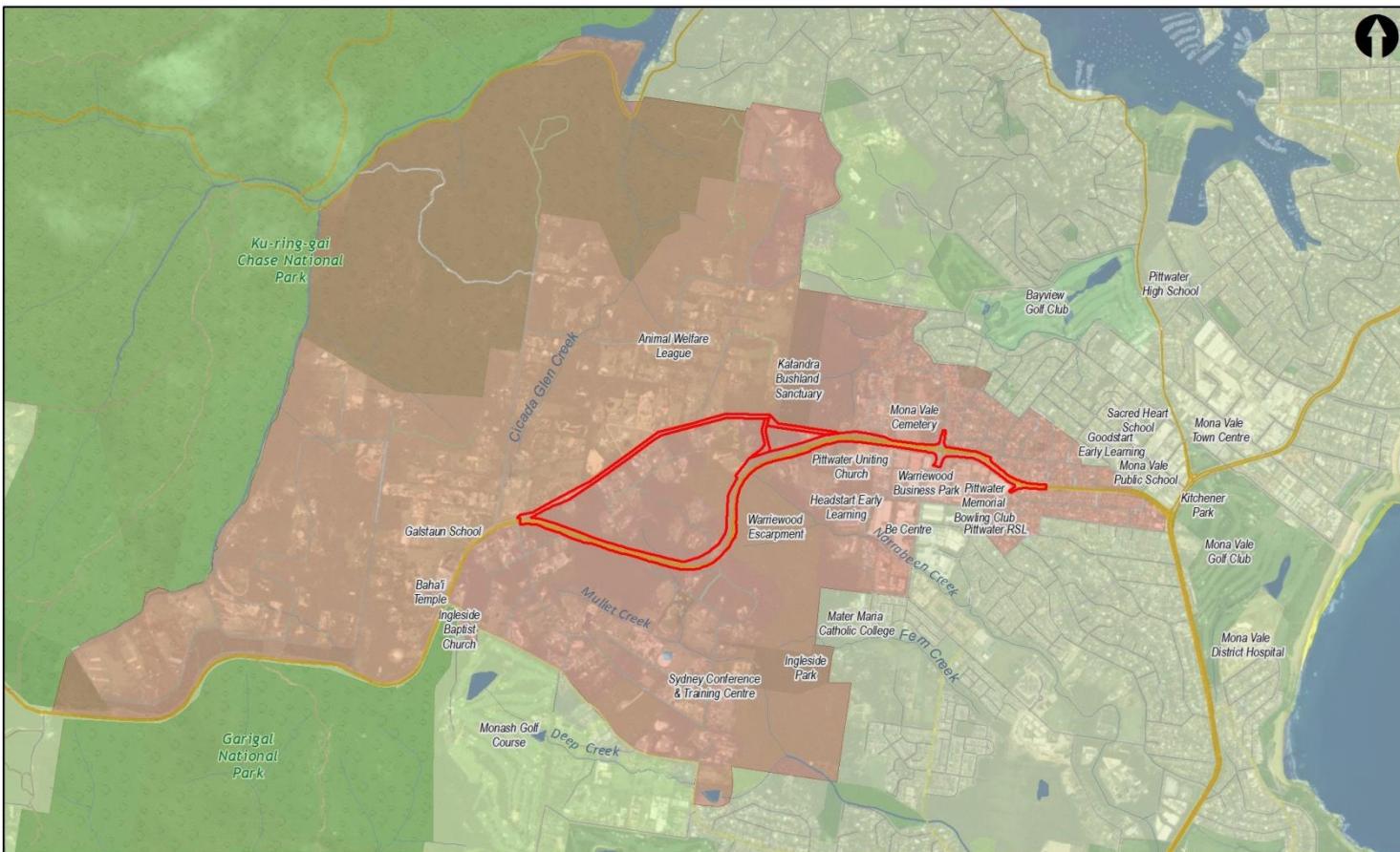
The Warriewood Business Park is located on the southern side of Mona Vale Road in this section, and is accessed from Ponderosa Parade and the surrounding local roads.

Traffic on Mona Vale Road is typically the most dominant noise generator in the area. Acceleration of vehicles up the steep inclines and decelerating down the hill is particularly evident. Generally local residents experience good air quality given the proximity to natural bushland.

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<sup>10</sup> Handy, S. (2002) "Amenity and severance" in Hensher, D.A and Button, K.J. (eds) *Handbook of transport and environment*, Elsevier Science, Oxford.

<sup>11</sup> HBO+EMTB (2015) *Mona Vale Road Upgrade East: Landscape Character, Visual Impact Assessment and Urban Design Study*.



■ Proposal boundary

■ SEIA investigation study area

Upgrade of Mona Vale Road between Manor Road, Ingleside and Foley Street, Mona Vale 30011633

#### Land use and social infrastructure

(Source: Vector backdrop – Roadnet © Map Data Services 2015, Nearmap 2015)



Last updated by: LR11993 on 30/04/2015 at 12:43

Location: \project\30011633 - Mona Vale Rd REFL008 DATA\05\_GIS\Map\SEIA\MVRE\_Figure3.mxd

**Figure 3-2: Land use and social infrastructure**

## **3.5. Social infrastructure**

Key facilities and services relevant to local residents and visitors to the study area are summarised below and shown in Figure 3-2. Mona Vale town centre is located outside of the study area, to the east of Foley Street, and contains local shops, Council chambers and a library. There are several small local parks and reserves within the study area.

### **Childcare centres**

The following childcare centres are located within the study area:

- Pittwater Uniting Church, 10 Jubilee Avenue: facilities are used for playgroups, program for mothers and preschool children, sport and fitness, support for older persons, and regular Sunday worship. An office is staffed during the week
- Be Centre, 9 Apollo Street: a not-for-profit foundation providing behavioural support services for children and teens aged three to 17, weekdays.
- Warriewood Child Care Centre, 1101/4 Daydream Street: a long day care centre
- Headstart Early Learning Centre, 3/6 Jubilee Avenue: a long day care centre.

### **Schools**

Mona Vale Public School and Sacred Heart Catholic Primary School are located opposite each other in Bungan Street, Mona Vale, close to Mona Vale town centre. Mater Maria Catholic College is located at Forest Road, Warriewood, approximately one kilometre south of the intersection of Mona Vale Road and Ponderosa Parade. Galstaun College is located slightly north-west of the study area in Ingleside. There are no schools located within the study area.

### **Health and emergency services**

Mona Vale Hospital is located outside the study area on Pittwater Road around one kilometre south of the intersection with Mona Vale Road. Rural Fire Service (RFS) headquarters and training centre are located west of the study area on the northern side of Mona Vale Road.

### **Mona Vale Cemetery**

Mona Vale General Cemetery is located at 107 Mona Vale Road and is more than 100 years old. It has direct left in, left out access from Mona Vale Road as well as access from Fazzolari Avenue. The Cemetery contains 6,400 grave sites, a crematorium, memorial gardens and wall niches. It is open every day during daylight hours. The Cemetery and stone gateposts that front Mona Vale Road – the latter built in 1929 and the original entrance to the cemetery - are included as local heritage items in Pittwater Local Environmental Plan 2014. The Cemetery contains a function centre, located on Fazzolari Avenue.

### **Other**

The Pittwater Returned and Services League (RSL) Club at 107 Mona Vale Road is an important local attractor and employment generator. It is a registered club offering entertainment and dining, sporting and social activities, and tours and has a membership of over 24,000. It has access from Foley Street and Jubilee Avenue and contains substantial onsite parking to the rear of the facility. The club is open every day and trades until late at night. The Pittwater Memorial Bowling Club is located adjacent to the RSL.

