

Appendix F. Social assessment

Purpose of the assessment of social effects

The purpose of the assessment of social effects of the Project is to inform the NOR and associated AEE during the construction and operational phases of the Project.

The assessment includes:

- A social impact assessment (SIA) framework derived from recognised international and national principles and standards (see Table 29-1)¹³⁷;
- Identification of the social study area and development of a demographic profile to provide an understanding of the existing social characteristics and conditions of the study area (social baseline);
- A review of the consultation and engagement process to identify social issues and community concerns;
- Identification of social effects against our SIA framework at both a regional and local level; and
- Identification of appropriate mitigation, avoidance or remediation and management strategies.

Project study area

The Project study area for the assessment of social effects is divided into:

- The sub-regional study area, being the area north from the Johnstone's Hill tunnels to the Dome Valley, and from Kaipara Flats to the coastal communities of Leigh, Matakana, Omaha, Sandspit, Algies Bay and Snell's Beach. This area includes Warkworth; and
- The local study area, being the area included within Census meshblocks traversed by the proposed designation and the Warkworth census area unit. This area includes Pūhoi.

Methodology

Summary of methodology

The principal steps in the preparation of this assessment of social effects for the construction and operations phases of the Project are as follows:

1. Scoping, which included:
 - review of relevant literature to inform the development of our assessment framework;

¹³⁷ Vanday F, 2003, *SIA Principles: International Principles for Social Impact Assessment*, in Impact Assessment and Project Appraisal, Vol 21 No 1, Beech Tree Publishing, Surrey

Quigley R and Fitzgerald C, 2012, *Standard for social impact assessment of state highway projects*, Draft v6.1, NZTA, Wellington

- review of the Project indicative design and location to identify local and regional communities along and adjacent to the proposed designation; and
 - development of a framework for assessing potential social effects.
2. Profiling of communities within the study area to establish an existing social baseline, using the 2006 Census, and Auckland Council community profiles.
 3. Identification of potential social effects, through a review of the community engagement and consultation process from a social perspective.
 4. Effects assessment, through an evaluation of the potential positive and adverse social effects arising from the Project.
 5. Mitigation and management measures, including:
 - identification of potential avoidance, remediation or mitigation options in relation to adverse social effects; and
 - identification of any future work required from a social perspective, to address risks and uncertainties during the construction and operational phases.

Project phases

The three Project phases adopted for this assessment are:

- the planning and consenting phase;
- the construction phase; and
- the operational phase.

Scoping of effects framework

The impact scoping framework developed for this Project is shown Table F1 in as follows:

Table F1: Assessment framework

IAIA criteria	Effects parameters
Way of Life	Accessibility, barriers and diversions
	Connectivity and choice of mode
	Patterns of living and mobility
	Changes to pedestrian and cycling
	Changes to public transport
Community	Community cohesion
	Identified communities
	Schools
	Community facilities

IAIA criteria	Effects parameters
	Business activities
	Recreational facilities
	Historical and cultural facilities
Health and Wellbeing	Changes to wellbeing
	Personal safety and averting behaviours
	Exposure to noise
	Exposure to discharges to air
	Public safety and risk
Personal and Property Rights	Uncertainty and construction timing
	Relocation
	Effects on properties
Fears and aspirations	Wider community
	Localised community

Way of life considerations primarily relate to the ability of people to access their community, activities and services in a manner which maximises their social welfare. Maintenance of connectivity and mobility is an important component of the ability of people to establish and maintain social networks and quality of life. Changes in the ability to access different modes of transport and the ability to engage in active transport options can affect local connectivity and mobility. There may be short-term construction related effects around perceptions of traffic safety and risk that change community access to connect with wider social networks.

Community considerations relate to the effects that a project can have on community cohesion and the way in which people identify and interact with a local community. Community cohesion can be affected by the loss of community members through property acquisition, or where community members decide to relocate to avoid the actual or potential adverse effects of project construction and operation.

Community effects can also be experienced where demand for particular community facilities and services changes as a consequence of the Project, both in the short-term construction phase and the long term operational phase. Community facilities may need to cope with an influx of workers and their families during construction, or during the operational phase they may need to expand or reconfigure their services to deal with the induced demand generated by greater accessibility and population and employment growth.

