7.10 Socio-economic

This chapter provides an assessment of social and economic impacts that were nominated in the DGRs as key environmental issues for the project. It represents a summary of the *Socio-economic Technical Paper* (AECOM and RM Planning, 2012) that was prepared for the project with consideration of the DGRs.

The technical paper is provided at **Appendix M.** The relevant extract from the DGRs is presented below.

Director-General's requirements	Where addressed
Directly affected properties and land uses adjacent to the project, including: impacts to land use viability and future development potential, property allotment, land sterilisation and severance impacts.	Section 7.9.2 Section 7.10.3
The agricultural sector taking into account the fragmentation and potential loss of agricultural and farm viability including internal and external farm access arrangements both during construction and operation of the project.	Section 7.9.2 Section 7.10.3
Local community socio-economic impacts associated with access, land use, property and amenity related changes.	Section 7.10.3
Business impacts including the overall viability, profitability, productivity and sustainability of businesses in the township of Berry associated with changes to route alignment.	Section 7.10.3
Impacts on recreational fishing access and opportunities in Broughton Creek, Broughton Mill Creek and Bundewallah Creek.	Section 7.10.3

7.10.1 Approach to assessment

Study area

In the context of the socio-economic assessment, the study area includes the project, as well as Berry, the lands immediately adjacent to the project, and the wider catchment as it relates to current usage of the Princes Highway.

Most of the study area lies within the Shoalhaven local government area (LGA). Around a third of the study area between Toolijooa Road and the third Broughton Creek bridge lies within the Kiama LGA.

Methodology

The approach to this assessment used quantitative as well as qualitative data. Key stakeholder issues and community values were identified during project consultation and interviews with property owners and a survey of local businesses were conducted.

The study area was profiled by examining the data from the Census Collection Districts (CCDs) of Broughton Vale, Broughton Village, Jaspers Brush and Rose Valley. Data for socio-demographic indicators were generally from the 2006 Census. A complete set of Census 2011 data was not available at the time the assessment was prepared.

Economic data was collated from surveys of local businesses conducted by AECOM in 2008 and 2011. Information was also sourced from a report, *Princes Highway Upgrade – Economic appraisal of Gerringong and Berry Town Access Arrangements* by SGS Economics and Planning (November 2008). The purpose of this report was to appraise the various town access arrangements for Berry and Gerringong from an 'economic impact' point of view. In so doing, it estimated the likely change in business turnover in the two towns resulting from the progressive Princes Highway upgrade.

The socio-economic impact assessment also drew upon evidence of reported socio-economic impacts experienced by other bypassed towns. This involved analysis of the potential project impacts with reference to the following documents:

- Bureau of Transport and Communications Economics 1994, Working Paper 11. *The Effects on Small Towns of Being Bypassed by a Highway: A Case Study of Berrima and Mittagong*.
- Urban Regional Planning Program, University of Sydney 2005, *The Karuah Highway Bypass, Economic and Social Impacts: The 1 Year Report*.
- Urban Regional Planning Program, University of Sydney 2009, *The Karuah Highway Bypass, Economic and Social Impacts: The 5 Year Report*.
- NSW RTA and University of Sydney, 1996, *Evaluation of the Economic Impacts of Bypass Roads on Country Towns: Final Report*.
- NSW RTA and University of NSW 2011, *Economic Evaluation of Town Bypasses: Review of Literature*.

7.10.2 Existing environment

The study area is strongly defined by physical, economic and social characteristics. The physical qualities of the rural environment derive from their agricultural capability as well as their scenic qualities. The region has high value agricultural capability and has become a draw for tourists. The lifestyle forged by the physical characteristics and community facilities have made the region an attractive place to live and this lifestyle is highly valued by the local community.

The assessment of the existing social and economic environment in the study area considered:

- The demographic profile.
- The economic environment, including a profile of the following industries and businesses:
  - Agricultural businesses.
  - Tourism businesses.
  - Businesses within Berry.
- The character of the community.
- The values of the community.
- Travel patterns.
- Recreation and community facilities.

Demographic profile

The study area has a homogenous and ageing population. A large proportion of the population is within the over 65 age group: 29.2 per cent compared with 13.8 per cent across NSW. The study area enjoys a lower than average unemployment rate, with the most common industries of employment being the retail and health care sectors. The bulk of jobs are located in Berry. The study area population is heavily dependent on motor vehicles for transport.

Some key social and demographic characteristics of the study area are as follows:

- The population of the study area, as well as that of Berry, declined between 2001 and 2006, whereas there was a marginal increase in the Shoalhaven LGA. Population forecasts for the Shoalhaven LGA show modest growth between 2011 and 2036 (NSW DP&I, 2010).
- The median age of Berry's population was 49 in 2006, whereas it ranged between 45 and 51 in the rest of the study area. The median age was 37 in NSW. Median age increased in the study area, Berry and Shoalhaven between 2001 and 2006 with a comparatively high proportion of the population aged 65 and over.
- Indigenous population in the study area was comparatively low in 2006 (0.7 per cent) and has been declining since 2001.
- The study area, including Berry and the Shoalhaven region, was largely homogeneous with more than 90 per cent of the population speaking English at home.
- Almost half (49 per cent) of the study area's workforce was employed in full time occupations in 2006, compared to 53 per cent of the Berry workforce, 51 per cent in Shoalhaven LGA and 61 per cent in NSW. Over a third (35 per cent) of the study area's workforce was employed in part time occupations, compared to 38 per cent in Berry. These proportions are higher compared to Shoalhaven LGA (34 per cent) and NSW (27 per cent). The study area's unemployment rate was four per cent compared to five per cent in Berry. This is low when compared to the rate of nine per cent in the Shoalhaven LGA and six per cent in NSW.
- About 40 per cent of jobs in Berry were concentrated in the retail, health care, accommodation and food services sectors. Comparable figures for the study area, Shoalhaven LGA and NSW are 32 per cent, 35 per cent and 28 per cent respectively. Much of this employment was related to servicing the tourist sector, while the prominence of the healthcare and social assistance services sector, coupled with an ageing population, suggests a link to the retiree market.
- Median weekly household income in Berry was $789 compared to $659 in Shoalhaven LGA and $1036 in NSW. The study area range is $700 to $1266.
- The vast majority of the study area's population used a car to go to work, as is the case with residents of Shoalhaven LGA.

