

APPENDIX E – SOCIAL IMPACT ASSESSMENT

Report

Preliminary Social Impact Assessment of the Otaki to North of Levin Transport Corridor Shortlist Options

Prepared for

Prepared by Beca Limited


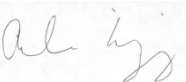
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Executive Summary

This report provides a preliminary social impact assessment (SIA) on the short-list options for the Ōtaki to North of Levin Project (O2NL). This project is part of the New Zealand Transport Agency's ("The Transport Agency") priority to improve the safety and resilience of the transport network connecting Ōtaki and Levin, including State Highway 1 (SH1) and State Highway 57 (SH57).

The purpose of this report is to supplement current understanding of social impacts assessed through the Multi Criteria Assessment process for the long-list of options evaluation. It provides a preliminary screen of potential social impacts (at a regional, local and sub-local scale) of the 6 short-list options for the O2NL, drawing from existing data including feedback received from engagement/consultation process (notably 2017 and 2018).

The regional scale encompasses the wider area linked by this corridor. "Local Communities" represents the larger communities that the corridor travels through and is the focus of the community profiles (Levin, Ohau and Kuku and Manakau). The 'sub-local communities' identified in this report refer to smaller 'neighborhoods' or community areas that are within direct proximity of the proposed corridor options, these are generally defined within local roads and in some cases private right-of-way accesses.

This report assesses the potential social impacts on each community for all related short-list options. The key positive and negative potential social impacts cover three 'key phases' of Project development (being planning, construction and operation phases) and are assessed at scales relevant to that impact (e.g. regional, local and sub-community scales). In all cases it is noted that the **potential** impacts identified have the scope to be reduced, ameliorated or mitigated by alignment design, project design and implementation of management and/or mitigation strategies. This scope is highlighted to assist in focusing on future development of any of the short-listed options and it is anticipated that this would be advanced in a full Social Impact Assessment ("SIA") of any preferred option (e.g. in subsequent design phases to support statutory designation or similar for the Project).

At a regional scale the preliminary SIA found that the potential impacts are considered to be the same / comparable for all short-list options (noting there are 6 component elements, 3 in the north and 3 in the south). Overall, the provision of any of the eastern corridor options (made up of these elements) is generally considered positive from a social perspective, due to potential improvements in safety, resilience of the local and regional road networks, the capacity to facilitate ongoing population and economic growth. The ability to move efficiently, safely and reliably around the region is identified as a positive social impact as it improves the way of life (including access to living, working and recreation environments). Connectivity of the regional communities, and efficiency to move people and goods opportunities to sustain people in the regional community) are also potential positive impacts. It is recognised that the proposed corridor will have an impact on the environment (and the values people place on that environment). Conversely, at a regional scale the separation of 'local' and 'through traffic' from established built environments, the safety improvements for the State Highway, and the associated opportunity for amenity and landscaping proposed both on the future and existing corridors are also identified as potentially positive for the quality of the environment and of the values people place in these environments.

At a local scale all corridor options are identified as having potential positive impacts for the wider local communities. In summary, the Project has the potential to reduce the adverse social impacts of the current SH1 corridor that currently effectively dissects all three communities. The removal of this 'severance' creates opportunities to improve access, connectivity, community cohesion, socio-economic opportunities (such as commuting and transport of goods) and provide the opportunity to enhance the town and village centres and local identity / sense of place (e.g. once traffic is diverted off SH1 and it serves a more local road function). A number of potential negative impacts were identified at a local level. However, for the community overall these were largely transitional (e.g. associated with construction works), though also

recognised the wider social consequences of the sub-community impacts (discussed below). Potential negative social impacts were identified in response to issues of access to activities of daily living (i.e. work/play/education), disrupting community cohesion (the sub-local community from the wider local community), losses of local economic activities and changes to the quality of the environment both the amenity values and natural landscape.

While for local communities, the Project represents potentially positive social outcomes, it is acknowledged that there are potential adverse social impacts that will be experienced by the sub-communities within these local communities. All the short-listed options considered in the preliminary SIA raise similar social impact issues; with the difference being the change in the sub-local community impacted. The preliminary assessment of these impacts range from minor to major adverse social consequences. However, while there are a number of adverse social impacts identified in this preliminary SIA it is also noted that there are further opportunities to ameliorate, remedy or otherwise mitigate impacts (and in some cases avoid potential adverse outcomes). This is dependent on the exact alignment location of any option (within the wider 300m corridor identified in the short-list options to date) and the mitigation strategies utilised (particularly relating to accessibility for communities, design responses and through management of construction and implementation). The report identifies that once a preferred option is identified, a full SIA can take place, including appropriate social research and consultation with the community, to provide guidance on community specific requirements for design and mitigation strategies to respond to potential adverse social impacts.

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Preliminary Social Screen of Western Corridor Options

1 Introduction

1.1 Introduction

The Ōtaki to north of Levin Project (O2NL) is part of the New Zealand Transport Agency's ("The Transport Agency") priority to improve the safety and resilience of the transport network connecting Ōtaki and Levin, including State Highway 1 (SH1) and State Highway 57 (SH57). It is part of the wider Wellington Northern Corridor Project and contributes to the following wider project objectives:

- To enhance inter-regional and national economic growth and productivity;
- To improve access to Wellington's CBD, key industrial and employment centres, port, airport and hospital;
- To provide relief from severe congestion on the State highway and local road networks;
- To improve the journey time reliability of travel on the section of SH1 between Levin and the Wellington airport; and
- To improve the safety of travel on State highways.

In addition to the wider Wellington Northern Corridor objectives the O2NL project objectives are:

- Reduce travel times on the state highway network;
- Reduce deaths and serious injuries on the state highway network;
- Enhance the resilience of the state highway network; and
- Provide appropriate connections that integrate the State Highway and local road networks to serve urban areas.

The Transport Agency is in the process of analysing relevant material required to decide a preferred option for a new state highway between Ōtaki and north of Levin, to replace the existing sections of SH1 and SH57.

The purpose of this report is to supplement current understanding of social impacts assessed through the MCA process and as identified in submissions from engagement/consultation process (notably 2017 and 2018). It will provide a preliminary screen of potential social impacts (at a regional, local and sub-local scale), and scope the potential social impacts of the short-list options for the O2NL (see Figure 1).

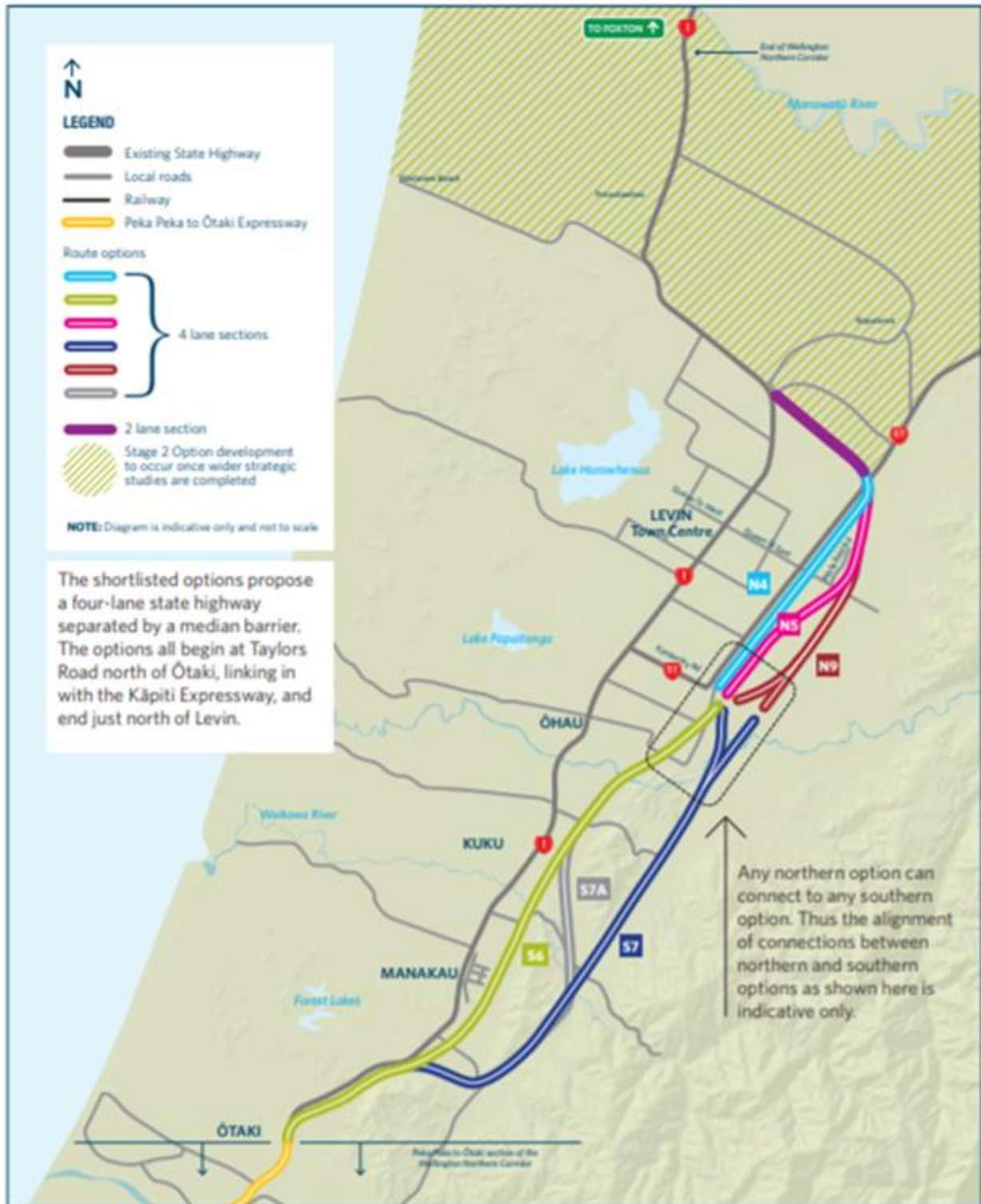


Figure 1 O2NL Short-list Corridor Options (Source: New Zealand Transport Agency 2018)

This will be utilised by the Transport Agency to assist and inform their evaluation of the short-list of options. It is understood that the Transport Agency is seeking to complete an Indicative Business Case and confirm a recommended corridor option, to then be further investigated in a Detailed Business Case. There are 6 indicative 300m wide corridors which have been short-listed (3 northern corridors and 3 southern corridors), from which 9 whole corridor combinations can be formed, see Figure 2 for the northern options and Figure 3

for the indicative locations of the 300m corridor options¹. Once the preferred indicative corridor is chosen detailed design will assess the corridor in detail to determine the exact location of the transport corridor (which is expected to be approximately 60-100m in width, allowing for mitigation works). The 6 short-list corridor options assessed in the Social Impact Assessment (SIA) are depicted in the maps below:

¹ This assessment only considers the Short-List Options which are all east of SH1. A high level preliminary social impact assessment has been included as an appendix (refer to Appendix B) to provide an overview of the Western Options that are not considered in the short-list phase.

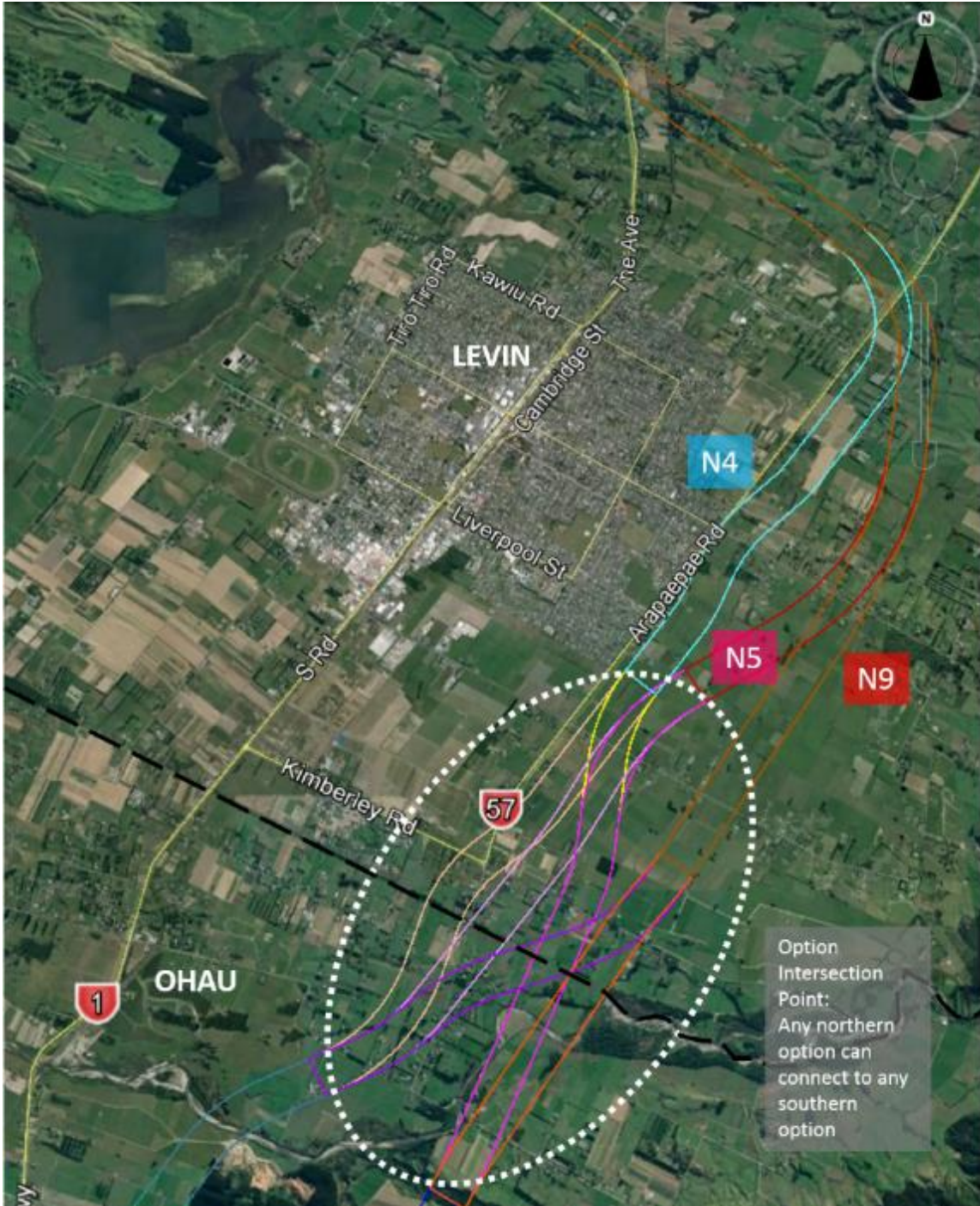


Figure 2 Northern Options (Source Google Earth, including Transport Agency *.kmz files for options)

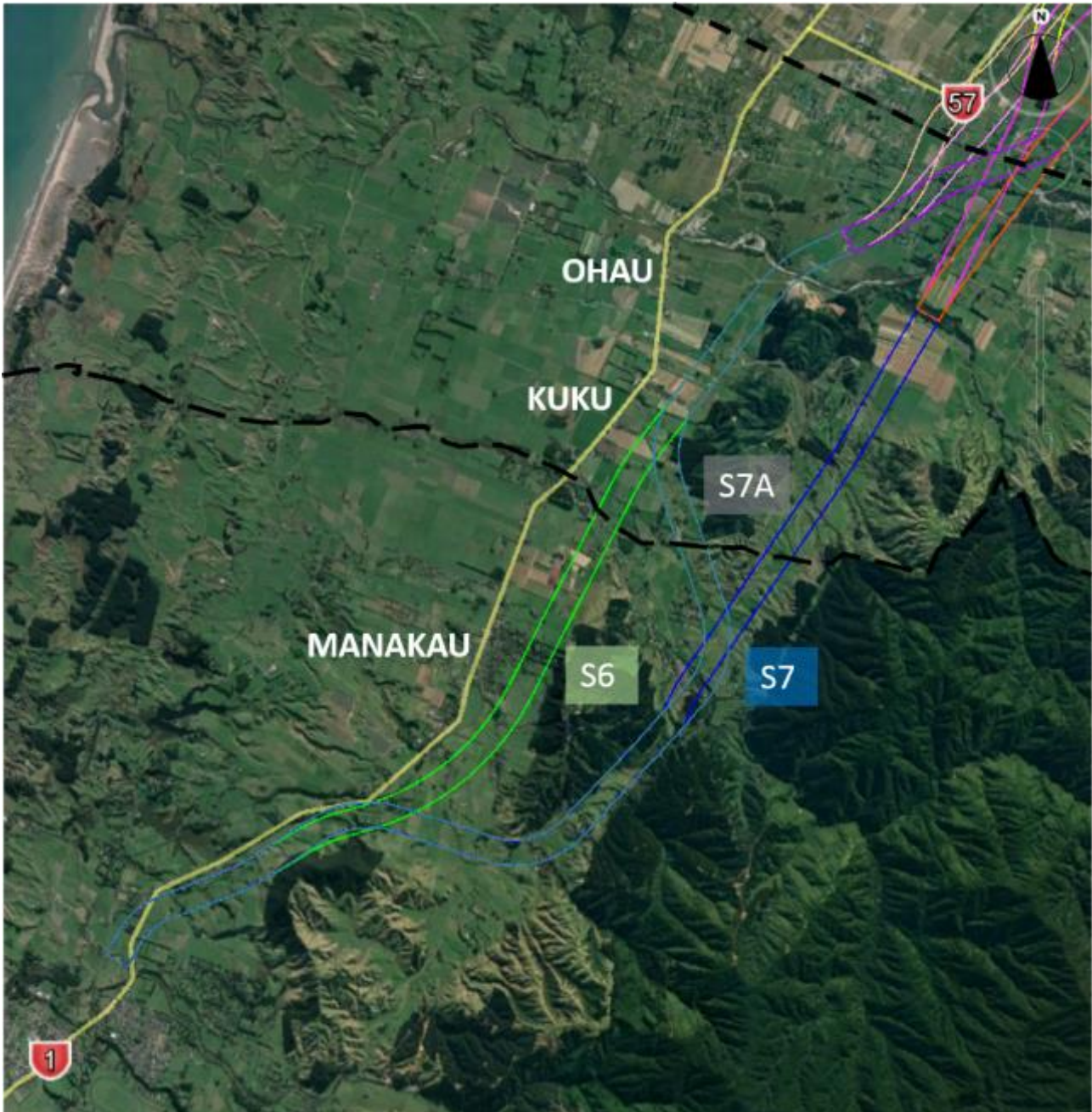


Figure 3 Southern Options (Source: Google Earth 2018, including Transport Agency *.kml files for options)

The actual and potential social impacts of the Project are an important consideration for the Transport Agency, in their overall evaluation of the corridor options. For this reason, the objectives of this assessment are:

- Collate data from research, consultation, district plans and other technical assessments which have been undertaken;
- Develop preliminary community profiles for “Levin”, “Ohau and Kuku” and “Manakau” on the basis of published data (e.g. Census);
- Identify and describe any potential social impacts (positive or negative) from each of the proposed short-list corridor options; and

- Provide a scope of potential social impact issues for consideration and further assessment, particularly for any subsequent development of alignments / alignment options within the preferred corridor, and development of the project to mitigate identified social impacts.
- This is an important first step in undertaking a Social Impact Assessment, it provides a social responsibility screen (in accordance with the Transport Agency business case guidelines), and provides a scope for a future social impact assessment of the Project.

1.2 Key Limitations and Assumptions

- The focus of this evaluation is an assessment of the potential social outcomes of the options. For this reason, the assessment of social outcomes is limited in respect to potential social consequences of the Project overall and is instead focused on key social impacts of each individual corridor option.
- This preliminary SIA has not undertaken specific consultation or conducted stakeholder interviews, at this stage of assessment. Consultation information from the Transport Agency has been reviewed and other community data has been gathered from council plans, data sites, and a site visit. This is an important element in social impact assessment and is recommended to complete any future and fulsome social impact assessment of the Project.
- As a result of the limitations above, it is acknowledged that there is (at this point in time) limited information available on sub-communities or specific community connections within the larger communities profiled (e.g. for the rural and peri-urban communities along the corridor options).
- The limitation of the consultation data used is recognised as it has been collected for the purposes of feedback on corridor options and not specifically targeted at social impacts on specific community locations.
- There are 9 short-list options for consideration. This report does not assess each of these options, instead it will assess the 6 corridor alignments (3 northern and 3 southern), that are the foundations for the combinations that make up the 9 options. Comments will be made if appropriate where combinations appear to have additional social impacts not considered separately.
- The corridor width (300m) is significantly wider than the final alignment between Ōtaki to Levin is likely to be (60-100m).
- Construction details (e.g. bridging, elevations, earthworks etc.) are not defined at this stage of the project development, therefore potential construction impacts have not been assessed.

2 Summary of Project

The following summary highlights key facts and information of the project which are considered relevant to the potential social consequences of the O2NL project.

2.1 Project Process Context

The following provides a summary of the overall Project Process, particularly focusing on matters relevant to consideration of the social consequences of the Project. It is not intended as a fulsome summary of the Project, which is provided by the Transport Agency² (2018).

Since 1958 the area between Ōtaki and North Levin has been part of processes to improve the Wellington Northern Corridor. This included purchase of land in 1990s for this section of the corridor. The land was subsequently sold in the early 2000s, as option consideration moved to the east of SH1.

Since 2011, the Transport Agency has been progressing the Ōtaki to Levin (O2NL) Project, and includes objectives to improve the safety, efficiency and resilience of the transport network in the study area. The current stage of the O2NL Project commenced in 2014 (see Figure 4 timeline) and is in investigation phase for the business case. This project is the northern most section of the Wellington Northern Corridor. On the basis of investigations to date, it is understood that an upgrade of the existing road has been deemed unfeasible due to the restrictions of the environment, the extent of capacity upgrades required (four-laning) and the significant effects anticipated with such widening.

Figure 4 summarises the anticipated timeline for the selection of a preferred option and RMA application for the O2NL Project. As set out in the Figure, this Preliminary Social Impact Assessment is part of the overall processes in consideration of the short-list of options. It is expected that this information, along with community consultation feedback, will assist the Transport Agency in their evaluation and identification of a preferred corridor option (expected mid-2018).



Figure 4 Timeline of Project Development (Source: New Zealand Transport Agency 2018)

Below is a summary of the investigation process as provided by the Transport Agency that has resulted in the identification of the short-list of corridor options (Figure 5).

² O2NL Project Overview – NZTA <https://www.nzta.govt.nz/projects/wellington-northern-corridor/Ōtaki-to-north-of-levin/>

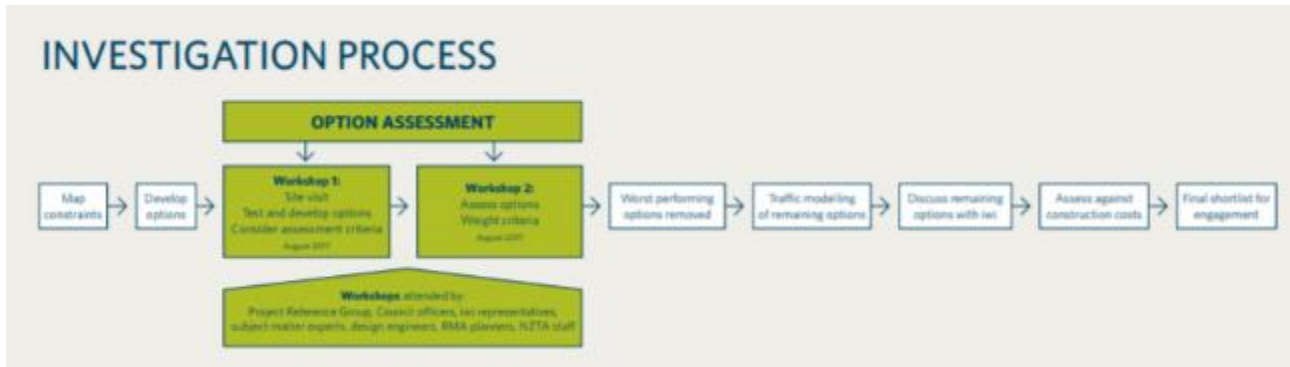


Figure 5 Investigation Process (Source: New Zealand Transport Agency 2018)

The investigation process to date has included the identification of ‘constraints’ and the development and evaluation of a long-list of corridor options against a suite of defined criteria (a Multi-Criteria Analysis (MCA)). It is understood that the MCA used the following 12 criteria (by which the long-list of corridor options were considered):

- Landscape and Visual
- Ecology
- Heritage
- Tangata Whenua Values
- Productive Land
- Social/Community/Recreation
- Impacts on Dwellings
- District Development
- Fit to Project Objectives
- Property degree of difficulty
- Engineering considerations
- Cost

It is understood that no specific social impact assessment reporting has been completed at this stage, but rather the social/community criteria were evaluated by the Workshop Attendees on the basis of a range of available technical and social information, including local knowledge. Information collated for the MCA on social/community/recreation, Tangata Whenua values, landscape values and impacts on dwellings do go some way to identifying potential social impact issues. Thus this report develops and refines the current understanding.