There may also be short-term effects on community facilities associated with construction traffic, traffic noise and vibration, and changed traffic flows during the construction period.

Social effects on **health and well-being** are generally associated with the compounding effects of noise, vibration, exposure to air pollution (eg dust generation), and changed traffic movements in both the construction and operational phases. For some people changes in the physical setting of a place, (eg access, landscapes or the introduction of a workforce), can induce stress or a sense of dislocation. For other people, such change is taken as evidence of progress and prosperity and is welcomed, leading to an enhanced sense of well-being.

Effects associated with **private property rights and aspirations** are generally felt during the planning phase, but may also be manifested during the construction and operational phases. The primary social impact concerns relate to:

- effects on health due to the stress associated with uncertainty and the property acquisition process,
- concerns about the ability to find a replacement property that fulfils the same amenity values currently enjoyed; and
- the need to develop new social networks if people are relocated is to a site significantly removed from their current community and networks.

Existing social environment

Summary – demographic profile

The overall character of the Study Area is rural and has a low population density. Warkworth is consistent with the character and density of a rural service town, while Pūhoi is consistent with the form and density of a rural village. The Study Area consists largely of farms, forestry and lifestyle blocks, with occasional industries and tourist businesses. The former Rodney area in general experienced high levels of population growth (an increase of approximately 30%) over the period 1996 to 2006. This trend is expected to continue.

The median age of residents within the Study Area was older than the median for the Auckland Region with a high proportion of the population aged over 65 years, especially within Warkworth. The proportion of the population aged 50 years or more increased between 1996 and 2006. This trend may be associated with the appeal of the lifestyle blocks within the Project area.

Family structures are characteristic of a growing population. For example, families of 'Couples with children' were the most significant family type in the local board area. This cohort is closely followed by 'Couple only' households, which is consistent with the age structure and the number of people within retirement age, particularly in Warkworth.

The degree of ethnic diversity in the Study Area is lower than in the Auckland region, with the predominant ethnic group comprised of people of European heritage (approximately 80% compared with approximately 57% for Auckland). Personal income levels are comparable with those for the Auckland regional population, although there is a slightly higher proportion of people on lower than median incomes. Again, this trend is indicative of a population with a significant older population.

The proportion of people participating in the workforce was comparable with the Auckland region as a whole, as was the proportion of people engaged in full-time work. Relative to the Auckland regional population, the workforce is made up of more managers, technical and trades people and labourers, but proportionally fewer professional, community, administration and sales workers.

The principal mode of transport to work place across the whole study area is the private motor vehicle. The use of public transport is negligible. The area is not well serviced with public transport or active transport facilities.

Pūhoi

European settlement in the Pūhoi area began in 1863 with a group of immigrants from Bohemia who were followed by a second group in 1866. This history defines its character, and the village is a destination for a unique cultural and recreational experience. The settlement beyond the village is rural, centred on forestry, farming, lifestyle blocks and small-scale home businesses. A pocket of more contemporary and intensive residential activity has established in the bow of the Pūhoi River to the east of the historic commercial core (around Pūhoi Close and Slowater Lane).

The Pūhoi community is characterised by its high level of cohesion and identity deriving from the scale of the place and its population, as well as its history of settlement and the presence of Ngā Pā o Te Hēmara Tauhia adjacent to the village. Community cohesion is also evidenced by the range of active community groups.

Pūhoi is not identified as a growth node from a regional perspective. In the Auckland Plan (2013), Pūhoi is considered a rural and coastal village (unserviced).

Warkworth

Warkworth is the largest urban centre within the Study Area, with a resident population of 3,270 in 2006. Assuming growth trends have been maintained, the estimated resident population is now approximately 4,030. Warkworth is a thriving service town that contains a wide range of retail, commercial, and community facilities and services. It acts as a commercial centre for the surrounding rural communities and as a gateway for the coastal communities at Leigh, Omaha, Whangateau, Tawharanui, Algies Bay, Snell's Beach and Sandspit.

Warkworth enjoys an identity as a service centre and demonstrates strong community cohesion through the activities of numerous business associations, service clubs, community networks, sporting and recreational clubs. Community consultation activities undertaken in Warkworth have all been well attended with participants demonstrating a keen interest in the Project, its potential benefits and impacts on their community, and the community's future generally.