Economic environment

The economic profile of the study area is generally dominated by agricultural and tourism industries. Businesses within Berry are also an important component of the economy of the study area.

Agricultural businesses

Agricultural land within the study area is used for dairy and beef production, viticulture, goat rearing, livestock feed (grasses), turf farming and horse agistment, with the largest economic contributions being from the dairy and beef industries. Dairy farms within the study area supply the Berry Rural Cooperative, which employs a total of 28 people across the organisation.

The different types of agricultural land uses and the classifications of the agricultural land within the study area have been discussed in **Section 7.9**. Agricultural land within the study area is generally suitable for a wide variety of agricultural uses, including regular cultivation. However, certain areas within the study area, especially the area around Broughton Village, are only suitable for grazing.

Agriculture businesses within the study area generally involve dairy, including Berry Rural Cooperative suppliers, and beef cattle farming, as well as horse agistment, goat rearing, turf production and silage.

Tourism

Tourism is an important driver of the economy of the South Coast Region. Almost a quarter (about 24 per cent) of all businesses in the region are in the tourism sector. This is greater than the national average which was 20.2 per cent in June 2009. Employing businesses, which employ staff as opposed to sole traders, comprise 54.8 per cent of all tourism businesses in the region, compared to the national average of 39.7 per cent.

In the year ending June 2011, the Shoalhaven LGA received 1.2 million domestic visitors and 421,700 visitor nights, an increase of 11 per cent over the previous year. By comparison, the South Coast Region (from Helensburgh to the Victorian border) recorded 2.9 million visitors while NSW recorded 24.1 million visitors during this period.

In the year ending 30 September 2011, international visitation to the area increased by 13 per cent, with expenditure in excess of $190 million by foreign visitors. Domestic overnight and day visitors to the area injected $617 million into the local economy, supporting 6000 jobs.

The tourism sector is therefore important to the study area both in terms of economic activity and job creation.

Businesses within Berry

Berry has a number of businesses that cater both to the tourist and local markets. There are 105 businesses in Berry of which 34 were likely to cater to locals only and the remaining 71 businesses are those that would serve locals, tourists and motorists passing through the town (SGS Economics and Planning, 2008). Further surveys by AECOM in 2008 and 2011 of businesses catering to passing motorists, tourists and locals, confirmed these proportions. The survey undertaken by AECOM in 2008 showed that retail businesses, representing the majority of Berry businesses, considered that less than 15 per cent of their turnover resulted from through traffic. Businesses most reliant on this form of trade were petrol stations, with 70 to 75 per cent of their turnover earned from this source. Accommodation businesses and food and beverage businesses considered that 24 per cent and 20 per cent respectively of their turnover resulted from through traffic.

The literature review of bypassed towns found that businesses that are most likely to be impacted by a bypass include service stations, some retailing, takeaway food and restaurants. The only accommodation category similarly impacted was budget priced motels and this occurred in one instance only (Mittagong). Businesses that served a resident community and hinterland were not adversely affected.

General trends for businesses within Berry included (SGS Economics and Planning, 2008):

- Customers came primarily from the north (Wollongong and Sydney) but some shops reported a smaller number of customers coming from the south.
- Berry is a destination town and many people travel there for shopping, food and browsing.
- People who come to Berry as a destination tend to stay longer in the town, often on a day trip, and spend more than people who stop briefly on their way through the town.
- More people visit and pass through Berry on weekends than weekdays.
- 'Long haul' highway travellers were not often mentioned, indicating that the bulk of trade was from people with a destination in the region.

Community character and cohesion

Community cohesion generally refers to intangible concepts such as a sense of belonging, attachment to a group, willingness to participate in activities and to share in outcomes. In a cohesive community, residents have a sense of belonging and feel a strong attachment to the community and their neighbours. The physical environment, including transport infrastructure, plays an important role in fostering or obstructing community cohesion.

The study area is predominantly rural in character, consisting mainly of large lot agricultural holdings. Agriculture has traditionally been dominated by the dairy industry, but more recently wineries and equestrian activities have become more prominent in the sector.

Existing physical connections and linkages in the study area, and particularly within Berry, are instrumental in shaping current community cohesion. Existing paths of travel by vehicle, bicycle and on foot are seen as critical by the local community to maintaining this current community cohesion, which also contributes to the community character of the town. Access to existing community infrastructure (educational facilities, health services, places of worship, etc.) is also seen as fundamental to creating and maintaining a sense of community cohesion and wellbeing.

Berry's community infrastructure consists of several educational facilities, health services, places of worship, community centres, arts and entertainment facilities, emergency services, open space, sporting and recreation facilities, and clubs.

Foxground and Broughton Village were small but active communities in the early and middle part of the twentieth century. As Berry became the dominant urban centre in the study area from the 1970's, these communities entered a period of decline as people moved away and community facilities closed given the lack of sufficient demand. However, friendships remain between farming families that settled in the area. The Toolijooa community has become stronger in recent years but remains a minor settlement.

