IN THE MATTER OF	the Resource Management Act 1991
AND	
IN THE MATTER OF	applications for resource consents and notices of requirement in relation to the Ōtaki to North of Levin Project
BY	**WAKA KOTAHI NZ TRANSPORT AGENCY**
	Applicant

ŌTAKI TO NORTH OF LEVIN HIGHWAY PROJECT

TECHNICAL ASSESSMENT E: SOCIAL IMPACT

BUDDLE FINDLAY

Barristers and Solicitors
Wellington

Solicitor Acting: **David Allen / Thaddeus Ryan**
Email: david.allen@buddlefindlay.com / thaddeus.ryan@buddlefindlay.com
Tel 64 4 462 0423 Fax 64 4 499 4141 PO Box 2694 DX SP20201 Wellington 6011

TABLE OF CONTENTS

EXECUTIVE SUMMARY 3
Project 3
Methodology 3
Existing Environment 4
Assessment 4
INTRODUCTION 8
Qualifications and experience 8
Code of conduct 10
Purpose and scope of assessment 10
Assumptions and exclusions in this assessment 11
PROJECT DESCRIPTION 12
Operation 12
Construction 15
METHODOLOGY 17
Introduction 17
Social Impact Assessment Framework 18
Methodological Steps 18
STATUTORY CONSIDERATIONS, INCLUDING NATIONAL STANDARDS, REGIONAL AND DISTRICT PLANS, AND OTHER RELEVANT POLICIES 29
Resource Management Act 1991 29
Land Transport Management Act 2003 30
Horizons Regional Council Long Term Plan 2021 – 2031 30
Horowhenua District Council Long-term Plan 2021 – 2041 31
Horowhenua Growth Strategy 2040 31
Kāpiti Coast Long-term Plan 2021-2041 32
Operative Kāpiti Coast District Plan 2021 32
Horowhenua District Council – Operative District Plan 2015 32
Greater Wellington Regional Council – Regional Policy Statement 32
EXISTING ENVIRONMENT – COMMUNITY PROFILES 33
Sub-local communities 34
Local Communities 37
Regional Community 57
PROJECT SHAPING AND AVOIDING AND MINIMISING EFFECTS 62
ASSESSMENT OF EFFECTS 64
Potential planning effects (route selection and pre-construction impacts) 66
Potential construction effects - Positive 68
Potential construction effects - Adverse 69
Potential operational effects - Positive 74
Potential adverse operational effects 87
Operational effects summary (Without Mitigation) 112
MEASURES TO REMEDY OR MITIGATE ACTUAL OR POTENTIAL ADVERSE SOCIAL EFFECTS 116
Construction 116
Operation 118
CONCLUSION AND RECOMMENDATIONS 123
APPENDIX E.1: SUMMARY OF SOCIAL RESEARCH 125
APPENDIX E.2: COPY OF SURVEY QUESTIONS AND LETTER TO RESIDENTS 135
APPENDIX E.3: PROJECT ENGAGEMENT SUMMARY - FULL DETAILS AVAILABLE - PART F OF VOLUME II OF THE AEE 140
APPENDIX E.4 – SUMMARY OF DEMOGRAPHIC DATA 142

EXECUTIVE SUMMARY

1. This technical report assesses the potential positive and negative social impacts of the construction and operation of Waka Kotahi New Zealand Transport Agency's ("**Waka Kotahi**") Ōtaki to North of Levin Highway Project ("the **Ō2NL Project**" or the "**Project**"). This assessment supports the notices of requirement for designations ("**NoRs**") and application for resource consents for the Ō2NL Project.

Project

2. The Ō2NL Project involves the construction, operation, use, maintenance, and improvement of approximately 24 kilometres of new four-lane median divided state highway (two lanes in each direction) and a shared use path ("**SUP**") between Taylors Road, Ōtaki (and the Peka Peka to Ōtaki expressway ("**PP2Ō**") and State Highway 1 ("**SH1**") north of Levin.

3. The Ō2NL Project is part of the New Zealand Upgrade Programme ("**NZUP**") and has a stated purpose to "improve safety and access, support economic growth, provide greater route resilience, and better access to walking and cycling facilities".

Methodology

4. The methodology employed for this assessment consisted of the following steps:

   (a) Step 1- Scoping and contextualisation: understanding the proposal and the ‘social area of influence’ of the Project.

   (b) Step 2- Information gathering: through desktop data analysis, site visits, and stakeholder and community engagement.

   (c) Step 3- Community Profiling: building a demographic profile of the regional, local, and sub-local communities located along the Project length using collated information from Step 2.

   (d) Step 4- Assessment of Effects: Reviewing collected information, technical assessments and confirming social domains of concern for assessment. Through analysis (considering extent, severity, duration and likelihood of potential social impacts), determining the social impacts that will likely result from the Project.

(e) Step 5- Recommendations: considering the requirements to avoid, remedy, or mitigate the identified negative impacts and making recommendations.

Existing Environment

5. The current SH1 traverses through the centre of Manakau, Ohau and Levin. It is the only roading connection between Ōtaki and Levin. State Highway 57 ("**SH57**") is located along the eastern urban / rural periphery of Levin. SH1 and SH57 are two lane state highways. Currently, it is identified that there are resilience (lack of alternate routes, closure due to natural hazards and crashes) and safety issues along the corridor. In the last 5 years, this stretch of road has had 72 deaths and serious injuries ("**DSIs**").

6. The Ō2NL Project also traverses through the urban / rural periphery of northeast and east Levin, the eastern rural sector of Ohau and Kuku, the eastern rural sector of North Manakau, the eastern periphery of Manakau Village, the partially established development of Manakau Heights, and the northern rural section of Ōtaki.

Assessment

Positive Impacts

7. The Ō2NL Project will provide improved safety, connectivity, and resilience, as well as a SUP along the full Project extent. Those benefits are assessed as having potentially moderate to high positive social impacts for the community (regional, local and sub-local communities), by helping respond to current social issues (such as safety, congestion, limited active transport modes and connectivity) and future growth.

8. That in turn positively impacts how people live (move around the area), connect to each other, remain safe when travelling (all modes) and have active transport mode options.

9. By taking traffic away from the centre of Levin, Ohau, Kuku, Manakau and North Ōtaki, the Project will improve the quality of the living environment and amenity of these community centres.

10. Overall, this is anticipated to generate moderate to high positive social impacts.

Negative Impacts

11. There is a geographical concentration of potential negative impacts for both construction and operation. These are highest at the sub-local level (that is, the small sub-communities that exist within, or in close proximity to, the Project) and largely reduce with increased distance from the Project.

Planning (pre-construction)

12. Pre-construction, the planning effects are related to the route selection process, confirmation of property requirements, and assessment of impacts and mitigation. In particular, the uncertainty of outcomes and associated stress. Some of these effects have already occurred during route selection and advance property purchases (50 advanced purchases as of August 2022). Others are ongoing due to continued property negotiations (including people waiting to understand partial acquisition impacts) and people waiting to find out the extent of mitigation proposed. Overall, the impacts are assessed as very-low to moderately negative depending on the extent of property acquisition and concentration within sub-local areas.

Construction

13. During construction the main social impacts arise from changes to the environment and property acquisitions. These are mainly experienced at a sub-local and, to a lesser degree, local scale.

14. Potential positive impacts may occur in relation to how people sustain themselves due to the business and employment opportunities that will potentially arise during construction.

15. Negative impacts relate to:

    (a) Way of life:

        (i) disruption to how people move around the area due to increased traffic and layout changes;

        (ii) disruption to activities at home due to noise, dust and access changes;

        (iii) changes to employment due to property acquisition of place of employment; and

(iv) relocation due to property acquisition necessitating change to work, education and lifestyle.

(b) Community:

(i) changes to the local and sub-local population and cohesion due to property acquisition.

(c) Health and wellbeing:

(i) health and wellbeing impacts of environmental stressors (noise, traffic and dust); and

(ii) stress and anxiety relating to changes to environment.

(d) Quality of living environment:

(i) changes to the quality of the living environment due to environmental stressors including noise, visual changes, traffic and dust.

16. Overall, without mitigation, potential negative social impacts from construction range from very-low to moderate.

17. Mitigation includes standard measures, to be set out in detail in technical construction management plans (for example, for noise and vibration, traffic and air quality), and a communication plan (including continued community meetings). Providing opportunity for feedback and response for the community and ability to participate in mitigation and design where relevant. With mitigation, it is assessed that potential negative social impacts from construction will be very-low to low.