The Animal Welfare League NSW at 11 Cicada Glen Road, Ingleside, provides an adoption centre for dogs and cats. It is open every day and serves the Sydney metropolitan area.

## **3.6. Travel behaviour**

Mona Vale Road is an important arterial road connector for north-eastern Sydney. The 20 kilometre route connects Pittwater Road at Mona Vale in the north east to the Pacific Highway at Pymble. It is frequently used by heavy goods vehicles and is the main east-west connector in northern Sydney for heavy goods vehicles, including B-doubles. Road users in the study area currently experience traffic congestion during peak hours.

The existing two-lane road has a steep vertical alignment and no overtaking opportunities east of Manor Road. This factor, combined with steep grades and heavy vehicle use, causes frequent major

traffic delays both during and outside of peak hours, as traffic flow behind heavy vehicles is slowed. In addition to the traffic congestion, this section of Mona Vale Road has a high crash rate indicating safety issues for vehicles using this road. Mona Vale Road is the main east-west heavy vehicle route in northern Sydney. It connects Macquarie Park and Warriewood and is the most direct heavy vehicle route for access Warriewood and Mona Vale from western and south west Sydney.

Congestion imposes costs on the economy and the community through longer commutes, higher operational costs and restricted access. Congestion costs Sydney around \$5 billion a year and is set to grow to \$8 billion a year by 2020. This has an indirect impact on businesses through increases in transport costs.<sup>12</sup>

### **Parking**

Parking is not permitted along Mona Vale Road within the study area.

Within the Warriewood Business Park area, there is timed on-street parking in Jubilee Parade Avenue and Ponderosa Parade, and unlimited parking on Daydream Street other than outside the Warriewood Child Care Centre where short-term pick-up and drop-off limits apply. There is no parking on Ponderosa Parade between the roundabout at Mona Vale Road and the next roundabout to the south.

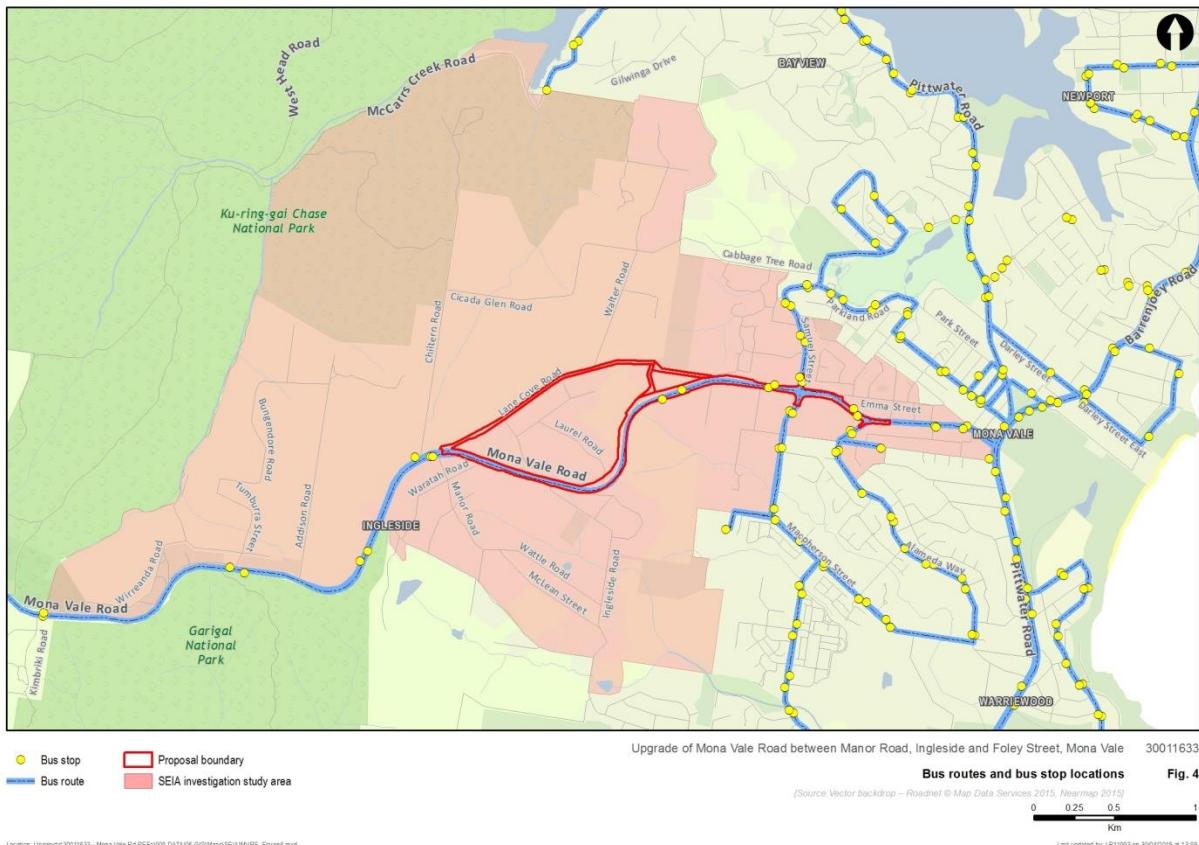
General off-street parking is available at the retail area on the corner of Mona Vale Road and Ponderosa Parade around the takeaway food outlets, video store and car wash. Eighty spaces are provided on the site.

### **Public transport**

Three bus routes currently operate along Mona Vale Road. Sydney Buses operates Routes 185/L85 and 182 which operate between Mona Vale and Sydney CBD via Warriewood Valley and Warringah Mall, and between Mona Vale and Narrabeen, respectively. Both of these routes service the eastern part of the study area only, with weekday services operating from early morning until late at night, with slightly shorter hours on weekends and public holidays. Forest Coach Lines operates routes 196 (Gordon to Mona Vale) and 197 (Macquarie to Mona Vale) along Mona Vale Road through the entire length of the study area. Weekday services are offered from approximately 6 am to 10.30 pm, with shorter hours on weekends and public holidays. School bus services also operate through the study area.

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<sup>12</sup> Infrastructure NSW (2014) *State Infrastructure Strategy Update*.



*Figure 3-3: Bus routes and bus stop locations*

Public transport accounts for less than ten per cent of the mode share in Pittwater LGA and approximately 15 per cent of transport mode share in Warringah LGA.

The following bus facilities exist along Mona Vale Road:

- Bus bay (westbound) immediately west of the Manor Road intersection with Mona Vale Road and slightly further west for eastbound travel
- Bus stops (both westbound and eastbound) near Lane Cove Road, west of Boundary Street
- Bus stops (westbound) near Ponderosa Parade
- Bus stops (eastbound) adjacent to the Mona Vale Cemetery
- Bus stops (westbound and eastbound), about 200 metres west of Foley Street, outside the Pittwater RSL Club.

### Pedestrians and cyclists

Currently, a paved shoulder is provided for most of the existing road length for on-road cyclists. Off-road pedestrian paths are provided as follows:

- On both sides of Mona Vale Road between Foley Street and Emma Street
- On the westbound side of the road between Foley Street and Samuel Street.

The existing cycle provisions along Mona Vale Road within the proposal area are relatively narrow and provide poor amenity and safety.

Generally there is a lack of suitable connectivity for pedestrians and cyclists between Ingleside in the west and Warriewood and Mona Vale in the east.