Planning for the Auckland region anticipates that, with the timely provision of infrastructure, Warkworth will accommodate substantial residential and employment growth. Warkworth is forecast to grow to a population of 20,000 over the next 30 years, with a balance of houses to jobs close to 1:1 and with strong, accessible, diverse and enhanced centres.

Rural Residential Communities

Rural residential and other forms of lifestyle properties are clustered along Moirs Hill Road, Perry Road, Wyllie Road, Viv Davie-Martin Drive and Valerie Close, as well as the communities of Mahurangi West off SH1.

The Moirs Hill Road area provides for a number of lifestyle blocks of varying sizes and configuration. While still a small community, this area experienced considerable growth between 1996 and 2006 as people sought alternative lifestyles to those available either in urban areas or larger-scaled farming areas.

The Mahurangi West area is serviced by the Mahurangi West Road and Cowan Bay Road. It is characterised by larger lifestyle blocks which enjoy high scenic amenity. The convenience of these blocks at present is constrained by having access only via SH1, with its challenging traffic conditions.

Perry Road is a discrete community comprised of a combination of lifestyle blocks, small agricultural holdings and the aquaculture site. The area is characterised by a pleasing but highly modified landscape with geometric plantings of introduced vegetation. Perry Road is a no exit road off SH1, with high scenic amenity contributing to a strong sense of local community identity.

The community at Wyllie Road derives its access off Woodcocks Road, which connects to SH1 at Warkworth. A number of rural residential properties sit on elevated land, and are orientated to take advantage of extensive views over the valley below, Warkworth and out to the Hauraki Gulf. Woodcocks Road itself forms part of the local roading network that services the Kaipara Flats communities west of Warkworth. Carran Road provides a link between Woodcocks Road and Kaipara Flats Road.

A conventional rural residential community is situated on the northern edge of Warkworth at Viv Davie-Martin Drive (which is a no-exit road ending in a cul-de-sac), and accessed from Falls Road. Most of the sites in the subdivision lie on the reverse slope from the proposed motorway. Being a relatively recent subdivision, not all sites have been developed with housing. Three dwellings have direct views into the valley to be traversed by the motorway.

Summary – community consultation

A comprehensive summary of the consultation process for the Project is presented in Section 8 of this AEE. The consultation programme implemented to this point in the Project has spanned across three distinct phases and is now in a fourth phase. The formal notification process associated with the lodgement of the Notice of Requirement and applications for resource consents will mark the commencement of the fifth phase of consultation. The consultation phases were implemented as follows:

- Phase 1 – to raise awareness of the Project and to inform the development of corridor options;
- Phase 2 – to inform the route selection process and to update the community on progress with the early planning work;

- Phase 3 – to inform design development for the scheme assessment report and identification of a preferred route; and
- Phase 4 – to inform further design refinement and the preparation of the AEE

An indication of the relative sensitivities for a wide range of issues identified particularly during phases one to three of the consultation process is presented in Table F2 below. Many of the planning and design issues have been resolved through the iterative design process, as community inputs informed design development. Other issues, such as the environmental concerns, are addressed elsewhere in this AEE through a combination of design, construction and operational management measures, and ultimately, the conditions to be imposed on the designation and the resource consents.

Table F2: Issues identified in consultation

Issues / Sensitivity	Regional Interests	Local Interests					Other Interests
		Pūhoi	Moirs Hill / Perry Rd	Wyllie Rd / Carran Rd	North Warkworth	Warkworth	
● High sensitivity							
● Moderate sensitivity							
● Low sensitivity							
○ Little or no sensitivity							
PLANNING & DESIGN							
Investment in road infrastructure	●	●				●	●
Funding mechanism (eg tolling, other)	●	○				○	●
New, off-line route bypassing centres and businesses		●	●			●	
Provide partial upgrades to SH1 (Warkworth bypass)	●					●	
Provide local connections to new route		●				●	
Location of possible local connections to new route		●	●			●	
Provide a 'Matakana link' as part of Project	●				●	●	●
Upgrade Hill St intersection (Warkworth)						●	
Local traffic planning (Western Collector Warkworth)						●	
Property impacts		●	●	●	●		
Impacts to local businesses		●	●			●	○
Maintaining access to local roads		●	●	●	○	○	
Impacts on ecological, landscape or conservation values	●	●	●	○			●
Cultural heritage		●		●	●		