Operation

18. Potential negative social impacts relate to the social changes experienced from the operation of a new state highway within a residential, rural and greenfield environment. Many of the potential impacts relate to proximity to the Project and therefore the highest degree of impact is at a sub-local scale.

19. The potential negative impacts include:

(a) Way of life;

(i) the way people move around the area;

(ii) how people carry out work;

(iii) recreation;

(iv) lifestyle; and

(v) sustaining oneself.

(b) Community:

(i) loss of community connections;

(ii) reduced sense of connectivity; and

(iii) change of community character.

(c) Health and Wellbeing:

(i) stress of change to acoustic and visual environment; and

(ii) health and wellbeing impacts of changes to acoustic environment such as disruption to sleep.

(d) Quality of living environment:

(i) loss of rural living environment;

(ii) loss of quiet environment; and

(iii) loss of nature outlook.

20. Overall, without mitigation potential negative social impacts from operation at a local scale will be low to very-low. At a sub-local scale these will be very-low to high. Mitigation will assist to reduce potential negative social impacts.

21. Mitigation recommendations include:

(a) support of high-performance surfaces and barriers at noise sensitive locations;

(b) support of landscaping along the corridor in keeping with the surrounding environment and providing screening where practicable;

(c) a Project contact person for the first 3-6 months of operation to aid in the transition and provide opportunity for community members to contact Waka Kotahi if initial issues arise in relation to the operation of the corridor.

22. Noise and landscaping mitigation will reduce impacts on the way people live, community character, health and wellbeing and the quality of the living environment. This will be achieved by reducing road noise and the visual presence of the Project.

23. With mitigation, local scale impacts are assessed as potentially negligible to very-low negative social impacts. Sub-local scale social impacts are assessed as negligible to moderate.

INTRODUCTION

24. I, Joanne Healy of Beca Limited, am the Primary Author of this assessment, supported by my team of social impact researchers aiding in data collection. This process has been assisted, overseen, and reviewed by my colleague Amelia Linzey as Supporting Author and Reviewer.

Qualifications and experience

25. I have the following qualifications and experience relevant to this assessment:

    (a) Honours of Science in Geography (First Class) and Bachelor of Science in Geography and Environmental Science from the University of Auckland;

    (b) Bachelor of Health Science in Occupational Therapy from the Auckland Institute of Technology;

    (c) Member of the International Association of Public Participation (IAP2) and I have undertaken the IAP2 Certificate Programme in Public Participation;

    (d) Over five years professional experience in social impact assessment and consultation; and

    (e) Over 15 years' professional experience in health, rehabilitation assessments, and community work.

26. Within the last five years, I have prepared or was otherwise involved (as specified) in undertaking Social Impact Assessments for the following transport and infrastructure projects:

(a) Social Impact Peer Review - Ohinewai Plan Change Submissions, Waikato District Council (including preparation and presentation of hearing evidence);

(b) Social Impact Assessment (Primary Author) - Queenstown Arterials Notice of Requirement, Queenstown Lakes District Council (Fast Track Consent Process – including developing conditions and responding to panel queries);

(c) Social Impact Assessment (Primary Author) - Southern Rail Stations Notice of Requirement and Resource Consent - Auckland, KiwiRail (Supporting Growth Alliance) (Fast Track Application);

(d) Social Impact Assessment (Primary Author) Bothamley Park Sewer Replacement Resource Consent Application, Kāinga Ora - Wellington (Fast Track Application) (Lodged); and

(e) Social Impact Assessment (Supporting Author) Te Ahu a Turanga (Manawatū Gorge Replacement highway) Notice of Requirement, Waka Kotahi (including assisting evidence preparation).

27. Amelia Linzey of Beca Limited is the Supporting Author and Reviewer; she has assisted in data collection (including site visits and interviews), assessment, reporting and review for this Technical Assessment.

28. The following are Ms Linzey's qualifications and experience relevant to this assessment:

(a) Master of Science in Geography (First Class Honours) from the University of Auckland and Bachelor of Science;

(b) full member of the New Zealand Planning Institute and recipient of the Distinguished Service Award from the institute in 2019;

(c) member of the International Association of Public Participation (IAP2) and having undertaken the IAP2 Certificate Programme in Public Participation (2003); and

(d) over 20 years' professional experience in environmental and social impact assessment and consultation.

29. She has prepared or was otherwise involved (as specified) in undertaking Social Impact Assessments, and examples include the following transport and major infrastructures projects in the last ten years:

    (a) Social Impact Peer review for KiwiRail's designation of the Rail Hub, Palmerston North (including the section 42A report, preparation and presentation of evidence), Palmerston North City Council;

    (b) Social Impact options assessment - Huia Water Treatment Plant Resource Consent Application (including preparation and presentation of evidence) Auckland, Watercare;

    (c) Social Impact Assessment East West Project - Auckland Notice of Requirement (involving preparation of a SIA and presentation of evidence to a Board of Inquiry), Waka Kotahi;

    (d) Social Impact Assessment Peer review - Redoubt Road-Mill Road Corridor Notice of Requirement, Auckland, Auckland Transport, including presentation of evidence;

    (e) Social Impact Assessment - Waterview Connection Proposed Plan Change – Auckland (including presentation of evidence at the Board of Inquiry), Waka Kotahi; and

    (f) Social Impact Assessment Peer Review - MacKays to Peka Peka ("**M2PP**") Notice of Requirement, for the M2PP Alliance, Waka Kotahi.

Code of conduct

30. I confirm that both Amelia Linzey and I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. This assessment has been prepared in compliance with that Code, as if it were evidence being given in Environment Court proceedings. In particular, unless I state otherwise, this assessment is within the area of expertise of myself, and the reviewer/supporting author (Amelia Linzey) and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Purpose and scope of assessment

31. This report forms part of a suite of technical assessments prepared for the Ō2NL Project. Its purpose is to inform the assessment of effects on the environment included in the Volume II 'Supporting Material' that accompanies

the NoR and resource consent applications under the Resource Management Act 1991 ("**RMA**").

32. This assessment analyses the potential social impacts of the construction and operation of the Ō2NL Project, as follows:

    (a) identify and describe the existing social environment;

    (b) assess the potential regional, local and sub-local social impacts (positive and negative) of the Ō2NL Project;

    (c) recommend measures as appropriate to avoid, remedy or mitigate potential adverse social impacts; and

    (d) present an overall conclusion of the level of potential adverse and positive social impacts of the Project after recommended measures are implemented.

Assumptions and exclusions in this assessment

33. The assessment considers potential social impacts at the regional, local, and sub-local scales. Whilst we acknowledge that there will be potential social impacts experienced at an individual/household level, specific property impacts (and in particular, socio-economic impacts associated with property purchase) have not been the focus of this assessment.

34. Overall social impacts to the community including the effects of property acquisition and subsequent social changes have been assessed. Consultation with owners and occupiers within the Ō2NL Project footprint is being undertaken by Waka Kotahi. This is as part of the wider Public Works Act 1981 ("**PWA**") process for the acquisition / lease of directly impacted properties and takes into consideration property and site-specific issues and effects caused by the Project.

35. The assessment draws upon information collected through social research and consultation (Appendix E.1) including consultation and engagement undertaken by Waka Kotahi (See Part F of Volume II).

36. Our assessment has drawn on the following data and findings from the following assessments;

    (a) Project drawings indicating designation and local road connections (Volume III);

(b) Draft Cultural and Environmental Design Framework ("**CEDF**") (provided as Appendix Three to Volume II);

(c) Cultural Impact Assessments / Cultural Appreciation Reports ("**CIAs**") (provided in Volume V);

(d) Design and Construction Report ("**DCR**") (provided as Appendix Four to Volume II);

(e) **Mr Phil Peet**'s Technical Assessment A (Transport);

(f) **Mr Michael Smith**'s Technical Assessment B (Noise and Vibration);

(g) **Mr Andrew Curtis**' Technical Assessment C (Air Quality);

(h) **Mr Gavin Lister**'s Technical Assessment D (Visual and Landscape and Natural Character);

(i) **Mr Lachie Grant**'s Technical Assessment N (Productive Land); and

(j) **Dr Doug Fairgray**'s Technical Assessment O (Economics and Town Centre Impact).