The conclusions from the MCA on the long-list are reported in the report titled “North Ōtaki to North of Levin: Multi Criteria Analysis Summary Report”, prepared by Stantec, dated September 2017.

At present, community consultation has been completed on the 9 short-list options (made up of 6 corridor options) that were identified through the MCA process (see Figures 1, 2 and 3). These are indicative 300m width corridors which the Transport Agency are currently completing an Indicative Business Case report around. The will entail an assessment of the data collected and submissions received during the community consultation, additional technical work undertaken in response to issues raised during the consultation (such as this report) and completed transport and economic assessments of the short-list of options. On the current programme the aim is to finalise the indicative business case by mid-2018 and in doing so select a preferred option.

3 Social Impact Assessment Methodology

3.1 Social Impact Assessment Framework

Social Impact Assessment (SIA) is the most common framework used in New Zealand and internationally to analyse, monitor and manage the potential social consequences of development. This preliminary SIA is intended to assist decision makers in the choice of the preferred corridor option and to inform subsequent investigations leading to the resource management processes.

This Report utilises the seven social impact matters described in the International Association of Impact Assessment Guidelines. The SIA process has taken these matters to consider the potential social impacts of the transport corridor options, on the basis of the existing community, the nature of the proposed works, and the consequential social changes anticipated.

The International Association of Impact Assessment describes social impacts as impact on one or more of the following:³

- **People's way of life** – how they live, work, play and interact with one another on a day-to-day basis.
- **Their culture** – their shared beliefs, customs, values and language or dialect.
- **Their community** – its cohesion, stability, character, services and facilities.
- **Their political systems** – the extent of which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose.
- **Their environment** – the quality of the air and water people use; availability and quality of the food that they eat, the level of hazard of risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources.
- **Their health and wellbeing** – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity.
- **Their person and property rights** – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties.
- **Their fears and aspirations**⁴ – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

³ International Principles for Social Impact Assessment 2003 – SIA principles – Frank Vanclay

⁴ In accordance with the NZ Transport Agency Social Impact Guidelines 2016 the following is noted in relation to fears and aspirations: It should be noted that the Resource Management Act case law requires that community perceptions, including fear, can only be given weight to if they are reasonably based on a real risk (*Shirley Primary School v Telecom, 1998*). Where communities are expressing fear of an effect that is not based on a real risk, the Transport Agency's preferred approach is to report on this, acknowledging the concern but also the limitations of this as an impact. It is acknowledged that in many instances such fears are based on misunderstanding of potential effects and therefore the Transport Agency also recognises the importance of community engagement tools to address such issues.

In addition, this report has taken into consideration the Transport Agency Social Impact Guide 2016⁵, the framework provided is also based on the International Principles for Social Impact Assessment. In addition to the above matters, the guidelines note the following social impacts for specific consideration (given the scope of potential social impacts associated with transport projects delivered by the Transport Agency):

- **Access and accessibility** - changes to transport patterns and movements, including how people move about and connect by active transport, public transport and private vehicle.
- **Social connectedness**
- **Community severance**
- **Changes to facilities**
- **Changes to local movement patterns**

The above framework was used to examine the local communities (including sub local) and the project context. Following the review of both the communities and the project a refined social impact criteria was devised for the social impact assessment. This is detailed in section 5.1.

3.2 Methodology Overview

This sections outlines:

- The social science methods used to gather, analyse and present social data; and
- The methods used to evaluate and identify preliminary social impacts / issues and the scope for subsequent assessment.

The methodology undertaken for this SIA is summarised as:

- Step 1 – **Scoping and contextualisation** – obtaining an understanding of what is proposed, geographical areas and the demographic context;
- Step 2 – **Information gathering** – demographic analysis, including profiling the community and community change over time; and
- Step 3 – **Assessment of potential social impacts** – utilising the information obtained in steps 1 and 2, the assessment of potential impacts is undertaken to determine the scale, extent, distribution and duration of potential social impacts.

3.3 Preparation of the Report

The preparation of the SIA has sourced information from:

- Review of the plans to provide scoping and context for the short-list options;
- Review of district and local plans, strategies and legislation which explain the particular characteristics of Horowhenua where all short-list options are located;
- Review of Statistics New Zealand data for the areas of Levin, Ohau & Kuku and Manakau;
- Site visits; and
- Review of consultation information provided (acknowledging this was information received to date at the time of preparing this report).

⁵ Social impact guide. NZ Transport Agency, September 2016. Retrieved from file:///C:/Users/keg1/Desktop/16-243-People-and-place-state-highway-social-impact-guide-2017-FINAL.pdf

The bibliography in Section 6 contains a more detailed list of the documents that were reviewed and used to assist in the development of community profiles and evaluation of this preliminary social impact assessment.

4 Profile of Communities

4.1 Establishing the Study Area

4.1.1 Geographic Extent – North to South

The proposed project occurs within the Horowhenua Region which extends from Himatangi in the north to just north of the Ōtaki River in the south, it is bordered by the Tararua Ranges to the east and the Tasman Sea to the west.

This SIA established a Project Study Area (Study Area) for the purposes of profiling the existing environment and for assessing local potential social impacts associated with the Project. This is broken up into three community areas based on the locality of the 6 short-listed options. For the purpose of profiling the community demographics, the Census Area Units and Meshblocks⁶ in Table 1 are referred to:

Table 1 Community Areas in the SIA Study Area

Community Area	Short-list Options
Levin – this includes Census Area Units (CAU's) of Levin East, Playford Park, Levin South, Levin North, Levin West and Meshblocks 1857600, 1857701, 1857702, 1857703, 1857800, 1857704, 1857705, 1857900, 1858100, 1858000, 1858202, 1858201, 1858203, 1858204, 1858401, 1858402, 1858901, 1858902, 1858700, 1858800, 1859005, 1855200, 1855700, 1856000, 1855800, 1855900, 1856400, 1856500, 1856700, 1856600, 1856300.	<ul style="list-style-type: none"> ■ N4 ■ N5 ■ N9 <p>Connection area between Northern and Southern Options</p>
Ohau & Kuku – this includes Meshblocks 1859006, 1859001, 1859004, 1859002, 1859003, 1859100, 1859401, 1857000, 1856902, 1856901, 1856903, 1856904, 1856906, 1856905, 1856907, 1857100, 1857400, 1859200, 1859300.	<ul style="list-style-type: none"> ■ S6 ■ S7 ■ S7A
Manakau – this includes Meshblocks 1883101, 1882300, 1882900, 1883001, 1882002, 1882100, 1882200, 1882404, 1882406, 1882403, 1882405.	<ul style="list-style-type: none"> ■ S6 ■ S7 ■ S7A

Figures 8, 15 and 20 outline the geographical extent of the community areas that were identified for the purposes of assessing potential social impacts (referring specifically to the community areas of Levin, Ohau and Kuku, and Manakau). It is acknowledged that the potential social impacts of the proposed short-list options may extend geographically beyond the boundaries depicted in the areas defined in Figures 8, 15 and

⁶ Census Area Units are names and mapped spatial areas identified by Statistics New Zealand for the purpose of the Census and for compiling and providing demographic and statistical information collected and forecast from Census data. It is noted that the 'portion of CAUs' refers to analysis taken at the Meshblock level from the Census data (the smallest unit of data collation provided by Statistics New Zealand). This more fine-grained analysis has been undertaken in acknowledgement of the geographical boundaries of 'community' as identified through the SIA investigation.

20 (e.g. there will be people beyond these areas who have a connection to and with those in the community areas identified).

4.1.2 Scale

For the purposes of completing this preliminary SIA, the areas are conceptualised into different extents of impact. Figure 6 demonstrates the conceptualisation of extent of impact has been broken down to regional (blue), local (yellow) and sub communities (purple).

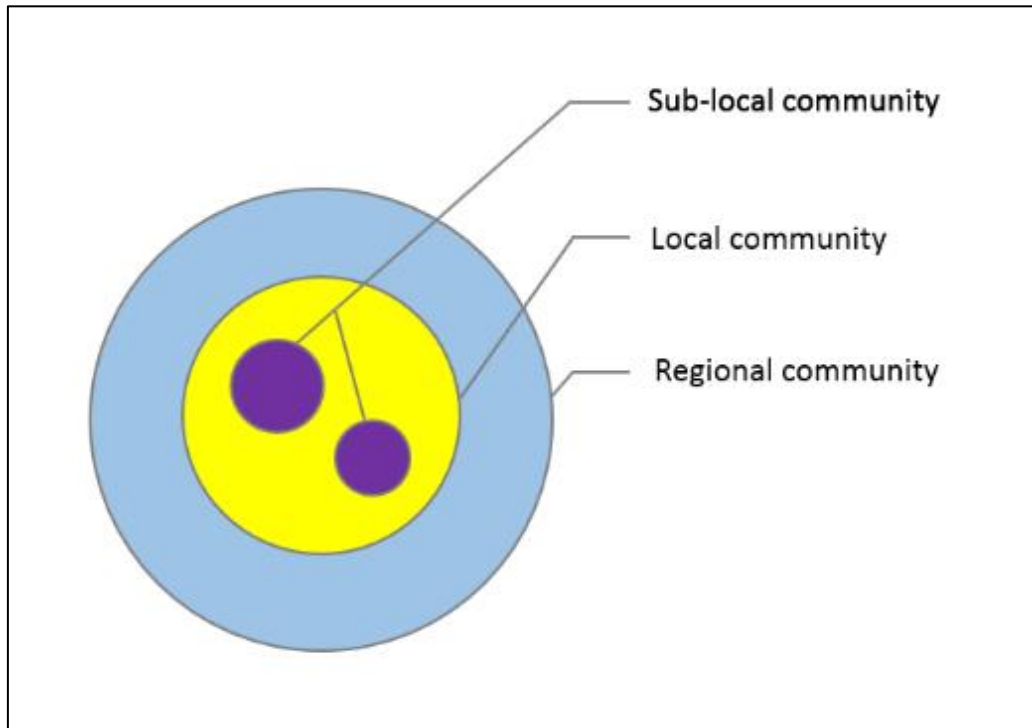


Figure 6 Conceptual Model of Scale of Impact

Regional encompasses the wider area linked by this corridor. Local Communities represents the larger communities that the corridor travels through and the focus of the community profiles. Sub-local communities are smaller neighbourhoods that are within direct proximity of the proposed corridor options, these generally developed within local roads and in some cases private right-of-way accesses. Figure 7 is an indicative map of the proposed regional, local and sub local communities for this area. Of note the sub-local communities are peri-urban/rural in character and are east of the main town/village at this stage the exact identities and character are not known and will need to be explored further at the next stage of assessment.

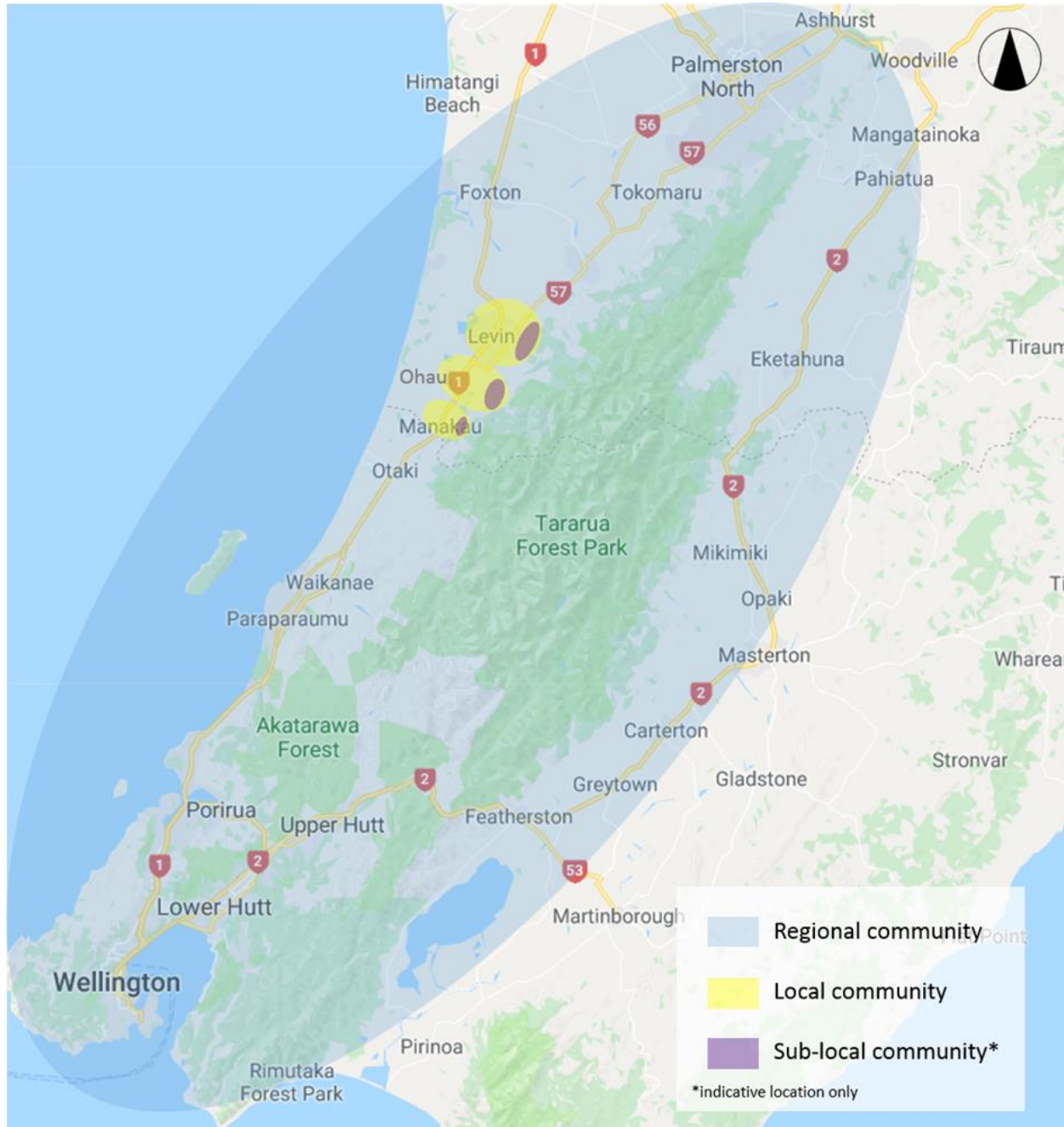


Figure 7 Indicative map of proposed regional, local and sub-local communities for O2NL (Source: Google Maps).

These communities have been used to assess the relative scale and nature of impacts being experienced directly by part of that ‘community’ and in respect of how absorptive the community might be to that scale of change.

4.1.3 Conclusion

This report assesses the potential social impacts on each community for all related short-list options. The key positive and negative potential social impacts cover three key phases for each locality including, planning, construction and operation and are assessed on a regional and local and sub-local scale. It is recognised that the preliminary social impact assessment is limited in consideration of construction effects (as these are yet to be defined) and that the current 300m corridors are significantly greater than the extent of any final

alignment within the corridor (for consideration of operational effects). These limitations are noted and discussed, where relevant, in the assessment.

The remaining community profile uses data from the 2013 Census, unless otherwise stated. It is acknowledged that a Census was completed in early 2018, but this information was not yet available. It is recommended that the community profile information is updated as this information comes available.

4.2 The Levin Community (Local Community)

4.2.1 Description of the Levin 'way of life' (how people live, work and play)

4.2.1.1 Key demographic information/geographic extent

Levin is the main town within the Horowhenua District, the geographic extent for consideration is illustrated below in Figure 8. Levin functions as the business, retail, civic, cultural, social and recreational hub for surrounding area. The centre of Levin is situated on SH1 (Oxford Street), which along with Queen Street form the main streets that define the central business district. Levin contains a relatively dispersed pattern of civic and retail activities. Surrounding the civic centre, residential development provides an urban/suburban living environment for the majority of Levin's residents. The urban centre of Levin is surrounded by peri-urban dwellings on the periphery of the town.

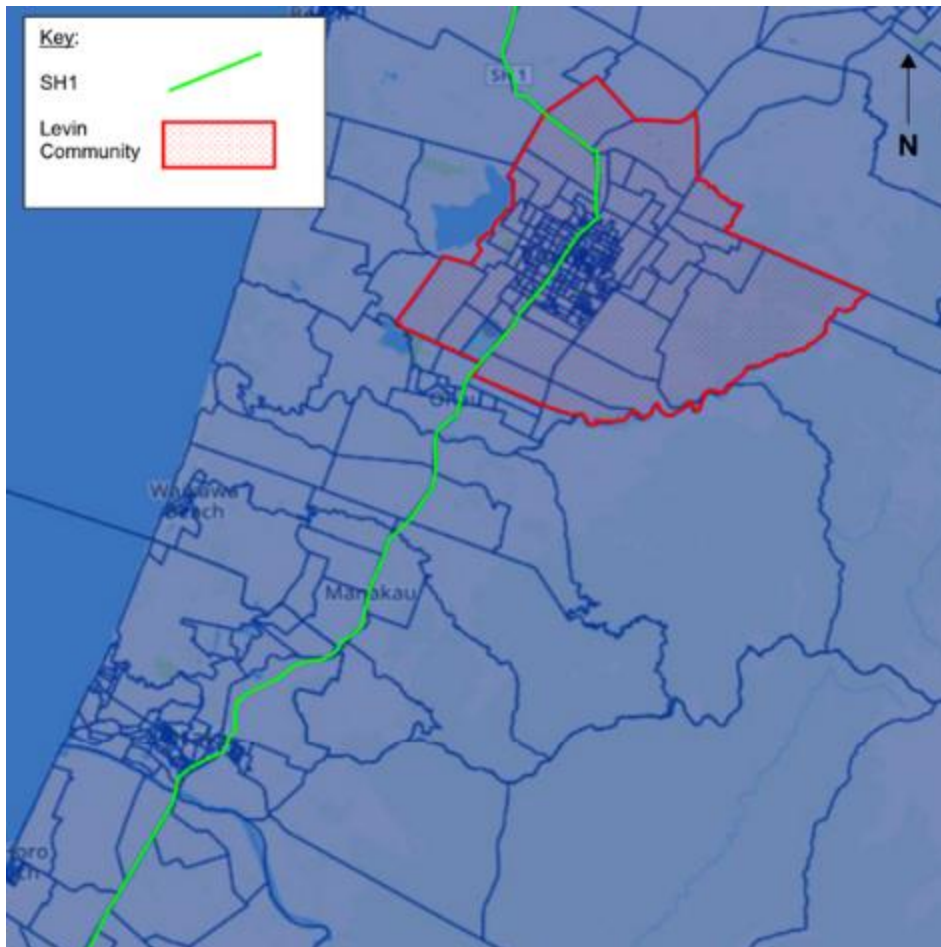


Figure 8 Approximate geographic extent of the "Levin Community" (Source: Statistics New Zealand)

Levin has a population of approximately 17,976 people (2013 Census), the largest town in Horowhenua. Between 2006 and 2013 the population grew by 1.3%, this growth has mainly occurred in the west of Levin, where a population growth of 3% occurred. Individual areas have experienced population growth or loss proportional to the existing population. A map profiling significant population changes between the 2006 and 2013 census is available in Appendix A. Areas that have significantly grown in size comparatively to what they were in 2006 include the south-west of Levin, the north of Levin and an area in the far east of Levin (outside the urban centre). There are some areas where the population within Levin has declined: one area in the north-east of Levin (where there has been a population decline of -27% between 2006 and 2013) and an area in the south of Levin on the east side (see Appendix A).

In the 2013 Census data approximately 76% of the community identified as NZ European and 22% identified as Māori. Comparatively the regional Māori population is 20% and nationally it is 14%.

According to the 2013 Census, a large portion of the population (26%) has lived in the same house in Levin for 1-4 years, which is comparative to the regional average of 27%. Both east and west Levin have 26% of the population residing in the same house for 1-4 years.

The town is relatively close to Wellington and fast-growing Kapiti, and is considered particularly attractive as a retirement area. In 2013, 25.7% of the population was aged 65 and over, compared with a national average of 14.3%. The average median age of Levin is 50 and the average median personal income is approximately \$25,154. The average median age of Levin is higher than the regional median age at 39, and the median personal income is also slightly higher than the regional median at \$25,000⁷. The largest proportion of Levin's population is between the ages of 15-64 (note this is also the largest age bracket, but used to identify the working population), and the second largest proportion of the population is in the over 65 age bracket. Between the 2006 and 2013 Census the proportion of those aged under 15 years decreased from approximately 21% to 19% of the Levin community. The proportion of those aged 15-64 stayed relatively constant between 2006 and 2013. Those aged greater than 60 increased from approximately 23% to 26%.

4.2.1.2 Location of existing transport corridors

Currently SH1 and the railway corridor dissect the middle of the town centre (see Figure 9). SH57 appears to form a peri-urban border on the eastern side of town. No formal cycle ways have been identified. A walkway has been developed at the periphery of the eastern side of town allowing access to the Waiopēhu Reserve and the Kohitere Path (Trig) as indicated on Figure 9 below (there appears to be a parking facility for this walkway east of the Queen St / SH57 intersection).

⁷ Nationally, the median personal income is \$28,500.



Figure 9 Location of existing transport corridors (Source: Horowhenua District Council GIS 2018)

4.2.1.3 Key locations and social infrastructure

Functioning as a service centre for the district, Levin contains a range of retail and business activities. It is understood / observed that local residents shop locally along Queen Street and Oxford Street as there are no other suburban commercial centres except for an occasional convenience store. Industrial activities are evident along the southern edge of the town including on SH1, which in 2008 occupied approximately 16% of the Levin's land area.⁸ Growth in the town is demanding smaller scale commercial activities and larger scale bulk retail outlets, which are beginning to cluster at the periphery of the town. Residents of the surrounding area such as Ohau, Kuku and Manakau appear to travel to Levin to access key services.

Levin provides civic functions with the location of the Horowhenua District Council and Te Takeretanga o Kura-hua-po Culture, Community Centre & Library located here to service the district. The Horowhenua Health Centre located in Levin provides a range of primary and hospital services for the district, in-patient services are limited to maternity, assessment treatment and rehabilitation and rural inpatient beds. More specialist in-patient treatment is primarily accessed at Palmerston North Hospital.

Levin has two secondary schools and a number of primary and 'intermediate' education options for the district, it is easily accessible to the immediate community, with all schools being well attended and with stable rolls. The schools are located both on the eastern and western side of town within close proximity of the town's centre and surrounding residential areas, which actively encourage walking and cycling to and from school.

⁸ Retrieved from the Horowhenua Development Plan, June 2008.