Impacts on environmental amenity & rural lifestyle		●	●	●	●		
CONSTRUCTION							
Direct effect of construction activities (air, noise)		●	●	●	●	●	
Construction traffic		●	●	●	●	●	
Impacts on heritage places (cultural, historic)	●	●					●
Soil erosion and sedimentation impacts on water quality	●	●	●			●	●
Impacts on terrestrial ecology	●						●
Impacts on freshwater ecology	●		●				●
Impacts on marine ecology	●						●
Effects on landscapes	●	●	●	●	●		
OPERATION							
Timing (eg likely commencement date)	●	●	●	●	●	●	●
Direct effects of operations (air, noise)		●	●	●	●	●	
Impacts on water quality		●					●
Funding (eg tolling)	●	●	●	●	●	●	●
Local traffic effects (eg changed traffic flows)					●	●	

Regional assessment of social effects

This Project will deliver positive effects on accessibility and connectivity. These positive effects are generally as follows:

- Greater journey time reliability and network resilience for traffic flows on an inter-regional basis between Northland and the Auckland metropolitan area;
- An improvement in traffic safety for trips between Auckland and Warkworth, with consequential reductions in crash rates and fatalities;
- An improvement in access for people in the former Rodney area to tertiary services (employment, health, education, personal and professional services, entertainment and recreation) in Auckland;
- A potential increase in the availability, frequency and timeliness of public transport connections between Warkworth and the North Shore, Albany and the Auckland metropolitan area; and
- Maintenance of current levels of connectivity during the construction phase by using an off-line route.

At a sub-regional level, patterns of living, convenience, transport safety and mobility are expected to benefit from delivery of this Project. Community networks presently constrained by traffic conditions on SH1 will freed up as inter-regional traffic including freight moves from SH1 to the new route. The effects of the Project on community cohesion are expected to be slightly positive as people are able to move around the sub-region more freely and more safely. The off-line indicative alignment to the west does not adversely affect the major areas of population and built development within the former Rodney area.

Careful management will be required in proximity to Mahurangi College to avoid effects associated with construction traffic on Woodcocks Road. However, none of the schools within the former Rodney area are adversely affected by the operation of the Project. Both Warkworth Primary School and Mahurangi College will benefit from the redistribution of traffic from the current SH1 alignment, Woodcocks Road, Hill Street, and respective intersections to the new route. These effects are likely to be positive (in terms of traffic volumes on Woodcocks Road and SH1, and reduced traffic noise and emissions).

Traffic management during construction will be required to avoid, or mitigate and manage potentially adverse, construction related traffic effects on Woodcocks Road, and redistribution of traffic on Hill Road.

At the sub-regional level the effects on business activity are expected to be positive, with flow on effects in terms of employment and business viability.

Recreational facilities or assets are not adversely affected by the indicative alignment or proposed designation footprint. They will benefit from redirected or reduced traffic flows in the vicinity, or enhanced accessibility in the case of the Showgrounds given its proximity to the northern tie-in. The Project is also likely to enhance opportunities for wider utilisation of these facilities by improved accessibility at the regional or sub-regional level.

At the sub-regional level the actual or potential effects of the Project on community health and well-being are expected to be beneficial as a consequence of enhanced access to tertiary services in Auckland and enhanced community networks through traffic relief on SH1. In the absence of the Project, there are potential adverse effects on community health and well-being as traffic congestion on the existing route becomes more severe, and public safety risk increases.

Table F3 summarises the range of social effects at the regional level, including the stage at which they will take place, who they will affect, the magnitude of effect and proposed mitigation.

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Table F3: Summary ratings of effect: regional assessment of social effects

Note: D: Directly affected; N: Neighbour affected; O: Others affected

Effect Way of Life	Stage	Who	Magnitude	Mitigation
Greater journey time reliability Network resilience	Operational	D N O	High positive	
Enhanced traffic safety for travel between the former Rodney area and Auckland	Operational		High positive	
Potential increase in availability of public transport or access to PT options	Operational	O	Minor positive	
Enhanced accessibility to tertiary level services in Auckland	Operational		Moderate positive	
Maintenance of current levels of accessibility during the construction phase	Construction	D N O	Minor negative	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
Impediments to traffic flow on SH1 during construction	Construction	D N O	Neutral	Construction Traffic Management Plan
Strengthening of opportunities for pedestrian and cycling modes in Warkworth	Operational	O	Moderate positive	
Effects on school bus services during the construction phase	Construction	D N	Minor negative	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan

Effect	Stage	Who	Magnitude	Mitigation
Community cohesion				
Effects on community cohesion	Construction	D N O	Minor adverse	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
Effects on sense of place and identity	Construction	D N	Minor adverse	
	Operational	N O	Neutral	
Effects on education facilities	Construction	D N O	Minor adverse	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
	Operational	N O	Neutral	
Effects on community facilities	Construction	D N O	Neutral	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
	Operational	N O	Neutral	
Effects on recreational facilities	Construction	D N O	Neutral	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
	Operational	N O	Minor positive	
Effects on business activity	Construction	D N O	Moderate positive	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
	Operational	N O	Moderate positive	

Effects on historical and cultural facilities	Construction	D N O	Moderate negative	Construction Environmental Management Plan Stakeholder Consultation and Engagement Plan
	Operational	N O	Neutral	
Effect Health and Wellbeing	Stage	Who	Magnitude	Mitigation
Changes in community wellbeing	Construction	D N O	Minor adverse	Stakeholder Consultation and Engagement Plan Construction Environmental Management Plan Construction Traffic Management Plan
	Operational		Moderate positive	
Effects on personal safety Potential for the development of aversion behaviours and loss of social interaction	Construction	D N O	Minor adverse	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
	Operational	D N O	Moderate positive	
Effects of exposure to noise	Construction	D N O	Minor adverse	Construction Environmental Management Plan Construction Traffic Management Plan
	Operational	N O	Neutral	
Effects of exposure to air emissions	Construction	D N O	Neutral	Construction Environmental Management Plan Construction Traffic Management Plan
	Operational	N O	Moderate positive	

Effects on public safety and risk	Construction	D N O	Minor adverse	Construction Environmental Management Plan Construction Traffic Management Plan
	Operational	N O	Moderate positive	
Effect Personal and Property Rights	Stage	Who	Magnitude	Mitigation
Effects of uncertainty and construction timing	Planning	D N O	Minor adverse	Stakeholder Consultation and Engagement Plan
Effects of relocation	Planning	D N	Minor/moderate adverse	NZTA property acquisition programme Stakeholder engagement
Effects on properties	Planning	D N O	Minor adverse	Stakeholder engagement
	Construction	D N O	Neutral	NZTA property acquisition programme
	Operational		Neutral	Stakeholder engagement
Effect Fears and Aspirations	Stage	Who	Magnitude	Mitigation
Effects on the wider community	Planning	O	Neutral	Stakeholder Consultation and Engagement Plan
	Construction	O	Moderate positive	Stakeholder Consultation and Engagement Plan
	Operational	O	Moderate positive	

Local assessment of social effects

The direct social effects of the Project, both positive and negative, are largely felt at the local community level and in relatively discrete areas.

Property effects

The Project will require the acquisition of land under the provisions of the Public Works Act.

The Project will require the acquisition of 129 separate parcels of land, either wholly or in part. A total of 46 landowners will be affected by these acquisitions, reflecting the common ownership of many parcels. Some landowners are government agencies, while others are private companies (15%), families or individuals (64%). The NZTA has purchased nine properties.

Of the 660 hectares required for acquisition, approximately 64% or 420 hectares, is held by companies, compared with 28% (186 hectares) held by individuals or family interests. Government agencies and public entities hold approximately 8% or 54 hectares.

The acquisition process adopts a process where fair and reasonable compensation is paid to the affected owners.

For some people, the acquisition process will result in them leaving their neighbourhoods, while some others may choose to relocate within it. For those people who will leave their neighbourhoods, the change can be disturbing and stressful, or it can be liberating by allowing people to choose alternative lifestyles. Some people prefer to relocate within their neighbourhoods or districts once the acquisition and compensation processes have been completed. The effect on people is typically very personal and is able to be mitigated to some extent by the compensation process.

The pattern and extent of this potential social dislocation will become apparent as the acquisition process is implemented and people exercise their choices in relation to new living arrangements. Considering there are 46 landowners, including individuals and families, directly affected by acquisition, the potential for social dislocation at the local community level is very low. There will be some losses of community 'membership' in locations such as Moirs Hill Road, Perry Road and Wyllie Road.