37. This SIA does not assess the cultural effects of the Project, or potential impacts on mana whenua values. These are identified and assessed separately by mana whenua within the CIAs (Volume V). The CIAs and the CEDF (a partnership document providing cultural framework on project design and the existing environment) have been reviewed (as was available as of August 2022) and matters relevant to potential social impacts have been incorporated into this assessment.

PROJECT DESCRIPTION

Operation

38. The Ō2NL Project involves the construction, operation, use, maintenance, and improvement of approximately 24 kilometres of new four-lane median divided state highway (two lanes in each direction) and SUP between Taylors Road, Ōtaki (and PP2Ō) and SH1 north of Levin.

39. The Ō2NL Project is part of the NZUP and has a stated purpose to "improve safety and access, support economic growth, provide greater route resilience, and better access to walking and cycling facilities". The objectives of the Project are:

(a) enhance safety of travel on the state highway network;

(b) enhance the resilience of the state highway network;

(c) provide appropriate connections that integrate the state highway and local road network to serve urban areas;

(d) enable mode choice for journeys between local communities by providing a north-south cycling and walking facility; and

(e) support inter-regional and intra-regional growth and productivity through improved movement of people and freight on the state highway network.

40. The Ō2NL Project provides the final northern link of the Wellington Northern Corridor that extends from Wellington International Airport to the north of Levin.

41. The Ō2NL Project includes the following key features:

(a) a grade separated diamond interchange at Tararua Road, providing access into Levin;

(b) two dual lane roundabouts located where Ō2NL crosses SH57 and where it connects with the current SH1 at Heatherlea East Road, north of Levin;

(c) four lane bridges over the Waiauti, Waikawa and Kuku Streams, the Ohau River and the North Island Main Trunk ("**NIMT**") rail line north of Levin;

(d) a half interchange with southbound ramps near Taylors Road and the new PP2Ō expressway to provide access from the current SH1 for traffic heading south from Manakau or heading north from Wellington, as well as providing an alternate access to Ōtaki;

(e) local road underpasses at South Manakau Road and Sorensons Road to retain local connections;

(f) local road overpasses to provide continued local road connectivity at Honi Taipua Road, North Manakau Road, Kuku East Road, Muhunoa East Road, Tararua Road (as part of the interchange), and Queen Street East;

(g) new local roads at Kuku East Road and Manakau Heights Road to provide access to properties located to the east of the Ō2NL Project;

(h) local road reconnections connecting:

  (i) McLeavey Road to Arapaepae South Road on the west side of the Ō2NL Project

  (ii) Arapaepae South Road, Kimberley Road and Tararua Road on the east side of the Ō2NL Project

  (iii) Waihou Road to McDonald Road to Arapaepae Road/SH57

  (iv) Koputaroa Road to Heatherlea East Road and providing access to the new northern roundabout

(i) the relocation of, and improvement of, the Tararua Road and current SH1 intersection, including the introduction of traffic signals and a crossing of the NIMT

(j) road lighting at conflict points, that is, where traffic can enter or exit the highway;

(k) median and edge barriers that are typically wire rope safety barriers with alternative barrier types used in some locations, such as bridges that require rigid barriers or for the reduction of road traffic noise;

(l) stormwater treatment wetlands and ponds, stormwater swales, drains and sediment traps;

(m) culverts to reconnect streams crossed by the Ō2NL Project and stream diversions to recreate and reconnect streams;

(n) a separated (typically) three-metre-wide SUP, for walking and cycling along the entire length of the new highway (but deviating away from being alongside the Ō2NL Project around Pukehou (near Ōtaki)) that will link into shared path facilities that are part of the PP2Ō expressway (and further afield to the Mackays to Peka Peka expressway SUP);

(o) spoil sites at various locations along the length of the Project; and

(p) five sites for the supply of bulk fill /earth material located near Waikawa Stream, the Ohau River and south of Heatherlea East Road.

Construction

42. The indicative timeline of the Project indicates that construction will commence 2025 and be completed by 2029. Enabling works may commence prior to this date.

43. As of August 2022, it is indicated that the proposed designations and subsequent construction and operation of the Ō2NL Project will directly affect a number of properties,[1] some of which have already been identified for partial acquisition. This will be confirmed as part of individual property purchase negotiations. The location of these affected properties in relation to local communities is recorded in Table E.1 below. It is anticipated that all land will be secured by mid-2025.

Table E. 1: Property requirements[2]

Community	Full property requirement	Partial property requirement*	Total properties Per Local Community
Levin	61	23	**92**
Ohau and Kuku	35	26	**41**
Manakau	34	4	**43**
North Ōtaki	22	6	**22**
Project Total	**152**	**59**	**211**

44. Large portions of the construction will take place away from or adjacent to the existing state highways, enabling construction of the Project to occur with minimum disturbance to other traffic. Requirements for temporary road closures and diversions is anticipated to be limited.

45. It is assumed that construction activities will be generally undertaken during daylight hours, six days per week. Night works will be limited but are likely to be necessary for some specific activities such as work to existing roads, elements of bridge construction and rail corridor works.

46. It is understood that the construction of the Ō2NL Project is likely to operate as a series of mostly independent construction zones delivering separate sections of the new corridor, but this will be determined by the contractor.

47. Pre-construction (including enabling and site establishment works) will be undertaken before commencement of bulk construction, and will include

[1] The property acquisition process commenced in 2016, to date approximately 50 of affected properties have already been acquired by the Crown. For the purposes of this assessment all affected landowners and directly affected properties will be considered (even if the property has been purchased). This is to acknowledge changes within the community and noting that some properties may be leased until construction hence further social change is still to occur.

[2] * denotes that confirmation of partial acquisition is subject to PWA property negotiations.

boundary fencing, service relocation, the establishment of site access and material supply sites / laydown areas and site clearance.

48. Details of the anticipated construction workforce and origin of the workforce are not known at this stage. It is anticipated that the number of staff employed at the site will vary as the work progresses, involving an average over the course of the project of some 280 vehicles (560 movements) per day to and from the site, and up to 800 movements per day at busiest times. A range of ride-share options will be used where practicable (Technical Assessment A (Transport)).

49. On-site parking for staff and for contractor vehicles will be provided for each work location as the works progress, away from the existing SH1.

50. Overall, the total amount of truck traffic associated with the Project is expected to range between 70 and 340 trucks per day (680 movements) as the work progresses. On average construction traffic is anticipated to be around 250 trucks per day (500 movements) and approximately 650 light vehicles (1,300 movements) per day (Technical Assessment A (Transport)).[3]

[3] This is an indicative assessment. It is noted that some of these movements may be within the project footprint where internal access roads are created, the percentage of these movements on public roads is not known at this stage (Technical Assessment A (Tranport)).

51. Figure E.1 shows potential site accesses for the construction of the Project:

Figure E. 1: Indicative construction site access locations (Source: Technical Assessment A (Transport).

52. Further details on construction are provided in Part C of Volume II.

METHODOLOGY

Introduction

53. Social Impact Assessment is the most common framework used in New Zealand and internationally to analyse, monitor, and manage the potential

social consequences of development. This SIA process considers the potential social impacts of the Ō2NL Project (both planning, construction, and operation), based on the existing community, the nature of the proposed works, and the consequential social impacts anticipated.

Social Impact Assessment Framework

54. This SIA is guided by both international and national frameworks. The International Association for Impact Assessment ("**IAIA**") Social Impact Assessment Guidelines[4] is a recognised framework for best practice.

55. The International Principles for SIA defines a SIA as:

> '*…the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions'* (International Association for Impact Assessment, 2003)[5]

56. Within the national context Waka Kotahi has developed a social impact guide[6] ("**Waka Kotahi Guidelines**") for transport infrastructure that acknowledges and works alongside the IAIA guidelines. This assessment has been based on both these guidelines.[7]

Methodological Steps

57. The methodological steps include:

Table E. 2: Methodological Steps[8]

STEP	TASK	DETAILS
Step 1:	Scoping and contextualisation	Obtaining an understanding of what is proposed and identifying the preliminary 'social area of influence' of the Project, likely impacted and beneficiary communities (nearby and distant), and stakeholders.
Step 2:	Information Gathering	The process of gathering information for profiling and assessment.