### **3.7. Business and industry**

The Warriewood Business Park is located on the southern side of Mona Vale Road and is bounded by Narrabeen Creek to the south, Boundary Street to the west, and Mona Vale/Warriewood residential area to the east. Primary access to the Business Park from Mona Vale Road is via Ponderosa Parade, with secondary access from Foley Street.

This Business Park is mostly developed for single large users, factory unit developments and business park estates. More than 300 businesses operate from within the Business Park<sup>13</sup>. Business types include pharmaceuticals, automotive, technology, audio-visual, electronics, engineering, timber and hardware, printing, and self-storage. Corporate headquarters include Pharmacare and Blackmores in Jubilee Street, and Amber Technology on Ponderosa Parade. Retail – mostly food – outlets are distributed throughout the area, with the main concentration at the intersection of Mona Vale Road and Ponderosa Parade, where Hungry Jacks, KFC and Blockbuster Video outlets, as well as a car wash and pizza shop are located.

The Business Park plays an important role in the economy of the local area. In 2011, it employed 3,317 persons or 16.7 per cent of the Pittwater workforce, and was the destination with the greatest number of workers in the LGA.<sup>14</sup>

Businesses that front Mona Vale Road take their access variously from Foley Street, Ponderosa Parade, Jubilee Avenue or Daydream Street. Alternative access routes via Pittwater Road also exist. All businesses have on-site parking. Businesses located between Ponderosa Parade and Daydream Street with frontage to Mona Vale Road have access from Daydream Street and most have parking fronting onto Mona Vale Road. The business at 90 Mona Vale Road is accessed via Ponderosa Parade and has parking fronting both streets. The retail cluster at the intersection of Mona Vale Road and Ponderosa Parade has a dedicated entry off Ponderosa Parade and on-site parking fronting Ponderosa Parade.

The Sydney Conference and Training Centre (also known as the Westpac Training Centre) is located at 30 Ingleside Road, in the vicinity of Ingleside Chase Reserve. The Centre is an all-inclusive conference centre, providing accommodation, and dining and recreation facilities. It has access to Mona Vale Road via Wattle and Manor Roads.

### **3.8. Tourism**

Tourism is a major activity in the Pittwater area, with beaches, waterways, bush, restaurants and relaxed lifestyle numbering among its key attributes. A study into domestic market perceptions of 32 Sydney tourism precincts, including the Northern Beaches, Palm Beach and Pittwater, found that Palm Beach was the second most popular beach precinct, after Bondi, with seven percent of respondents specifically citing the set of Home and Away.<sup>15</sup>

The value of tourism to the Pittwater area is significant. In 2012/13, total tourism and hospitality sales in the LGA were \$245.7 million, and the total value added was \$109.7 million.<sup>16</sup>

Council's tourism strategy includes the objective to ensure that any investment in infrastructure provision or up-grade has the two-fold benefit of improving facilities for the community while addressing the needs of tourism operators and users.<sup>17</sup>

The study area is not a known tourist destination and contains no accommodation establishments, however Mona Vale Road is one of the primary access routes to the Pittwater area from the rest of Sydney.

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<sup>13</sup> Source: [www.manta.com/world/Oceania/Australia/New+South+Wales/Warriewood/](http://www.manta.com/world/Oceania/Australia/New+South+Wales/Warriewood/) viewed on 4 December 2014.

<sup>14</sup> Source: [economy.id.com.au/pittwater/employment-locations](http://economy.id.com.au/pittwater/employment-locations) viewed on 4 December 2014.

<sup>15</sup> Destination NSW (2011) Perception of Sydney Precincts.

<sup>16</sup> Pittwater Council *Tourism Sector Analysis* <http://economy.id.com.au/pittwater/tourism-value?t=2> viewed on 2 December 2014.

<sup>17</sup> Pittwater Council (2011) *Tourism in Pittwater: Building Communities and Economic Development*.

### **3.9. Recreation**

Walking for pleasure or fitness is the second most popular activity, after dining in a café or restaurant, and the most popular type of active recreation for the wider Pittwater community. Bushwalking is the third most popular activity for the community.<sup>18</sup> The popularity of walking has been a consistent theme in the Pittwater community for the past 20 years and the need for a network of walking tracks and paths has traditionally been given high priority by Pittwater residents.

The study area contains extensive areas of bushland including the Ingleside Chase Reserve (also known as Ingleside Park) and the Katandra Bushland Sanctuary. These areas provide the community with recreational as well as other benefits e.g. somewhere to rest and relax, enjoy the scenery and vistas, and become involved in maintenance and upgrading through bush care programs.

The Katandra Bushland Sanctuary is situated on the Ingleside escarpment to the north of Mona Vale Road. It is a Crown Reserve, administered by the Department of Lands and managed by the Katandra Bushland Sanctuary Trust. It is accessed from Lane Cove Road, with primary access being by car. Katandra Bushland Sanctuary is dedicated to the study of native flora and fauna of the Hawkesbury Sandstone country. It comprises 12 hectares of rainforest, heathland and open forest, with one and two kilometre walking tracks provided. It is open every Sunday from July to October to coincide with the blooming of wildflowers.

The Ingleside Chase Reserve is located on top of the Ingleside escarpment and contains 9.3 hectares of bushland. It is bounded by rural development to the west, Mona Vale Road to the north, and future residential development/Warriewood Business Park to the east. The Reserve is owned and managed by Pittwater Council, is important for native flora and fauna and contains walking tracks and bush regeneration sites. It has expansive views of the Warriewood Valley and ocean, and provides an important natural escarpment as visual backdrop to the coast. It provides opportunities for passive recreation, as well as an educational resource, to the local community. The reserve is accessed off Ingleside Road, adjacent to the Westpac Training Centre.

### **3.10. Community values**

Community values relate to things such as:

- Amenity and character
- Community health and safety
- Community cohesion and sense of community
- Environmental values
- Intangible connections to place.

Access to employment and key regional services (hospitals, schools), traffic safety and the importance of a thriving local economy were some of the key community issues identified in Pittwater Council's Social Plan.<sup>19</sup>

A consistent theme in community consultation for most Pittwater Council projects relating to public space is the high value residents place on Pittwater's natural environment. The community wish to protect, conserve and enhance the natural environment, with nature appreciation being the seventh most popular activity in the LGA.<sup>20</sup> Natural areas in the study area with high conservation value include the Ingleside Escarpment and Ingleside Chase Reserve, and Katandra Bushland Sanctuary. Members of the community often participate and connect through their shared similar values and interest in the natural environment. Many of the opportunities to participate locally are centred around the beaches and waterways.<sup>21</sup>

Council's transport options paper identifies that geographically Pittwater is more isolated than other parts of the Northern Beaches and that sufficient public transport systems are a key social consideration for residents. Council studies have shown that "traffic congestion, lack of available

<sup>18</sup> Pittwater Council (2014) *Draft Public Space and Recreation Strategy*.

<sup>19</sup> Pittwater Council (2012) *Pittwater Social Plan 2012-2016*, accessed from [http://www.pittwater.nsw.gov.au/council/Corporate\\_Documents/social\\_plan](http://www.pittwater.nsw.gov.au/council/Corporate_Documents/social_plan)

<sup>20</sup> Pittwater Council (2014) *Pittwater Draft Public Space and Recreation Study*, p36.