The community utilises a range of key communal facilities such as the Levin Memorial Hall, St Joseph's Catholic School, Waiopahu College and Horowhenua College to congregate and socialise. See Figure 10 for a map of key social facility locations (not including health facilities), please note that the map does not show the full extent of the Levin Community as identified key social infrastructure is concentrated in the urban centre.

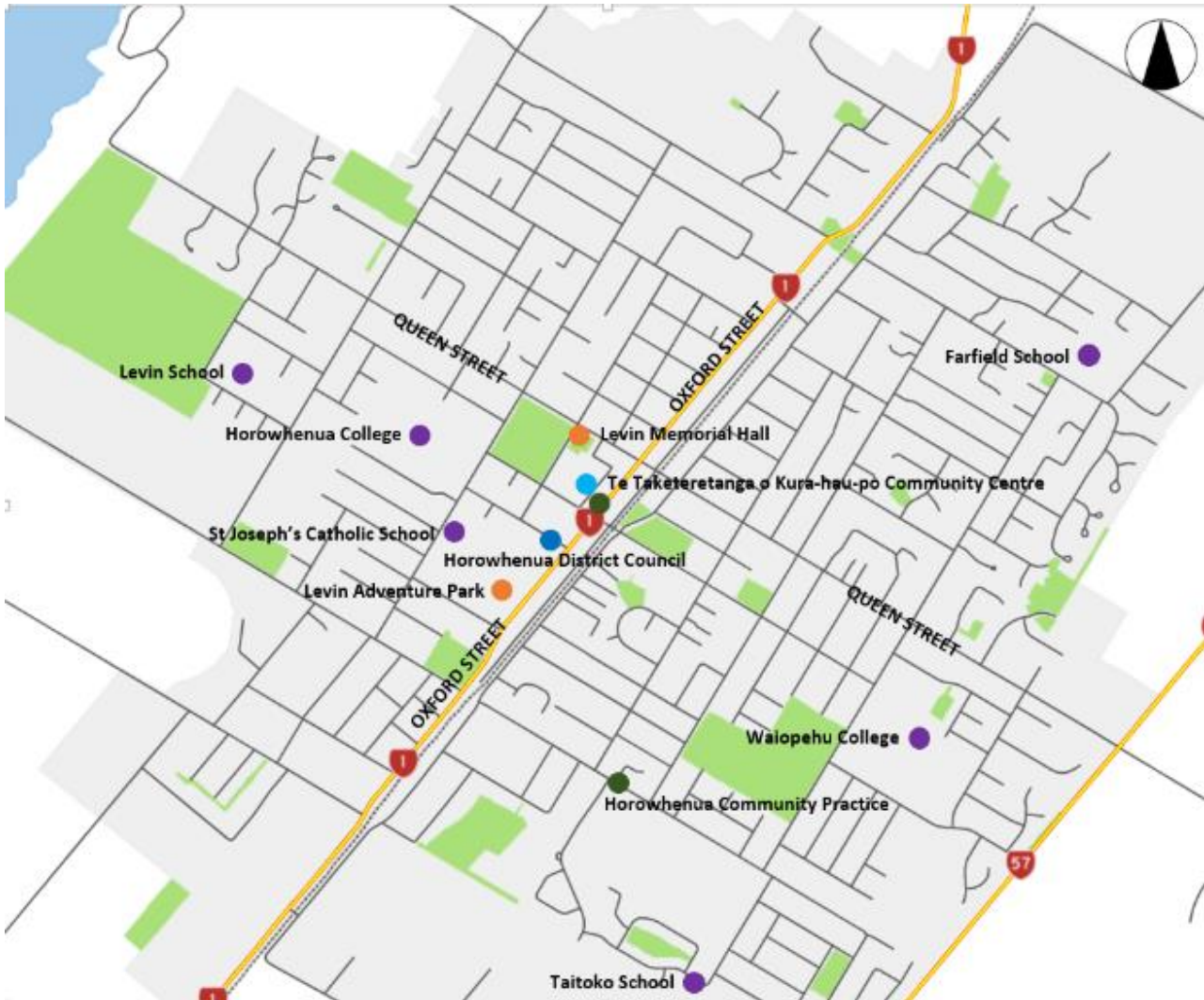


Figure 10 Key Social facilities / services in the Levin Community (Source: Horowhenua District Council GIS 2018)

4.2.1.4 Housing and Development

The 2013 Census data establishes that there are a total of approximately 7,422 houses in Levin. As commonly identified in rural New Zealand towns, separate, single detached homes make up 79% of the household types in the town. Approximately half of the residents own their homes (51%) with a relatively lower portion of the population in the renting market (30%).

A map of the housing changes from 2006 to 2013 (see Appendix A) shows the patterns of housing development in the Levin community. Much of the newer residential development appears to be occurring on the periphery of Levin in the peri-urban areas such as the eastern and northern sections.

The Draft Horowhenua Growth Strategy 2040 (2018) anticipates that there will be significant growth in the area in scale and effect, population projections suggest that the district will experience on average a 1.2% annual growth rate. Expectations of growth have, at least in part, been derived from the improved travel time south to Wellington and the ability to provide for a 'commuter population'. For this reason projected residential growth is anticipated in the southern part of the district (the project focus area). It has been assumed that growth will be attracted to Levin due to the employment base and facilities such as schools. Demand for residential development based on historic data has shown that 63% was in residential zones and 37% in rural zones.

Below are the settlement principles for housing development from the Horowhenua Growth Strategy:

- Plan for settlement growth at key nodes (such as existing settlements) on transport routes including public transport networks;
- Provide housing choice - range of lot sizes/densities. Higher densities around centres (e.g. 25-50dw/ha) and larger lots at edges;
- Recognise and provide affordable housing choices for people with a low income;
- Ensure neighbourhoods have a focal point or 'heart' which is a people-friendly place;
- Avoid areas of development where there are high risks from hazards and recognise the effects of sea level rise;
- Maintain the 'village' character of smaller settlements (e.g. Tokomaru, Ohau, and Manakau);
- Maintain the 'beach' character of coastal settlements (e.g. Waitarere, Hōkio and Waikawa Beaches);
- Recognise and provide for retention and reuse of heritage buildings; and
- Address in any new growth areas the potentially disconnecting influence of main roads/highways either current or future-planned.

Residential (medium 150 to 250m²) to low density (1000-2000m²) lots) within the urban form and Green Belt Residential (2000-5000m² lots) on the peri urban periphery are considered the key types of residential development. Figures 11 and 12 demonstrate the areas of potential future growth areas within Levin.

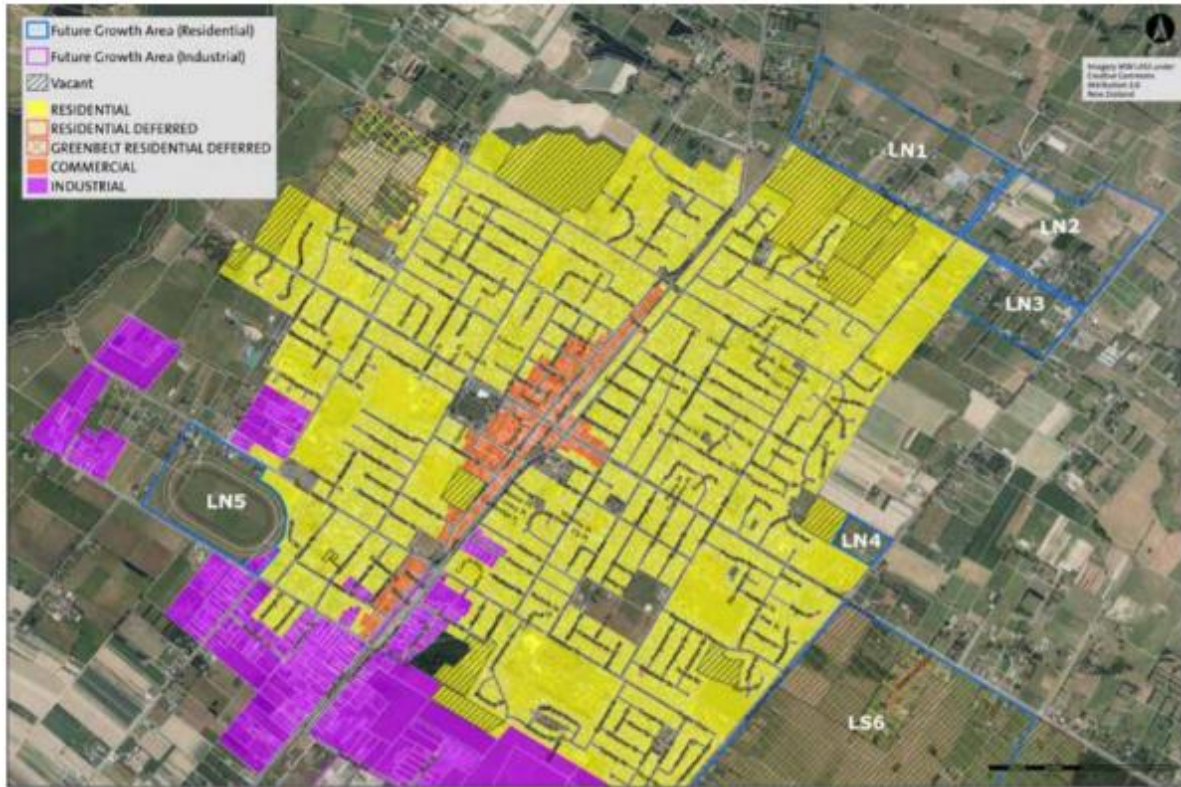


Figure 11 Levin North Potential Growth Options (Source: Draft Horowhenua Growth Strategy 2040)

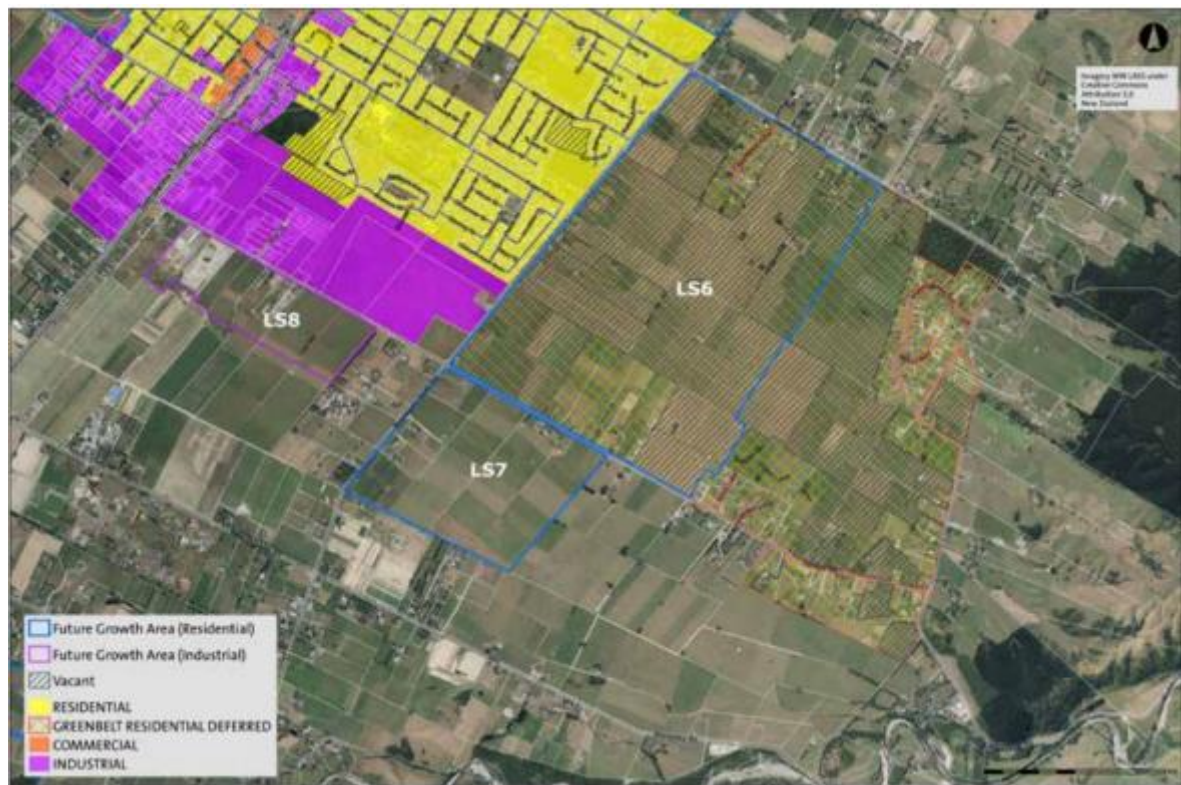


Figure 12 Levin South Potential Growth Options (Source: Draft Horowhenua Growth Strategy 2040)

4.2.1.5 Industry and Employment

The periphery of Levin is part of the district's well established agricultural and horticultural industry. Tourism that focuses on the natural assets of the region and horticulture are seen as potential growth areas. Service industries make up approximately 50% of the GDP estimates for the Horowhenua economy and is anticipated to remain steady. Manufacturing makes up around 30% however is projected to decline by 10% in the 35 years. Primary industry is estimated to be around 20% and grow to 25% in the next 35 years. Industrial land use is planned for the southern periphery of Levin (see Figures 11 and 12).

The largest proportion of the population within Levin, at 36% are not in the labour force (this would in part encompass the retiree population). This is higher than the regional percentage at 27% and also the national percentage at 25%. 26% of Levin's population are employed full time, compared with the 34% of the regional population and nationally at 36%. 5% of Levin's population are unemployed, which is 1% more than the regional and national ratios.

Service and sales are the most common type of occupations (18%) according to the 2013 Census data. Elementary occupations (15%); and Legislators, Administrators and Managers, Technicians and Associate Professionals (12% respectively) are the next most common. Agricultural workers make up 10% of Levin's occupations.

4.2.2 History and Sense of Place Values

4.2.2.1 History

Māori settlement in Levin dates back over 650 years, communities clustered at the time on the coast and around lakes Horowhenua and Papaitonga (Waiwiri) and Rivers. Beyond the coast or river banks, the dense forest cover prevented permanent settlement, but did provide a 'storehouse' of berries, and birds such as kererū and kākā. There are four iwi with rohe in Horowhenua; Muaūpoko, Rangitāne, Ngāti Raukawa and Ngāti Apa. The eastern side of the district was not totally unoccupied, but was not intensively settled until after the completion of the Wellington-Manawatu Railway in 1886. Prior to this, the forest was for resource gathering. The largest area of Māori occupation during this period was predominantly located west of SH1.

The Levin district was one of the last in the region to be opened to Pākehā settlement, it began in the 1840's and grew in the 1880s coinciding with the building of the Wellington–Manawatū railway. The town grew steadily as farming developed in the surrounding areas, overshadowing railway settlements. Levin grew slowly in the 1920s and 1930s, but rapidly throughout the 1940s to 1960s.

This history is illustrated in the preliminary mapping of historic buildings and archaeological sites (further investigations to be undertaken) below, concentrations of historic buildings are found in close proximity to the railway corridor and larger clusters archaeological sites to the west near landmarks such as Lake Horowhenua.

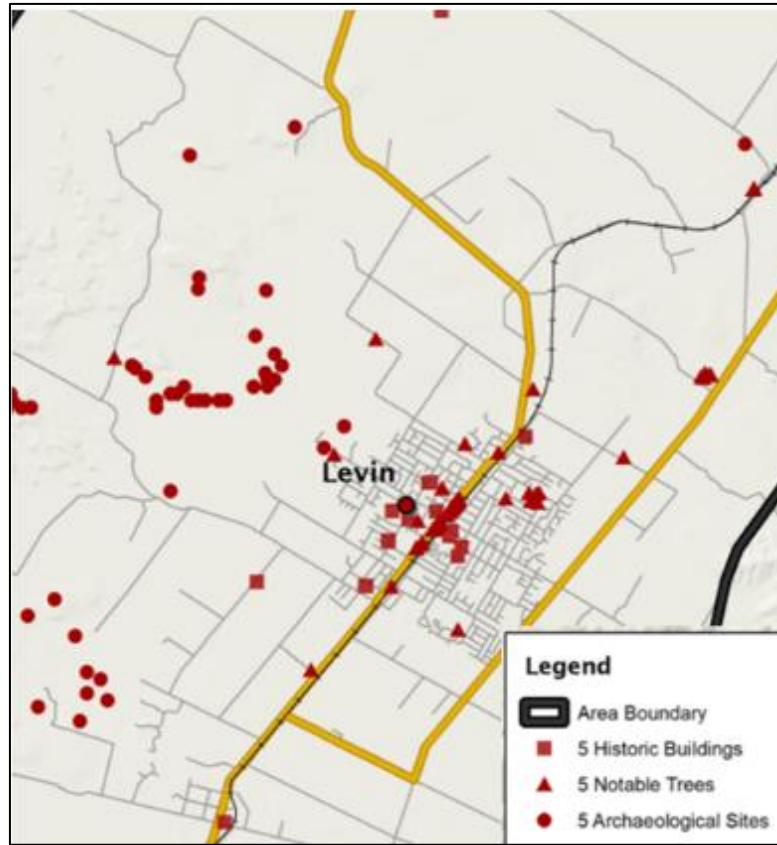


Figure 13 Heritage areas in Levin (Source: New Zealand Transport Agency 2017)

The historic and cultural heritage of the area is strongly valued by the community and local iwi members and many longstanding families continue to live in and around Levin.

4.2.2.2 Sense of Place values

Levin values a sense of history both the historic buildings within the city centre and the natural resources and history of the land, including the Māori heritage of the area. Levin residents have identified that the surrounding landscapes are a part of their identity, including Lake Horowhenua, the coast and the Tararua Ranges. This includes easy access and protection of these areas. Similarly, Levin is strongly connected to its rural surroundings, noting that productive land and the rural lifestyle is highly valued.



Figure 14: Community values (Source: NZTA 2018 consultation data)

As a larger settlement Levin has distinct communities that are both urban and rural. Those in the eastern rural sector make reference to “road families” (e.g. those families that reside down the east-west roads from Levin) that create irreplaceable communities with values to the land and the historic connections. In particular, valuing the ability to produce their own produce and live a rural lifestyle with close connections to the Levin community.

4.2.3 Quality of the environment

Levin is uniquely situated between the coast and hills of the Tararua Ranges, with Lake Horowhenua also creating a strong landscape, clearly visible from the centre of the town. There is a good distribution of open spaces amongst the town, including the Levin Adventure Park that contributes as a safe and enjoyable outdoor area for children and families (both local and beyond).

A clearly and commonly identified value of the Levin community is their respect and enjoyment of the environment. As identified above, the town’s strong natural landscape features are a key component of the community’s identity. With several generations of families living, working and playing on the land, safeguarding Levin’s natural environment is at the heart of community involvement. In particular, a small but dedicated community organisation, ‘Keep Levin Beautiful’ actively updates members of the community through social media on their Facebook page about clean up events and what individuals can do to play their part in keeping Levin beautiful.

The peri-urban community values include living off the land, the peace and tranquillity of the lifestyle, rural views of key landmarks and connections to nature including local birdlife.

4.2.3.1 Community political and social connections

As the largest town in the district Levin has many organised community groups for different sectors of the community these including church groups, age concern, Keep Levin Beautiful etc. The Horowhenua District

Council is establishing a community reference group involving a range of community stakeholders, to assist and support the Community Services Team by advising on the community impact of community services delivered, identifying future community service opportunities and assisting with ongoing monitoring and evaluation. It is recognised that as a larger community, informal neighbourhood groups may have been established as part of the pending project development.

4.2.4 Levin Sub-Local Community

The area east of the town centre and east of SH57 (“Rural East Levin”) is the focus sub-local area for Levin for the purposes of this SIA, as it is the area surrounding the proposed corridor options. This area is located on the flat terraces between Levin and the Tararua foothills, it is a relatively modified landscape with only small pockets of native forest. It encompasses both larger residential lots, lifestyle and agricultural and horticultural properties. Parts of this area have long-established rural families and more recently residential subdivisions have been forming (as evidenced by the population growth between 2006 and 2013) and future urban growth plans indicate intentions for a greenbelt residential zone (see Figure 12). Table 1 provides a comparison of the profile of rural east Levin against the whole Levin Community and the township itself. Rural east Levin makes up approximately 4% of the total population and 4% of the households. Communities beyond the urban centre make up approximately 12.5% of the Levin Population of which approximately one third of which are in rural east Levin. This area has a higher average median income (68.5% higher than Levin Town) and lower youth population. It has a large working age population and a significantly lower unemployment rate.

Table 1 – 2013 Census Data*

	Local Community (Levin)	Levin Township (Urban)	Sub-Local Community (Rural East Levin)
Population 2013	17,976	15,735	684
Population Change 2006 - 2013	1.3%	1%	13%
Average Median Age	50	44	52
Average Median Income	\$25,154	\$20,060	\$29,275
Number of Households	7,422	6,522	273
Change in Household Numbers 2006 – 2013	5%	4%	20%
Female	54%	54%	48%
Male	47%	46%	53%
European	76%	75%	88%
Maori	22%	23%	11%

	Local Community (Levin)	Levin Township (Urban)	Sub-Local Community (Rural East Levin)
Population under 15	19%	20%	14%
Population btw 15 - 64	55%	54%	64%
Population 65 and over	26%	26%	22%
Employed full time	26%	25%	37%
Employed part time	10%	10%	14%
Unemployed	5%	5%	2%
Not in labour force	36%	37%	27%
Top Occupation	Service and Sales Workers (18% of employed)	Service and Sales Workers (19% of employed)	Legislators, Administrators and Managers (16% of employed)
Second Top Occupation	Elementary Occupations (incl Residuals) (15% of employed)	Elementary Occupations (incl Residuals) (15% of employed)	Trades Workers (14% of employed)
Third Top Occupation	Legislators, Administrators and Managers; Technicians and Associate Professionals (12% of employed respectively)	Technicians and Associate Professionals (12% of employed)	Technicians and Associate Professionals; Elementary Occupations (incl Residuals) (13% of employed)

*Note that this data is from the 2013 Census, development and population growth would have continued since then, particularly in new development areas. It is recommended that this information be reviewed in social research or as 2018 Census data becomes available – depending on the timing of the full SIA.

4.3 The Ohau & Kuku Community (Local Community)

4.3.1 Description of the Ohau community and 'way of life' (how people live, work and play)

4.3.1.1 Key demographic information/geographical context

It is recognised that this geographic extent represents areas with separate identities, including Ohau village, Kuku and Muhunua East. In comparison to Levin, this area is significantly smaller with a population of approximately 1,116 people and contains a traditional village structure in Ohau where the historical Ohau School forms the centre of the community. Kuku is a separate more rural community, as is Muhunua East.