[4] International Association for Impact Assessment: Social Impact Assessment: Guidance for assessing and managing the social impacts of projects.
[5] Vanclay, F., 2003 International Principles for Social Impact Assessment. Impact Assessment & Project Appraisal 21(1), 5-11.
[6] New Zealand Transport Agency: People, Place and Environment Series: Social Impact Guide 2016.
[7] Following scoping the Project and in discussion with Waka Kotahi Social Impact Specialist the authors have drawn from the international and national guidelines to reflect the Project and Community context and utilised the frameworks as guidance documents.
[8] Note this is an iterative and cumulative, multi-modal approach and each step informs the subsequent one. These steps are based on the guidance documents by IAIA and Waka Kotahi and interpreted by Beca Ltd for this project.

STEP	TASK	DETAILS
Step 3:	Community Profiling	Gaining a good understanding of the communities likely to be affected by the Project by preparing a Community Profile.
Step 4:	Assessment of Social Impacts	Reviewing collected information and confirming social domains of concern for assessment. Through analysis, determining the social changes and impacts that will likely result from the Project
Step 5	Recommend mitigation	Considering the requirements to avoid, remedy or mitigate the identified impacts and making recommendations.

Step 1 – Scoping and Contextualisation

58. The aim of this step was to:

    (a) understand the proposed Ō2NL Project, including all ancillary activities necessary to support the Project's construction and operation;

    (b) identify the preliminary 'social area of influence' of the Project; likely impacted (negatively and/or positively) communities (nearby and distant) and stakeholders; and

    (c) understand the community/ies in the 'social area of influence' (further described below).

<u>Understand the project</u>

59. A review of the proposed construction and operation of the Project and background documentation to determine the scope and extent of the potential social impacts.

60. The following information sources and methods were used during this step:

    (a) site visits with the Ō2NL Project team and Iwi Project Partners;

    (b) review of previous desktop SIA;

(c) review of Multi Criteria Analysis ("**MCA**")[9] social assessments;

(d) review of Project information; and

(e) review of previous consultation and Ō2NL Project history.

Establishing the study area – social area of influence

61. The geographical extent of assessment ('social area of influence') was scoped at this phase based on the location of the proposed Project, corresponding community, and the geographic reach of the Project impacts.

62. Firstly, it was identified that social impacts would be experienced at the following scales within the following communities:

(a) Sub-local;

(b) Local; and

(c) Regional.

63. These definitions of communities are based on the context of the Project and potential areas of social impact (both positive and negative). A map (Figure E.2) of the above communities and a brief description is provided below. See the Community Profile section for more details and maps of each community.

[9] For corridor and subsequent route refinement options Assessment DCA workshops were undertaken including specialist assessment of specific criteria. The criteria were social/community/recreation - assessment criterion considered the social / community and recreational impacts on local communities, including community severance /opportunities, and construction phase impacts.

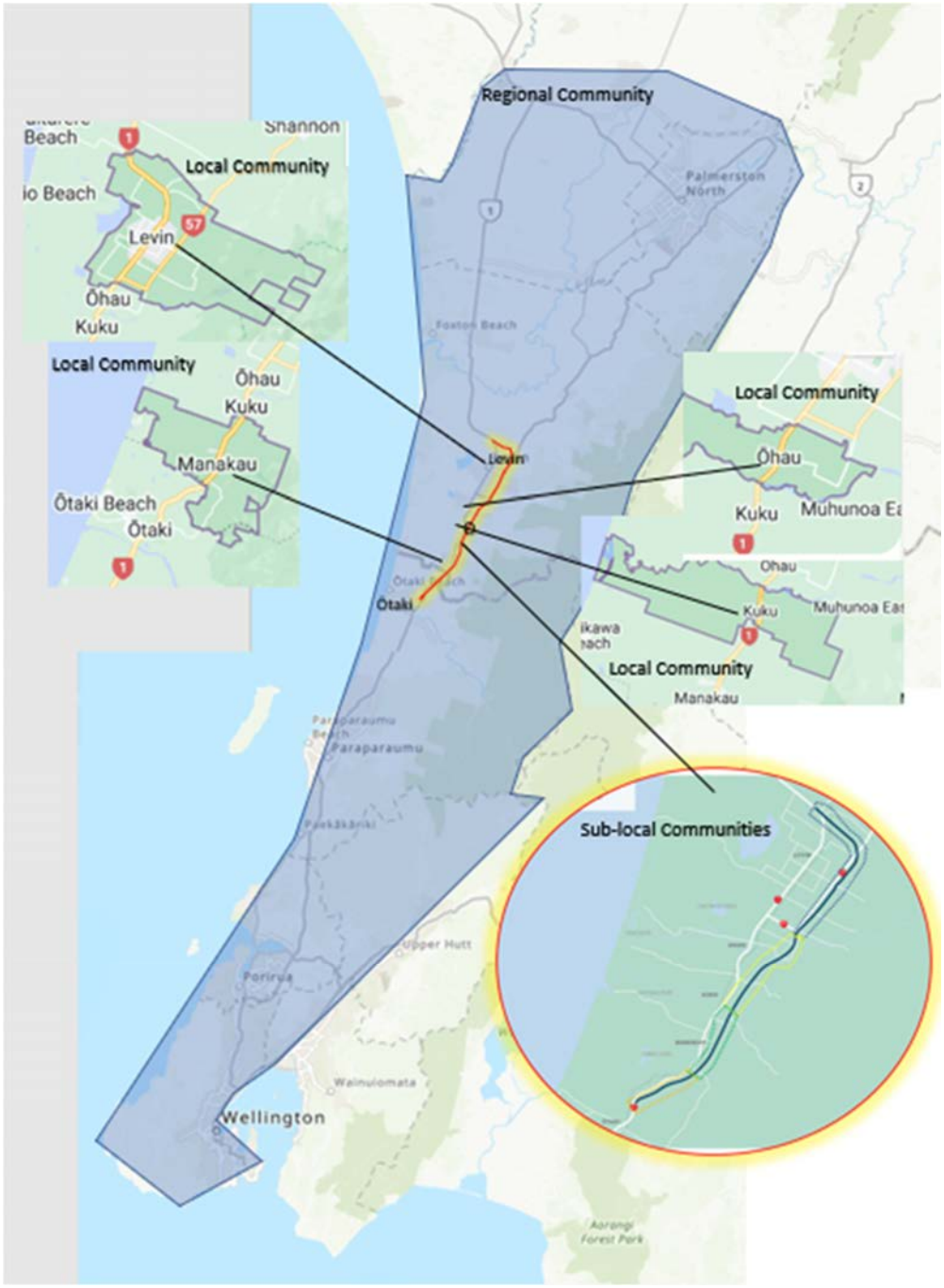


Figure E. 2: Map of the scales of communities considered within the "social area of influence".

64. Sub-local Community: A smaller sub-group of one of the local communities (see Figure E.4). This sub-local community is within the designation boundary, within close proximity (approximately 200m) and or residing within a street / road (or part of) that is impacted due to the land acquisition and/or reconfiguration. It is anticipated that there will be direct and indirect impacts from construction and operation of the Project. The geographic extent of

each sub-local community depends on local side street communities and/or neighbours surrounding the Project (this considers the social connections / characteristics established rather than the individual properties). These include sub-local communities within:

(a) East / Northeast Levin;

(b) East Ohau, East Kuku and Muhunoa East (Western portion);

(c) East Manakau; and

(d) North Ōtaki.

65. Local Community: The established larger communities that the proposed Project traverses (see Figure E.5). It is anticipated that the community will experience direct and indirect social impacts from construction and operation of the Project. This includes the following local communities:

(a) Levin;

(b) Ohau and Kuku; and

(c) Manakau.

66. Regional Community: This encompasses the wider area connected by the area of the proposed Project. This is the region around SH1 and SH57 between Palmerston North and Wellington (see Figure E.15).

Step 2 – Information Gathering

67. Information was collated to aid in understanding the existing social context of the Project and identify potential social impacts of Project construction and operation.

68. This was carried out in two phases:

(a) social research – where the Social Impact Team directly consulted and engaged with the community; and

(b) reviewing outcomes of relevant Project engagement activities.

<u>Social Research</u>

69. Site visits - Several site visits along the corridor have been undertaken on four separate occasions; 28th March 2018, 12th April 2021 and include two

with iwi partners (1st and 9th August 2020). These were used to observe the social context of the existing environment.