Community values

From community consultation undertaken over the past five years during the route selection process and planning for the project (refer to **Chapter 6** for further details), it is clear that the local community values the high quality and intrinsic beauty of the surrounding rural environment and considers it an economic asset. This is because it draws tourists to the area as well as providing productive agricultural land. The community also highly values the existing community, recreation and open space facilities in the town. These elements make up the lifestyle qualities that have attracted people to the region.

Travel patterns

The Princes Highway is the major route for road traffic between Sydney and the South Coast. Over 80 per cent of traffic using this highway, within the study area, is through traffic. Since the Highway passes through Berry, all through traffic, including heavy vehicles, must pass through the town. Between 70 and 75 per cent of traffic passing through Berry does not stop (refer to **Section 7.1**).

The local road network within Berry currently consists of two access points between Berry and west Berry. One access is via the intersection of Queen Street and Kangaroo Valley Road and the second access is via North Street. There is direct access between North Street and Kangaroo Valley Road.

Within the broader study area, there is currently direct access from local roads and property access roads to the highway. Left hand and right hand turns are generally able to be made to and from the highway from local roads and property accesses.

Cyclist and pedestrian access

Within Berry, North Street is a popular pedestrian and cyclist route. North Street is used by pedestrians and cyclists to travel between Berry and west Berry. It is also used to access local recreation facilities such as the Camp Quality Memorial Park, Berry sportsground and Berry Riding Club.

Outside of Berry, there are limited opportunities for pedestrian movement along the Princes Highway within the project. This is due to the significant travel distances between towns coupled with the high speed limits along the highway.

There are no formal cycle specific facilities in Berry but Shoalhaven City Council promotes various cycle routes to and from Berry utilising the Princes Highway and other local and regional roads (for example Berry to Seven Mile Beach via the Princes Highway, Tannery Road and Beach Road, and Berry to Kangaroo Valley via Berry Mountain (AECOM 2011b)).

The proposed 1400 kilometre coastal cycleway stretching from the Queensland border to the Victorian border includes a section within the study area that follows the route of the Sandtrack. The Seven Mile Beach route described above connects Berry to the coastal cycleway. The purpose of the cycleway program is to deliver more sustainable transport choices, increase tourism, provide better coastal recreation access and grow bicycle-tourism industries. It is largely funded by RMS and implemented by local government, and has already resulted in over 330 kilometres of the route being constructed or committed to in the form of shared pedestrian and cycle paths or on-road cycle lanes along local streets. There are opportunities for Shoalhaven and Kiama Councils to apply for grants to improve the route for cyclists. There is also the opportunity to expand the network beyond the coastal cycleway utilising the road and rail network (refer to **Section 7.1**).

Recreation and community facilities

Berry has a wide range of community facilities and assets including places of worship, sporting grounds, recreational facilities, educational establishments and essential facilities and services. Many of these facilities were provided when the town was first established, including the old court house, hospital, post office and police station. Community facilities within Berry include:

- Berry community activities centre, which houses the Berry school of arts, Berry community cottage and coordination activities for the Berry country fair.
- Berry showground, which is the location of the Berry agricultural show and the Berry country fair.
- Berry sports and recreation centre.

Recreation within the study area is facilitated by the abundant natural features. Common recreational activities within Berry and the surrounding area include:

- Walking, jogging and cycling along North Street.
- Passive recreation in the many parks, rest stops and lookouts.
- Active recreation at the horse riding facilities, sporting facilities and grounds within Berry.
- Fishing at local creeks. Fishers generally visit Broughton, Bundewallah, Connollys and Broughton Mill creeks, which are accessed from road bridges.

7.10.3 Assessment of potential impacts

Socio-economic impacts would occur during the construction and operation phases of the project. As discussed in **Section 7.10.1**, a number of studies were used to assess the likely impacts of the project, especially the bypass of Berry.

Construction impacts

Potential positive and negative socio-economic impacts from construction of the project would result from the following physical changes that would occur within the study area:

- Changes in amenity. This would include increased noise and vibration, adverse changes to views and a reduction in air quality. Further details are provided in **Section 7.2**, **Section 7.6** and **Section 8.2**.
- Changed traffic conditions and access arrangements. This would include the temporary closure of Kangaroo Valley Road, purchasing and leasing of land, partial closure or temporary access to local roads and provision of temporary access to some properties. Further details are provided in **Section 7.1** and **Section 7.9**.

The construction phase would give rise to the following socio-economic impacts:

- Amenity impacts.
- Economic impacts, including impacts to the agricultural and tourism sectors as well as businesses in the township of Berry.
- Impacts on traffic conditions.
- Impacts to community cohesion.
- Impacts to community assets and recreation.

Amenity impacts

Amenity impacts during construction of the project would include any factors that affect the ability of a resident, visitor or business owner to enjoy their home and daily activities. Amenity impacts during construction of the project are discussed in detail in **Section 7.2**, **Section 7.6**, **Section 7.9.2** and **Section 8.2**.

Noise impacts during construction would be temporary in nature and would generally occur during daytime hours. Normal working hours are from 7am-6pm, Monday to Friday and 8am-1pm Saturday. When required, works would be carried out during extended hours. Based on consultation undertaken with affected residents, there is general support for extended working hours as this could lead to a shorter construction period. These works would be limited to the following times and locations:

- Between 6am and 7pm Monday to Friday for the Toolijooa cut, Broughton Creek floodplain and major bridge works (outside Berry township).
- Between 7am and 4pm on Saturdays for the Toolijooa cut, Broughton Creek floodplain and major bridge works (outside Berry township).
- Outside of known likely major traffic peaks (such as the Friday evening prior to a public holiday long weekend).
- Out-of-hours activities, as detailed in **Section 4.4.9** and **Section 7.2**.