<sup>21</sup> Pittwater Council (2012) *Discussion Paper 2: A Sense of Place*.

efficient public transport and heavy reliance on private vehicle patronage is a huge problem".<sup>22</sup> It is recognised that traffic congestion and accessibility are important issues that impact on their way of life. Council's Transport Discussion Paper also identifies the need for more bike paths as a priority from the dual perspectives of personal health and environmental sustainability. Promotion of active transport and improving the walkability of the area was also identified as important, particular given the older age profile of the population.

### **3.11. Summary**

Key socio-economic characteristics of the study area can be summarised as follows:

- The study area is strongly defined by physical, economic and social characteristics
- The physical qualities of the environment, concentrated in the western section of the study area, derive from its bushland setting, escarpment and scenic qualities. The local community places high value on these qualities
- Private vehicles are the predominant mode of transport throughout the study area, with higher than average levels of vehicle ownership. There is limited public transport availability and limited opportunities for cycling and pedestrian movement
- The Warriewood Business Park is an important employment generator and plays a key role in the local economy
- There is limited social infrastructure located within the study area
- The study area affords many opportunities for passive recreation with an abundance of natural features, bushland areas and lookouts.

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<sup>22</sup> Pittwater Council (2012) Discussion Paper 6: Getting Around Pittwater – Our Transport Needs.

## 4. COMMUNITY ENGAGEMENT

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This chapter summarises community engagement undertaken for the proposal to date. Community engagement will continue throughout the life-cycle of the project. Further detail can be found in Chapter 5 of the REF and the *Mona Vale Road East and West Upgrades Community Consultation Report*.<sup>23</sup>

Stakeholder engagement is an essential element of understanding stakeholder and community values, concerns, potential impacts, hopes, fears and opportunities in relation to a project. A range of stakeholders have been consulted to date for the proposed Mona Vale Road upgrade projects, using a variety of engagement methods.

The following key stakeholders have been consulted to date:

- Pittwater Council
- Warringah Council
- Department of Planning
- Ingleside Community Reference Group for Department of Planning
- Office of Environment and Heritage
- National Parks
- Transport for NSW
- Utility authorities.

In October 2014 a community update describing the proposal was distributed to the local community and submissions were sought up until 14 November 2014. Three community information sessions were held where the project team was available to answer questions and receive feedback on the proposal.

Issues raised by the community during the public display period include:

- Constructability
- Maintenance
- Cost effectiveness
- Public transport
- Pedestrian and cyclist facilities
- Traffic capacity
- Intersection controls
- Local road adjustments
- Road safety
- Noise and vibration
- Fauna and flora impacts
- Construction staging and timing.

These issues have been considered in the design development and REF where relevant in order to improve the proposal outcomes. These issues will also be used to inform the impact assessment in the next section.

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<sup>23</sup> Roads and Maritime (2015) *Mona Vale Road East and West Upgrades Community Consultation Report*.

## 5. ASSESSMENT OF SOCIAL AND ECONOMIC IMPACTS

The proposed upgrade of Mona Vale Road East would add an additional two lanes on Mona Vale Road in order to alleviate traffic congestion, improve road safety and provide for future population and employment growth. It would also improve safety for cyclists by providing dedicated off-road paths and improved on-road facilities.

Following the local profiling and consultation with local residents, businesses and stakeholders, the following potential impacts were identified as a result of the proposal during construction and operation phases.

### 5.1. Construction phase impacts

#### 5.1.1. Property impacts

In order to enable the construction of the proposal, it will be necessary for Roads and Maritime to acquire three lots in total and partially acquire 19 lots. Table 1 below identifies properties, by ownership, to be acquired in whole or part for the proposal.

Property impacts would commence with the construction phase, resulting from the acquisition of land required for the proposal. The majority of acquisition required for the proposal would be strip acquisition for boundary and driveway adjustments and in most cases acquisition would not affect the ongoing enjoyment and use of land.

Table 1: Property acquisition

Lot / DP	Ownership	Whole / Part	Approx. area (hectares)
Lot 53 DP812289	Government	Part	0.056
Lot 21 DP114318	Government	Part	0.014
Lot 44 DP 114318	Private	Part	0.028
Lot 1 DP 549098	Private	Part	0.028
Lot 1 DP 114318	Government	Part	0.046
Lot 2 DP 114318	Government	Part	0.058
Lot 3 DP 114318	Government	Part	0.051
Lot 4 DP 114318	Government	Part	0.015
Lot 5 DP114318	Government	Part	0.127
Lot 1 DP 784516	Government	Whole	0.247
Lot 35 DP12297	Government	Part	0.090
Lot 1 DP502582	Government	Part	0.438
Lot 2 DP502582	Government	Part	0.214
Lot 3 DP502582	Private	Part	0.071
Lot 1 DP 519037	Government	Part	0.055
Lot 1 DP124602	Government	Whole	1.34
Lot 2 DP124602	Government	Whole	0.073

<b>Lot / DP</b>	<b>Ownership</b>	<b>Whole / Part</b>	<b>Approx. area (hectares)</b>
Lot A DP372094	Private	Part	0.214
Lot 1 DP350940	Government	Part	0.111
Lot 2 DP350940	Government	Part	0.047
Lot 3 DP350940	Government	Part	0.043
Lot 4 DP350940	Government	Part	0.081
Lot 12 DP241313	Government	Part	0.035
Lot 9 DP241313	Private	Part	0.006
SP70187	Private	Part	0.021
Lot 1 DP270291	Private	Part	0.079
Lot 119 DP135512	Private	Part	0.045
Lot 101 DP749415	Government	Part	0.014
Lot 102 DP749415	Private	Part	0.005
Lot 26 DP654262	Private	Part	0.036

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. Uncertainty over the amount and timing of acquisition and construction can cause stress to property owners and tenants and requires careful management to minimise any associated stress. Roads and Maritime would engage with affected parties as soon as practical, to share relevant information and to work cooperatively. Final acquisitions required would be confirmed through detailed design in consultation with landowners. All property valuations and acquisitions would be carried out in accordance with the *Roads and Maritime Services Land Acquisition Information Guide* (Roads and Maritime Services, 2014b) and the *Land Acquisition (Just Terms Compensation) Act 1991*.

Access to individual properties would be temporarily affected by construction activities, either through the loss of existing access arrangements or the alteration of access arrangements. However, existing property access would be maintained at all times, except as detailed below, and any impacts would be short-term.

Lot 1 DP784516 is private property on Laurel Road West which has already been acquired and will be demolished. Roads and Maritime are leasing the property back to the previous owners until pre-construction activities commence. The site is required for a 13 metre cut in the road. The nearest dwellings are separated from the site by bushland. Retention of as many trees as possible beyond the zone of construction would minimise visual impacts to the existing bushland setting and serve to provide a buffer between the new construction and the dwellings that are to be retained.

Lot 3 DP502582 would have a strip acquired from the front of the property which would require the demolition of a shed. The current use of the shed is not known. The acquisition is required to accommodate the construction of a retaining wall and new culvert in addition to widening of the existing cutting in this location. Fauna fencing may also potentially be located on this site. The property is accessed off Lane Cove Road.

Lot A DP372094 would lose access from Mona Vale Road, however, this property currently has secondary access from Walana Crescent. Roads and Maritime may need to provide internal driveway adjustments; the extent of impact and corresponding adjustment would be determined during the detailed design phase in consultation with the land owner.

Lot 26 DP654262: a 364 square metre splay would be acquired on the corner of Mona Vale Road and Foley Street. The site is owned by the Pittwater RSL Club. Acquisition would require the relocation of

RSL signage, a field artillery piece and memorial plaques. These items would be relocated elsewhere on site.