70. Community online survey – an online survey was conducted from June to July 2020 with residents located within, or in close proximity to, the initial 300m Project corridor (699 households were contacted). This investigated how they lived within their communities, the values, challenges, and opportunities of their communities, services they access in the community, and their thoughts on the Ō2NL Project. Details of the process and findings are provided in Appendix E.1.

71. Follow-up phone interviews with survey participants - 18 follow-up phone interviews were also undertaken by the research team (August 2020). The interviews further investigated different themes raised by respondents in terms of the existing environment and anticipated impacts of the project. Details of the process and findings are provided in Appendix E.1.

72. Stakeholder interviews – following a review of the planned Project consultation, community groups we identified (ie all schools, community groups, forums etc.) and then screened in relation to potential impact, community representativeness and information on existing environment. The following groups were identified to interview (in addition to Project stakeholder engagement) to provide more information on the existing environment and potential social impacts of the project:

    (a) Horowhenua District Council ('**HDC**") (strategic planners involved in the Ohau and Manakau Community Plans);

    (b) Fairfield School;

    (c) Levin East School;

    (d) Ōtaki School;

    (e) Ohau School;

    (f) Manakau School;

    (g) Manakau Residents and Ratepayers Association; and

    (h) Horowhenua Ratepayers Association.

73. A summary of findings is provided in Appendix E.1.

Project consultation and engagement

74. Full details of this process are provided for in Part F of Volume II of the AEE.

75. The Project engagement can be summarised in three phases:

    (a) Phase 1 Option investigations: 2011 – 2017;

    (b) Phase 2 Preferred corridor identification: 2018;

    (c) Phase 3 Preferred alignment identification: 2019 – 2022.

76. A table summarising the Project community consultation and engagement is provided in Appendix E.3, for full details please refer to Part F of Volume II of the AEE.

Step 3 – Community Profiling

77. This section provides a detailed description of the social area of influence relevant to the Ō2NL Project, which includes:

    (a) Descriptions of the regional, local, and sub-local communities including demographic and socio-economic data on the local and impacted populations (sourced from site visits, Census data, local council data, and technical reports).

    (b) Sense of place values sourced from community plans, consultation data, surveys, the CEDF (Appendix Three to Volume II) and stakeholder interviews.

    (c) Travel patterns and existing transport infrastructure of the local and sub-local communities taken from social impact survey information, Census data, NZ Household Travel survey (where applicable), and data from Technical Assessment A (Transport).

    (d) A place analysis of the social facilities and amenities of the three local communities (see maps in ‘Existing Environment’ section) taken from Social Pinpoint data, survey data, interviews, community plans, and the CEDF (Appendix Three to Volume II).

    (e) Housing and development – projected future growth planning of the local communities taken from local plans, council reports, and growth analysis completed in Technical Assessment A (Transport).

(f) Community political and social connections (information from council documents and stakeholder interviews).

Step 4 - Assessment of Effects

Social Impacts Assessed

78. In accordance with the IAIA and Waka Kotahi guidelines a social impact is a (positive or negative) change that can include aspects of a person's:

(a) way of life;

(b) community (for example, cohesion, stability, character, services and facilities);

(c) biophysical environment and resources;

(d) quality of the living environment and amenity;

(e) family, community, and social networks;

(f) health and wellbeing;

(g) material wellbeing, personal and property rights;

(h) fears and aspirations;

(i) culture and identity; and

(j) political systems (based on Vanclay et al., 2015).

79. Following scoping, data collection and review of the baseline environment (community profile), the following social impacts relevant to the Project have been identified to assess:[10]

(a) Way of life:

(i) how people carry out and get to their activities of daily living including consideration of access to and between communities and places / centres where people live, work and play.

[10] It is noted that where appropriate, some of the "potential" impacts outlined in the Waka Kotahi and IAIA guidelines have been grouped and discussed together to avoid repetition.

(b) Community:

(i) cohesion - connection and participation in the community and stability;

(ii) character – values, community culture and identity (including relevant fears and aspirations);[11]

(iii) services and facilities – impact on community services and facilities and separation of people from facilities, services;

(c) Health and Wellbeing:

(i) mental, physical, social and spiritual wellbeing;

(d) Quality of the living environment:

(i) sense of place;

(ii) changes in comfort and attractiveness of areas;

(iii) liveability;

(iv) fear and aspirations of lifestyle in relation to the environment.

Approach

80. The assessment of social impacts identifies, describes, and assesses actual and potential social effects on each community separately. The rationale for this approach is that the Project is 24km long and as such interacts with distinct communities in different ways. At different geographic scales and within different communities the potential social impacts differ both in type and scale. This approach facilitates the ability to capture the distribution of impact in the different social contexts and recommend the appropriate targeted mitigation for each affected community.

Rating

81. Social impacts (as categorised above) for each community are identified as positive or negative based on whether the potential impact will enhance or detract from the community values, social processes, or social infrastructure identified in the community profile. This is prior to mitigation.

[11] Note a draft CEDF and CIAs provide framework for design and assess potential social impacts relative to their respective iwi/hapu (see assumptions and limitations section of this report). Community culture and identity refers to community culture and aspirations and will integrate these documents where relevant.

82. In all cases it is noted that the potential negative impacts have the potential to be avoided, remedied, or mitigated through the detailed design phase and through implementation of management and/or mitigation strategies (ie noise barriers, screening). Impacts are also assessed post mitigation.

83. For each social impact identified, information collated (in Steps 1 – 3) is used to assess the scale of either a positive or negative social impact. This information is used to inform the consideration of the following factors which determine the scale:

    (a) duration;

    (b) likelihood;

    (c) severity; and

    (d) extent – it is important to note that this 'extent' is relative to the defined 'community of interest' (being regional, local, or sub-local).

84. The following rating scale (for both positive and negative social impacts) demonstrates what is considered at each scale:

    (a) Very-low (negligible) scale for effects experienced at a:

        (i) short / temporary duration (temporary, eg weeks / months);

        (ii) small extent of the community (eg less than 10% of a community impacted);[12] and/or

        (iii) very-low or negligible level of 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 level).[13]

    (b) Low:

        (i) transitional duration (eg months, or for periods of construction activity);

        (ii) small to medium extent of impact on a community (eg less than 10%, to up to 50%, of a community impacted); and/or

[12] Unless that small % comprises a large % of a unique sector of a community.
[13] 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.

(iii) 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).

(c) Moderate:

(i) transitional to long term duration (eg months to years, or eg, impacts that will extend over and throughout a construction period);

(ii) medium extent or scale of impact for the community (eg around half of an identified community experience are impacted); and/or

(iii) 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).

(d) High:

(i) long term duration (eg years to permanent impact);

(ii) medium to large scale extent of impact for the community (eg more than half or the majority of a community is considered likely to experience the impact); and/or

(iii) 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).

(e) Very high:

(i) long term duration (eg more likely to be a permanent impact);

(ii) large extent or scale of impact for community (eg most of a community is likely to experience the impact); and/or

(iii) 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).

85. The overall scale of impact is based on a consideration of all factors and therefore, for example, a high severity impact (positive or negative) experienced by a small proportion of people for a short period will be low or very-low impact. This recognises that in some cases duration, extent,

likelihood, and severity of impact may be of different scales and it is the overall outcome that is considered.

Step Five – Recommend Mitigation

86. Using the assessment in Step 4, this step considers the requirements to avoid, remedy, or mitigate the identified negative impacts and make recommendations. These recommendations are used to incorporate into designation conditions (where relevant), with more detail to then be included in management plans (ie consultation), and the implementation phase of the Project where relevant.

87. Following mitigation recommendations, the social impacts are assessed with mitigation (Table E.3).

STATUTORY CONSIDERATIONS, INCLUDING NATIONAL STANDARDS, REGIONAL AND DISTRICT PLANS, AND OTHER RELEVANT POLICIES

88. There are a number of statutory and non-statutory frameworks that provide a social framework from which to assess this Project.

Resource Management Act 1991

89. The RMA requires the decision-making process to include consideration of the actual and potential effects of activities on the environment. The RMA definition of the environment in Section 2 includes (emphasis added):

> *(a) ecosystems and their constituent parts, **including people and communities**;*
>
> *(b) **the social, economic, aesthetic, and cultural conditions** which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.*
>
> *(c) amenity values; and*
>
> *(d) the s**ocial, economic, aesthetic, and cultural conditions** which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.*

90. This definition is central to defining the social impacts with respect to the environment. Other sections of the RMA (such as section 5) are also integral to an assessment of social effects.