The impact of construction activities would be the same as during normal construction hours and are discussed in **Section 7.2.4**. Mitigation and management measures are described in **Section 7.2.5**.

The project may cause construction fatigue for residents or motorists given the duration of the construction period.

Dust would be generated from earthworks associated with the construction of the proposed highway. The main sources of dust would be from blasting and crushing, the use of excavators, front-end loaders and dump trucks as well as wind erosion from exposed areas (PAE Holmes, 2011). This would be addressed by mitigation and management measures as described in **Section 8.2.4.**

The construction phase would also give rise to visual impacts to road users and to residents of rural properties in the vicinity and in Berry, from not only road works but associated materials stockpiles adjacent to the corridor.

Economic impacts

Agricultural sector

Construction impacts to agricultural land and businesses would arise from the use of productive agricultural land for ancillary facilities such as stockpiling materials. All land currently anticipated to be required for these facilities has been or would be acquired by RMS prior to use. However, should sites be required that are not located within either the road reserve or within RMS owned land, then additional land would need to be leased over the short term during the construction phase of the project. Refer to **Section 7.9.2** for further information.

Tourism sector

Potential visitors to the area may perceive that construction works would create an impact on their enjoyment of their stay, which may discourage them from visiting the area. This may impact local businesses in the tourism sector.

Businesses in the township of Berry

The project would be constructed in a way that would allow existing traffic arrangements to continue until the new interchanges are operational. Access to businesses and therefore highway trade would not be directly affected during construction although construction works north of Berry may encourage a small proportion of drivers to divert to the 'Sandtrack', which could have a minor impact on highway trade.

In the order of 500 jobs would be created over the course of the construction, based on a construction period of three years. Construction worker expenditure during the three year construction period would benefit local services in the vicinity of the highway, such as cafes and takeaways, service stations, trades and services suppliers and potentially some accommodation providers. The expenditure would have flow on effects to other businesses in the area.

Traffic conditions

An 80 kilometre per hour construction speed limit would be maintained where possible throughout construction. However, construction activities would inevitably impact traffic efficiency (in order to maintain road and workplace safety) for both local and regional commuters due to a short term reduction in travel speeds through construction zones and potential delays caused by temporary road closures and detours. In the unlikely event that the average speed along the whole route were to fall from 80 kilometres per hour to 50 kilometres per hour, a driver travelling the entire 11.6 kilometre distance may experience a delay of around six minutes. Traffic impacts are discussed further in **Section 7.1**.

Community cohesion and severance

Construction of the project has the potential to reduce cohesion within the community if road closures act as a barrier to through movement. This impact would be most prominent within the Berry community and would have the potential to occur even when road closures are temporary.

Construction of the project does not include any major works within the centre of Berry. The most significant modification to the town's road network would occur at the southern interchange for Berry, which would require a temporary road closure. During this time North Street would provide an alternative route between Berry and west Berry. This would mean additional traffic along North Street and the associated increase in traffic noise, for the duration of the closure of Kangaroo Valley Road. Traffic flows that would be expected to be diverted are detailed in **Section 7.1**. Whether or not North Street is closed and the extent and duration of these impacts are dependent on the construction programming to be determined during the detailed design process.

The majority of works in the vicinity of Berry would be constructed offline and although it is likely that there would be some adverse effects, such as reduced connectivity, where the offline sections connect with the active road network, these disruptions would only last for short periods of time.

Certain residents within the study area may experience severance impacts should access to their properties be cut as a result of the project. Any property accesses or local roads impacted by the project would be provided with an alternate access point (refer to **Section 4.4.8**). Consultation has been ongoing throughout the project and early consultation with potentially affected residents has kept the local community informed of pending changes to access arrangements.

Community assets and recreational activities

The following impacts to community assets and associated recreational activities may occur during the construction phase of the project:

- Changes to the Berry sportsground due to a small area (0.3 hectares) of land take, which does not affect buildings and which would not disrupt sporting activities or passive recreational activities. Refer to the discussion regarding operational impacts on community assets below.
- Relocation of the Berry Riding Club including the two smaller riding clubs which use its facilities during construction to an agreed site in the Berry area. The permanent solution for the Clubs would be determined in consultation with Shoalhaven City Council and may involve the reconfiguration of the facilities on the adjoining land.
- Disruption to passive recreational space at Mark Radium Park due to land take associated with the southern interchange.
- Disruption to the use of North Street as an existing recreational route for walking, cycling and jogging.
- Traffic disruption for vehicles travelling from outside of Berry to access recreational facilities or clubs within town. Access within Berry to recreational sites would not change.
- Recreational facilities in the vicinity of North Street would be exposed to construction noise during building of the bridge at Berry and upgrade to the north of Berry. Construction on this section of the project would only occur during standard working hours and hence Saturday afternoon and Sunday activities would not be affected. Construction noise would be minimised in accordance with standard construction mitigation measures as outlined in **Section 7.2**

Impacts on recreational activities during construction are expected to be minor.

Recreational fishers

Access to the existing Broughton Creek bridge would be maintained for recreational fishers throughout the construction of the project. However, construction works may temporarily restrict access to fishing sites near Broughton Creek bridge and near the Berry sportsground (Bundewallah Creek and Broughton Mill Creek).

The construction of the project also has the potential to impact the riparian and aquatic habitat in the vicinity of new bridges if sediment enters the water and the bank is altered to accommodate the bridge abutments. As discussed in **Section 7.3**, the project may result in potential risks to fish stocks including impediments to fish passage, sedimentation and pollution, which would be managed by the implementation of appropriate mitigation measures.