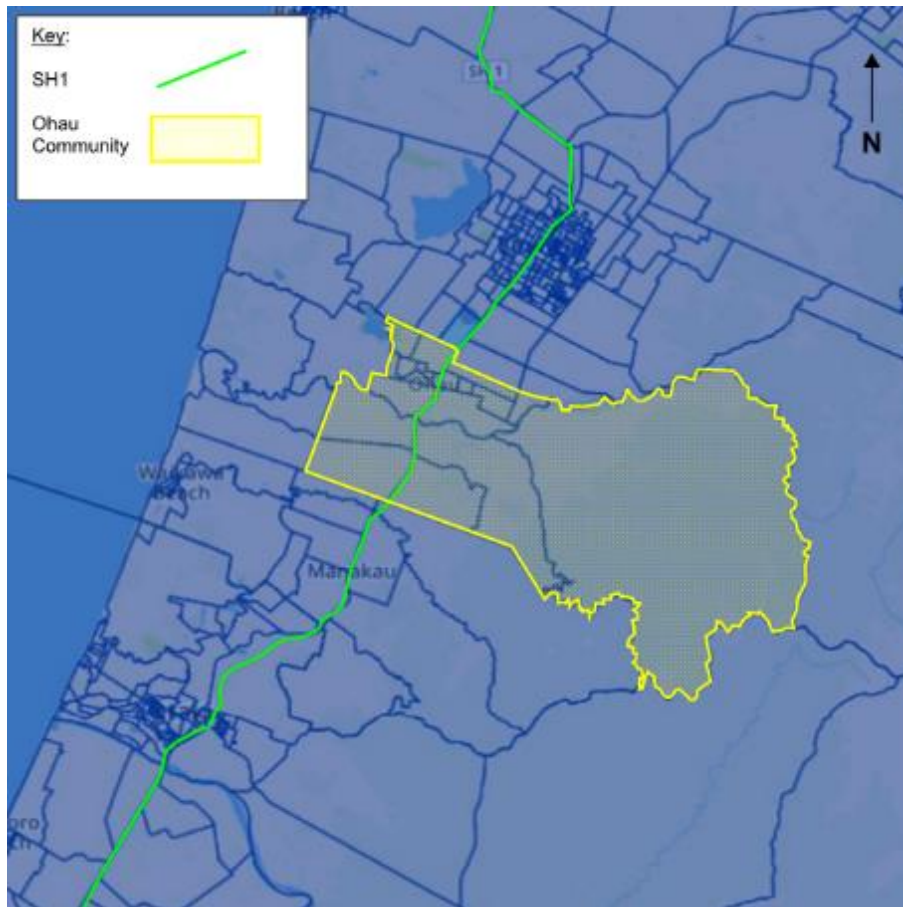


Figure 15 Approximate geographical extent of the "Ohau & Kuku Community"

Between 2006 and 2013 the population grew by 12.4%, this growth has mainly occurred in the west of SH1 where a population growth of 13.6% occurred, compared to 10.9% in the east of SH1. An area in the north-east of Ohau had significant population growth from 3 to 30 people. In the north-west of Ohau two areas also increased in population; one increased from 15 to 36 people, the other from 9 to 54 people. Significant population losses and gains are illustrated in Appendix A. Approximately 84% of this wider community identified as NZ European and 13% identified as Māori. Comparatively the regional Māori population is 20% and nationally it is 14%.

According to the 2013 Census, a large portion of the population (27%) has lived in the same house in this area for 5-9 years, which is higher than the regional average of 20%. Both east and west of SH1 have the largest percentage of the population residing in the same house from 5-9 years, with the second largest proportion living in the same house for 1-4 years (see Appendix A for pattern of population growth).

Ohau and Kuku are relatively close to Wellington and fast-growing Kapiti, and attracts retired people. In 2013, 19% of the population was aged 65 and over, compared with a national average of 14.3%. The average median age of Ohau and Kuku area is 48 and the average median personal income is approximately \$29,601. The average median age of Ohau and Kuku is higher than the regional median age at 39, and the median personal income is also higher than the regional median at \$25,000. Nationally, the median personal income is \$28,500. The largest proportion of Ohau and Kuku’s population is between the ages of 15-64, and the second largest proportion of the population is in the over 65 age bracket. Between the 2006 and 2013 Census the proportion of those aged under 15 years decreased from approximately 20% to 19% of the Ohau and Kuku community. The proportion of those aged 15-64 stayed decreased from 68% in 2006 to 62% in 2013. Those aged greater than 60 increased from approximately 12% to 19%.

4.3.1.2 Location of existing transport corridors

SH1 and the railway run parallel to each other and split through the centre of Ohau and Kuku. The railway partially distances itself from the highway at the centre of the community, forming a slight curve to the east. The planning maps do not identify any existing cycle ways or major walking routes for the area (nor were any identified through a site visit). A tunnel under SH1 is provided for pedestrian access for school children.

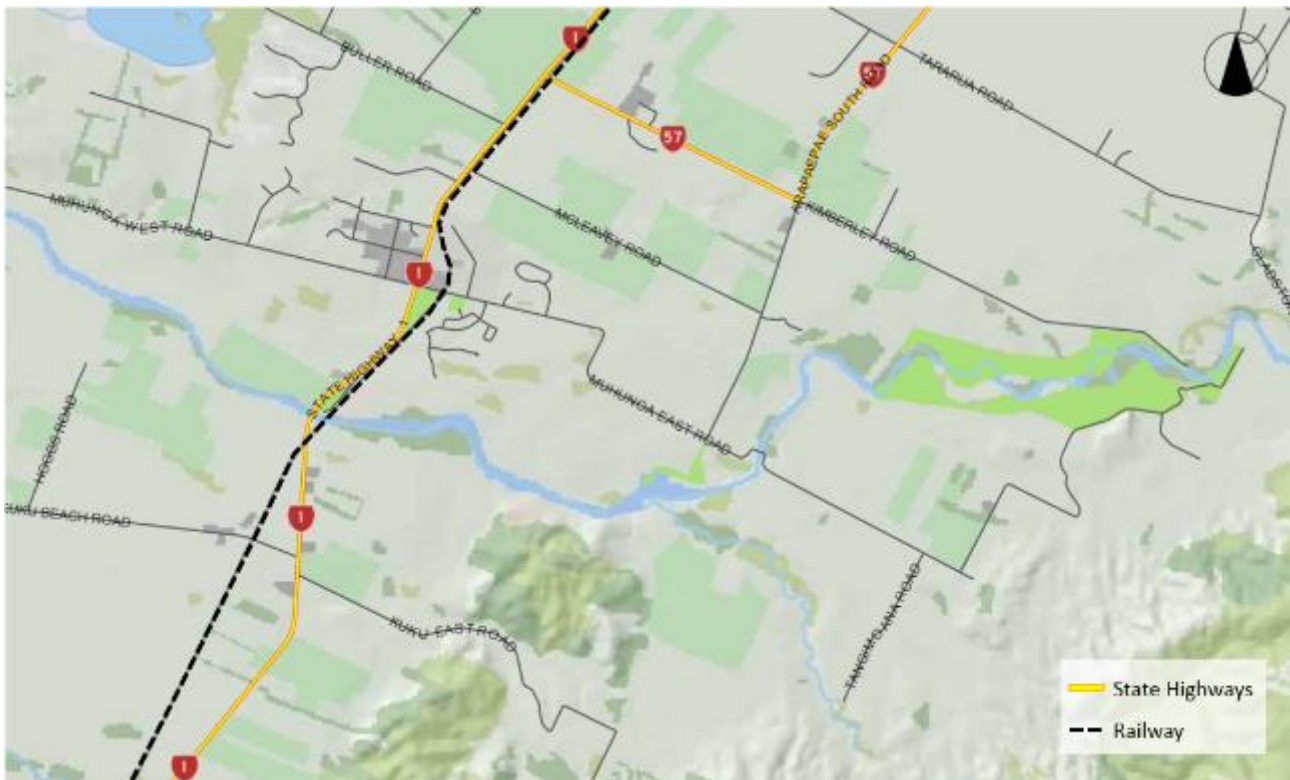


Figure 16 Existing transport corridors in Ohau (Source: Horowhenua District Council, 2018)

4.3.1.3 Key locations and social infrastructure

As a small, rural village, Ohau School forms the focal point of the community and is actively utilised for community gatherings and events. The primary school serves students year 1 to 8 and in July 2017 recorded a student role of 187 students. There has been a relatively steady roll trend over the past recent years,

however has decreased since the highest recorded roll of 195 students in 2013⁹. Figure 17 shows the catchment area for the school population, the majority of students (approx. 85%) are from the areas radiating north from Kuku, with the second line showing the distribution of most of the remaining 15%.

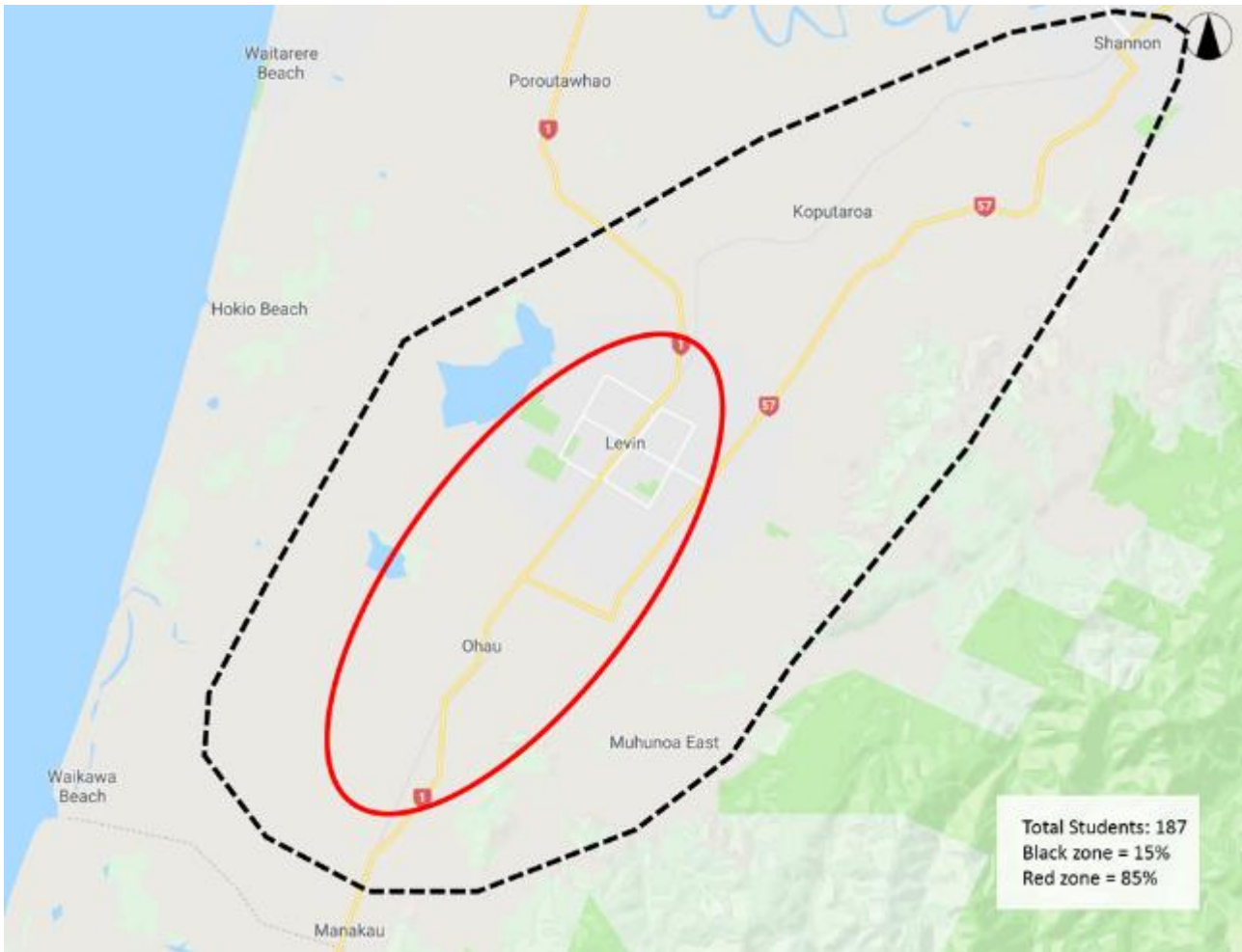


Figure 17 Student location profile for Ohau School Source: Ministry of Education 2017¹⁰

The neighbouring Ohau Domain is also an important area for the school and community as it provides a safe and enjoyable outdoor space for community events and leisure.

Located within close proximity to Ohau School and Domain is the Ohau Public Hall. A range of community events such as the monthly Ohau Market Day is held here, providing another central meeting space for the community. There are also two Marae located within the Ohau and Kuku communities, Kikopiri Marae and Te Iwi o Ngati Tukorehe, which both play an important role in safeguarding the cultural and historic significance of the area. See Figure 18 for the location of these facilities, note the map focuses on the Ohau village as this is where key social / community facilities and services are located.

⁹ Education Counts website provides data for 2013-2017

¹⁰ It is acknowledged there may be individual students from beyond these 'catchment circles' (some data is limited to protect privacy of individual students).



Figure 18 Key locations and social infrastructure in Ohau and Kuku (Source: Horowhenua District Council 2018)

4.3.1.4 Housing and development

The draft Horowhenua Growth Strategy 2040, identifies a main goal to maintain the ‘village character of Ohau. The residential pattern in Ohau is relatively low density, with smaller lots situated closer to the community centre, and larger lots extending at the periphery. The village has experienced an increase of 18% in the number of new dwellings, particularly in the development of rural-residential properties. There has been a 14% increase in East Ohau and 21% in West Ohau (see Appendix A).

The Draft Growth Strategy shows the pattern of residential settlement at the hub and green belt residential around the periphery (Figure 19). Development is spread either side of SH1. It is anticipated that due to the improved southern links to Wellington this community will continue to grow.

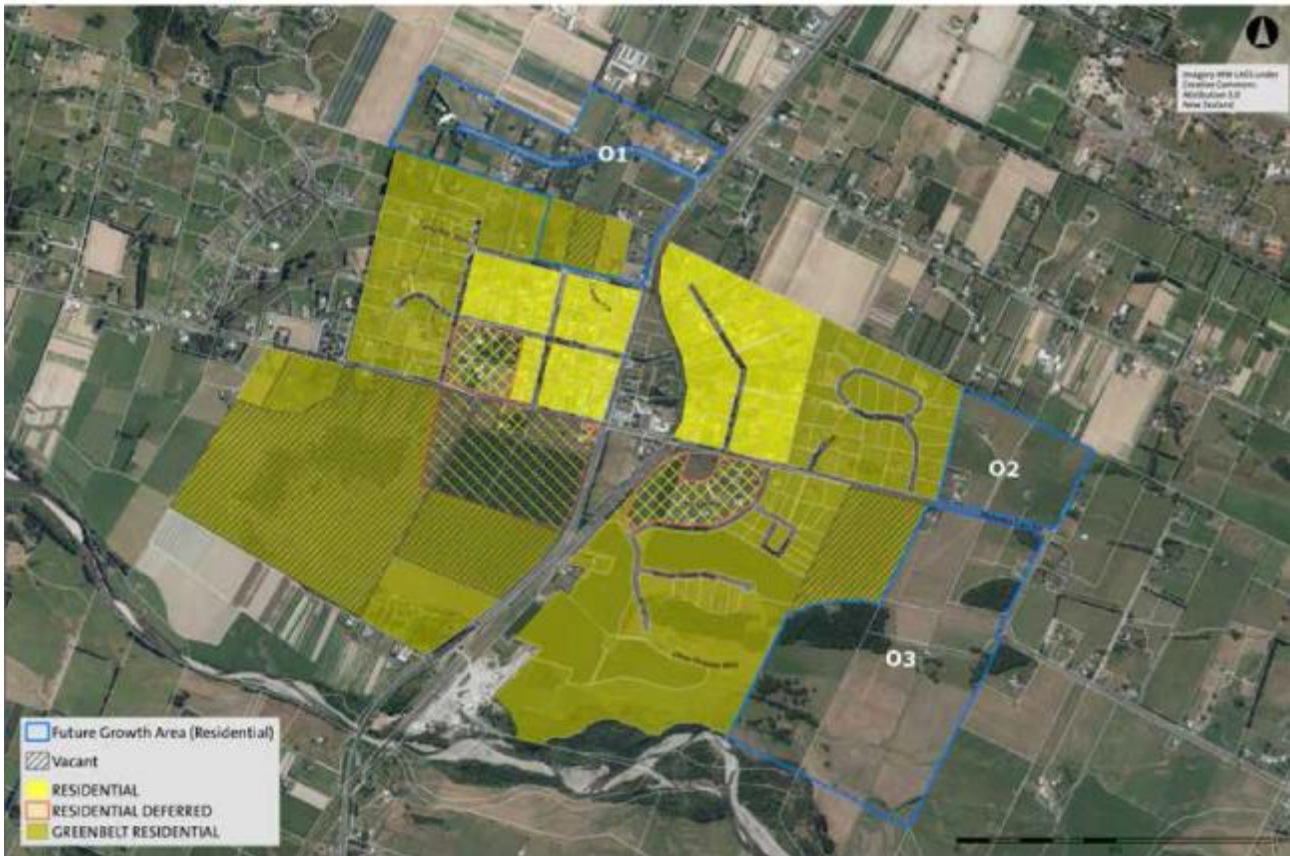


Figure 19 Ohau residential zones and potential growth areas (Source Draft Horowhenua Growth Strategy 2040)

4.3.1.5 Industry

There is limited commercial industry within Ohau village, employment opportunities are sought in Levin, Ōtaki and further south. Agriculture and horticulture are the primary land use industries beyond the village hub. A monthly market, which is well attended, is a representative of the local produce.

4.3.1.6 Employment

Approximately 36% of Ohau and Kuku's population are employed full time according to the 2013 Census, which is the same as the national full time employment percentage, and 2% more than the regional amount. 26% of its population are not in the labour force. Ohau and Kuku's unemployment rate is at 3%; 1% less than the regional and national numbers.

East SH1 (Ohau and Kuku) top 3 occupations: Agriculture and Fishery Workers (19%); Technicians and Associate Professionals (12%), and Trade Workers (11%). This illustrates the productive land in the area east of Ohau and Kuku. West SH1 (Ohau and Kuku) top 3 occupations: Legislators, Administrators and Managers (18%), Agriculture and Fishery Workers (15%), and Professionals (13%).

4.3.2 History and sense of place values

4.3.2.1 History

Māori occupation has been dated back more than 700 years in this area. Small settlement clustered around natural features such as the coast, Ohau River, Kuku Stream and Waikawa River and the abundant wild life

that thrived in the rivers and surrounding bush. Kikopiri Marae and Te Iwi o Ngati Tukorehe Marae are located within this area. St Stephen's Church Kuku was opened in 1891 to service the local Māori community.

The first evidence of European settlement in this area predates the completion of the Wellington-Manawatu Railway in 1886. The coast was part of the main route for traveller from Wellington travelling north. The route was used by coach companies and an accommodation house was built on the Ohau River. Following the completion of the rail more settlers came and settlement moved inland to align with this. Ohau School was established in 1891 which reflects the construction era of the rail line.

The original village streets of Ohau are in a neat grid bounded by SH1 on the east and Muhunua West Road on the south. A plaque on the old post office documents the history of the area. Before the expansion of Levin and the increased efficiencies of the transport linkages, Ohau functioned as a thriving village with infrastructure to support it including dairy factories servicing the surrounding area. At present day it has returned to a quiet rural village where lifestyle blocks and agricultural and horticultural industry is the primary land use beyond the residential settlements, it relies on Levin for facilities and services.

4.3.2.2 Sense of place

Ohau itself has a strong identity as a village with the historic grid development and community connectedness. Beyond the hub, a rural lifestyle focused on the natural landscape are the strong sense of place values in the area. The productivity of the land particularly horticultural and agricultural enterprises is highly valued and the ability to be providers to the district and beyond are a sense of pride for the community. Connectivity is an important component of the community the outlier settlements value the ease of access to the village and sense of community in the area. Many have sought out the area for the tranquil lifestyle it affords with both a sense of privacy and space and a sense of connectedness that is formed within a small community.

4.3.3 Quality of the environment

The Ohau River, Kuku Stream, Totara Forest and Tararua Ranges are key ecological features of the area. A tranquil landscape with ease of access to natural environments hosting native wildlife typifies the quality of the environment in this area. A recent real estate advert described it as “a rural setting in which each season accentuates the beauty of the vineyards, river setting, magnificent native trees and the backdrop of the spectacular Tararua ranges¹¹”.

4.3.4 Ohau and Kuku Sub-Local Community

The area east of Ohau Village (rural area east and west of the Tararua foothills), this includes Muhunua East and rural east Ohau and Kuku. This is the focus sub-local area for Ohau and Kuku for the purposes of this SIA, as it is the area surrounding the proposed corridor options. This rural area beyond the villages is located on the flat terraces between SH1 and the Tararua foothills and the valley on the eastern side of the foothills, it is a relatively modified landscape with several rivers and remnants of lowland tōtara forest. It encompasses both rural lifestyle and agricultural and horticultural properties. Parts of this area have long-established rural families and more recent lifestyle blocks including the Ohau Vineyard development. Table 1 provides a comparison of the profile of rural east Ohau and Kuku against the whole Ohau and Kuku Community and Ohau Village (peri-urban area). Rural east Ohau and Kuku makes up approximately 34% of

¹¹ Harcourts Ōhau Vineyard Real Estate Ad <http://harcourts.co.nz/Property/761060/LE13242/0-Ohau-Vineyard-Village-Green-Sections>

the total population and 34% of the households. Communities beyond the Ohau Village centre (east and west) make up approximately 53% of the population of Ohau and Kuku area, which demonstrates it has a much larger lifestyle and rural population. This eastern area has not developed as much as the village in terms of population change (only 5.8%), other demographics are relatively similar to the village, though this area is more reliant on agricultural occupations than the village.

Table 2 – 2013 Census Data

	Local Community (Ohau & Kuku)	Ohau Village (Residential Cluster)	Sub local Community (Rural East Ohau & Kuku and Muhunua East)
Population 2013	1,116	522	384
Population Change 2006 - 2013	12.4%	28.9%	5.8%
Average Median Age	48	52	46
Average Median Income	\$29,601	\$31,811	\$27,571
Number of Households	447	210	150
Change in Household Numbers 2006 – 2013	18%	35%	9%
Female	52%	52%	52%
Male	49%	48%	49%
European	84%	90%	85%
Maori	13%	10%	14%
Population under 15	19%	18%	18%
Population btw 15 -64	62%	60%	65%
Population 65 and over	19%	23%	18%
Employed full time	36%	36%	38%
Employed part time	11%	11%	11%
Unemployed	3%	3%	3%
Not in labour force	26%	28%	26%
Top Occupation	Agriculture and Fishery Workers (17% of employed)	Legislators, Administrators and Managers (17% of employed)	Agriculture and Fishery Workers (21% of employed)
Second Top Occupation	Legislators, Administrators and Managers (13% of employed)	Service and Sales Workers (14% of employed)	Technicians and Associate Professionals (14% of employed)

*Note that this data is from the 2013 Census, development and population growth would have continued since then, particularly in new development areas. It is recommended that this information be reviewed in social research or as 2018 Census data becomes available – depending on the timing of the full SIA.

4.4 The Manakau Community (Local Community)

4.4.1 Description of Manakau 'way of life' (how people live, work and play)

4.4.1.1 Key demographic information/ geographic extent

The Manakau community is located amongst a rural landscape, around key community facilities including a local church, school, bowling club and pub.