91. Section 5 defines the purpose of the RMA being to promote the sustainable management of natural and physical resources. Sustainable management means (emphasis added):

> "*Managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their* ***social,*** *economic and cultural wellbeing and for their health and safety…*"

92. Section 7(c) of the RMA states that (emphasis added):

> "*all persons exercising functions and powers under the Act… shall have particular regard to… the maintenance and enhancement of* ***amenity values****.*"

93. Schedule 4(2) of the RMA states that any person preparing an assessment of the effects on the environment should consider the following matters (emphasis added):

> "*Any effect on those in the neighbourhood and, where relevant, the wider community* ***including any socio-economic and cultural effects****.*"

Land Transport Management Act 2003

94. The Land Transport Management Act ("**LTMA**") 2003 provides the legal framework for managing and funding land transport activities. The purpose of the LTMA is to contribute to an effective, efficient and safe land transport system in the public interest.

95. Section 6 of the LTMA requires that in meeting its objective and undertaking its functions, Waka Kotahi must exhibit a sense of social and environmental responsibility.

Horizons Regional Council Long Term Plan 2021 – 2031

96. In accordance with the Local Government Act 2002 the community outcomes of this plan aim to promote the social, economic and cultural wellbeing of these communities in the present and for the future whilst taking into account a sustainable development approach.

97. A specific outcome is for the region to have effective transport networks that enhance wellbeing. It acknowledges the centrality of the region and the need to ensure that people and goods can move through and around the region which is deemed critical to the region's economic function and social wellbeing, as is addressing the need to reduce deaths and serious injuries within the transport network.

Horowhenua District Council Long-term Plan 2021 – 2041

98. The HDC Long-term Plan 2021 – 2041 aims to proactively plan for population growth that is estimated to almost double by June 2041. The desired community outcomes are set across five areas[14] below and are key social outcomes for consideration when assessing the Ō2NL Project:

> "*Vibrant economy – we aspire for economic security for all our people.*
>
> *Outstanding environment - we ensure our built environment supports the wellbeing of our people.*
>
> *Fit for purpose infrastructure - we develop and maintain facilities and infrastructure to meet the needs of current and future generations; and*
>
> *– our community facilities and infrastructure are resilient, helping us to respond to climate change and natural hazards.*
>
> *Partnership with Tangata Whenua - we support whānau, marae, hapū and iwi in achieving their aspirations.*
>
> *Strong communities - we provide infrastructure and services as a foundation for resilient and connected communities.*"

Horowhenua Growth Strategy 2040

99. The Horowhenua Growth Strategy 2040 provides a framework for managing current and future growth. Aiming to provide enablement of growth whilst being appropriately planned so as to manage potential adverse effects.

100. The strategy acknowledges the Project and specifies that the council should work closely with Waka Kotahi to ensure that Ō2NL provides the optimal opportunities for urban form. Giving consideration to the Growth Strategy Principles, including the following:

> "*Community cohesion and maintaining connectivity within urban areas.*
>
> *Accessibility and placement of new highway interchanges and maintain access to local roads, especially for local trips." Page 58 – Horowhenua Growth Strategy 2040.*"

[14] Economy, environment, infrastructure, tangata whenua, and communities (pg 5).

Kāpiti Coast Long-term Plan 2021-2041

101. The overall vision within the community "Toitū Kāpiti" embodies their goal of a vibrant and thriving Kāpiti with healthy, safe and resilient communities. The Kāpiti Coast Long-term Plan 2021 - 2041 considers the social, cultural, environmental and economic wellbeing of the community. Of particular relevance to social impacts is the following outcome:

> "*Our communities are resilient, safe, healthy, thriving and connected. Everyone has a sense of belonging and can access the resources and services they need.*"

102. Social wellbeing is defined as involving individuals, their families, whānau, hapū, iwi and a range of communities being able to set goals and achieve them, such as education, health, the strength of community networks, financial and personal security, equity of opportunity, and rights and freedoms.

Operative Kāpiti Coast District Plan 2021

103. Objective 2.13: Recognise the importance of infrastructure and ensure an adequate level of social and physical infrastructure and services throughout the district that meets the needs of the community and the region and builds stronger community resilience.

104. Policy 11.33: Effects from the development and upgrade of the transport network to mitigate effects of noise, to minimise degradation of amenity values, avoid adverse effects on historic heritage, minimise community severance, minimise loss of productive land and private property, and minimise adverse effects on pedestrian/cycle safety and amenity.

Horowhenua District Council – Operative District Plan 2015

105. Policy 10.1.3: Ensure that all proposed new or extended roads are necessary to provide safe and convenient access for the community.

Greater Wellington Regional Council – Regional Policy Statement

106. Objective 10 and Policy 8: protect the social, economic, cultural and environmental, benefits of regionally significant infrastructure.

107. Policy 57: Integration of land use and transportation: connectivity / access to services and recreational areas; access to public transport; safe and attractive environments for pedestrians and cyclists.

EXISTING ENVIRONMENT – COMMUNITY PROFILES

108. The Ō2NL Project traverses through a section of three established local communities (Levin, Ohau and Kuku, and Manakau) as shown in Figure E.3 below.

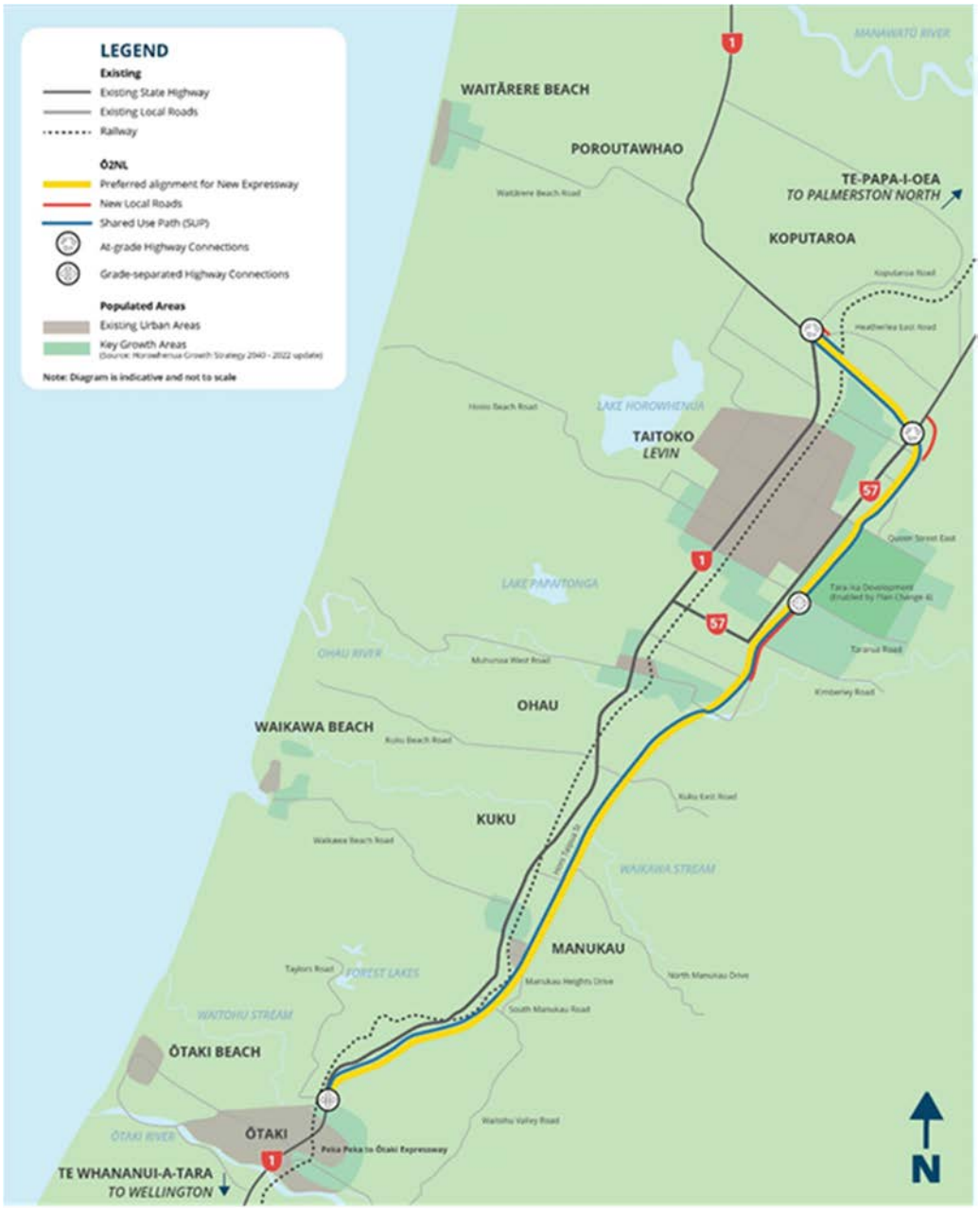


Figure E. 3: Project Map

109. Specifically, the Ō2NL Project traverses through the eastern urban-rural periphery of northeast and east Levin, the eastern rural sector of Ohau and Kuku, the eastern rural sector of North Manakau, the eastern periphery of