An anticipated effect of the acquisition process is that some social connections and networks will be disrupted. The effects of such disruptions tend to be of a short to medium term nature as communities continue to evolve and respond to a wide range of internal and external influences. Again, considering the number and diversity of the acquisitions in the context of the robust community life evident in the Study Area, any social disruptions which do occur are expected to be less than minor.

Construction effects

The construction phase can have a range of ramifications in terms of increased business activity, heightened employment opportunities, changes to people's sense of place, aesthetics and heritage, changes to people's sense of belonging, security and liveability.

During phases one to three of consultation, many people expressed concern about potential construction effects such as noise, dust, construction traffic and landscape. To balance this, some people also anticipated beneficial impacts such as increased business activity through the provision of goods and services to the proposed works, direct and in-direct employment, and increased demand from the project workforce. These latter views were expressed by people from both Warkworth where there is an established industrial base, and Pūhoi.

The construction effects are proposed to be mitigated and managed through a suite of integrated measures including modifications to construction methods, monitoring and management, and early and on-going consultation with local communities and near neighbours in particular. Early communication about construction methods and specific construction events, such as blasting, transport of large equipment or components and changes to local access arrangements, will allow people to adjust and manage their daily patterns to either avoid or minimise the effects of construction.

Local communities could be affected during the construction phase by restrictions on accessibility and connectivity. All of the communities directly affected by construction activity rely on social services and infrastructure concentrated in Warkworth, or in the case of Pūhoi, in Silverdale and Orewa. If residents are dependent on social networks that are not predominantly based on their respective "road", there may be some reduction in the frequency of those interactions.

Construction traffic management planning is proposed to be implemented to maintain access to properties and local access roads. While delays may be experienced, careful management in combination with effective community engagement, can minimise potential disruptions to travel and trip patterns.

Changes to local landscapes are anticipated as a consequence of the major earthworks required to implement the project. Impacts on community values, arising from landscape changes, are likely to be significant in exposed locations such as the Pūhoi viewshed and the open ground to the north of Warkworth and Wylie Road. Landscape changes elsewhere along the route will be obvious to smaller populations or be sufficiently distant from sensitive receivers as to reduce the impact on community values.

It should also be noted that the median age of residents within some of the affected communities is higher than the sub-region median age, and the proportion of the total population in the 65+ age group is growing. This is consistent with other research into the characteristics of lifestyle block owners. For this older age group the effects on well-being may be more acute and lead to avoidance or aversion behaviours to minimise conflict with construction based activity.

Operational effects

In the operational phase, there will be period of adjustment, as communities come to terms with the Project as a fully operational motorway, and with the subsequent changes in community composition, social networks and accessibility.

The social benefits of the Project are expected to flow from enhanced accessibility to tertiary services and employment opportunities in Auckland, improved safety and travel time reliability in accessing such services, and improved environmental amenity and accessibility for those communities still relying on the existing SH1 for access.

The social benefits accruing from enhanced accessibility will be more pronounced for people living in Warkworth and the surrounding communities of Kaipara Flats and the eastern beaches, than for people living in Pūhoi. Travel via the Project to Auckland for tertiary level health care, education, entertainment and personal and professional services, will become more convenient, safer and more predictable as a consequence of the Project. Similarly, the removal of inter-regional traffic including freight from SH1 to the Project, will help deliver similar social benefits as a consequence of improved travel time reliability and traffic safety for those communities to the south of Warkworth.

For the Pūhoi community, the social benefits will derive from improved access to the existing SH1 at Pūhoi Road through a reduction of regional traffic on the existing SH1.

The Project will improve safety and travel time reliability, which in turn will reduce risks and apprehensions regarding the safety and consistency of road travel within the corridor.

The Project design will maintain local access and connectivity in the local road network. Present levels of social cohesion and social networks can be maintained as a result.

Minor changes in community structures are likely as a result of people either relocating within or leaving their districts due to property acquisitions.

Changes in environmental amenity due to operating effects, such as traffic noise, motor vehicle emissions and surface water quality are not expected to be significant. Consequently, there should be no impact on community values attaching to environmental amenity, such as general well-being. For some near neighbours, the changes in environmental amenity will be noticeable, especially during the first few years of operation. These effects will lessen for some neighbours after a period of adjustment.