Operational impacts

Potential positive and negative socio-economic impacts of the project would be a result of the following physical changes that would occur in the project area:

- The bypass of Berry town centre. The removal of heavy vehicles from within Berry would improve noise levels in the town centre but would reduce visual amenity and increase road noise in other locations, particularly the North Street precinct. Further details are provided in **Section 7.2**, **Section 7.6** and **Section 8.1**.
- Changes to the local and regional road network. This would include severance of North Street, the closure of Victoria Street at the western end, a new link from Huntingdale Park Road to Hitchcocks Lane, changes to access between Berry and west Berry and changes to access along Kangaroo Valley Road due to the southern interchange. It would also include changed access arrangements to local roads and properties along the project and changed pedestrian and cyclist arrangements. Further details are provided in **Section 7.1**.

- Property acquisition and severance of rural properties. The project would require acquisition of around 110 hectares of land, affecting 90 properties. This would include the full or partial acquisition of urban and rural properties. Further details on property acquisition are provided in **Section 7.9**.

These changes to the study area would have the potential to result in the following socio-economic impacts:

- Amenity impacts.
- Impacts on community cohesion and the social character of the Berry township and broader study area. This would include impacts due to changed access arrangements and property acquisition and severance.
- Economic impacts, including impacts to the agricultural and tourism sectors and to highway reliant and non-highway reliant businesses. Impacts on recreational activities and community assets.

Amenity impacts

Amenity within Berry would be expected to improve as a result of the project. Removing a large proportion of traffic (especially heavy vehicles) from Berry would improve amenity in the vicinity of Queen Street by reducing traffic congestion, noise levels and improving air quality and pedestrian safety. This assumption is justified by case studies of towns that have been bypassed (refer to **Section 7.10.1**). When heavy vehicles in particular have been removed from a town, the result has been the universal improvement in amenity and lifestyle quality for the town concerned.

Throughout the study area and particularly within Berry, air quality is expected to improve as a result of the project. Predicted ground-level carbon monoxide, nitrogen dioxide and particulate matter concentrations for the project area in 2017 and 2027 would generally be lower than those for the existing alignment in future years if the project was not constructed (refer to **Section 8.1** for further detail). The reduced noise levels and improved air quality and pedestrian safety along the main street of Berry would be a significant benefit to the town and could be a catalyst for the redevelopment of businesses along the current route of the highway.

However, there is also potential for adverse amenity impacts to occur as a result of the project. These would generally be associated with visual impacts and noise impacts, especially in the vicinity of North Street, Berry. These impacts were recognised during the options and route selection process and the value management workshops and the route options were modified to minimise these impacts, particularly on the sportsgrounds and Camp Quality memorial park. The North Street corridor has been previously gazetted as a road corridor and there has been community awareness and expectation that the highway would be relocated along this corridor. One of the key factors in selecting this option was to avoid the potential impacts on the Pulman Street heritage precinct that would have resulted from construction of other route options.

The proximity of the bypass to North Street would have the potential to increase noise levels and interrupt views to the pastoral landscape and escarpment. The installation of measures to mitigate noise impacts adjacent to the upgrade, such as barriers and mounds, would also have implications for visual amenity.

The concept design for the upgrade has responded to community concerns about these impacts by moving the highway about 40 metres away from North Street, by reducing its height by up to two metres, and by reducing the overall height of the noise barriers from five to four metres. Sloped embankments and vegetative screening would be utilised between potential noise barriers and affected properties to reduce visual impacts. A further concern to residents was the height of the bridge at Berry and in response to these concerns RMS has lowered the maximum height of the bridge by 6.4 metres. This process has been facilitated by a series of alignment and urban design consultation workshops with the Berry community.

Amenity impacts associated with the project are discussed in **Section 7.2**, **Section 7.6** and **Section 8.2**.

Community cohesion and social character impacts

Community cohesion and social character impacts would arise as a result of:

- Changes to community connectivity, such as changed access arrangements.
- Changes to community wellbeing from impacts such as property acquisition.

Connectivity and access arrangements

The project would potentially have both positive and negative connectivity impacts within the study area and specifically within Berry.

The removal of the highway traffic from Berry would eliminate the existing physical barrier from the centre of town. The improved amenity along Queen Street would improve the quality of the Berry urban environment for businesses and the local community. This would create a more pedestrian friendly environment and reinforce a sense of community identity and community wellbeing. Benefits to the community and improved community cohesion have been shown in other towns that have been bypassed, such as Berrima, Karuah and Yass, and it is likely that Berry could expect the same outcome. See **Section 4** of the *Socio-Economic Technical Paper* at **Appendix M**.

Localities such as Broughton Village and Foxground are no longer active communities, with the closure of community facilities, churches and schools following a decline in population. However, friendships remain between farming families that settled in the area. The project would not sever these communities, and the community members have not expressed concern that the project would interfere with their ability to continue to interact with each other. While the Toolijooa community has grown in recent years, the route of the project is close to the existing alignment and would not affect the integrity of this community.

One access between Berry and west Berry (along North Street) would be permanently closed as a result of the project. The severance of North Street would not be expected to affect access by car between Berry and west Berry. However, the closure of the route would increase the distance that residents in west Berry would have to walk to destinations on North Street, including the Camp Quality Memorial Park and Berry sportsground. This could create a perception of increased isolation or severance among these residents.

Connectivity between Berry and the developing areas to the west and north west would be maintained by bridging Kangaroo Valley Road over the upgraded highway as part of the southern interchange for Berry. This would be connected to a footpath along North Street from the intersection of Queen Street and Kangaroo Valley Road. The bridge would retain the existing alignment and level of Kangaroo Valley Road and be sufficiently wide to provide for off road pedestrian and cyclist access adjacent to, but separated from the carriageway on both sides of the bridge. Pedestrian and cyclist arrangements would be provided to ensure that adequate access is maintained at the proposed roundabouts on Kangaroo Valley Road to the west of Berry. Pedestrian refuges at each leg of the roundabout and a shared path within the design improve pedestrian and cyclist facilities compared to the existing situation at this location.