Manakau Village, the partially established development of Manakau Heights, and the northern rural section of Ōtaki (see Figure E.3 for the Project map).

Sub-local communities

110. This is the Project area and immediate neighbourhoods surrounding the Project. Sub-local communities are those directly impacted (subject to Project land requirements) and those outside the designation boundary but within close geographical proximity (approx. 200m) that will be subject to environmental changes (as identified by noise and landscape and visual experts) and/or population changes (ie property acquisition) which will result in potential social impacts. This includes some streets/roads whose residents are subject to land acquisition or the street/road has been realigned due to the project. This is illustrated below in Figure E.4.

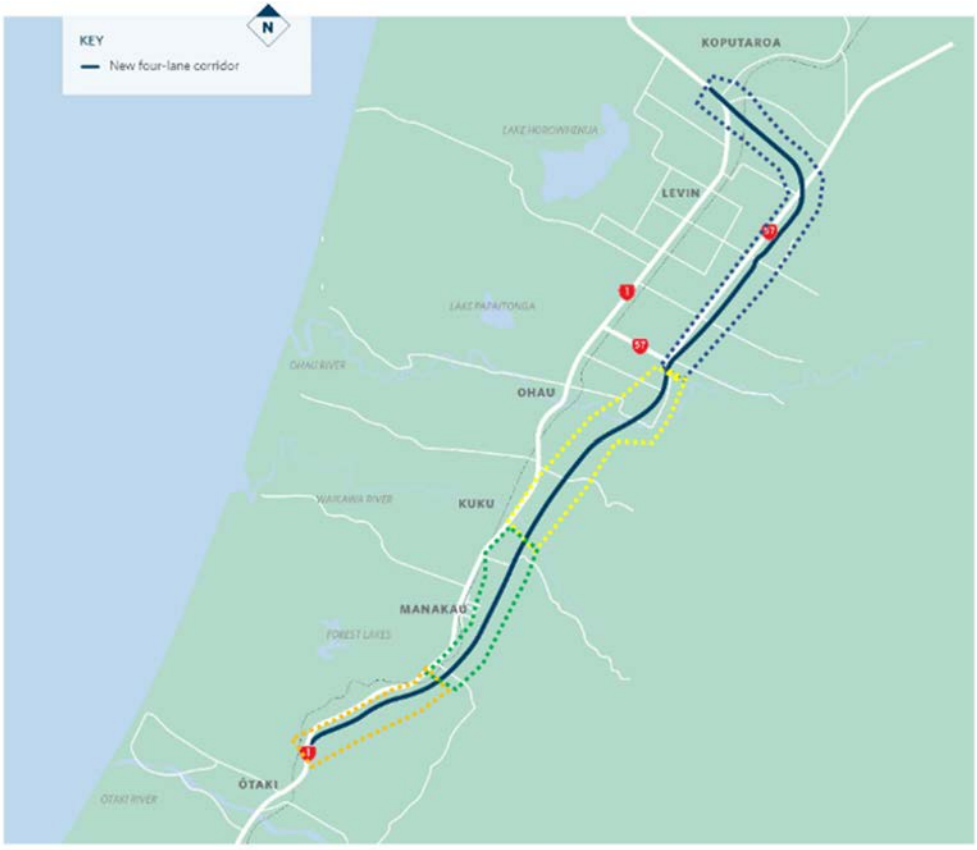


Figure E. 4: Sub-local Communities

111. The community context will be described as part of the local community descriptions later in this section. The following outlines the existing land uses the Project traverses through and the immediate neighbourhoods.

112. North and East Levin: This is the area within, and in close proximity to, the Project; from the northern extent of the Project to the area of the Project that traverses SH57 / Kimberley Road. Land use consists primarily of farming, horticultural activities, larger lot lifestyle blocks and smaller residential developments.

113. This sub-local community is located on the eastern periphery of central Levin. Residents within this area are required to travel into Levin for schooling, community services and most retail. Those surveyed and interviewed indicated that travel into central Levin was largely undertaken by private vehicle (Appendix E.1). There is no public transport within this area and limited footpaths (public footpath on Queen Street East).

114. Sub-local community members consulted noted delays when turning onto SH57 (for trips to and from central Levin), particularly at peak traffic times. Many also reported feeling unsafe turning onto SH57 due to high volumes and the speed of traffic. Technical Assessment A (Transport) notes four serious crashes and one fatal crash on this section of SH57 between 2017 and 2021.

115. There are approximately 220 households (3% of households within Levin) within this sub-local community (demographics will be provided in the description of the Levin local community). Sub-local residents surveyed and/or interviewed described community connections to both Levin and in some cases local street communities and/or neighbours (Appendix E.1). Activities such as neighbourhood gatherings and neighbourhood watch activities have formed around the street communities such as MacDonald Road, Waihou Road, Queen Street East, Tararua Road, and Kimberley Road.

116. East Ohau / Muhunoa East / East Kuku: This is the area within, and in close proximity to, the Project from McLeavey Road (northern side) to Waikawa Stream. This area is located between the existing SH1 and the Tararua Range. At the northern end of this area, there is more lifestyle / semi-urban development, which then becomes more rural and agricultural as it heads south. The centre of Ohau (Ohau Village) is to the east of this sub-local community, which is centred around SH1. This sub-local area includes street communities such as McLeavey Road, Muhunoa East Road, and Kuku East Road. Surveys and follow-up interviews identified that family relationships, neighbour support, and longstanding connections to the area (ie farms being

in the family for generations and a long history of relationships with the same neighbours) were the basis for some of these "street" communities.

117. Overall, there are approximately 65 households within this sub-local community. Ohau and Kuku have approximately 490 households (2018 Census). This sub-local community makes up approximately 13% of households within Ohau and Kuku.

118. Manakau East: The Project traverses through the north-eastern rural section of Manakau, the semi-urban village eastern periphery (backing onto the Tararua Range) and the partially established lifestyle development of Manakau Heights. The area is in close proximity to the Project from Waikawa Stream to the north of Pukehou Hill. Localised farming relationships, longstanding neighbour relationships, familial relationships, and urban street communities are some of the connections within the sub-local area of Manakau East (community survey responses, public consultation feedback).

119. Overall, there are approximately 65 households within this sub-local community. Manakau has approximately 318 households (2018 Census), this sub-local community makes up approximately 20% of households within Manakau.

120. North Ōtaki: This area is from (approximately) south of South Manakau Road to Taylors Road (it is primarily the area east of the existing SH1 between SH1 and Pukehou Hill) but includes the area around Taylors Road where the Project footprint extends for the relocation of the Taylors Road SH1 connection. For this assessment, this area is collectively referred to as "North Ōtaki" and is located in the Kāpiti Coast District and the Greater Wellington Region. The remainder of the Ōtaki community is assessed as part of the regional community assessment (as the Project does not transect the area and therefore impacts are on how the community would use the corridor or experience impacts from changes to the existing SH1 in construction and/or operation).

121. Within this area, some smaller neighbourhood connections have formed between residences along Taylors Road and those living between SH1 and Pukehou Hill. The area is sparsely populated and has a primarily rural land use with both large lifestyle blocks and agricultural and horticultural industries. Overall, there are approximately 36 households within this sub-

local community.[15] Within the wider Ōtaki community there were approximately 1420 households as of the 2018 Census. This sub-local community is approximately 2% of the total households within Ōtaki.