The acquisition of strips of land from SP70187 (located within the Business Park west of the roundabout at Ponderosa Parade) and Lot 119 DP135512 (Blackmore's campus site) would not affect business operations at these locations.

Temporary sites are likely to be required for use as construction compounds. At this stage, the location of any ancillary sites has not been confirmed.

## 5.1.2. Amenity impacts

Amenity impacts include any factors that affect the ability of a resident, visitor or business owner to enjoy their home and daily activities, for example, noise, vibration, detrimental changes to views or changes to air quality. A project could improve amenity in some locations while being reduced in others.

Construction activities associated with the proposal would generate noise and vibration impacts which would potentially adversely impact on residents, businesses and other visitors in the study area if left unmitigated. Sensitive receivers generally relate to residents, but also include schools, child care centres, community, recreation facilities and businesses. Sensitive receivers in the study area are identified in Section 3.5 of this report and shown on Figure 3-2.

The majority of the construction activities would take place from 7am-6pm, Monday to Friday and 8am-1pm Saturday, with no work on Sunday or public holidays. However, certain activities may need to take place outside of these hours due to technical considerations, such as the need to meet particular quality specifications for placement of concrete pavement; safety and traffic management considerations; and/or due to climatic factors. Out of hours noise from construction activities can create considerable distress and disturbance for affected receivers, particularly if unexpected or prolonged.

Any extension to working hours would be subject to notification of the directly affected residents, in accordance with the procedures contained in the *Environmental Noise Management Manual* (ENMM).<sup>24</sup> The Noise and Vibration Assessment<sup>25</sup> prepared for the proposal sets out the out of hours work procedures and notification processes which would be required and these would be included in the safeguards and mitigation measures identified in the REF.

The Noise and Vibration Assessment identifies that residential receivers along the proposal corridor would be expected to experience exceedances of the relevant noise management levels during standard hours of construction as well as outside of standard hours, under worst-case conditions. Night works would also cause exceedances in some areas. The Noise and Vibration Assessment and the REF have detailed construction noise and vibration management measures that would need to be implemented in order to manage the impacts on local residents and other sensitive receivers during construction to the greatest extent possible. It is likely however, that there would be a reduction in amenity for receivers along the road corridor during construction.

Dust would be generated from earthworks associated with construction of the proposed upgrade. The total amount of dust would depend on the silt and moisture content in the soil and the types of activities being carried out. The main sources of dust would be from vegetation clearing, earthworks and associated heavy vehicle movement and stockpiling activities. Safeguards and mitigation measures have been recommended however it is unlikely that the implementation of all reasonable and feasible air quality control measures would reduce construction borne dust completely.

Vegetation clearing required for the proposal would occur early in the construction phase and would have an immediate adverse visual impact which would be experienced by the local community, business employees and road users. Given the natural bush setting of much of the proposal corridor and the value placed by the community on their natural environment, this is likely to be of concern to local residents. The Visual Impact Assessment<sup>26</sup> prepared for the proposal considers both the sensitivity and magnitude of visual impacts at numerous points along the proposal corridor to understand the visual impacts at the local scale as well as the overall impacts. In addition to

<sup>24</sup> RTA (2001) *Environmental Noise Management Manual*.

<sup>25</sup> Pacific Environment (2015) *Mona Vale Road East – Noise and Vibration Impact Assessment*.

<sup>26</sup> HBO+EMTB (2015) *Mona Vale Road Upgrade East: Landscape Character, Visual Impact Assessment and Urban Design Study*.

vegetation clearing, the proposal would result in an increased road footprint and introduce new built features such as retaining walls. The assessment identified that visual impacts are highest in the areas where there is less space available in the corridor for the upgrade work to be implemented, particularly in areas where there is more urban development or where there is heritage significance.

### **5.1.3. Social infrastructure**

Other than traffic delays that may occur at times during construction, the majority of community facilities within and in close proximity to the study area are not expected to be affected by construction activity.

As discussed in the previous section, the Noise and Vibration Assessment identified that a childcare centre on Jubilee Avenue and Boundary Street and the bowling greens at Pittwater Memorial Bowling Club (next to Pittwater RSL Club) would be affected by noise at certain times during construction. Construction activities in the vicinity of the cemetery would also potentially impact on highly sensitive public and private activities at this location. Safeguards and mitigation measures such as temporary screens, respite periods and noise monitoring have been recommended however it is unlikely that the implementation of all reasonable and feasible noise mitigation measures would reduce construction noise completely.

The memorial walls at the cemetery are located along the southern boundary around five metres from the road corridor. The walls contain cremation remains, are highly sensitive to vibration and could potentially be affected by construction activities if not managed appropriately.

Nearby emergency services such as the RFS and ambulances would potentially be affected by road construction works and traffic delays.

### **5.1.4. Travel behaviour**

The proposal would impact on traffic during construction as a result of:

- Reduced speed limits around construction sites
- Increased heavy vehicle and construction machinery movements
- Temporary partial or complete closure of roads, intersections and/or accesses.

This is expected to result in additional delays along Mona Vale Road, particularly during peak hours, which is likely to generate increased frustration for local road users and increased travel times for road users and bus services.

As stated in Section 5.1.1, access to properties along Mona Vale Road would be temporarily affected by construction activities, either through the loss of or alteration to existing access arrangements. This would require longer travel distances for some residents.

#### **Parking**

Up to four parking bays would be removed near the corner of Mona Vale Road and Ponderosa Parade on Lot 1 DP270291. These are part the privately owned car parking area that services the takeaway food outlets, car wash and video store. Parking demand at this location fluctuates over the day and that there is typically a high turnover given the nature of the businesses present. A reduction of four spaces from a total of 80 is not expected to impact on the businesses served by the car park.

There would be no change to the existing prohibition of on-street parking along Mona Vale Road within the study area. There would be no change to the existing on-street car parking arrangements on local roads surrounding the proposal during construction.

#### **Public transport**

Bus routes would continue to operate along Mona Vale Road during construction, however, there would be changes to access and egress functions at junctions with adjoining roads, particularly Ponderosa Parade and Samuel Street. Some bus routes would need to be modified both during and after the construction phase to accommodate the new access arrangements. Reduced speeds and temporary relocation of bus stops would also have a short-term impact on bus services during construction. The temporary relocations of bus stops may require further distances to be walked to and from bus stops which may have an adverse impact on less mobile transport users. Any bus stop relocations would be undertaken in consultation with the relevant bus operators. Further detail on the

proposed temporary changes during construction is provided in the Traffic and Transport Assessment report<sup>27</sup>.

#### **Pedestrians and cyclists**

Currently pedestrians do not have access along Mona Vale Road through the escarpment area. Cyclists are limited to the hard shoulder. Pedestrian access during construction would be maintained where existing footpaths are located.

### **5.1.5. Business and industry impacts**

Construction activities would primarily be located along Mona Vale Road and would have minimal direct impact on local businesses and industry. There is the potential for indirect impacts as a result of traffic delays. Alternative access to the Business Park is available via Vineyard Street or McPherson Street through to Pittwater Road which would likely serve to offset some traffic delays and driver frustration.

The construction phase would generate a number of jobs. Construction worker expenditure would benefit local businesses in the vicinity of the upgrade, such as cafes and takeaways in the Warriewood Business Park and in the Mona Vale shopping centre. The expenditure would have flow on effects to other businesses in each area. This is a benefit of the proposal.