Table F4 summarises the range of social effects at the local level, including the stage at which they will take place, who they will affect, the magnitude of effect and proposed mitigation.

Table F4: Summary rating of effects: local assessment of social effects

Note: D: Directly affected; N: Neighbour affected; O: Others affected

Effect Way of Life	Stage	Who	Magnitude	Mitigation
Ability to maintain of existing level of accessibility at Pūhoi	Construction	D N O	Minor adverse	Construction Traffic Management Plan Stakeholder Engagement and Consultation Plan
	Operational		Minor positive	
Maintenance of current levels of accessibility during the construction phase at Moirs Hill Road, Perry Road and Wyllie Road	Construction	D N O	Minor adverse	Upgrade of Moirs Hill Road from SH1 to the construction site Alternative construction access routes where possible Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan
Impediments to traffic flow on SH1 during construction at Pūhoi, Moirs Hill Road and Perry Road	Construction	D N O	Neutral	Construction Traffic Management Plan
Effects on school bus services during the construction phase	Construction	D N	Neutral	Construction Traffic Management Plan Stakeholder Consultation and Engagement Plan

Effect	Stage	Who	Magnitude	Mitigation
Community cohesion				
Effects on community cohesion Removal of dwellings directly affected by the indicative alignment and vacating of other dwellings within the proposed designation footprint	Construction	D N O	Minor/moderate adverse	Stakeholder Consultation and Engagement Plan
	Operational		Minor positive	
Effects on sense of place and identity and effects on visual amenity Loss of values associated with decision to adopt a rural-residential lifestyle	Construction	D N	Moderate adverse	Construction Environmental Management Plan Stakeholder engagement
Ability to adapt to presence of the motorway within the local landscape	Operational	N O	Neutral	Long term rehabilitation and landscape plan to be lodged in conjunction with the Outline Plan of Works Stakeholder engagement regarding draft rehabilitation and landscape plans
Effects on education facilities	Construction	O	Neutral	Construction Traffic Management Plan Stakeholder engagement
	Operational		Neutral	
Effects on community facilities	Construction		Neutral	Construction Traffic Management Plan Stakeholder engagement
	Operational		Neutral	

Effects on recreational facilities	Construction	O	Minor adverse	Construction Traffic Management Plan Stakeholder engagement
	Operational	O	Minor positive	
Effects on business activity	Construction phase	N O	Minor adverse/Moderate positive	Construction Traffic Management Plan Construction Environmental Management Plan Stakeholder engagement
	Operational	O	High positive	
Effects on historical and cultural facilities	Construction		Moderate adverse	Construction Environmental Management Plan Stakeholder engagement
	Operational		Neutral	On-going stakeholder engagement
Effect Health and Wellbeing	Stage	Who	Magnitude	Mitigation
Changes in community wellbeing	Construction	D N O	Minor adverse/minor positive	Construction Traffic Management Plan Construction Environmental Management Plan Stakeholder engagement
	Operational	N O	Neutral	
Effects on personal safety Potential for the development of aversion behaviours and loss of social interaction	Construction	D N O		Construction Traffic Management Plan Construction Environmental Management Plan Stakeholder engagement
	Operational	N O	Neutral	

Effects of exposure to noise	Construction		Minor adverse	Construction Environmental Management Plan
	Operational		Neutral to minor positive	
Effects of exposure to air emissions	Construction	D N O	Minor adverse	Construction Environmental Management Plan
	Operational	O	Minor positive	
Effects on public safety and risk	Construction	D N O	Neutral	Construction Traffic Management Plan Stakeholder engagement
	Operational		Moderate positive	Grade separation of Motorway from local roads
Effect Personal and Property Rights	Stage	Who	Magnitude (do minimum)	Mitigation
Effects of uncertainty and construction timing	Planning	D N O	Moderate adverse	Stakeholder engagement
Effects of relocation	Planning	D N	Moderate adverse	NZTA property acquisition programme
Effects on properties	Planning	D N	Neutral	Stakeholder engagement
	Construction	D N	Moderate adverse	Construction Traffic Management Plan Construction Environmental Management Plan Stakeholder engagement
	Operational	D N		Long term rehabilitation and landscape plan to be lodged in conjunction with the Outline Plan of Works Stakeholder engagement regarding draft rehabilitation and landscape plans