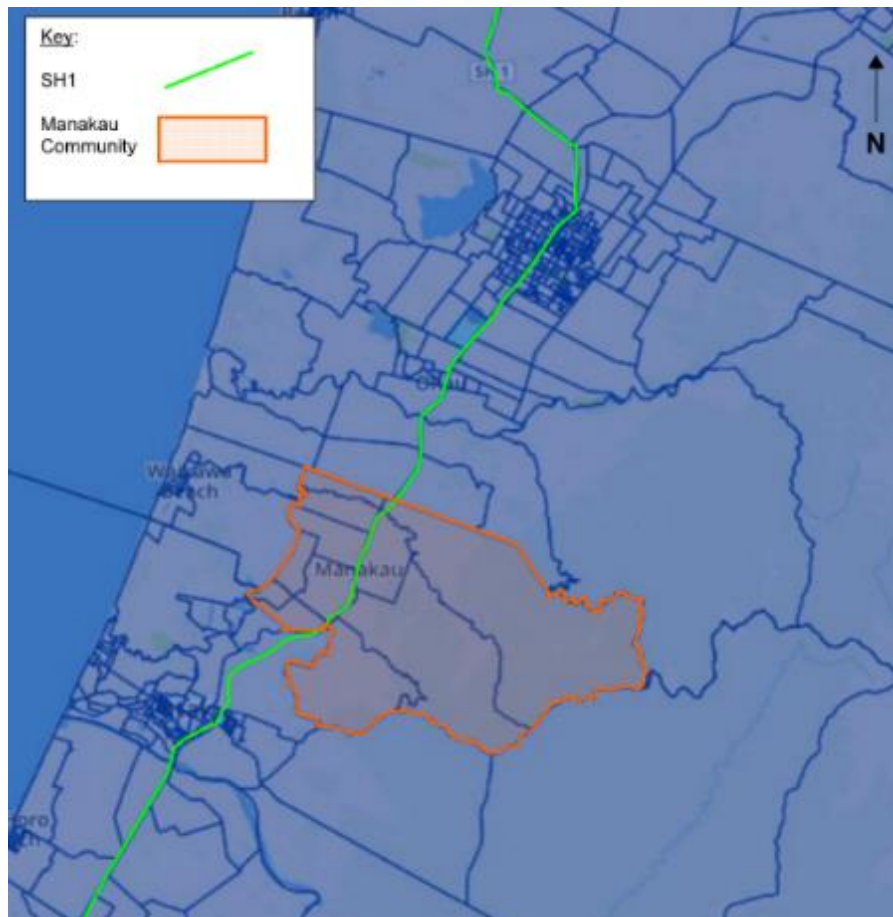


Figure 20 Approximate geographical extent of the "Manakau Community"

Manakau has a population of approximately 711 people. Between 2006 and 2013 the population grew by 15%, this growth has mainly occurred in the east of Manakau, where a large population growth of 26.3% occurred, compared to 3% in the west of Manakau. Only one area had a population loss and this was in north-west Manakau. Significant population losses and gains are represented and illustrated in Appendix A. Approximately 86% of the community identified as NZ European and 17% identified as Māori. Comparatively the regional Māori population is 20% and nationally it is 14%.

According to the 2013 Census, the same proportion of Manakau's population has lived in the same house for 1-4 years and 5-9 years. 22% lived in the same house for 1-4 years which is lower than the regional amount of 27%. Another 22% of the population has lived in the same house for 5-9 years which is higher than the regional amount of 20%.

The town is relatively close to Wellington and fast-growing Kapiti, and attracts retired people. In 2013, 21% of the population was aged 65 and over, which was just higher than the national average of 14.3%. The

average median age of Manakau is 46 and the average median personal income is approximately \$24,010. The average median age of Manakau is higher than the regional median age at 39, and the median personal income is lower than the regional median at \$25,000. Nationally, the median personal income is \$28,500. The largest proportion of Manakau’s population (64%) is between the ages of 15-64, and the second largest proportion of the population is in the over 65 age bracket. Between the 2006 and 2013 Census the proportion of those aged under 15 years stayed the same at 16% of the Manakau community. The proportion of those aged 15-64 increased from 53% in 2006 to 64% in 2013. Those aged greater than 60 increased from approximately 15% to 21%.

4.4.1.2 Location of existing transport corridors

The current transport corridors run through the village with the main portion of residential development forming on the eastern side (see Figure 21).

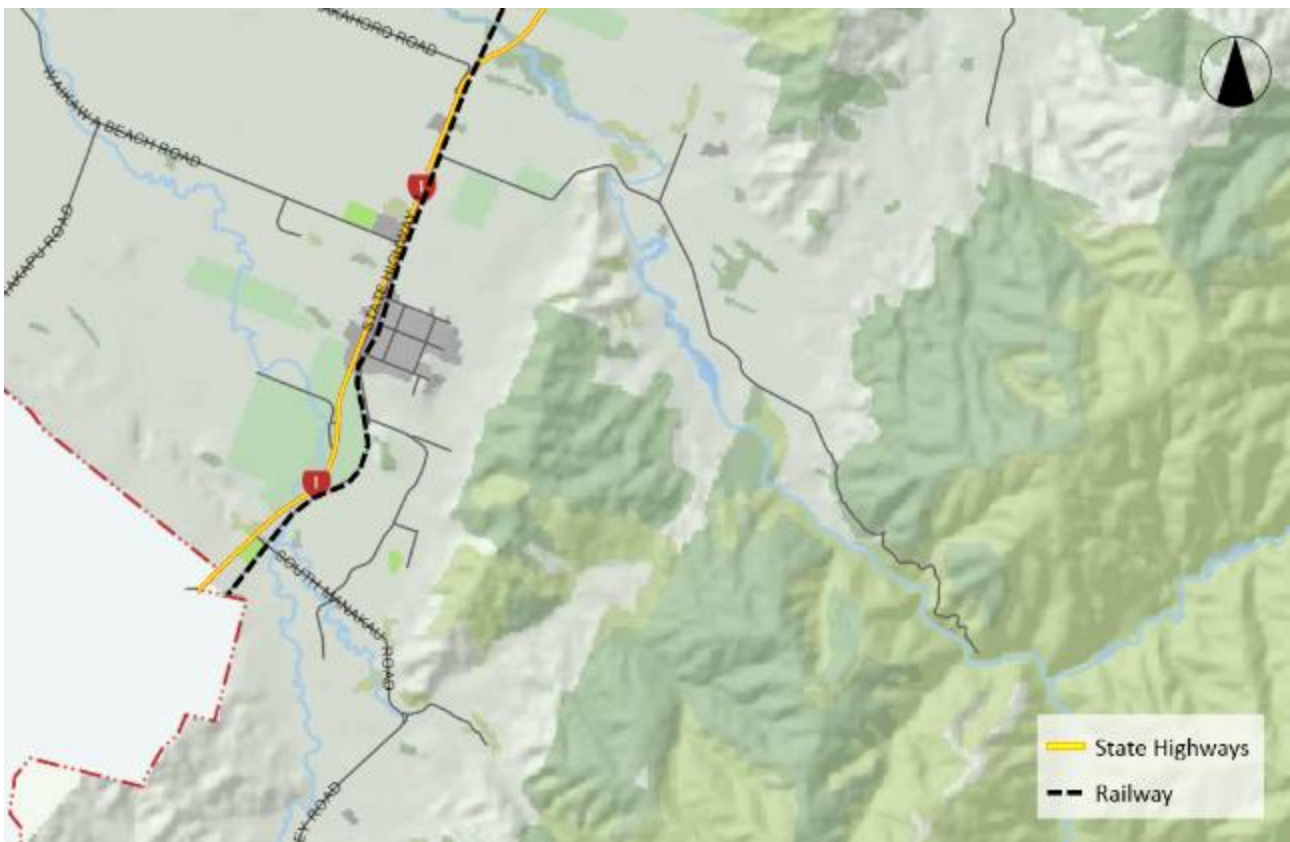


Figure 21 Existing transport corridors (Source: Horowhenua District Council 2018)

4.4.1.3 Key locations and social infrastructure

Manakau School is a key focal point to the community. It currently has a role of 111 students which is relatively stable and attract pupils from both within the village and north and south of the community as illustrated in Figure 22. Figure 22 shows approximate catchments for the school, noting that the majority (around 68%) of students attending the school come from the local areas east and west of SH1. The remaining students come from the wider catchment indicated by the black dashed line (as noted earlier, there may be individual instances of children travelling to the school from beyond these catchments).

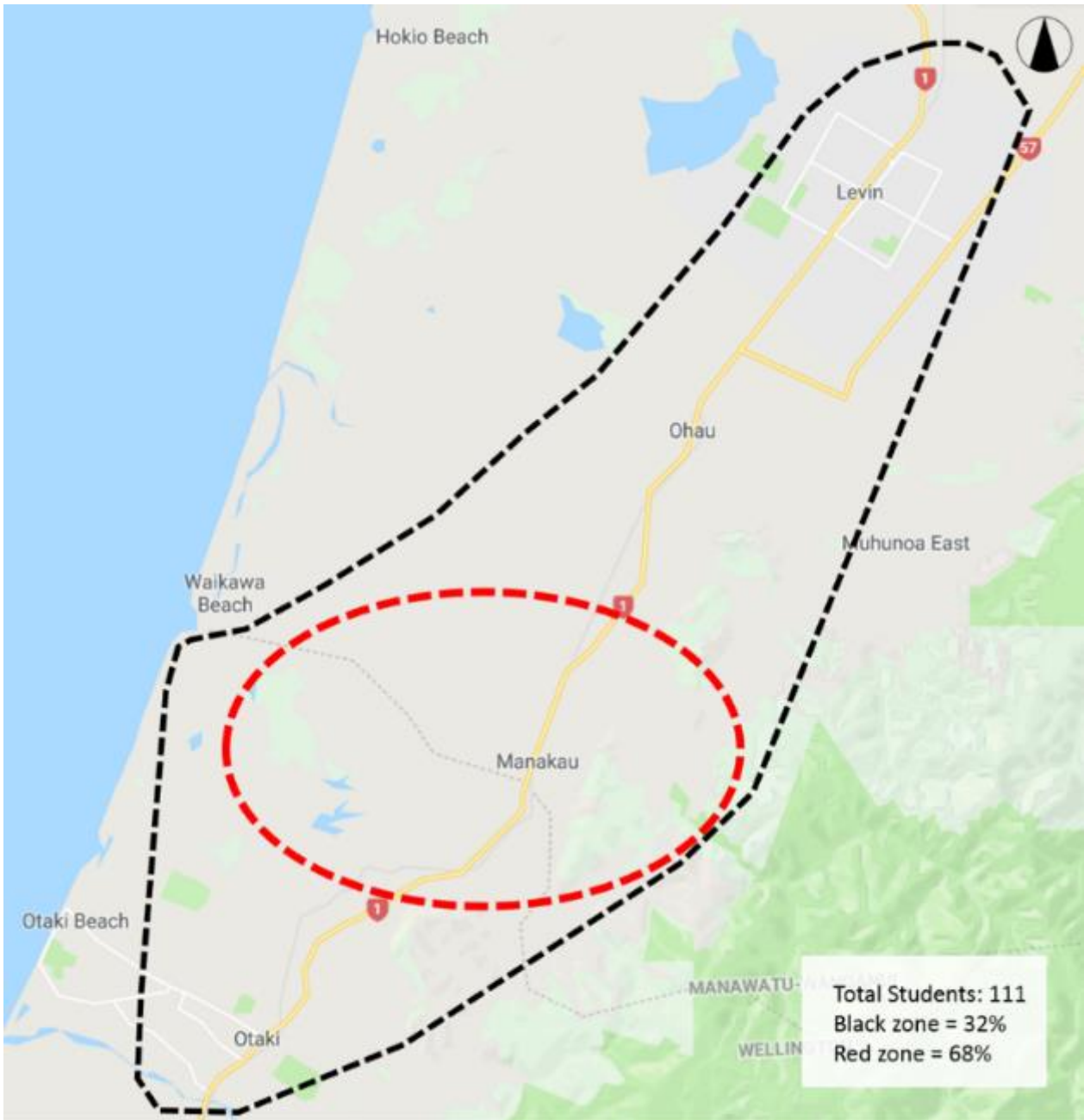


Figure 22 Location of pupils at Manakau School (Source: Ministry of Education 2018)

The Manakau Domain is another focal point, it is regularly utilised by the Manakau United Football Club and Horowhenua Adult Riding Club and attracts visitors from the wider district area. The school and local hall form the hub of the community and the centre for community gatherings.

All the above infrastructure is based within the village. Figure 23 depicts the Manakau village, where key social infrastructure is located.



Figure 23 Key locations and social infrastructure in Manakau (Source: Horowhneua District Council 2018)

Beyond the village camping facilities to the west and east of Manakau provide locations for local and beyond to camp, access local natural attractions and provide locations for school camps. Waikawa Campsite to the east is part of the Department of Conservation reserve and located within the Tararua Forest Park.

4.4.1.4 Housing and development

The most significant and recent development has occurred to the south of village where several rural subdivisions have taken place. Infill subdivision has been limited due to the lot sizes ranging from a minimum of 2,000m² (See Appendix A). It is anticipated that the core village will be made up of small residential lots (containing the large portion of population) with the periphery being residential green belt and rural lifestyle blocks and agricultural farming beyond. Growth is anticipated in the area with the improved links to the south. Future residential growth in the Manakau area is particularly focused to the west of the existing State highway.



Figure 24 Current residential patterns and potential growth in Manakau Source: Draft Horowhenua Growth Strategy 2040.

4.4.1.5 Industry and Employment

A few commercial enterprises exist within the village, then beyond the village the land use is primarily lifestyle block and agricultural use.

Manakau has a high proportion of its population in full time employment at 40% of the population. This is above both the regional and national percentages. 21% of Manakau's population is not in the labour force which is below the regional and national numbers. Its unemployment rate is also below that of regional and national data, at 3%. The most common occupation category in Manakau is Agriculture and Fishery Workers (15%); Elementary Occupations (incl Residuals) (14%); Legislators, Administrators and Managers (13%).

4.4.2 History and sense of place values

4.4.2.1 History

The historic street pattern of the area, with regards to scale and layout has remained unchanged since early settlement containing narrow road widths and vegetated berms which maintain the historic and rural character of Manakau. Newer development has generally been sensitive to remain consistent with the existing character of the village.

The existing built form of Manakau is highly valued by the community as there are many historically significant buildings that commemorate the culture and history of the rural village. Most are generally located along the edge of the SH1 corridor. In particular, Manakau School is one of the oldest buildings in the village

which has been a key contributor to the community for over 130 years. The primary school first opened its doors in 1888 and is now scheduled in the New Zealand Heritage List as a historic building. Several generations of families living in Manakau have attended the school in the past, and the community is active in encouraging the school to continue providing education for younger generations. In 2017, the school had a student role of 111 students, which has remained steady over the past years.

The community is also strongly recognised for its Māori heritage and history. The streets particularly located to the east of SH1 are famously named after Māori members of Parliament.

4.4.2.2 Sense of place values

A village character is strongly recognised by both the residents and district council plans. A strong sense of history both by European settlers to the village and local Tangata Whenua is expressed for this area. A sense of community and cohesion are strongly expressed and valued. Members of the community denote the connection to the rural and peri-urban lifestyle as being important, including tranquillity and a connection to the natural environment through sight, sound and access being strong identifiers of the area.

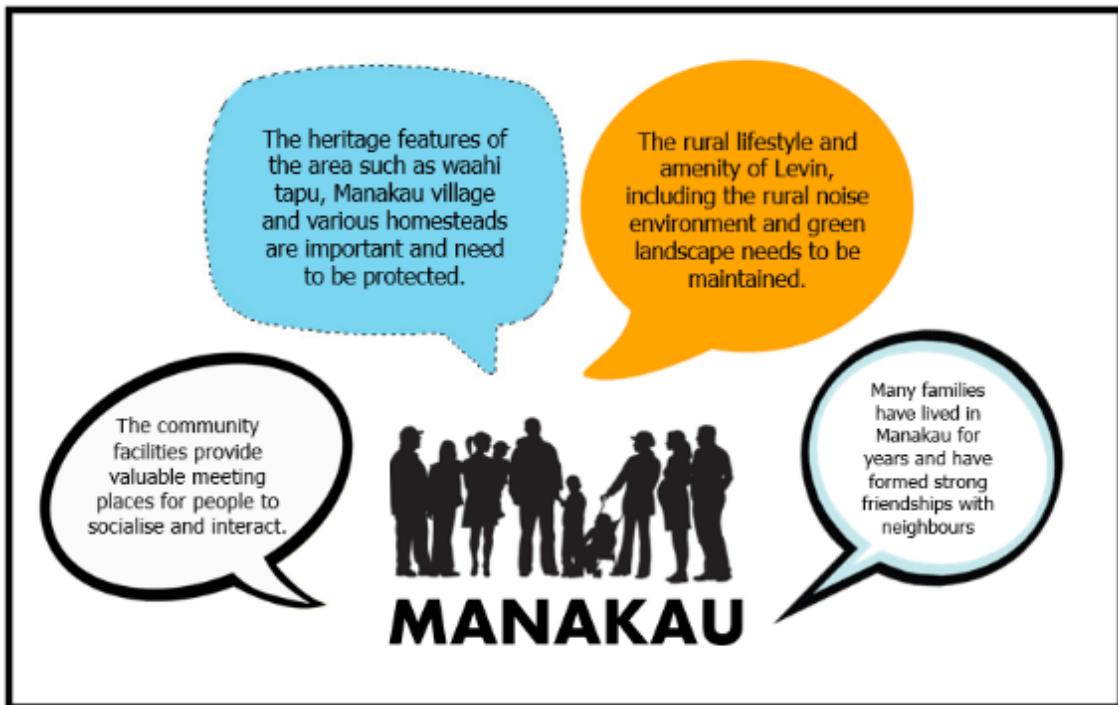


Figure 25 Community values of Manakau (Source: NZTA ON2L consultation data)

4.4.3 Quality of the environment

Community values regarding the quality of the rural environment have derived from the agricultural and horticultural activities that have been long established in the area, this includes the productivity of the land. The village and in particular the more rural extent of the area is known for its tranquillity, panoramic views and undisturbed natural environments.

4.4.3.1 Community political and social connections

The Manakau community is considered to be engaged and active with events occurring in the village and within the surrounding areas. To showcase this, the Manakau District Community Association was founded in 2012 as a valuable channel of communication and representation of the Manakau community to a range of institutions including Horowhenua District Council. Membership is strictly open to residents of the Manakau

Township and is important in gathering and voicing any concerns present in the community. Committee meetings take place regularly at the Manakau Community Hall, which is also a popular venue for community events.

4.4.4 Manakau Sub-Local Community

The area east of SH1 surrounding the Manakau Village is the sub-local area for the purposes of this report. It straddles east and west of the Tararua Foothills including the Valley between the foothills and the ranges. This area is made up of agricultural activities, lifestyle blocks and more recently larger residential developments as evidenced by the household increase (see Table 3). The demographic makeup of this rural east community is similar to Manakau village and the wider area apart from having a much smaller Māori population, lower percentage not in the labour force and a higher youth population.

Table 3 – 2013 Census Data

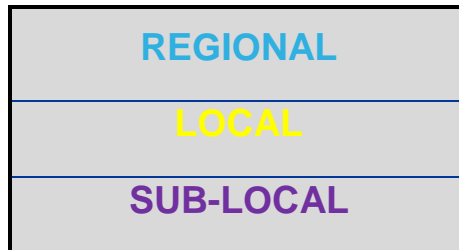
	Local Community (Manakau)	Manakau Village (Residential Cluster)	Sub-Local Community (Rural East Manakau)
Population 2013 (usual)	711	183	219
Population Change 2006 - 2013	15%	5.2%	52.1%
Average Median Age	46	51	53
Average Median Income	\$24,010	\$26,500	\$25,300
Number of Households	285	81	81
Change in Household Numbers 2006 – 2013	10%	4%	29%
Female	51%	51%	53%
Male	49%	49%	47%
European	86%	92%	90%
Maori	17%	23%	4%
Population under 15	16%	11%	21%
Population btw 15 -64	64%	61%	59%
Population 65 and over	21%	28%	23%
Employed full time	40%	38%	38%
Employed part time	15%	13%	19%
Unemployed	3%	2%	3%
Not in labour force	21%	31%	18%
Top Occupation	Agriculture and Fishery Workers (15% of employed)	Agriculture and Fishery Workers (16% of employed)	Legislators, Administrators and Managers (17% of employed) Agriculture and Fishery Workers (17% of employed)
Second Top Occupation	Elementary Occupations (incl Residuals) (14% of employed)	Legislators, Administrators and Managers; Professionals; Technicians and Associate Professionals; Service and Sales Workers; Trades Workers (all 13% of employed respectively)	Elementary Occupations (incl Residuals) (14% of employed)

*Note that this data is from the 2013 Census, development and population growth would have continued since then, particularly in new development areas. It is recommended that this information be reviewed during social research or as 2018 Census data becomes available – depending on the timing of the full SIA.

The southern section of the corridor that is common to all options has not been included in any of the above profiles. This area is the eastern section of SH1 between Atkins Road and Taylors Road. This sub-local community is called “forest lakes”. These are dispersed houses and agricultural properties north of Ōtaki. It is considered that they are a peripheral community of Ōtaki.

5 Social Impacts Assessment

This assessment considers the social impacts at both a regional, local and sub-local scale (see Section 4.1.2). Colour coding will be used to assist in clarifying at what scale the assessment of impacts is being considered (see below):



The aim is to identify the social impacts of each option on the relevant community.

5.1 Potential Social Impacts

There are a number of potential social impacts from the proposed project options which have been identified in this preliminary SIA. On the basis that this report has been prepared as a preliminary screen to assist decision makers to understand the relative potential social impacts of the 6 short-list corridor options, each potential social impact has been analysed and compared for the 6 options. Following an analysis of the project and the community context the framework from section 3.1 was reviewed and revised to specifically target potential impacts from this project for these communities. The impacts assessment considers:

- **Impacts on way of life** – How people carry out and get to their activities of day living including consideration of access to and between communities and places / centres where people live, work and play;
- **Impacts on community cohesion** – Connectivity between people including potential impacts relating to severance of communities and loss of communities (through the physical impact / land take of the project);
- **Impacts on sustaining oneself** – How people sustain themselves both financially and providing for themselves (such as growing food) including viability and feasibility of economic production in areas where people live and work; and
- **Impacts on the quality of the environment** – This includes people's well-being (related to changes to the environment), sense of place and identity and changes to the character and amenity of living environments and character of communities.

Impacts on political structures, processes and democracy (if any) will be assessed on the project overall (see section 5.2.5).

The assessment of potential social impacts is considered as either: **positive** or **negative** on the basis of whether the anticipated social consequences will either enhance or detract from the community values, social processes or social infrastructure identified in the Community Profile and in accordance with the impact framework set out above.

In all sections this assessment considers social impacts at the following scales, regional, local community and sub-local. Whilst it is acknowledged that impacts are experienced at an individual/household level this has not been the focus of the social impact assessment which looks at a community scale. The Resource

Management Act provides for individuals and groups to make submissions and this provides a forum for consideration of individual/household level impacts.

In all cases it is noted that the **potential** impacts have the potential to be reduced, ameliorated or mitigated by alignment design, project design and implementation of management and/or mitigation strategies that will be advanced in the full SIA in the preferred option detailed design phase.

The scale of impact is identified as either very low (negligible), low, moderate, high or very high. This assessment is made on consideration of the assessed duration and scale of impact. The following describes the assessment scale:

- Very low (negligible):
 - Short/temporary duration (temporary e.g. weeks/months)
 - Small extent of impact for community (e.g. less than 10% of a community impacted)
 - Very low or Negligible level or severity of impact (a preliminary assessment of what the impact is likely to be / how much it will likely affect those involved at a community level¹²)
- Low
 - Transitional duration (e.g. months or for periods of construction activity)
 - Small to medium extent of impact on a community (e.g. less than 10% to up to 50% of a community impacted)
 - Low level of severity of impact (what the severity of the preliminary impact is likely to be / how much it will affect those involved at a community level)
- Moderate
 - Transitional to long term duration (e.g. months to years, e.g. impacts that will extend over and throughout a construction period)
 - Medium to scale or extent of impact for community (e.g. around half of an identified community experience the impacted)
 - Low to Moderate level of severity of impact (what the severity of the preliminary impact is likely to be / how much it will affect those involved at a community level)
- High
 - Long term duration (e.g. years to permanent impact)
 - Medium to large scale extent of impact for community (e.g. More than half or the majority of a community is considered likely to experience the impact)
 - Moderate to High level of severity of impact (what the severity of the preliminary impact is likely to be / how much it will affect those involved at a community level)
- Very High
 - Long term duration (e.g. more likely to be a permanent impact)
 - Large extent or scale of impact for community (e.g. Most of a community is likely to experience the impact)

¹² Throughout this assessment it is important to note that the social impact assessment does not attempt to account for all 'individual' impacts. As such, it is acknowledged that different people within a community will experience a project and the impacts of a project in different ways. These individual issues an important consideration to any project and are most appropriately considered through individual submissions from those parties.