### **5.1.6. Tourism and recreation impacts**

Construction of the proposal is expected to have some adverse impacts on congestion and travel speeds at times. While this would potentially have a minor indirect impact on tour operators travelling to and from the Pittwater area, it is likely to be minimal and manageable. It is expected to have little effect on tourist attractors in the immediate vicinity.

Other than potential traffic delays at certain periods, the proposed construction activities are not expected to interfere with either access to or use of recreational areas within or in close proximity to the study area.

### **5.1.7. Community values**

As discussed in Section 5.1.2, construction of the proposal is likely to adversely impact on local visual amenity through the vegetation clearing and presence of construction activities. Given the identified community values relate to their natural environment, it is likely that there would be some adverse perceived impacts on community values through the construction phase. This is an unavoidable short-term impact associated with any infrastructure upgrade project.

### **5.1.8. Cumulative impacts**

Other construction projects in the surrounding area, including road upgrades, may lead to the potential for road users to experience cumulative impacts during the construction of the Mona Vale Road East upgrade. The Northern Beaches Hospital and associated road network upgrades at Frenchs Forest have been announced and will involve substantial work on Warringah Road and Forest Way. Warringah Road is the other primary east-west connection on the Northern Beaches and Forest Way provides a north south connection between Mona Vale Road in the north and Warringah Road in the south. It is also likely that kerbside Bus Rapid Transit upgrades will be implemented along Pittwater Road in the same time period. The resulting potential delays on all major routes through the northern beaches is likely to lead to frustration for all road users, including public transport users, and has the potential to encourage changes to travel patterns while these projects are under construction.

### **5.1.9. Summary of construction impacts**

In summary, the following construction impacts have been identified:

- The expanded footprint would require the acquisition of three full lots and 19 partial lots
- Temporary noise, dust and visual impacts for local residents are likely

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<sup>27</sup> AECOM (2015) *Mona Vale Road Upgrade East – Traffic and Transport Assessment*.

- Additional traffic delays during construction are likely to have an indirect impact on accessibility to social infrastructure, tourism and recreation and business and industry
- Construction activities outside the cemetery could potentially impact on highly sensitive public and private activities at this location
- Construction vibration could potentially impact on the memorial walls at the cemetery if not managed appropriately
- Temporary diversions of public transport routes, and temporary relocations of bus stops would be required
- Additional traffic delays are likely as a result of the cumulative impacts of nearby road upgrade projects planned in the same period.

## **5.2. Operational phase impacts**

### **5.2.1. Property impacts**

Access to around 10 residential properties on Mona Vale Road between Emma and Foley Streets would be restricted left in/left out movements only once the proposal becomes operational. The changes to travel behaviour are discussed in Section 5.2.4 below. This would result in some adverse impacts on these properties however it is considered that the improvements in road safety and easing traffic congestion achieved by the proposal would offset this impact.

The proposal would provide improved accessibility along Mona Vale Road and contribute indirectly to the attractiveness of the Ingleside Land Release Area for future property development.

### **5.2.2. Amenity impacts**

Once operational, traffic would be shifted closer to some residential dwellings along the proposal corridor which would contribute to increased noise levels at some locations. Furthermore, once the adjacent Mona Vale Road West upgrade is completed, the posted speed limit along the combined corridor would be increased from 70 kilometres per hour to 80 kilometres per hour. Traffic volumes are generally also expected to increase along Mona Vale Road as a consequence of urban growth. Consequently it is predicted that there would be around 30 residential receivers, one child care centre and one active recreation area at the bowling club that would require investigations with regards to mitigation measures such as architectural treatments.

The proposal would increase the carrying capacity of Mona Vale Road and in doing so would relieve existing congestion. Vehicle emissions in general would still contribute to local air quality levels however generally it is expected that the proposal would generate a positive outcome for local air quality in peak periods.

As discussed in Section 5.1.2, the proposal would result in loss of vegetation along the road corridor during construction and operation as a result of the increased road footprint. The proposal would also introduce new cuttings, retaining walls and culverts. This would result in a larger presence of built infrastructure in the natural bushland setting. Generally the proposal would result in a reduction in visual amenity for local residents, businesses and road users. However, the design of the proposed retaining walls has been inspired by the sandstone cuttings that are already a defining characteristic of the Mona Vale Road route. Overall the design has been developed in response to the local site in order to improve the aesthetic outcomes of the proposal.

It is expected that with the implementation of the proposed mitigation measures, the visual impact of the proposal and the resulting changes in amenity would be acceptable for local residents, businesses and road users and would be offset by the improvement in traffic congestion and travel times that would be experienced by all road users and in particular local residents who use it daily.

No regional or district views would be affected by the proposal. Further detail on visual amenity impacts and mitigation measures can be found in the Landscape Character, Visual Impact Assessment and Landscape Design report.<sup>28</sup>

As a busy main road, Mona Vale Road already presents a degree of severance in the community. The volume and speed of traffic does not encourage connections across the road, effectively operating as

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<sup>28</sup> HBO+EMTB (2015) *Mona Vale Road Upgrade East: Landscape Character, Visual Impact Assessment and Urban Design Study*.

a barrier to social connections. The land use patterns to the north and south of the road also contribute to a lack of social connection across the road. Consequently it is not expected that the upgrade of Mona Vale Road to a four lane road would contribute to a further break down of social connection.

### **5.2.3. Social infrastructure**

Once operational, the proposal is expected to have a positive indirect impact on social infrastructure in the wider community.

Access for workers and patrons of community facilities, particularly in the northern part of the Warriewood Business Park, would improve with a signalised intersection and associated slip lanes at the intersection of Mona Vale Road and Ponderosa Parade.

Improved traffic flows on Mona Vale Road are likely to benefit local schools e.g. Mona Vale Public School and Sacred Heart Catholic Primary School in Bungan Street, Mona Vale, and the Mona Vale town centre itself.

There would be no negative impacts on community services, facilities and networks due to property acquisition or a need for services, facilities and networks to relocate.

Social infrastructure with frontage to Mona Vale Road i.e. the Mona Vale General Cemetery and Pittwater RSL Club, is expected to continue to operate with little to no impact. There would be a loss of some vegetation to the frontage of the cemetery, but the heritage-listed gates and the cemetery itself would be unaffected. The main entrance to the cemetery is away from Mona Vale Road, on Fazzolari Avenue, and the main concentration of operational activity is located near this entrance.

As a result of the increased road footprint required for the proposal, a corner of the RSL site, which contains RSL signage, a field artillery piece and memorial plaques, would be impacted. These items would be relocated elsewhere on the RSL site, in consultation with the Club. Memorial Corridor plantings are proposed for both sides of Mona Vale Road in the vicinity of the RSL to maintain and improve the existing vegetated character of this area. Overall, it is expected that the proposal would have minimal impact on the RSL Club which would be offset by improved accessibility for patrons and staff.

There are otherwise no amenity impacts anticipated for social infrastructure during operation of the proposal.

### **5.2.4. Travel behaviour**

The proposal would result in improved traffic flow and more efficient travel times within the study area. Congestion has substantial social economic effects because it affects the ability of people get to work, access educational activities, access recreational opportunities and spend time with their families and friends. Overtaking lanes would increase safety and efficiency for B-double and freight vehicles, and the widening of the road to two lanes in either direction would provide opportunities for general vehicles to overtake heavy vehicles safely.

Traffic modelling indicates that the proposal would be able to adequately accommodate the future population growth from the Ingleside Land Release Area and the adjoining Mona Vale Road West upgrade.