West Berry residents accessing Berry by car would have an increased risk of severance impacts in the event of an incident on Kangaroo Valley Road at the southern interchange for Berry. An incident that closes Kangaroo Valley Road has the potential to cause disruption to access for west Berry residents travelling to other parts of Berry or the Princes Highway, especially considering the northern interchange for Berry contains only a southbound off-ramp. However these impacts are considered to be manageable and likely to be of limited risk and duration, given the low speed environment and the width of the overbridge that would allow vehicles to pass by an incident under traffic control. Further, if the northbound and southbound lanes of project can be accessed in either direction, motorists would be able to complete a u-turn at the Tindalls Lane interchange or at the Mullers Lane u-turn facility to access the Berry township or West Berry, with a small delay.

The introduction of median fencing would result in left-in and left-out only movements from local roads and private properties to and from the highway. Right hand turns across fast-moving two-way traffic would no longer be allowed. There are 12 accesses that would be restricted to left-in left-out movements as a result of the project and this would add up to around three minutes of additional travel time to affected properties but improve safety in the area.

U-turn provisions would be via the grade-separated interchanges at Toolijooa Road, Austral Park Road, Tindalls Lane and the northern and southern interchanges for Berry. Given that some interchanges would not include provision for all traffic movements, additional u-turn facilities would be provided on the existing highway north of Austral Park Road and south of Schofields Lane at Mullers Lane. U-turns would also be facilitated via a new roundabout at the junction of Tannery Road with the existing Princes Highway in Berry.

Community wellbeing

Land acquisition and severance may result in major changes to the lives of those affected giving rise to a sense of anxiety or uncertainty, a loss of amenity, financial costs and isolation.

Those residents whose property would be acquired as a result of the project would relocate to an alternative location. RMS would compensate owners for land acquisition in accordance with the Land Acquisition (Just Terms Compensation) Act 1991.

The economic impacts of property acquisition and land severance are discussed below.

Economic impacts

The project would improve connectivity to the NSW south coast and as such would enhance potential business opportunities in the area. It would facilitate improved access to the existing tourism industry at Jervis Bay, Batemans Bay and Ulladulla. In addition, industries in the Nowra area would benefit from more reliable access to markets and raw materials in the Sydney and Wollongong areas due to reduced travel times and increased road safety.

Within the study area, the project would have the potential to impact on businesses in the agricultural and tourism sectors. The project may also impact businesses that rely on traffic utilising the highway for trade as discussed below.

Agricultural sector viability

The project would require the acquisition of agricultural land within the study area, which has the potential to impact on the economic productivity and the viability of agricultural businesses. The project would also fragment rural properties, which may restrict agricultural operations. The majority of agricultural land directly and indirectly impacted by the project is currently used for livestock grazing associated with dairy or beef production, or for horse agistment. The greatest impact on agricultural land would occur where the project involves new sections of highway at Toolijooa Ridge, Broughton Creek floodplain and in areas north of Berry. Land uses within the study area are discussed further in **Section 7.9.1**. Where possible, impacts to agricultural land have been minimised through the options selection and design of the project. However, the full or partial acquisition of agricultural land could result in a loss of revenue to the owner and could affect the viability of the business.
This would be due to:

- The loss of productive land.
- Changes to the size and shape of paddocks (through strip acquisitions, severance or fragmentation of properties).
- Changes to farming conditions as a result of the road development affecting flooding behaviour, water supply.
- Changes to access between different parts of the property.

Land acquired for project that is outside the road reserve and used temporarily for ancillary facilities would be repackaged and sold on completion of the project. Where practicable, following the completion of the project and rehabilitation of the site, there would be potential for the sites to be returned to their previous use.

A total of 23 agricultural properties would experience direct impacts as a result of the project.

Of these, seven rural operators have said that their businesses would no longer be viable as a result of the proposal RMS has already acquired these properties in full. Of the seven properties, two were used for grazing beef cattle, two for silage, one for horse agistment, one as a mixed hobby farm and one for goat farming. The acquired properties are currently leased to tenants and are being used for similar operations, with the exception of the goat farm, which is now used for horse agistment.

There are 16 other agricultural businesses that would be affected by land acquisition and may experience a decrease in productivity. However, their viability is not expected to be affected since the extent of acquisition or the location of land to be acquired at the edge of a property would not affect business operations. Two dairy farms supplying milk to the Berry Rural Cooperative would be affected by partial acquisition but after consultation with the affected landowners, this is not expected to significantly affect their current operations and outputs. Consultation with the Berry Rural Cooperative has confirmed that the potential small loss in production is not expected to reduce the scale of the Cooperative's operation, turnover or workforce.

Refer to **Section 7.9.2** for further discussion on land use viability.

The economic impact of the project on the agriculture sector as a whole has been determined by estimating the contribution by a business to the gross regional product and the change in this following full or partial acquisition. The resulting estimates are considered reliable as indicators of the impact of the project.

The estimates of the gross direct economic impact of the project as well as the number of impacted agricultural businesses is contained in **Table 7-70**. The hobby farm that has been acquired has been excluded from **Table 7.70** because it does not provide an income and therefore an economic impact is not expected.

Table 7-70 Economic impact: agriculture sector

Potential loss of value added ($)		Economic activity of potentially directly affected agricultural businesses	No. of businesses impacted	No. of businesses acquired in full
Annual	**Long-term[a]**			
385,100	8,801,900	Dairy cattle farming	3	0
		Beef cattle farming	13	2
		Silage, hay and turf farming	3	2
		Agistment	1	1
		Goat farming	1	1
		Other[b]	2	1

Note:
a: Present value of annual loss of value added over 50 years discounted at seven per cent real discount rate (in discounting to present value, 50 years is a reasonable period to represent the permanent case).
b.Other businesses include a hobby farm and a maze.