- High to Very High level severity of impact (what the severity of the preliminary impact is likely to be / how much it will affect those involved at a community level)

For example, an impact that is likely to be experienced by more than half of an identified community, but for a long duration or to a high level of severity is considered a 'High' impact, while an impact experienced by this same community but for transitional period and to a low extent of severity would be considered a 'Moderate' impact.

5.2 Potential Regional Social Impacts

The context of the proposed project in relation to the wider region is shown in Figure 26.

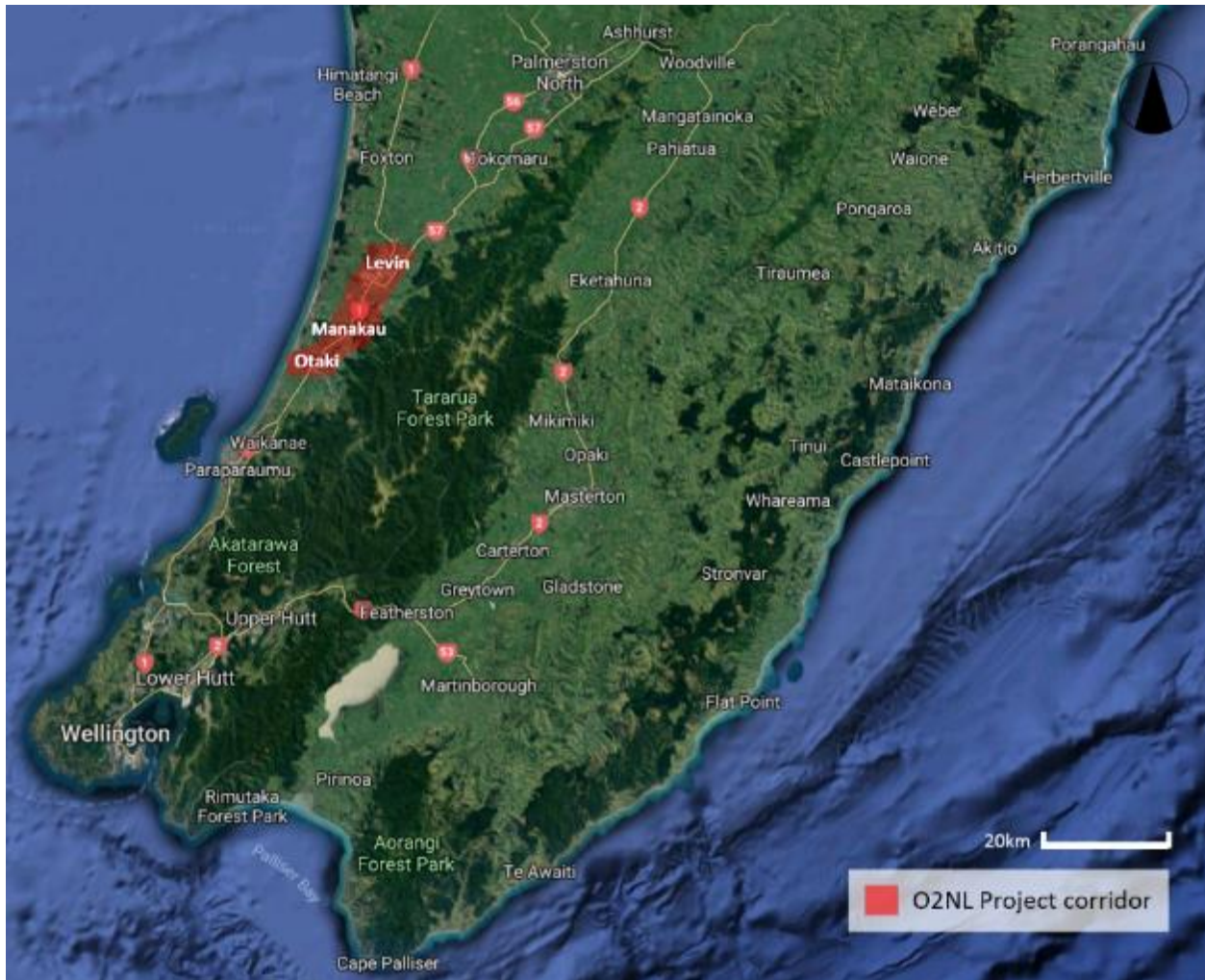


Figure 26 Regional (Source: Google Earth 2018)

For the Regional Community, the social outcomes are generally considered positive. Table 4. provides an assessment of these regional community social impacts, in the context of the following transportation and accessibility outcomes:

- Approximately 50 deaths and serious injuries occur on the network every 5 years. The section of state highway between Otaki and Levin is in top 5% of worst sections of state highways in NZ (from a safety perspective). The project will address the current safety issues of the existing corridor, providing separated traffic which will significantly reduce the risk of crashes. In addition to the physical health and safety outcomes for the regional community this is also considered to have positive social impacts arising

from the reduced social consequences from such events (e.g. wider community and socio-economic impacts)¹³.

- The project is identified as improving the resilience of the local and regional roading network. In particular, it is noted that the current transport network does not provide alternative detour routes in the event of SH1 being disrupted and that this has resulted in significant delays on the State Highway network in the event of accidents. The establishment of a new State Highway corridor (with the existing State Highway network maintained for local access) provides some network redundancy that will improve resilience. In addition, the capacity and design requirements for the new State Highway are considered more able to absorb disruptions with improved safety features (particularly the reduction of local and property accesses off the State Highway which are recognised as a significant safety concern) and some sight-line and vertical alignment issues with the existing State Highway corridors (e.g. at the intersection of SH57 and SH1);
- Provision of improved network capacity to facilitate ongoing population and economic growth in the region, with increased capacity of the State Highway network between two major urban centres (being Wellington and Palmerston North). The improved travel times, trip reliability and capacity of this network is reflected in the transport benefits assessed for the Project (an economic consideration); and
- Improved connections to and from the Wellington region to the north.

It is also noted that consultation feedback has generally acknowledged that a new or improved State Highway is required and the region would benefit from having a safer and more resilient transport corridor.

Table 4 - Regional Assessment of Social Impacts

Preliminary Regional Social Impacts	
Impacts on Way of Life	<p>At a regional scale the potential impacts on way of life are considered to be moderate positive.</p> <p>Potential positive Impacts including:</p> <ul style="list-style-type: none"> ■ Improved accessibility, reliability in travel times and from travel disruption and safety for these road users. ■ This impact will be experienced by most people travelling to and between Wellington and Palmerston North including those that currently use SH1 and SH57 to access these destinations. ■ Reduced social community consequences of death and injury crashes. This significant positive outcome will be experienced by a much smaller group in the regional community. ■ These positive impacts will enhance opportunities for quality of life in respect of access to living, working and recreation environments. For example, is benefits including: ■ Between residents and work locations, with some residents commuting from peri-urban and rural lifestyle locations to employment centres in Wellington, Ōtaki, Levin and Palmerston North; ■ Between residents and recreation facilities and services, including coastal settlement areas (e.g. between Palmerston North and Wellington and coastal settlements such as Foxton and Himatangi Beaches), and other destinations such as Tararua Forest Park; and

¹³ The evidence base for this is well established. One example includes the Ministry of Transport paper from 2011: *The Social Cost of Road Crashes and Injuries, June 2011 Update* (ISSN 1173-1370).

Preliminary Regional Social Impacts	
	<ul style="list-style-type: none"> ■ Connectivity between health services (as there is already interaction and transfer of patients between facilities along these corridors). ■ In addition, the O2NL project provides opportunity for the planned growth (e.g. both for areas along the corridor such as the Levin community but also for wider growth planning with improved accessibility across the region). Providing infrastructure capacity to support these growth areas, will enable Council's and the Region to meet the forecast demand for population and dwelling growth expected in the lower North Island Region.
Impacts on Community Cohesion	At a regional scale, this is considered a low positive social benefit . In particular, it is noted that the improved accessibility and travel times (identified above) will potentially improve the ability of people and communities to interact (e.g. people may be more inclined to travel to friends and relatives with improved travel times and trip reliability). Such changes would provide benefits for community cohesion and sense of community identity.
Impacts on Sustaining Oneself	At a regional scale the potential impacts on sustaining oneself are considered to be moderate positive . The improved accessibility provided by the Project will enable the efficient movement of goods and services between communities along SH1 and SH57 (Wellington to Palmerston North). While reflected in the economic benefits of the Project, it is also recognised that this economic activity will provide for community wellbeing, enabling them to financially sustain themselves. Further specific consideration of the economic outcomes of the Project has been assessed specifically through economic considerations
Impacts on the Quality of the Environment	At a regional scale the potential impacts on way of life are considered to be low positive . The project is a significant infrastructure development in an area that is currently characterised by low infrastructure development (e.g. there is a lack of transport connectivity through this area). This corridor will impact on the quality of that environment (which is discussed and considered further below). While acknowledging this impact, it is noted that the removal of State highway traffic from the existing road corridors of SH1 and SH57 will have positive amenity outcomes for both users of these corridors and for the existing settlements and development areas that have established along the corridor (e.g. Manakau, Ohau, Kuku and Levin). In the main, these changes are considered further in respect of local and sub-local community impacts. However, at a regional scale the separation of 'local' and 'through traffic' environments, the safety improvements for the State highway and the associated amenity and landscaping proposed on this corridor are considered potentially positive for the quality of these transport environments.

Given that the key purpose of this preliminary social impact assessment is to assist in corridor evaluation and that the potential Regional impacts of the proposed corridor short-list options are considered to be the same for all 6 corridor options, they are not assessed further in the preliminary SIA.

5.3 Potential Local and Sub-Local Social Impacts

*Dwelling numbers used for the northern options are based on dwelling counts measured at a distance from the centre of the proposed corridor (i.e within 50m means 25m either side of the centre line, with further measures for 225m and 450m of the proposed corridor centreline). It is acknowledged that this is a 'preliminary level' assessment as the corridors identified are wider than potential future alignments (and as such it is recognised that the numbers in this report talk to the 'potential' impacts, rather than actual assessed impacts (which will be determined at the time that the alignment and construction footprints are identified)). Calculations of dwelling counts within the Southern section were collected for the whole options so have not been distinguished between the communities of Ohau & Kuku and Manakau (at this stage).

5.3.1 Potential impacts on way of life

For the purposes of this SIA, potential impacts on way of life for each community have been assessed as a potential operational corridor (as construction details are unknown at this stage). The table provides a summary of the assessed potential impact (without mitigation), followed by rationale for the assessment.

It is important to note that the table column widths shift through the reporting, as corridor options are not relevant to all identified communities (for legibility the headings are retained).

5.3.1a Potential Impacts on Way of Life			
Option	Levin	Ohau and Kuku	Manakau
All	<p>Assessed as moderate to high positive impact</p> <p>It is considered that for the majority of the population of Levin (that lives west of State Highway 57), the impact of all three options is similar. This relates to approximately 95% of the Levin population. The proposal will have long term benefits on the community as it has potential to lessen traffic on SH1. Potentially improving the connection between east and west Levin, reactivating opportunities for a 'main street' in the centre and providing for improved access for the community to work, school and recreation activities both by car, cycle or foot. This will particularly be for those that use facilities to the east or west of the existing State Highway and live on the other side, but also for those (smaller proportion of the population) that commute north / south of Levin (e.g. Palmerston North or Wellington) to access work or community services. Included in this consideration is the improved resilience for this north-south corridor, provided by the O2NL project overall.</p> <p>The level of positive impact will depend on:</p> <ul style="list-style-type: none"> • The amount of traffic that is likely to be reduced on SH1; • Design and mitigation works in the town centre, e.g. main street programmes' or similar; • Improvements to pedestrian connectivity through the centre; • Maintenance of the walkway connection (including parking) to Waiopehu Reserve (west of SH57); and • Improved access across SH57 which is currently heavily trafficked and dangerous to cross, dependent on the design and posted speeds for this road (including grade separation and access to Levin from SH57). <p>It is acknowledged that some of these may be addressed in the design detail for the Project and others may rely on works by the Council (e.g. beyond the O2NL project).</p>	<p>Assessed as moderate to high positive impact</p> <p>It is considered that for the population of Ohau and Kuku not within proximity of the proposed corridors the impact of all options is similar and is generally considered positive for people's way of life. The large portion of this population is within close proximity to SH1. The corridor is currently a high speed environment raising issues of accessibility for residents, with facilities and services currently bisected (severed) by the corridor. While the rail line will still create some severance impacts (e.g. residential areas and the school) the intermittent nature of services on this line is considered a mitigating factor.</p> <p>The proposal will have long term benefits for the community as it will significantly reduce traffic flows on the SH1, providing opportunities to both reduce the speed environment and improve physical connections between the east and west sides of these communities. The O2NL project will also improve local access for the community to work, school and recreation activities located in Levin and or Ōtaki for these residents (e.g. separating this access from the highway access to the east). In addition, the improved resilience of the connection through this section (in particular) is noted.</p> <p>The level of positive impact will depend on a number of specific mitigation and design considerations. These include:</p> <ul style="list-style-type: none"> • The amount of traffic reduced on the current SH1 alignment; • Design and mitigation works through the centres / community nodes of Ohau and Kuku, e.g. the speed environment, pedestrian accessibility and design treatments of the current highway alignment; • Treatment of the old / current State Highway in the vicinity of the Marae, Kuku Beach Road, Kuku East Road and urupa at Kuku and in particular design and posted speeds for this road; and • Connectivity between the existing SH1 and O2NL, to maintain accessibility between these communities and centres to the north and south (Palmerston North and Wellington). <p>It is considered that most of these would be addressed in the design detail for the Project. However, some works may rely on others (particularly the Council) for delivery (e.g. works to improve accessibility across SH1 to services and facilities in the Ohau community).</p>	<p>Assessed as moderate to high positive impact</p> <p>A large proportion of the population of Manakau is within close proximity to the existing SH1 corridor. The proposal will have long term benefits for this part of the community as it has potential to lessen traffic on SH1, and has potential to improve the connections between east and west of the community. This improved east-west connectivity also provides opportunity to improve connections between Manakau and the coast (e.g. Waikawa Beach). The corridor is currently a high speed environment raising issues of safety and accessibility for residents, with facilities and services currently focused to the east of the existing road corridor and some residential and employment areas to the west (with growth planned to this western side of SH1 as well). While it is acknowledged that the rail line still creates some severance impacts the intermittent nature of services on this line is considered a mitigating factor.</p> <p>For the above reasons (reduced traffic volumes and speed reductions) the project will also likely improve access for the community to work, school and recreation activities that are located in Levin and or Ōtaki. In addition, the improved resilience of the connection through this section (in particular) is noted.</p> <p>The level of positive impact will depend on a number of specific mitigation and design considerations. These include:</p> <ul style="list-style-type: none"> • The amount of traffic reduced on the current SH 1 alignment; • Design and mitigation works on the existing SH1 corridor as it passes through the Manakau area and up to the Domain on the western side of the corridor, e.g. the speed environment, pedestrian accessibility and design treatments of the current highway alignment; • Connectivity between the existing SH1 and O2NL, to maintain accessibility between these communities and centres to the north and south (Palmerston North and Wellington); and • Accessibility to Waikawa Beach from the Manakau settlement area, including potential for pedestrian / cycle connectivity. <p>It is considered that most of these would be addressed in the design detail for the Project. However, some works may rely on others (particularly the Council) for delivery (e.g. connectivity to Waikawa Beach).</p>

5.3.1b Potential Impacts on way of life			
Option	Levin	Ohau and Kuku	Manakau
Common Northern Section of Proposed Corridor from SH57 to SH1	<p>Assessed as high negative impact</p> <p>From the basis of the preliminary assessment, the potential impact (either direct physical take or severance impacts) will be experienced by approximately 20 properties. This is assessed as a high potential negative impact for these residents in respect of their way of life. The impact relates to properties around the Sorenson Road cul-de-sac, part of Heatherlea Road and the end of Fairfield Road. Impacts include direct property take (considered as a community cohesion impact), severance to accesses and partial property takes that may require portions of economic properties.</p> <p>This corridor is the only option for this sector and so has been reported in this section. It is acknowledged that this impact will be experienced by a small extent of the community (less than 2% of Levin Community) but the duration would be long term and the level of severity would be very high for this sub-local community.</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment; Whether there are particular communities of interest and connections between any 'cul-de-sac or road communities' in this area; Opportunities for this community to connect to Levin and to the North (Palmerston North), depending on the specific movement patterns of residents in this area; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); Amenity and design considerations for the quality of environment for these residents (this is an impact on quality of living environment considered below); and <p>The above are scoping matters for more detailed consideration once a preferred option is identified and could substantially mitigate the assessed negative impact.</p>	NA	NA
N4	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Many properties run perpendicular to SH57 and for this reason the location of N4 has the potential to sever a number of these properties in half (i.e. house from land/business) or house from chattels; This area is a high productive area with many horticultural and agricultural properties (considered further in the consideration of 'sustaining oneself'), potential changes to daily work patterns; Approximately 15 dwellings are within the corridor but more properties (approximately 100) are close to the corridor (noting the 'severance' impact above); For these residents the potential impacts relate to both the direct take of dwellings (a smaller proportion) and for many others, significant changes to access to Levin and SH57. For these people, the corridor has the potential to significantly impact the way they access amenities (work/education/recreation/healthcare etc.) in Levin and work from home or live at home (high retirement community in this area); and Access would need to be further assessed and addressed for those isolated by the proposed corridor. <p>In addition to the above, the impact of the O2NL corridor with the existing SH57 corridor, for future residential development (signalled as a growth area by Council) is noted. While it is acknowledged this is a future community, the impact on Council and community growth planning is noted. See also the social benefits assessed at a community level for the reduced traffic on SH1 and SH57 above.</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment – and whether these are direct to SH57 or to local roads east of O2NL (requiring a 'detour' to access back to Levin), it is noted that we assume local road accesses will be reinstated but potentially not all of them; Whether there are particular communities of interest and connections between residents in this area and the urban area of Levin to the east and how these connections can be maintained; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the residential area between SH57 and the O2NL project (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>	NA	NA
N5	<p>Assessed as moderate negative</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Some properties run perpendicular to Waihou Road, for this reason the location of N5 has the potential to sever properties in half (i.e. house from land/business or lifestyle property / amenities). This is also a high productive area with many horticultural and agricultural properties; Approximately 18 dwellings are within the corridor and 137 dwellings are within 450m of the centre of the corridor; It is considered that in addition to those that will lose their dwellings, many will have their access impaired, potentially including residents of Waihou Road, McDonald Road, Wakefield Road and Redwood Close. This has the potential to adversely impact how residents in these areas access amenities (work, education, recreation/healthcare etc.) in Levin and work from 	NA	NA

5.3.1b Potential Impacts on way of life			
Option	Levin	Ohau and Kuku	Manakau
	<p>home or live at home (high retirement community in this area). Most accesses will be reconnected but not all and changes to connections are unclear at this stage of the project; and</p> <ul style="list-style-type: none"> Access would need to be further assessed and addressed for those isolated by the proposed corridor, in particular considering the specific accessibility requirements / desire lines (this would be confirmed through engagement with residents). <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be directed to local roads east of O2NL to connect back to Levin and to SH57 (as well as the new O2NL project); Whether there are particular communities of interest and connections between residents in this area and the urban area of Levin to the east and how these connections can be maintained; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the residential area between SH57 and the O2NL project (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>		
N9	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Approximately 5% of Levin live east of SH57 and may be impacted from this corridor option; Some properties run perpendicular to Waihou Road, for this reason the location of N9 has the potential to sever properties in half (i.e. house from land/business). This is also a high productive area with many horticultural and agricultural properties; Approximately 17 dwellings are within the corridor and 133 dwellings are within 450m of the centre of the corridor; It is considered that in addition to those that will lose their dwellings, many will have their access impaired, potentially including residents of Waihou Road and McDonald Road. This has the potential to adversely impact how residents in these areas access amenities (work, education, recreation/healthcare etc.) in Levin and work from home or live at home (high retirement community in this area). This location does not change the access for those between the proposed corridor and SH57; and Access would need to be further assessed and addressed for those isolated by the proposed corridor, in particular considering the specific accessibility requirements / desire lines (this would be confirmed through engagement with residents). <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be directed to local roads east of O2NL to connect back to Levin and to SH57 (as well as the new O2NL project); Whether there are particular communities of interest and connections between residents in this area and the urban area of Levin to the east and how these connections can be maintained; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the residential area between SH57 and the O2NL project (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>	NA	NA

5.3.1c Potential Impacts on Way of Life			
Option	Levin	Ohau and Kuku	Manakau
Connection between North and South Options	<p>Assessed as moderate negative impact</p> <p>This area affects properties living in the south eastern section of Levin, the connection from N4 to S6 impacts those who live perpendicular to the east of SH57 and Arapaepae Road. Connections that cross from east to west or west to east such as N9 and S6 potentially cut across more properties causing issues with severance for properties off Kimberly Road and access for Riveredge Terrace. All options need to address access for properties east to access SH1, SH57 and Kimberly Road.</p> <p>The scope and comments above are considered relevant for this 'connection' area between options.</p>	<p>Assessed as moderate negative impact</p> <p>This area affects properties living in the south eastern section of Levin, the connection from N4 to S6 impacts those who live perpendicular to the east of SH57 and Arapaepae Road. Connections that cross from east to west or west to east such as N9 and S6 potentially cut across more properties causing issues with severance for properties off Kimberly Road and access for Riveredge Terrace. All options need to address access for properties east to access SH1, SH57 and Kimberly Road.</p> <p>The scope and comments above are considered relevant for this 'connection' area between options.</p>	NA

5.3.1d Potential Impacts on way of life

Option	Levin	Ohau and Kuku	Manakau
S6	NA	<p>Assessed as moderate negative impact at a sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>This option does not affect Ohau Village but rather the rural properties to the east of the village (circa 10 properties). However, in addition to these direct impacts, the corridor and alignments within it have the potential to sever properties running perpendicular from SH1 south of Ohau village through Kuku, affecting the way people live and work, particularly if house and business and land/business are separated (see sustaining oneself).</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be provided from Kuku East Road to the Ohau and Kuku communities as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin); The nature of particular communities of interest and connections between residents in this area and the urban area of Ohau (and Levin / Kuku) and how these connections can be maintained, particularly the communities on Kuku East Road; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>	<p>Assessed as high negative impact at a sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>This option traverses the east of the existing Manakau village (comments regarding the quality of environment for this option are discussed further below), while the positive impacts of the O2NL project overall for this community area are discussed above.</p> <p>While the existing village has the potential to be positively impacted by the O2NL project, there are potential adverse social impacts for those residents in the community around the eastern edge of the village, (off Honi Taipua Street / Manakau Height Drive (and the roads accessing off this, such as South Manakau Road and Mountain View Road). In some instances, the corridor appears to take properties and in others appears to directly sever accesses for these properties (particularly at the foothills of the forested block land). In the scale of impact, it is noted that there are some 41 properties (within 300m corridor) potentially directly affected in this area, though the scale of this increases if consideration is given to those properties where access is potentially impacted (combined with the North Manakau Road area, this is estimated to be closer to 100), while this is anticipated this detail is not available at the time of this assessment. In addition there will be transitional construction impacts.</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be provided to Manakau or to local roads (as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin)). This includes impacts for properties with direct access onto Honi Taipua Street / Manakau Height Drive (and the roads accessing off this, such as South Manakau Road and Mountain View Road); The nature of particular communities of interest and connections between residents in this area and the urban area of Manakau and how or to what degree these connections can be maintained; and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>