Effect Fears and Aspirations	Stage	Who	Magnitude (do minimum)	Mitigation
Localised community	Planning	D N	Moderate adverse	Stakeholder engagement
	Construction		Moderate adverse	Stakeholder engagement
	Operational		Neutral	Long term rehabilitation and landscape plan to be lodged in conjunction with the Outline Plan of Works Stakeholder engagement regarding draft rehabilitation and landscape plans

Design, mitigation and monitoring measures

The design of the Project has benefited from the extensive community consultation programme with the early identification of a number of potential social effects. The design development has been used as a primary means of avoidance and mitigation of adverse effects. The key elements of the design in this regard are:

- the provision of south-facing ramps at Pūhoi;
- separation of local roads from the motorway to maintain local community connectivity in the operational phase of the Project; and
- the selection of a Project area that traverses areas of low population concentrations and is separated from the principal urban communities;
- an indicative alignment that avoids areas of community value; and
- an off line alignment that assists with the connectivity of Warkworth with a substantial reduction in through traffic which currently divides the community (the existing SH1 currently divides Warkworth).

The mitigation of actual or potential adverse social effects during the consenting and construction phases can be primarily achieved by the following:

- by maintaining an engagement and consultation process that seeks to keep directly affected landowners, adjacent landowners and affected communities fully informed regarding the Project design, implementation, and timing, and which seeks to identify the ways in which individual circumstances can be accommodated; and
- the use of construction environmental management plans and a construction traffic management plan to set the parameters around the management of the effects of the construction phase on directly affected communities.

Mitigation by design

Various decisions have been made by the Project team which seek to avoid or mitigate adverse social effects. The most significant response to both the feedback from community engagement and the social effects assessment has been the decision to provide south facing ramps at Pūhoi. This is directly related to the key issues of maintaining an appropriate level of accessibility and connectivity, commensurate with the level of accessibility the community currently enjoys.

The second component of the design that has significant social benefits is the provision of grade separation at Billings Road, Moirs Hill Road, Wyllie Road and Woodcocks/Carran Road. While the construction of the Project will have short term adverse effects in terms of relocation, disruption to social networks and community cohesion, the long term benefits for the directly affected local communities and adaptation to the Project over time mitigate against the short term effects. Each of these communities benefits from enhancements to the local roading network, and changes to

the distribution of traffic on the local network that have positive spin-off effects on accessibility and connectivity.

Environmental management plans / procedures

Three management plans form the basis for the mitigation of adverse effects including actual or potential adverse social effects. These are:

- The Construction Traffic Management Plan (CTMP);
- The Stakeholder Consultation and Engagement Management Plan (SCEMP); and
- The Construction Noise and Vibration management Plan (CNVMP) (The contents of the CNVMP are discussed in Sections 15.5.1 and 17.6 of this AEE).
- The CTMP is intended to identify techniques to manage the construction related traffic and to maintain an adequate level of accessibility for local residents who need to traverse the construction works. This has obvious benefits in terms of connectivity and community well-being, and community perceptions of traffic safety and risk.

In addition, it is recommended that a formal SCEMP be put in place, to assist in the identification and resolution of issues arising from the communities' engagement with the Project over the construction phase and in the early stages of the operational phase.

The SCEMP is intended to provide a framework for:

- Informing the community of construction progress;
- Engagement with the community to develop good working relationships;
- Providing early information on key project milestones; and
- Responding to queries and complaints and the development of initiatives to proactively address community issues.

A principal component of the SCEMP is the establishment of the Community Liaison Group (CLG). The concept behind the CLG is that the wider community will have a vested interest in how the delivery of the Project affects their local community, and how effects are managed. Some of the effects may lie outside the direct responsibility of NZTA. The CLG is intended as a forum for identifying which agency or organisation is best placed to respond. CLGs have been used successfully on other large infrastructure projects, including:

- The SH16 Causeway Upgrade Project – the CLG was particularly valuable in engaging in discussions regarding demolition works;
- The NGTR – the CLG was instrumental in advising the community of key construction works and timeframes; and
- The Waterview Connection Project – CLGs have helped to communicate and appropriately recognise community interests in aspects such as urban design and landscaping for the project.