The loss of productive agricultural land would also impact on the contribution of agriculture to the regional economy, with flow on effects to other sectors. For instance, the operation of a beef farm requires inputs and services from other suppliers, and the processing and transport of products creates further economic benefit.

Tourism and non-highway reliant businesses

The experience of other bypassed towns shows that improved amenity in the commercial precinct of Berry would likely result in increased turnover for non-highway reliant businesses in Berry. These businesses cater to locals and tourists and help to form the destination feel of the town. In particular, the experience of other bypassed towns such as Berrima and Goulburn suggests that businesses in Queen Street and the streets adjoining it would benefit significantly from improved amenity.

This could lead to greater economic activity within the town and in turn, expand business activity and employment in the area. The upgraded highway would be seen from a number of businesses such as bed and breakfast establishments in Berry and the surrounding areas. Views of the bridge at Berry are not expected to impact the numbers of tourists visiting the area and therefore the viability of these businesses given businesses would benefit from safer road access for guests, and views would be retained to the Cambewarra Range and escarpment. The bypass to the north of Berry would provide easy access to the town centre and accommodation in Berry as well as access to bed and breakfast establishments in the nearby rural areas.

Highway reliant businesses

Research carried out in bypassed towns that were established destination towns pre-bypass shows that, post bypass, their business sectors generally all performed well. Some highway dependent businesses in these towns have been able to reposition themselves and become sustainable in the longer term. This evidence indicates that the likely overall effect on business in Berry following the bypass would see the creation of new business opportunities as a result of improved amenity.

The project however has the potential to impact and reduce the viability of highway reliant businesses in the town of Berry from reduced traffic volumes passing through the town. It is estimated that there are 71 businesses in Berry that cater to highway traffic and locals and 34 that cater to locals only. Studies of highway bypass impacts in NSW (refer to **Section 7.10.1**) have shown that the most affected businesses are those directly serving the needs of the motorist such as motor vehicle services, particularly service stations, food and beverage outlets and, to a minor extent, accommodation establishments.

The design of the bypass means that Berry would be visible from the highway and from the southern interchange for Berry, which may encourage through traffic to continue to stop in the town, reducing the impact.

The impact of the project on highway reliant business was assessed in accordance with ‘A Guide to Good Practice – Evaluation of the Economic Impacts of Bypass Roads on Country Towns’ (RMS, 1996). It provides a worst case assessment in so far as it does not take account of any increase in turnover as businesses adapt to the conditions.

As business owners may be considerably uncertain about the extent of impact the project would have on through traffic and trade, the analysis considered three potential scenarios upon opening of the project. The three scenarios were based on varying amounts of highway traffic diverting to the bypass at Berry, being 78 per cent of highway traffic (central scenario, which reflects the traffic assessment), 100 per cent of traffic (as the worst case scenario) and 50 per cent (best case scenario).

The business effects assessed are the potential change in employment and turnover at highway reliant businesses. The potential change in economic contribution of each business to the study area was indicated by the value added per employed person (based on ABS National Accounts data). The value added by a particular business represents the contribution by a business to the gross regional product.

Table 7-71 summarises the estimated impacts on employment, turnover and value added as a result of the three scenarios.

Table 7-71 Economic impact on highway reliant businesses

	Low			Central			High		
	Decrease in full time equivalent jobs	**Decrease in turnover**	**Loss in value added (annual)**	**Decrease in full time equivalent jobs**	**Decrease in turnover**	**Loss in value added (annual)**	**Decrease in full time equivalent jobs**	**Decrease in turnover**	**Loss in value added (annual)**
Motor vehicle services	3	419,226	146,930	6	838,452	293,861	12	1,676,904	587,721
Food and beverage	4	181,903	136,955	8	363,806	273,909	17	727,611	547,819
Other retail	1	109,065	47,176	3	218,130	94,352	6	436,260	188,703
Total	**8**	**710,194**	**331,061**	**17**	**1,420,388**	**662,122**	**35**	**2,840,775**	**1,324,243**

Note: *Totals include rounding*

Under the central scenario and based on the turnover calculated by SGS in 2008 (refer to **Section 7.10.1)**, there is potentially a loss of up to 17 full time equivalent jobs as a result of the project and a decrease in turnover equivalent to two percent of total turnover in businesses at Berry.

The analysis shows that it is likely that the project would cause some businesses to experience a short-term decrease in turnover and reduced employment if they do not adapt to the new market conditions. However, the evidence from bypassed towns indicates that the repositioning of existing businesses and new opportunities would lessen the overall effect of reduced turnover and employment in highway affected businesses.

Recreation impacts

Recreation within the study area would have positive and negative impacts as a result of the project. These would generally be the result of impacts to community assets and impacts to recreational fishing.

Community assets

Community assets used for recreation have a role in promoting cohesion and interaction among community members. Therefore, any changes to these facilities caused by the acquisition of land or the proximity of the project may have a social impact on the surrounding community.

The buffer zone between North Street and the upgrade that would be up to 40 metres in parts would be made available for community uses, such as open space and the shared path extending the whole length of North Street (refer to **Section 7.6**). Uses would be developed in consultation with and to respond to the community's needs. A parcel of vacant land on the corner of George Street and Albert Street could also be added to the community assets in the area. The unused road space resulting from the closure of Victoria Street could be used as an extension to the parking area for Mark Radium Park, which would improve the amenity and useability of the facility.