5.3.1d Potential Impacts on way of life

Option	Levin	Ohau and Kuku	Manakau
S7A	NA	<p>Assessed as moderate negative impact at sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>This option does not affect Ohau Village but rather the rural properties to the east of the village (circa 9 properties). However, in addition to these direct impacts, the corridor and alignments within it have the potential to sever properties running perpendicular from SH1 south of Ohau village through Kuku, affecting the way people live and work particularly if house and business and land/business are separated (see sustaining oneself).</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be provided from Kuku East Road to the Ohau and Kuku communities as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin); The nature of particular communities of interest and connections between residents in this area and the urban area of Ohau (and Levin) and how these connections can be maintained, particularly the communities on Kuku East Road; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>	<p>Assessed as high negative impact at sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following :</p> <p>This option does not disrupt Manakau village but impacts those living off South and North Manakau Roads and Corbett Road, potentially creating access issues and severing properties, whilst it is anticipated that access issues will be resolved details are not available at the time of assessment. Temporary construction impacts are also anticipated.</p> <p>As with Option S7, this corridor also impacts on Waikawa Campsite, which is understood to be both a local and wider community attraction.</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Impacts associated with the partial loss of the Waikawa Campsite for the local community (as well as wider communities of interest), through engagement with the Department of Conservation, local schools and others (as it is understood to be a resource for schools in the area); Physical access to properties potentially severed by the alignment and particularly how accesses will be provided to the Manakau community centre as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin), this relates to both access for properties around Manakau North Road and Manakau South Road; The nature of particular communities of interest and connections between residents particularly on Manakau North Road (but also those properties in Manakau south to the immediate east of SH1) and the urban area of Manakau and how these connections can be maintained; and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified</p>
S7	NA	<p>Assessed as moderate to high negative impact at sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>This option does not affect Ohau village but rather the properties to the east of the hill (circa 9) which may form their own sub-community, the preliminary social impacts of this option relate to communities accessing Kuku East Road (both sides of the hill). It is acknowledged that these impacts are a small proportion of the Ohau and Kuku communities, and are already geographically isolated by topography. It is anticipated that access will be resolved but details are not known at the time of this assessment. It is anticipated that there will also be temporary construction impacts.</p> <p>It is acknowledged that these impacts will be more difficult to mitigate than the accessibility impacts identified for S6 and S7A above, with the corridor traversing through this area.</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Physical access to properties potentially severed by the alignment and particularly how accesses will be provided from Kuku East Road to the Ohau and Kuku communities as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin); The nature of particular communities of interest and connections between residents in this area and the urban area of Ohau (and Levin) and how these connections can be maintained, particularly the communities on Kuku East Road; Maintenance of connections within properties, where economic wellbeing is provided (this is an impact on 'sustaining oneself' considered below); and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified</p>	<p>Assessed as high negative impact at sub-local level</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>This option does not disrupt Manakau village but impacts those living off South and North Manakau Roads and Corbett Road, potentially creating access issues and severing properties, whilst it is anticipated that access issues will be resolved details are not available at the time of assessment. Temporary construction impacts are also anticipated.</p> <p>As with Option S7A, this corridor also impacts on the site of the Waikawa Campsite which is understood to be both a local and wider community attraction.</p> <p>This option has most impacts on properties on Mountain View Drive, South Manakau Road and Corbetts Road, including some recently built (or properties under construction).</p> <p>It is acknowledged that this preliminary assessment has the potential to be substantially impacted by the final design including the alignment and mitigation measures, within the 300m corridor and the design of access for remaining properties, including consideration of:</p> <ul style="list-style-type: none"> Impacts associated with the partial loss of the Waikawa Campsite for the local community (as well as wider communities of interest), through engagement with the Department of Conservation, local schools and others (as it is understood to be a resource for schools in the area); Physical access to properties potentially severed by the alignment and particularly how accesses will be provided to the Manakau community centre as well as onto both the O2NL and the existing SH1 corridor (e.g. to provide 'local connection' to Ōtaki and Levin), this relates to both access for properties around Manakau North Road and Manakau South Road; The nature of particular communities of interest and connections between residents particularly on Manakau North Road (but also those properties in Manakau south to the immediate east of SH1) and the urban area of Manakau and how these connections can be maintained; and Amenity and design considerations for the quality of environment for the rural and lifestyle residential area (this is an impact on quality of living environment considered below). <p>The above are scoping matters for more detailed consideration once a preferred option is identified.</p>

5.3.2 Potential impacts on community cohesion

For the purposes of this SIA, potential impacts on community cohesion have been assessed for each community as a potential operational corridor (as construction details are unknown at this stage). The table provides a summary of the assessed potential impact (without mitigation), followed by rationale for the assessment.

5.3.2a Potential Impacts on Community Cohesion			
Option	Levin	Ohau and Kuku	Manakau
All	<p>In general for the community hub this is assessed as moderate positive impact</p> <p>Potential positive impacts include:</p> <p>All options potentially decrease the severance created by SH1 creating more cohesion to the centre of Levin. Acknowledging the low speed environment for the State Highway through Levin already, this is considered a moderate positive impact (noting accessibility and way of life impacts considered above).</p> <p>Improved access across SH57 due to reduced traffic and facilitated access across the proposed corridor may improve the cohesion of the wider community.</p> <p>However it is recognised that there are potential negative impacts that need to be considered:</p> <p>All options create a further divide (beyond the already existing SH57) between the urban form and the peri-urban eastern section. This will be four lanes and will have less accesses of it than the existing SH57. This will have impacts on cohesion between these community areas albeit that the extent or scale of impact for these communities is assessed as smaller.</p>	<p>In general for the community hub this is assessed as moderate to high positive impact</p> <p>Potential positive impacts include:</p> <p>All options potentially decrease the severance created by SH1, creating more cohesion to the centre of Ohau. Given the speed environment and severance impacts for this community (and acknowledging the growth plans on both sides of SH1 for Ohau and Kuku), this is considered a moderate to potentially high positive impact (noting accessibility and way of life impacts considered above).</p> <p>However it is recognised that there are potential negative impacts that need to be considered:</p> <p>All options create a divide between the village and the rural eastern section. This will have impacts on cohesion between these community areas, albeit that the extent or scale of impact for these communities is assessed as smaller.</p>	<p>In general for the community hub this is assessed as moderate positive impact</p> <p>Potential positive impacts include:</p> <p>All options potentially decrease the severance created by SH1 creating more cohesion to the centre of Manakau. Given the speed environment of the existing State highway (and acknowledging the growth plans on to the west of the existing SH1 in Manakau), this is considered potentially a high positive impact (noting accessibility and way of life impacts considered above).</p> <p>However it is recognised that there are potential negative impacts that need to be considered:</p> <p>All options create a divide between the village and the peri-urban and rural eastern section. This will have impacts on cohesion between these community areas albeit that the extent or scale of impact for these communities is assessed as smaller.</p>

5.3.2b Potential Impacts on Community Cohesion				
Option	Levin	Ohau and Kuku	Manakau	
Common Northern Section of Proposed Corridor from SH57 to SH1	<p>Assessed as low to moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential “loss of sub community” if large section of area disrupted move from area due to change of environment (beyond the direct property take / requirements); and • Potential disconnection of neighbourhoods (such as Heatherlea E Road and Sorenson Road) leaving members of the sub communities isolated. <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	NA	NA	
N4	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential “loss of sub community” if large section of area disrupted move from area due to change of environment (beyond the direct property take / requirements); and • Potential disconnection of sub local neighbourhoods (such as those around Waihou and McDonald Road) leaving members of the sub communities isolated. <p>This option mirrors the alignment of SH57 creating a similar effect to cohesion to currently, however the area between the proposed corridor and the existing SH57 has the potential to isolate those residents from any of the sub-communities they were connected to east of the proposed corridor.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	NA	NA	
N5	<p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential “further loss of sub-local community” if large section of area disrupted move from area due to change of environment; • Potential for sub-local communities such as cul-de-sac communities to be “left” (e.g. some are removed and others retained) leaving individual houses not connected to a neighbourhood (dependent on alignment within 300m corridor). • Potential disconnection of neighbourhoods leaving members of the sub communities isolated; and • Loss of sense of connectedness to Levin for residents to the east, with further physical separation and increased complexity or constraint on connection points. <p>This option will disrupt the cohesion of communities developing around the proposed Residential Greenbelt Area (some sub communities have already established around Queen Street). It has the potential to disconnect communities west of this option from feeling part of Levin.</p>	NA	NA	

5.3.2b Potential Impacts on Community Cohesion			
Option	Levin	Ohau and Kuku	Manakau
	A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.		
N9	<p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential 'further loss of sub community' if large section of area disrupted move from area due to change of environment; • Potential for sub-communities such as cul-de-sac communities to be "left" (e.g. some are removed and others retained) leaving individual houses not connected to a neighbourhood (dependent on alignment within 300m corridor). • Potential disconnection of neighbourhoods leaving members of the sub communities isolated; and • Loss of sense of connectedness to Levin for residents to the east, with further physical separation and increased complexity or constraint on connection points. <p>This option will disrupt the cohesion of communities developing around the proposed Residential Greenbelt Area (some sub communities have already established around Queen Street). It has the potential to disconnect communities west of this option from feeling part of Levin.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	NA	NA

5.3.2c Potential Impacts on Community Cohesion			
Option	Levin	Ohau and Kuku	Manakau
Connection between North and South Options	<p>Assessed as high negative impact for:</p> <p>N4/N5 to S6, N9 to S6/S7A, N4 to S7A due higher potential to disrupt communities and including potentially "vulnerable community" at SH57 and Kimberly Road</p> <p>Assessed as moderate to high negative impact for:</p> <p>N4, N5 and N9 to S7 potentially have less disruption to communities due to less concentration of houses further east of Kimberly Road/Arapaepae Road intersection.</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>Potential to disrupt sub communities within cul-de-sacs and further separate this section from feeling part of urban Levin.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	<p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>All connecting to S6/S7A have potential severance issues, may change how community currently connects to Ohau (if they do) and will potentially change these connections as it may be more likely that the community member will connect with Levin following the completion of the project.</p> <p>Dependent on the access provided and the path of the connection this has the potential to change the sense of connectedness and cohesion the residents east of the proposed corridor to being part of Ohau as if connections are difficult it may shift them to connect with Levin (i.e. attend Levin primary schools).</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	NA

5.3.2d Potential Impacts on Community Cohesion			
Option	Levin	Ohau and Kuku	Manakau
S6	NA	<p>At a local scale this is assessed as moderately positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Could be potentially higher if access is improved further to both sides of SH1 for the community 	<p>At a local scale this is assessed as low positive to moderate negative</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>Potential positive impacts include:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Improves access of community facilities and community west and east of SH1 <p>Potential negative impacts include:</p> <ul style="list-style-type: none"> • Potential 'further loss of community' if large section of area disrupted move from area due to change of environment; • Potential to isolate surrounding rural lifestyle communities from the village; and • Depending on scale of potential impact to residential activities, the number of people affected could result in potential loss of school role and general community numbers (but not

5.3.2d Potential Impacts on Community Cohesion			
Option	Levin	Ohau and Kuku	Manakau
		<p>Assessed as low to moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of portion of farming/rural community, particularly if livelihood no longer sustainable; • Potential disconnections between families if some lose properties, particularly for those with strong family connections in the geographic area; and • Separation from Ohau village reducing sense of connection. <p>While this effects the outer areas of Ohau, Kuku and Muhunua East, these are smaller rural sub-local communities that bond through locality to neighbours, loss of a few member could significantly impact the community, especially those with historic connections and families in the area. Impacts on cohesion could be reduced if corridor is pushed closer to the foothills.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	<p>assessed as significant impact on basis of current rolls and distribution of students) – this is considered likely to be a matter of further design detail – depending on alignment impacts for this corridor option.</p> <p>This option is most likely to impact the cohesion of Manakau village, while this is a very cohesive community, the scale compared to the size of the community is causing greater negative impact.</p> <p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential ‘further loss of sub-local community” if large section of area disrupted move from area due to change of environment; • Disconnection of neighbourhoods leaving members of the sub communities isolated; • Potential disconnections between families if some lose properties, particularly for those with strong family connections in the geographic area; and • Separation from Manakau village reducing sense of connection. <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area. Alignment design approaches to reduce residential property impacts and mitigate quality of living environments (particularly noise) to address potential consequential impacts to social services and facilities.</p>
S7A	NA	<p>At a local scale this is assessed as moderately positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Could be potentially higher if access is improved further to both sides of SH1 for the community <p>Assessed as low to moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of portion of farming/rural community, particularly if livelihood no longer sustainable; • Potential disconnections between families if some lose properties, particularly for those with strong family connections in the geographic area; and • Separation from Ohau village reducing sense of connection. <p>While this effects the outer areas of Ohau, Kuku and Muhunua East, these are smaller rural sub-local communities that bond through locality to neighbours, loss of a few member could significantly impact the community, especially those with historic connections and families in the area. Impacts on cohesion could be reduced if corridor is pushed closer to the foothills.</p> <p>A full SIA utilising through consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	<p>At a local scale this is assessed as low positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Improves access of community facilities and community west and east of SH1 <p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of notable portion of farming/rural community, particularly if livelihood no longer sustainable or viable to support people; • Potential disconnections between families if some lose properties, particularly those with strong family connections in the geographic area; • Severance of Corbetts Road and Mountain View Drive from Manakau village reducing sense of connection; and • Potential of loss of a whole sub community within the valley. <p>While this impact a more isolated area these are smaller rural sub communities that bond through locality to neighbours, loss of a few member could significantly impact the community, especially those with historic connections and families in the area.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>
S7	NA	<p>At a local scale this is assessed as moderately positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Could be potentially higher if access is improved further to both sides of SH1 for the community 	<p>At a local scale this is assessed as low positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Removes severance of SH1 • Improves access of community facilities and community west and east of SH1

5.3.2d Potential Impacts on Community Cohesion				
Option	Levin	Ohau and Kuku		Manakau
			<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of notable portion of farming/rural community, particularly if livelihood is no longer sustainable or viable to support people; • Potential disconnections between families if some lose properties, particularly those with strong family connections in the geographic area; • Further separation from Ohau village reducing sense of connection; and • Potential of loss of a whole sub community. <p>While this impact a more isolated area these are smaller rural sub communities that bond through locality to neighbours, loss of a few member could significantly impact the community, especially those with historic connections and families in the area.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>	<p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of notable portion of farming/rural community, particularly if livelihood is no longer sustainable or viable to support people; • Potential disconnections between families if some lose properties, particularly those with strong family connections in the geographic area; • Severance of Corbetts Road and Mountain View Drive from Manakau village reducing sense of connection; and • Potential of loss of a whole sub community within the valley. <p>While this impact a more isolated area these are smaller rural sub communities that bond through locality to neighbours, loss of a few member could significantly impact the community, especially those with historic connections and families in the area.</p> <p>A full SIA utilising consultation or social research methods, with these residents will enable better understanding of the community connections and sense of identity for impacted residents in this area.</p>
Common Southern Section of Proposed Corridor from Atkins Road/SH1 to Taylors Road/SH1	NA	NA		<p>This relates to the sub-community of “Forest Lakes” which appears to be a satellite community of Ōtaki.</p> <p>Assessed as low to moderate negative impact</p> <p>Without detailed assessment it is difficult to understand the sense of community in this area, potential impact are considered to be the following:</p> <ul style="list-style-type: none"> • Potential reduction in size of this community due to loss of properties (approximately 10); and • Potential isolation for residents between the proposed corridor and SH1.

5.3.3 Potential impacts on sustaining oneself

For the purposes of this SIA, potential impacts on sustaining oneself have been assessed for each community as a potential operational corridor (as construction details are unknown at this stage). In general, it is noted that consideration of these impacts covers the extent to which the community and people in that community will be economically disadvantaged from business disruption due to the proposal, particularly in respect of how they live and work. It is acknowledged that this assessment relates to, but is distinct from the economic effects assessment (which identifies the economic opportunities that may arise from options, beyond the impacts on the existing patterns of how the community in an area may sustain itself). The table provides a summary of the assessed potential impact (without mitigation), followed by rationale for the assessment.

5.3.3a Potential Impacts on Sustaining Oneself				
Option	Levin		Ohau and Kuku	Manakau
ALL	<p>Assessed as low positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <p>Potential positive impacts</p> <ul style="list-style-type: none"> • Opportunity for businesses and operations in Levin that rely on pedestrian traffic / amenity (e.g. local café etc.); and • Improved travel time, connectivity and reliability to connect Levin with other centres where they work or distribute goods. <p>However it is recognised that there are potential negative impacts that need to be considered:</p> <ul style="list-style-type: none"> • Potential loss of local produce (reduction of local market gardens); and • Potential loss of employment for small portion of wider community that is hired by any of the affected businesses. <p>Assessed as temporary and permanent impacts dependent on businesses ability to relocate (i.e. market gardens) and other employment opportunities. Positive impacts will be permanent and have the potential to build dependent on how the town centre is treated.</p>		NA	NA

5.3.3a Potential Impacts on Sustaining Oneself			
Option	Levin	Ohau and Kuku	Manakau
N4	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of productive land used for agricultural and horticultural uses; • Approximately 32 parcels of land used for farming (14), market gardens (15) and commercial (3) are potentially affected by this option (300m width). Either loss of operation or severance issues; • Potential loss of 72 parcels of lifestyle blocks (300m width) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and • Potential loss of through traffic for some business operations that appear to be reliant on passing trade; <p>Assessed as permanent impact, experienced by those properties within the corridor alignment. While it is acknowledged that the long-term future use of the area east of SH57 in Levin is for increased residential development, this has not been specifically factored in the above assessment on the basis that the timing for such land use change is both long-term but also because it is usually within the control of landowners themselves (e.g. landowners choose when to stop farming etc.).</p> <p>Further social research and consultation would enable better understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area).</p>	NA	NA
N5	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of productive land used for agricultural and horticultural uses; • Approximately 33 parcels of land used for farming (22), market gardens (6) and commercial (5) are potentially affected by this option (300m width). Either loss of operation or severance issues; • Potential loss of 63 parcels of lifestyle blocks (300m width) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and • Potential loss of through traffic for some business operations that appear to be reliant on passing trade; <p>Assessed as permanent impact, experienced by those properties within the corridor alignment. While it is acknowledged that the long-term future use of the area east of SH57 in Levin is for increased residential development, this has not been specifically factored in the above assessment on the basis that the timing for such land use change is both long-term but also because it is usually within the control of landowners themselves (e.g. landowners choose when to stop farming etc.).</p> <p>Further social research and consultation would enable better understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area).</p>	NA	NA
N9	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Potential loss of productive land used for agricultural and horticultural uses; • Approximately 39 parcels of land used for farming (27), market gardens (5) and commercial (7) are potentially affected by this option (300m width). Either loss of operation or severance issues; • Potential loss of 69 parcels of lifestyle blocks (300m width) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and • Potential loss of through traffic for some business operations that appear to be reliant on passing trade; <p>Assessed as permanent impact, experienced by those properties within the corridor alignment. While it is acknowledged that the long-term future use of the area east of SH57 in Levin is for increased residential development, this has not been specifically factored in the above assessment on the basis that the timing for such land use change is both long-term but also because it is usually within the control of landowners themselves (e.g. landowners choose when to stop farming etc.).</p> <p>Further social research and consultation would enable better understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area).</p>	NA	NA

5.3.3b Potential Impacts on Sustaining Oneself

Option	Levin	Ohau and Kuku	Manakau
ALL		<p>Assessed as low negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following::</p> <p>Potential positive impact</p> <ul style="list-style-type: none"> Improved travel time, connectivity and reliability to connect with other centres where they work or distribute goods; <p>Potential negative impact</p> <ul style="list-style-type: none"> Potential loss of local produce (reduction of local market gardens); Potential loss of employment for small portion of wider community that is hired by any of the affected businesses; and Potential loss of through traffic for some business operations that appear to be reliant on passing trade. <p>Dependent on ease of access to proposed corridor. Assessed as temporary and permanent impacts dependent on if businesses ability to relocate (i.e. market gardens) and other employment opportunities. Positive impacts will be permanent and have the potential to build dependent on how the town centre is treated.</p>	<p>Assessed as low negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following::</p> <p>Potential positive impact</p> <ul style="list-style-type: none"> Improved travel time, connectivity and reliability to connect with other centres where they work or distribute goods; <p>Potential negative impact</p> <ul style="list-style-type: none"> Potential loss of employment for small portion of wider community that is hired by any of the affected businesses; and Potential loss of through traffic for some business operations that appear to be reliant on passing trade. <p>Dependent on ease of access to proposed corridor. Assessed as temporary and permanent impacts dependent on other employment opportunities. Positive impacts will be permanent and have the potential to build dependent on how the town centre is treated.</p>
S6	NA	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> The potential loss of productive land and the number of properties that appear to be business / resident operations in the corridor; Potential loss of lifestyle blocks (partial/whole) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and The potential loss of viability of farms/market garden (more market gardens in this section) severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties). <p>Assessed as permanent impact, experienced by those properties within the corridor alignment. This section of S6 appears to have more market gardens and agricultural land and less lifestyle blocks.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area).</p>	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> The loss of productive land and the number of properties that appear to be business / resident operations in the corridor; The potential loss of lifestyle blocks (partial/whole) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and The potential loss of viability of farms (more farms than market gardens)market garden severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties); and <p>Assessed as permanent impact, experienced by those properties within the corridor alignment. This section has mainly agricultural land and more lifestyle blocks.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area).</p>
S7	NA	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of productive land required by the corridor; Potential loss of lifestyle blocks (partial/whole) where owners may generate a smaller income off the land or sustain their household through growing produce or raising animals, a loss or reduction in size would change these practices; and The potential loss of viability of farms/market garden severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties). <p>Assessed as permanent impact, experienced by those properties within the corridor alignment.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area). This engagement would also assist to identify opportunities (if any) to mitigate impacts through alignment design or measures to maintain accessibility within properties.</p>	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of productive land required by the corridor; The potential loss of viability of farms severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties); The relatively higher proportion of landowners that appear to reside in these areas for lifestyle / amenity values (considered in the quality of environment consideration below). <p>Assessed as permanent impact, experienced by those properties within the corridor alignment.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area). This engagement would also assist to identify opportunities (if any) to mitigate impacts through alignment design or measures to maintain accessibility within properties.</p>

5.3.3b Potential Impacts on Sustaining Oneself

Option	Levin	Ohau and Kuku	Manakau
S7A	NA	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Loss of productive land required by the corridor; • The potential loss of viability of farms/market garden severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties); and • The minor increase in rural activities sustaining community though the valley area between Kuku and Manakau that are potentially affected is noted, but does not change the assessed impact in respect of S6 above. <p>Assessed as permanent impact, experienced by those properties within the corridor alignment.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area). This engagement would also assist to identify opportunities (if any) to mitigate impacts through alignment design or measures to maintain accessibility within properties. It is noted that these changes may reduce the potential impacts identified above.</p>	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Loss of productive land required by the corridor; • The potential loss of viability of farms/market garden severed by the corridor, albeit that the land requirement for these impacts may not fully impact on these operations (may be mitigated by alignment design / accessibility within properties); • Increase in rural activities sustaining community though the valley area between Kuku and Manakau that are potentially affected; and • The relatively higher proportion of landowners that appear to reside in these areas for lifestyle / amenity values (considered in the quality of environment consideration below). <p>Assessed as permanent impact, experienced by those properties within the corridor alignment.</p> <p>Further social research and consultation would better enable understanding of the potential impacts of the options on this issue (particularly the degree to which current landowners derive economic wellbeing from the land in this area). This engagement would also assist to identify opportunities (if any) to mitigate impacts through alignment design or measures to maintain accessibility within properties.</p>

5.3.4 Potential impacts on the quality of the environment

For the purposes of this SIA, potential impacts on the quality of the environment have been assessed for each community as a potential operational corridor (as construction details are unknown at this stage). It is limited to the values people have placed on the quality of their environment (it relies on the other specialist assessments of physical environment impacts, including water, air, noise, visual/landscape and ecology).