With the removal of right turn movements into and out of Emma Street, a number of alternate routes would need to be utilised:

- Vehicles currently utilising this intersection to exit westbound would need to use Oliver Way, Samuel Street or Bungan Street. This could add up to 2.2 kilometres to the journey for some residential dwellings should they not wish to use the Oliver Way intersection
- Vehicles currently utilising this intersection to enter Emma Street from the east would need to use Oliver Way, Samuel Street, Bungan Street or Foley Street / Ponderosa Parade. This could add up to 2.2 kilometres to the journey for some residential dwellings should they not wish to use the Oliver Way access or Foley / Ponderosa route.

Although there may be additional journey time for some residents as a result of the Emma Street access operating as a left in / left out, the overall time taken to travel to their destinations is likely to be shorter than if signals were provided to retain all movements.

The construction of a central median would affect access to and from ten dwellings on the northern side of Mona Vale Road between Emma and Foley Streets (ie access from the east or egress to travel west). For trips from the east, access would be via right turn to Oliver Way and then via Emma Street resulting in a maximum additional travel distance of about 920 metres. For trips heading west, these properties would need to travel east along Mona Vale Road, turn right into Foley Street and then travel via Jubilee Avenue and Ponderosa Parade before re-joining Mona Vale Road. This alternate route would have a maximum additional travel distance of about 700 metres.

### **Parking**

There would be no changes to the existing arrangement of no parking along Mona Vale Road during operation.

### **Public transport**

The proposed changes to public transport facilities include:

- Relocation of the eastbound bus stop on Mona Vale Road, near the Ponderosa Parade and Samuel Street intersection, about 250 metres further east
- Provision of bus priority lanes on Mona Vale Road on approaches to and departures from the intersection of Ponderosa Parade and Samuel Street.

The proposal would remove one eastbound and one west bound bus stop located along Mona Vale Road between Lane Cove Road / Manor Road and Daydream Street. These stops were informal (no bus bays and serving only a small number of properties) and would no longer be feasible with the proposed upgrade as they would present an impediment to vehicle speeds. The property on the northern side of the road would be able to access the proposed shared path and walk to the next bus stop however access for the properties on the southern side of the highway would be permanently removed as there is no footpath provision along this section of Mona Vale Road proposed. The current usage of these bus stops is not known.

There would be no negative impacts to existing bus routes 196 and 197. The relocation of the bus stop near the intersection of Ponderosa Parade and Samuel Street would move the bus stop closer to the newly signalled intersection, providing improved safety and convenience for public transport users. Passengers from the northern side of Mona Vale Road are likely to access the bus stop via Samuel Street. It would improve safety and accessibility to the Warriewood Business Park area and would likely discourage informal crossing of busy Mona Vale Road by pedestrians at this location. Relocation of the bus stop also removes the need to impact adversely on the cemetery as additional land acquisition would be required if it were to be retained in the current location. The provision of bus priority lanes at the intersection of Ponderosa Parade and Mona Vale Road would improve the reliability of bus services.

Transport for NSW advice indicates that additional bus services would be implemented to service development along the Mona Vale Road corridor between Mona Vale and Macquarie Park including existing and new development along the corridor such as the Ingleside Release Area. Any new services would benefit from the increased capacity the proposal provides.

### **Pedestrians and cyclists**

The proposal would provide benefits to pedestrians and cyclists as follows:

- Provision of three-metre wide shoulders along the length of Mona Vale Road between Manor Road and Foley Street to allow for breakdowns and on-road cyclists. This would improve safety for cyclists and allow Mona Vale Road to operate as a regional cycle route
- Provision of a 3.5 metre wide shared path (pedestrians and cyclists) on the southern side of Mona Vale Road between Ponderosa Parade and Foley Street, providing improved access to the Pittwater RSL
- Provision of a multi-use path between Lane Cove Road, at Ingleside, and Walana Crescent in Mona Vale. This path would cater for cyclists and pedestrians and potentially horse riders. Details of the multi-use path are not yet available however it is expected to be provided away from the busy Mona Vale Road corridor, and closer to the Katandra Bushland Sanctuary, due to the steep descent from the Warriewood Escarpment. This connection would provide future Ingleside residents with a shorter walking route to the Mona Vale town centre and responds directly to one of the most important recreation activities, i.e. walking, articulated by Pittwater residents

- Retention of existing pedestrian paths on the northern side of Mona Vale Road between Samuel and Foley Streets
- Provision of a signalised intersection at Ponderosa Parade, providing safer access for pedestrians and cyclists across Mona Vale Road.

The augmentation of shared cycle and pedestrian pathways as part of the proposal is consistent with the Pittwater Walks and Rides Masterplan<sup>29</sup> and will contribute to improved active transport options in this section of Pittwater LGA.

### **5.2.5. Business and industry impacts**

It is expected that business opportunities in the area would be enhanced by the proposal due to regional economic effects, improved connectivity and reduced travel times. The climbing lanes are expected to provide improved safety and efficiency for B-double and freight access along Mona Vale Road, and the widening of the road to two lanes in either direction would improve travel times for workers, suppliers and customers. The proposed intersection upgrade at Ponderosa Parade and Samuel Street would result in safe and efficient access for heavy good vehicles to the Warriewood Business Park area. Impacts on parking at the takeaway food area on the corner of Mona Vale Road and Ponderosa Parade are discussed in Section 5.1.4.

Acquisition of land within SP70187, Lot 1 DP270291 and Lot 119 DP135512 would not directly impact business operations at these locations – refer to discussion in Section 5.1.1. Acquisition of land from the Pittwater RSL Club's site would require the relocation of signage, memorial and plaques. Roads and Maritime would cover the costs of relocating these items elsewhere on site. The proposed land partial acquisition would not affect club operations.

The proposed upgrade of the existing signalised T-intersection at Foley Street and Mona Vale Road to provide a westbound left turn lane into and out of Foley Street would benefit patrons and employees of the Pittwater RSL Club, as well as customers and employees in businesses accessed off Foley Street.

As identified in Section 5.1.4, the proposal would require the removal of up to four parking spaces located on private property at a fast food centre on the corner of Ponderosa Parade and Mona Vale Road. The minor loss of parking is not expected to have an adverse impact on the businesses which operate at this location.

The existing vegetation screening between the majority of businesses fronting Mona Vale Road, particularly within the Warriewood Business Park would be removed as a result of the proposed upgrade. This would result in some additional exposure to traffic noise and a reduction in visual amenity. The landscaping plan would include replacement plantings where possible, however it would take some time to re-establish the new vegetation to a suitable height and density.

### **5.2.6. Tourism and recreation impacts**

Once operational, the proposal is expected to improve travel times and road safety along Mona Vale Road which would indirectly benefit tourism operators in the Northern Beaches area and improve community access to local recreational spaces.

### **5.2.7. Community values**

Demographic analysis indicates the area is a well-established, family oriented area with high private vehicle ownership and dependence on cars for transport. The local community is likely to be reasonably resilient to change.

The proposal would result in some loss of native vegetation which contributes to the natural setting valued by the community. Community concerns around fauna protection and impacts on the natural environment have been considered in the design development and mitigation measures have been identified to minimise these impacts through new landscaping and planting where possible.

Consultation activities undertaken for the proposal to date have indicated that generally the community are satisfied with the proposal and how Roads and Maritime proposes to address safety, road capacity and the environment. There is a general acknowledgement across the community that the congestion issues on Mona Vale Road are of great concern and need to be urgently addressed.