Through the options selection process and the concept design, impacts to the Berry sportsground, Camp Quality Memorial Park and the Pulman Street and Tannery Road European heritage precinct have been avoided, where possible. However, around 0.3 hectares of land along the northern boundary of Berry sportsground would be acquired. This would only represent about six per cent of the total sportsground area and therefore the impact of the acquisition on the use of this land for recreation would be minor. As well as this, access to the sportsground would be maintained during the operational phase of the project.

The Berry Riding Club and the smaller riding clubs that use its facilities would be affected during construction of the project. A permanent solution for the clubs would be determined in consultation with Shoalhaven City Council during detailed design and may include the reconfiguration of the performance and training areas using adjoining land. Should the club be reinstated in its current location, this would occur as soon as practicable after construction in the area is complete and safe access can be provided. This would retain all the facilities of the Berry Riding Club and the smaller riding clubs in the same area. Car parking facilities consistent with the existing facilities will be provided as part of the relocation.

Recreational fishing

There are no impacts to the existing main fishing access point from the bridge over Broughton Creek. This access point would be bypassed by the project and would therefore become safer for fishers to use.

RMS has recognised that the project presents the opportunity to reduce conflict between fishers wishing to access creeks and the owners of private land adjacent to creeks. As such, the bridges over Bundewallah Creek and Broughton Mill Creek and the two new bridges over Broughton Creek would provide potential future access points for fishers using the RMS maintenance access points. The safer access at Broughton Creek bridge due to the reduction in traffic on the existing highway, and the additional accesses that would be provided at the new bridges would benefit recreational fishers.

7.10.4 Environmental management measures

Mitigation and management measures would be implemented to avoid, minimise or manage socio-economic impacts. These mitigation and management measures have been identified in **Table 7-72** and incorporated in the draft statement of commitments in **Chapter 10**.

Table 7-72 Mitigation and management measures

Potential impact	Mitigation and management measures
Construction	
Amenity	
Noise from construction works	Manage noise impacts as described in **Section 7.2**
Dust from construction works	Manage dust impacts as described in **Section 8.2**
Visual impacts of construction works	Reduce vegetation clearance where possible and progressively revegetate and landscape cleared areas as works are completed. Refer also to Landscape and visual amenity measures in **Section 7.6**
Traffic delays and road closures	Manage traffic and access arrangements as described in **Section 7.1** Through implementation of a Community Involvement Plan, provide timely, regular and transparent information about changes to access and traffic conditions, details of future work programs and general construction progress throughout the construction phase of the project. Provide information in a variety of ways including letter box drops, media releases, an internet site and variable message signs. Set up a 24 hour hotline and complaints management process.

Potential impact	Mitigation and management measures
Potential impacts on tourism due to potential delays from construction works	Provide information about access and timing of works on the project website to assist tourists to plan their journey to Berry. Provide signage from the highway to the services and tourist attractions within Berry township. No construction work is to be carried out on public holidays or over the Christmas and New Year holiday period. Prepare Traffic Control Plans to address peak tourist/holiday traffic such as Friday and Sunday afternoons and days immediately prior to and following public holidays.
Potential impacts on community cohesion and assets	Relocate the Berry Riding Club facilities to a nearby site agreed by the Club for the period that safe access cannot be provided to the grounds; Undertake works in the area of the Club as early as practicable in the construction program.
Recreation	Maintain access to the existing Broughton Creek bridge throughout the construction of the project.
Operation	
Amenity	Use a low-noise pavement along the Berry bypass section of the project. Provide noise barriers at North Street and Huntingdale Park Road. Consider the provision of architectural treatment to the 20 properties that have been identified that would experience noise levels above the controlling noise criterion. Continue to consult with the community with regards to potential amenity impacts and possible mitigation measures to be implemented. Manage noise impacts as described in **Section 7.2** Implement the urban and landscape design strategy. Other measures to mitigate impacts on Landscape Character and Visual Amenity are described in **Section 7.6**.
Economic	Continue consultation with agricultural business owners to address the impacts of land acquisition on the viability of farm operations. Repackage lots and sell parcels of acquired land to new owners or neighbouring owners. Provide sign posting to encourage highway traffic to visit Berry for a rest stop and as a tourist destination. Continue discussions with Shoalhaven City Council to assist in developing strategies to encourage the ongoing viability of businesses in the town of Berry and to encourage new businesses. This could include programs to enhance community areas and streetscapes.

Potential impact	Mitigation and management measures
Community cohesion	Provide signage between east and west Berry clearly identifying new routes and road closures. Provide functional and safe access to all properties affected by the project. Continue to consult the community when developing a plan to provide pedestrian access and cycle links over the proposed highway, connecting the east and west sides of town. Refer to the Pedestrian Access and Mobility Plan in the detailed design process as referenced in **Section 7.1**. Amend the existing incident response plans for the road network in consultation with emergency services to account for the altered road network at the completion of the project, such as the southern interchange for Berry. Carry out property acquisition in accordance with the RMS 'Land Acquisition Information Guide' (RTA, 2011) and under the terms of the *Land Acquisition (Just Terms Compensation) Act 1991* (refer **Section 7.9**).
Recreational activities and community assets	Consult with Shoalhaven City Council during detailed design to identify an appropriate option for the Berry Riding Club to identify an appropriate option for the club, including the reconfiguration of the facility. Continue to consult with the community with regard to potential uses for the buffer zone between North Street and the edge of the project. Maintain access to local creeks by recreational fishers where possible. Provide parking bays for bridge maintenance workers where practicable along the project and make these available for use by fishers wishing to access the river bank in the vicinity of bridges. Undertake consultation with DPI Fisheries on appropriate angler access signage and access infrastructure such as fence stiles.