5.3.4a Potential Impacts on the Quality of the Environment				
Option	Levin		Ohau	Manakau
ALL	<p>Assessed as low to moderate positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Decreased traffic from SH1 potentially improves the quality of the environment of the town centre (dependent on how this is developed); and Decreased traffic noise for those residents within proximity of SH57 (Mainly applies to dwellings west of SH57). <p>The sub-local assessment below highlights the change to the local environment from the Project (in some instances, this may impact on the wider communities appreciation of the environment, particularly in respect of the Department of Conservation estate area).</p>		NA	NA
N4	<p>Assessed as low to moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity (those within close proximity of the corridor who do not already live near SH57 will experience greatest change); Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as being in an environment already close to road noise from SH57 so change in environment is reduced. It will impact all residents within sight or hearing distance of the proposed corridor as additional noise to SH57 but most impact to those adjacent (Approximately 317 within proximity of this corridor).</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>		NA	NA
N5	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity (those within close proximity of the corridor are currently in a very rural character environment, with noise activities associated with rural industry not traffic per say); Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent (Approximately 137 within proximity of this corridor), higher level of impact for those within closer proximity.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>		NA	NA
N9	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity (those within close proximity of the corridor are currently in a very rural character environment, with some noise activities associated with rural industry not traffic per say and higher proportion of rural lifestyle activities); Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent (Approximately 133 within proximity of this corridor), higher level of impact for those within closer proximity.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>		NA	NA

5.3.4b Potential Impacts on the Quality of the Environment			
Option	Levin	Ohau	Manakau
Connection between North and South Options	<p>Assessed as moderate to high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity (those within close proximity of the corridor are currently in a very rural character environment, with some noise activities associated with rural industry not traffic per say and higher proportion of rural lifestyle activities); Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent. Less change for those already living close to SH57.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>	<p>Assessed as high negative impact</p> <p>Impacts include:</p> <ul style="list-style-type: none"> Loss of tranquillity; Loss of rural view; Loss of productive land / rural outlook / rural environs; and Impact to natural resources (river and native bush on N9 connections). <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent N9 connections have the most potential to change the natural environment (Ohau River and native bush).</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>	NA

5.3.4c Potential Impacts on the Quality of Life			
Option	Levin	Ohau	Manakau
ALL	NA	<p>Assessed as low to moderate positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Decreased traffic from SH1 potentially improves the quality of the environment of the village centre (acknowledging this is subject to mitigation planning, similar to those comments made regarding the impacts on quality of life); and Decreased traffic noise for those residents within proximity of SH1. 	<p>Assessed as low to moderate positive impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Decreased traffic from SH1 potentially improves the quality of the environment of the village centre (acknowledging this is subject to mitigation planning, similar to those comments made regarding the impacts on quality of life); and Decreased traffic noise for those residents within proximity of SH1 – albeit that the corridor extends closer to the eastern side of the existing settlement at Manakau (relative to S7 and S7A).
S6	NA	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity; Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as impacting the most productive land but least natural or secluded environment. Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts including opportunities in the Ohau settlement area (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>	<p>Assessed as high negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity; Loss of rural view; and Loss of productive land / rural outlook / rural environs. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent. Affects the most residents however less change to those living within proximity of SH1. Greatest impact to residents around Manakau Heights.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts including those to provide for amenity and improved connectivity between Manakau and the west (and coast) (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>
S7A	NA	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity; Loss of rural view; Loss of productive land / rural outlook / rural environs; and Loss of native flora and fauna. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent. Impact more remote properties than S6 where it goes to join S7.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area, including values associated with and opportunities to develop values with respect to</p>	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> Loss of tranquillity; Loss of rural view; Loss of productive land / rural outlook / rural environs; and Loss of native flora and fauna. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent. Assessed as greatest change to tranquil; remote environment and most natural environment (but for fewer residents). Includes loss of doc camping reserve.</p>

5.3.4c Potential Impacts on the Quality of Life			
Option	Levin	Ohau	Manakau
		native flora and fauna impacts and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts, opportunities in the Ohau settlement area (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).	Further social research and consultation would better enable understanding of the specific environmental values people have in this area, including values associated with and opportunities to develop values with respect to native flora and fauna impacts, and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts including those to provide for amenity and improved connectivity between Manakau and the west (and coast) (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).
S7	NA	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Loss of tranquillity; • Loss of rural view; • Loss of productive land / rural outlook / rural environs; and • Loss of native flora and fauna. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent Assessed as greatest change to tranquil; remote environment and most natural environment for small section of the community.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area, including values associated with and opportunities to develop values with respect to native flora and fauna impacts and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts, opportunities in the Ohau settlement area (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>	<p>Assessed as moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Loss of tranquillity; • Loss of rural view; • Loss of productive land / rural outlook / rural environs; and • Loss of native flora and fauna. <p>Assessed as impacting all residents within sight or hearing distance of the proposed corridor but most impact to those adjacent. Assessed as greatest change to tranquil; remote environment and most natural environment (but for fewer residents). Includes partial loss of DOC camping reserve.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area, including values associated with and opportunities to develop values with respect to native flora and fauna impacts, and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts including those to provide for amenity and improved connectivity between Manakau and the west (and coast) (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>
Common Southern Section of Proposed Corridor from Atkins Road/SH1 to Taylors Road/SH1	NA	NA	<p>This relates to the sub-community of “Forest Lakes” which appears to be a satellite community of Ōtaki. Assessed as low to moderate negative impact</p> <p>In identifying this scale of potential impact, consideration has been given to the following:</p> <ul style="list-style-type: none"> • Loss of tranquillity (those within close proximity of the corridor who do not already live near SH1 will experience greatest change); • Loss of rural view; and • Loss of productive land / rural outlook / rural environs. <p>Assessed as being in an environment already close to road noise from SH1 so change in environment is reduced. It will impact all residents within sight or hearing distance of the proposed corridor as additional noise to SH1 but most impact will be to those sandwiched between SH1 and the proposed corridor.</p> <p>Further social research and consultation would better enable understanding of the specific environmental values people have in this area and assist to identify opportunities (if any) to enable or maintain these values (through design) or otherwise appropriately mitigate impacts (e.g. noise attenuation, landscaping, recognition of heritage values of area etc.).</p>

5.3.5 Potential Impacts on Political Structures and Democratic Processes

No specific assessment has been made between the corridor options in respect of potential impacts on political processes structures and democratic processes. However, it is recognised that the Project, and the statutory process for delivery of the projects, has the potential to have significant impacts (both positively and negatively) on these structures and processes. The following provides an overall commentary and assessment of these potential impacts.

Significant infrastructure projects, such as O2NL represent a major change to the physical environment, and the ‘benefits’ of such projects are often attributed to people other than those most directly adversely impacted (e.g. the community that experiences the changes to their amenity, their accessibility or in the highest impact case loss of their home, are in some cases either not the main recipients of the travel time, safety and resilience improvements or experience benefits no greater than for the community at-large (while being the recipient of greater adverse outcomes)).

In this project, it is recognised that the local communities will benefit from the outcomes of O2NL. However, it is also recognised that the adverse social impacts will likely be incurred by a smaller subset of that community (referred to in this assessment as the sub-local community, and particularly relating to the rural, rural-residential and lifestyle residential sub-communities to the east of SH57 (in the case of Levin) and SH1 in the case of Ohau, Kuku and Manakau). The nature of the geographic extent of these impacts (both positive and negative) has the potential to result in specific potential impacts on political structures and democratic processes that will be experienced at the local and sub-local levels. In particular:

Potential **negative impacts** include:

1. The process has the potential to create the sense that communities are being 'pitted against each other' (particularly if there are different alignment or corridor options impacting on different people); and
2. The process has the potential to create the sense that the community has a small voice facing the 'Goliath' of a national led project and that as such community views will be discounted, disregarded or down-played – this is particularly relevant in the context of this project where the sub-local community is a smaller proportion of the overall local community (who may largely be supportive of the project);

It is noted, as with the potential positive impacts identified below, the scale or severity of these impacts depends, to some extent, on how the project is undertaken, particularly the process of community engagement in project assessment and delivery phases.

In addition, it is noted that the statutory approvals process overall (for first identifying and then protecting the corridor for the Project) itself creates uncertainty for people and their lives overall, as the process of considering options, obtaining statutory approvals and subsequent procurement for these projects means that communities can feel left in 'limbo', unable to move on with their lives. This impact is noted with specific reference to the timeframes and investigation uncertainty associated with this project and impacts on people's sense of empowerment in democratic and political processes.

While the above are recognised as potential adverse social impacts, there are **potential positive impacts** arising from such projects – generally experienced more at the local level:

1. The Project and associated processes often act to galvanise communities and bring them together (e.g. providing leverage for new political voices in a community and bringing people together for other projects); and
2. Depending on how a project is undertaken, and particularly community engagement these processes can result in significant positive changes to community and empowerment for community in local identity. While this is often difficult to confirm at the planning and investigation phase of a project, through construction and delivery these outcomes can be reflected in positive social / physical environment changes. For example, through recognition and celebration of local heritage, improvement to local amenity values (planting, features or others), and/or improved linkages and walkways for community use etc. It is acknowledged that this positive social outcome is highlight dependent on how a project is delivered and particularly how community engagement is undertaken. At this preliminary stage, this opportunity is acknowledged.

6 Bibliography

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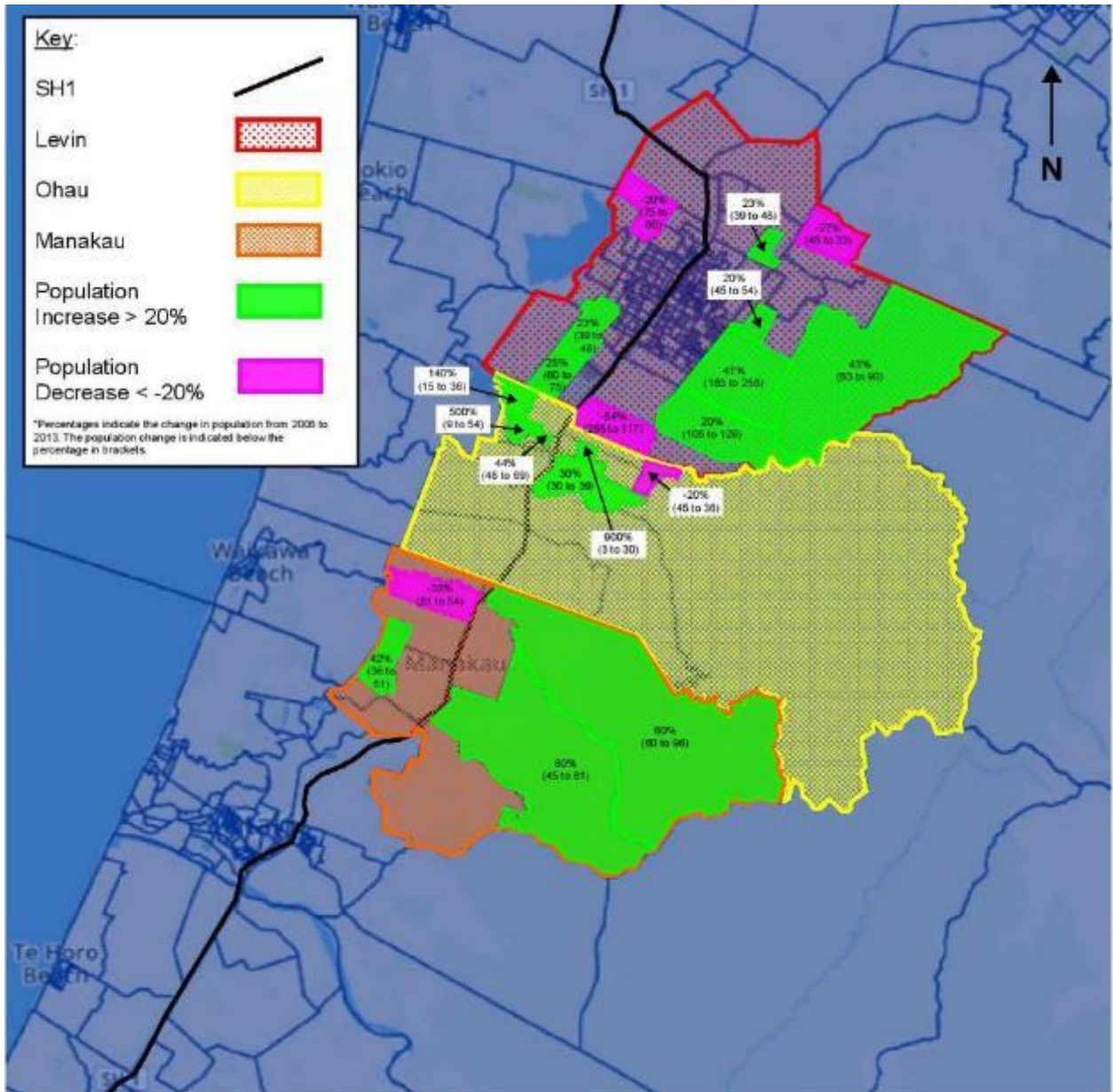
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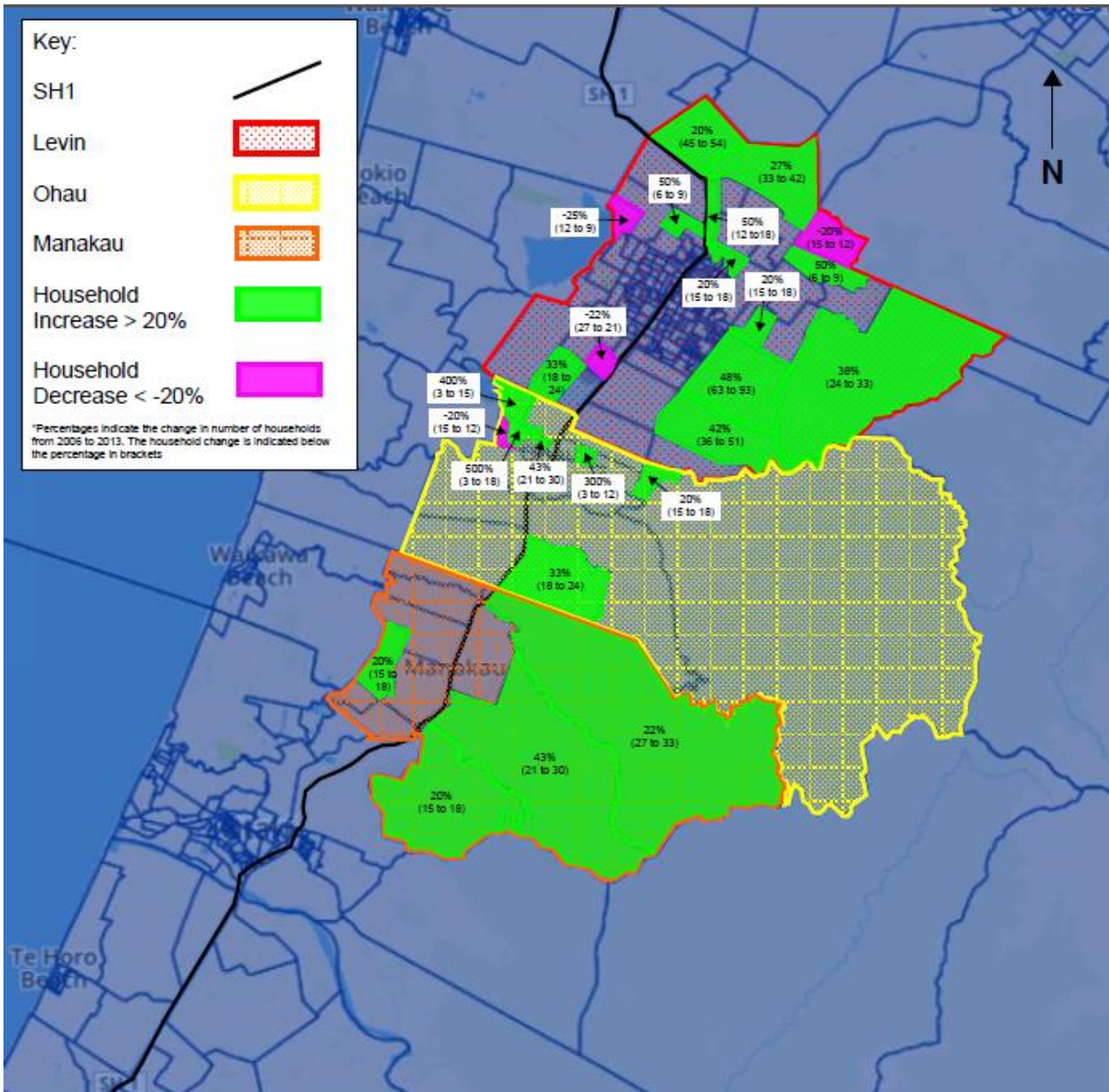
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Appendix A
Maps

Map 1: Population growth in community areas



Map 2: Housing growth in community areas



Appendix B

Preliminary Social Screen of Western Corridor Options



Preliminary Social Screen of Western Corridor Options

While this report has not provided a preliminary Social Impact Assessment (SIA) of the long-list of corridor options, the following provides a summary of potential social impacts and social considerations associated with those corridor options that run to the west of State Highway 1 (SH1). This commentary has been provided in response to questions and feedback received from the community: essentially contending that were the social impacts of corridor options to the east considered relative to the social impacts of those corridors to the west, this would have resulted in one of those options being selected over the western corridor options (which are considered in this report).

At the outset of this commentary, it is reiterated that the eastern corridor options are not being considered further by the NZ Transport Agency^[1]. The purpose of this commentary is to provide a consistent SIA screen and preliminary assessment of matters that would be considered in a SIA for any eastern corridor option, to complement the assessment provided in the MCA report.

Western Levin, Kuku, Ohau and Manakau Communities

A full community profile for those sub-communities to the west of Levin, Kuku, Ohau and Manakau has not been prepared (particularly given that specific western corridor options are not being considered). However, the following general comparative comments are noted:

- The land use is dominantly rural, with areas of horticulture and pastoral farming;
- The population density is generally lower on the western side of SH1 compared to the eastern side, particularly around the settlements of Ohau, Kuku and Manakau. In Levin, the population is denser closer to Levin urban area and there are large lakes (Lake Horowhenua and Lake Papaitonga) which separate these urban areas from the rural surrounds (though there are rural lifestyle and large lot residential between the urban area and these lakes);
- There is a higher proportion of Maori Land to the west of SH1 and through to the coast and some titles have more than one residential property on them (this is also true of some larger titles east of SH1);
- In Ohau there are planned growth areas that extend to the west (as well as to the east) of SH1, while in Manakau the larger planned growth areas are to the west of SH1. This differs from Levin where the growth areas identified are largely to the east of both SH1 and SH57.

Regional Impacts

For the Regional Community, the social outcomes would also generally be considered positive – as per the regional impacts identified in this SIA report, acknowledging the reduced travel time savings (and consequentially the reduced traffic volumes) of the western corridor options (particularly for traffic travelling to and from Palmerston North (currently via SH57)).

Local Impacts

For Levin, Ohau and Kuku and Manakau, the potential social benefits are similar but less than for the eastern corridor options due to the reduced diversion of traffic from the existing State Highways and particularly SH57 (as such they are assessed as low to moderate positive impact).

^[1] From our review of the Multi-Criteria Assessment of the long-list, a number of potential adverse impacts and dis-benefits of these eastern corridor options were identified in that earlier assessment. These included ecological, environmental, social, cultural and transport impacts. Notably, it is understood that the eastern corridor options were not considered to realise the same transport benefits as western corridor options (in particular they did not attract as much traffic from State Highway 1 / State Highway 57 (e.g. traffic travelling to and from Palmerston North)).

As with the eastern options, it is acknowledged that the majority of the population of Levin are not impacted by the corridor options, e.g. the majority of the Levin population live in the main urban area. However, while there are potential long term benefits on the community as it has potential to lessen traffic on SH1 which traverses through the town centre, it is not predicted to have the same degree of traffic reduction on SH57, to the west (and as a result the future urban growth and development areas that are identified around this eastern side of the existing Levin urban area remain potentially 'severed' by SH57 from the social facilities and services in Levin (which are largely west of the State Highway). It is anticipated that a western option would reduce traffic on SH1 and, therefore, is likely to improve the connection between east and west Levin in a manner similar to the eastern corridor options, albeit to a lesser degree. For this reason, there are similar (though slightly reduced) opportunities to reactivate the 'main street' in the centre and providing for improved access for the community to work, school and recreation activities both by car, cycle or foot. These benefits will particularly be experienced by those that use facilities to the east or west of the existing SH1 and live on the other side. Included in the identification of this positive social outcome is consideration for the improved resilience of the north-south corridor, provided by the O2NL project overall.

While this benefit is noted, the potential impacts of loss of access from Levin to Lake Horowhenua and the beaches to the east coast area also identified. These environments are important both culturally, (including heritage connections between the Levin, the Lakes and coast) and for recreation uses for the residents of Levin.

In the case of impacts for the population of both Ohau and Kuku and Manakau, not within proximity of the proposed western corridors the impact of all options is similar and is generally considered positive for people's way of life. As with the eastern corridor options, the removal of currently high speed traffic from the State Highway has the potential to improve accessibility for residents, with facilities and services currently bisected (severed) by that corridor. However, this is considered less positive than for the eastern corridor options, given that the existing State highway corridor remains a more attractive (shorter) route for some travelling to Levin and particularly for traffic travelling onto SH57 to the north. Furthermore, the opportunities for the existing State Highway to be managed more as a more local access road with reduced speed are considered likely diminished (e.g. it will potentially be the main corridor through to SH57).

Furthermore, and as with the discussion of eastern corridor options in Levin, it is noted that accessibility to the coast (e.g. Waikawa Beach) from the Manakau settlement area, including the potential for pedestrian / cycle connectivity, would not be delivered by these western options (or would require specific design elements to provide for connectivity).

For those sub-local communities within proximity to the western corridor options, the potential negative social impacts associated with the corridor would be similar to those identified for the eastern options in this report (ranging from potentially moderate to high adverse impacts). It is acknowledged that the population to the west is generally smaller than the population to the east (and as such the scale of impact is lower, but conversely the potential scale of sub-local community impacts resulting from the loss of people may in fact be higher). It is also recognised that there are specific land ownership patterns (particularly Maori Land holdings) that mean that the potential significance of these impacts would need to be considered. While the cultural and ancestral association with the land is more appropriately addressed through a Cultural Impact Assessment, there are specific social considerations that would need to be explored further in a full SIA. For example, at this preliminary social impact phase, the potential impacts that may increase the severity of impact on way of life include:

- Long family and historical connections and the consequential patterns that residents may have in the area (including marae, urupa, social networks and access to recreation / cultural resources (acknowledging this is in part and 'way of life' but also a potential social cohesion and sense of identity impact)) (it is noted that this historical community connection is not limited to Iwi and that such impact could be substantially adverse);

- The limitations and constraints some whanau may have to provide alternative Maori Land for impacted residents (depending on the nature of land allocation within a hapu) and as a result the limitations this may impose on the ability for impacted residents to maintain their way of life in the local area;
- The potential limitations in terms of financial compensation for residents on Maori Land (compared to the full beneficiaries of Maori Land) and as a consequence the financial hardship this may impose on displaced residents (e.g. lower financial mobility). Also the limitations this may impose on these residents ability to afford alternative housing options in the wider area or the resulting impact on way of life as these residents move from more stable housing to rental housing options; and
- The number of impacted 'landowners' and persons with a social interest in the land can be significantly greater than just the residents living in the community (e.g. ancestral relationships for many beneficiaries of a Maori Land title).

It is noted, as with any screening assessment of the impacts, it is important that a full SIA is undertaken to fully explore the extent and nature of these potential social impacts. However, such assessment would usually be done at the time that an alignment is developed – which is not expected for these western corridor options. While this is only a preliminary screen, it is considered reasonable to conclude that the potential social impacts of the western corridor options are similar (in some areas more significantly adverse) than for the eastern corridor options (which is considered consistent with the overall MCA scoring of these options undertaken at the long-list evaluation).