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<sup>29</sup> Pittwater Council (2012) Pittwater Walks and Rides Strategy Masterplan.

## **5.2.8.Cumulative impacts**

Once operational, the various improvements to the road network identified in Section 5.1.8 would complement each other in addressing congestion and servicing growth in the region. This would be a positive benefit for the local community and for all road users.

## **5.2.9.Summary of operational impacts**

The following impacts during operation have been identified:

- Changed access arrangements for some properties along Mona Vale Road or users of Emma Street
- Increased noise impacts at a number of properties that would potentially require architectural treatment
- Reduced visual amenity as a result of the increased road footprint
- Benefits to social infrastructure facilities, local businesses and industry, and tourism and recreation facilities as a result of reduced congestion
- Improved safety and accessibility for public transport users at Samuel Street through the relocation of the bus stop closer to the signalised pedestrian crossing
- Improved pedestrian and cyclist provision
- Vegetation clearing associated with the proposal would result in a minor adverse impact on the natural environment valued by the local community.

## 6. MITIGATION MEASURES AND STRATEGIES

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

### 6.1. Construction phase

#### Property impacts

- Land acquisition would be undertaken in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* and Roads and Maritime policies.
- Consultation with potentially affected property owners would be undertaken as early as possible.
- The requirements for adjustments for internal driveway access to Lot A DP372094 would be determined during the detailed design phase.
- Roads and Maritime would undertake and pay for the relocation of signage, field artillery piece and memorial plaques at the Pittwater RSL Club in consultation with the RSL.

#### Amenity impacts

- A construction noise and vibration management plan (CNVMP) would be prepared and implemented in accordance with Roads and Maritime guidelines. The CNVMP would detail the “best practice” construction methods to be used, presenting a reasonable and feasible approach.
- The CNVMP would also detail the community engagement activities that are planned, which would include prior notification procedures, regular updates on noise intensive activities and consideration for provision of alternative arrangements for affected residents, such as temporary relocation. Any extension to working hours or prolonged out of hours works would be agreed with directly affected residents, businesses or community users in accordance with the ENME.
- The CNVMP would include specific measures to monitor vibration impacts at the cemetery.

#### Traffic impacts

- A Construction Traffic Management Plan (CTMP) would be prepared in accordance with Roads and Maritime’s *Traffic Control at Work Sites Manual* (2003), and approved by Roads and Maritime prior to implementation.
- The CTMP would include measures to:
  - Manage traffic staging during construction
  - Ensure continuous, safe and efficient movement of traffic for both the public and construction workers
  - Maintain the capacity of local roads
  - Implement temporary speed restrictions around work zones
  - Maintain access to local roads and properties including businesses
  - Manage temporary changes to bus stop locations and routes
  - Minimise road user delays and frustrations where possible, such as additional signage and information.
- The TCP would include requirements for ongoing consultation and notification with emergency services providers and ensure access is maintained at all times.
- Should temporary or alternative property access be required, this would be provided in consultation with the affected landowner(s).
- Work would not be carried out on public holidays or over the Christmas and New Year holiday period. Traffic Control Plans would address peak tourist/holiday traffic periods such as Friday and Sunday afternoons and days immediately prior to and following public holidays.
- Opportunities would be investigated to construct the off-road multi-use path link along Lane Cove Road as early as possible.

#### Community consultation and communication

- The TCP would include a construction communications plan including requirements to provide details and timing of proposed activities to affected residents, 24 hour contact name and number

- for complaints and details of a notification plan for changed conditions during the construction period.
- The construction communications plan would establish processes to ensure that the community and local businesses are provided with sufficient information to enable them to understand the likely nature, extent and duration of all construction activities.
  - The construction communications plan would include procedures for individual notification with directly impacted residences, businesses, emergency services, utility authorities, transport industry groups and government stakeholders.
  - The construction communications plan would be prepared in accordance with Roads and Maritime's *Community Participation and Communications Manual* (2010).
  - Activities which would require updates to the community would include:
    - Changes to access and traffic conditions
    - Details of future work programs
    - General construction progress.
    - Travel behaviour

## 6.2. Operational phase

### Amenity impacts

- Opportunities to include additional screen planting on alignment verges to mitigate potential visual impacts of new built features such as retaining walls and the arrester bed in the vicinity of Walana Crescent would be included in the Landscaping Strategy.
- Opportunities to improve noise outcomes for the proposal, such as through a reduction in posted speeds, would be explored further in detailed design.
- The Landscape Strategy would include details of plantings to replace screening vegetation along the proposal corridor where possible.

### Social infrastructure

- Vegetation lost to the frontage of the Mona Vale General Cemetery would be replaced.

### Travel behaviour

- Signage would be introduced to notify new speed limits, steep descents and no right turns into and out of Emma Street.

### Business and industry impacts

- Memorial Corridor plantings on both sides of Mona Vale Road in the vicinity of the Pittwater RSL Club would be installed to maintain and improve the existing vegetated character of the area.

## 7. CONCLUSION

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This report has identified and assessed the potential socio-economic impacts associated with the proposed upgrade of Mona Vale Road between Manor Road, Ingleside and Foley Street, Mona Vale. The assessment has had regard to the existing context of the proposal, the contribution other specialist studies, outcomes from community consultation, and the adoption of appropriate mitigation measures.

The proposal is expected to result in considerable improvements to traffic flow, travel times and safety for freight vehicles, buses and private users. It would provide for increased pedestrian and cycling opportunities, activities which are highly valued by the local community.

The proposed upgrade has been designed to minimise impacts on property to the greatest extent possible. The proposal would require the acquisition and demolition of one dwelling, that has already been acquired, and a shed. All property acquisitions would be negotiated in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.

The proposal is expected to have some impacts on visual amenity, largely in the creation of cuttings, retaining walls, culvert structures and removal of vegetation. Where possible, significant trees would be retained and new plantings would attempt to assist in mitigating these impacts. Any loss of amenity would be outweighed by the significant benefits of upgrading the road.

Improved traffic flows along Mona Vale Road would benefit workers and patrons of community facilities, particularly in the northern part of the Warriewood Business Park, local schools immediately outside the study area and the Mona Vale town centre. Social infrastructure fronting the road is expected to be largely unaffected by the upgrade; the Mona Vale General Cemetery has alternate access and structures required to be relocated on the Pittwater RSL Club site would be relocated elsewhere on the property.

Restrictions to turning movements at Emma Street and to properties on Mona Vale Road in the vicinity of Emma Street would result in a small increase in travel times for some residents. A number of alternative routes are available. The impact on these properties would be offset by improved road safety for all users and improved provision for pedestrians and cyclists within the study area.

The proposal would benefit business and industry through improved travel times, safety and connectivity. These benefits are expected to outweigh the loss of four parking bays to the fast food complex at the intersection of Mona Vale Road and Ponderosa Parade which, in turn, is not expected to affect business operations at this location.

The community values the natural environment they live in, however they also recognise that traffic congestion and accessibility are important issues that impact on their way of life. There is a general acknowledgement across the community that the congestion issues on Mona Vale Road are of great concern and need to be urgently addressed.

The impacts on the community as a whole are not expected to be significant. Uncertainty is an impact that would be felt mostly before and during the construction stage, but can be eased by a co-ordinated and regular communication program.

Where necessary, mitigation measures are recommended to address negative impacts of the upgrade, at Section 6 of this report.

Overall, the social and economic benefit of the proposal is expected to outweigh any negative impacts that cannot be satisfactorily mitigated.

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