Local Communities

122. The Project is located between North Ōtaki (see description of the sub-local community above), then passes through the local communities of Manakau, Ohau and Kuku, and Levin Town. Figure E.5 shows how these communities relate to each other and the Ō2NL Project. It is noted that each community is distinct, and the effects of the Project differ due to the different community contexts. Therefore, each community is described and assessed separately to capture that spatial distribution of effects.

[15] This is a manual count of houses within the area identified as sub-local community and informed by surveys done by the Landscape and Visual and Noise and Vibration teams. The number is indicative as no definitive physical boundaries of this area.

Figure E. 5: Local Communities

123. Levin and Ōtaki are the main towns that service these local communities. The villages of Ohau, Manakau and Kuku utilise both townships for local education, health services, retail, and entertainment. The villages of Ohau and Manakau have local primary schools, a few local shops and cafes, markets, recreation grounds, marae, and local churches. Many locals traverse between these communities via SH1 daily. The communities are solely reliant on at least a section of SH1 for this connection. No regular local buses or allocated walking and cycling facilities are provided to connect these local communities.

124. Collectively the area is known for its connections from coast to mountains, with the Tararua Range to the east and the coast on the west.

Levin

125. Levin is the largest town (by population) in Horowhenua District and the largest commercial centre (in size) between Palmerston North (48km) and Paraparaumu (43km). It is positioned at the northern end of this Project.

Key demographic information and geographic extent

126. Levin has a resident population of approximately 19,500 people (2018 Census). Based on the last census (2018) between 2013 and 2018 the population grew by 9% (slightly less than the national population growth of 11%). The Horowhenua District Council Growth Strategy (2040) has adopted a 95th percentile growth scenario and projects a 71% increase in population over 20 years.

127. In the 2018 Census, approximately 78% of the community identified as NZ European and 24% identified as Māori. This is a larger Māori population than the national average (17%) but is comparable to that of the Horowhenua District (24%). In 2018, 27% of the population was aged 65 and over, compared with a national average of 23%.

128. The centre of Levin is situated on SH1 (Oxford Street) which, along with Queen Street, forms the main streets that define the central business district. Levin is surrounded by lifestyle blocks, horticultural and agricultural activity. Levin functions as the business, administrative, retail, civic, cultural, social, and recreational hub for the surrounding rural area.

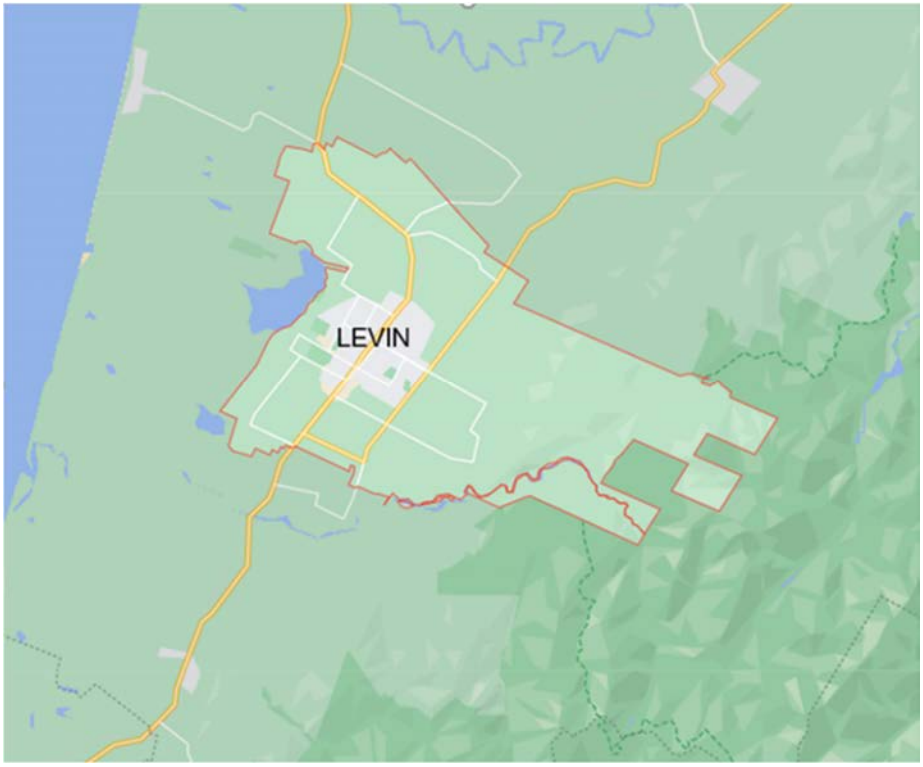


Figure E. 6: Approximate geographic extent of the "Levin community" (Source: Statistics NZ)

Transport

129. Currently SH1 and the railway corridor bisect the middle of the Levin town centre (see Figure E.6). According to 2019 traffic volumes approximately 14,000 vehicles per day (vpd) travel through Levin on SH1 (see Technical Assessment A (Transport)). Within the Levin local community on SH1 and SH57 there have been 22 serious or fatal crashes between 2017-2021 (numbers extracted from Figure 3 in Technical Assessment A (Transport)), the bulk of which occurred on the main street of town. Responses from community surveys and Project consultation feedback indicated that the main street amenity is compromised by both the volume of traffic and heavy vehicles (Appendix E.1). SH57 forms a peri-urban border on the eastern side of town. No formal cycleways have been identified. The Queen Street walkway has been developed at the periphery of the eastern side of town providing pedestrian and cycle access to the Waiopehu Reserve and the Kohitere Path (Trig) as indicated in Figure E.7 below.

Figure E. 7: Location of existing transport corridors (Source: HDC GIS 2021)

130. According to the 2018 Census, active and public transport use is low; 7% of people walk to work, 2% bike, 1% train, 0% bus and 79% drive to work. Nine percent of households in Levin do not have a motor vehicle, with 41% owning two or more vehicles per household.

131. There are no public bus services within Levin and limited public bus services available around Levin and surroundings. Current services which operate (one return service per day) are as follows:

    (a) Levin, Waitarere Beach, Foxton, Foxton Beach, and Shannon (Fridays).

    (b) Levin to Waikanae via Ōtaki service (Tuesdays and Thursdays).

    (c) Levin to Palmerston North commuter bus service (Monday to Friday (see Technical Assessment A (Transport)).

132. Intercity services buses pass through Levin with most other major destinations in the North Island (between eight and 12 intercity bus services travel through Levin per day). There is a daily commuter rail connection between Levin and Wellington. The Levin Rail Station is accessed from SH1 (see Technical Assessment A (Transport)).

Key locations and social infrastructure

133. Functioning as a service centre for the district, Levin contains a range of retail and business activities. It is understood / observed that 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, and in 2008 this occupied approximately 16% of Levin's land area (Horowhenua Development Plan, 2008).

134. Levin provides civic functions with HDC offices 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 in-patient beds, and more specialist in-patient treatment is primarily accessed at Palmerston North Hospital.

135. Levin has nine schools; two secondary schools (state), six primary (state or state-integrated), and an intermediate school (state). Figure E.8 below shows the location of education options for the district (as well as other amenities and facilities).

136. The community utilises a range of key communal facilities such as the Levin Memorial Hall, St Joseph's Catholic School, Waiopehu College and Horowhenua College to congregate and socialise. See Figure E.8 for a map of key social facility locations (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 E. 8: Key social facilities/services in Levin (Source: HDC Council GIS 2018).

Growth and Development

137. There were approximately 7,749 households in Levin in 2018 with an average of 2.5 people per household. Sixty-six percent of households own their own home (this includes those that fully or partially own, or have their dwelling held in a family trust). According to the 2018 Census, 28% lived in the same house in Levin for one - four years. Thirty-eight percent of the population had lived in the same house for over four years and 16% had lived in their current house for less than one year.

138. The Wellington Regional Growth Framework ("**WRGF**") identifies Levin as a high-growth location. To accommodate this growth, HDC are using a growth strategy (originally developed in 2008 and reviewed in 2018 and 2022) which identifies potential urban growth areas. Figure E.9 below shows the area of potential future growth within and around Levin in relation to the Project.

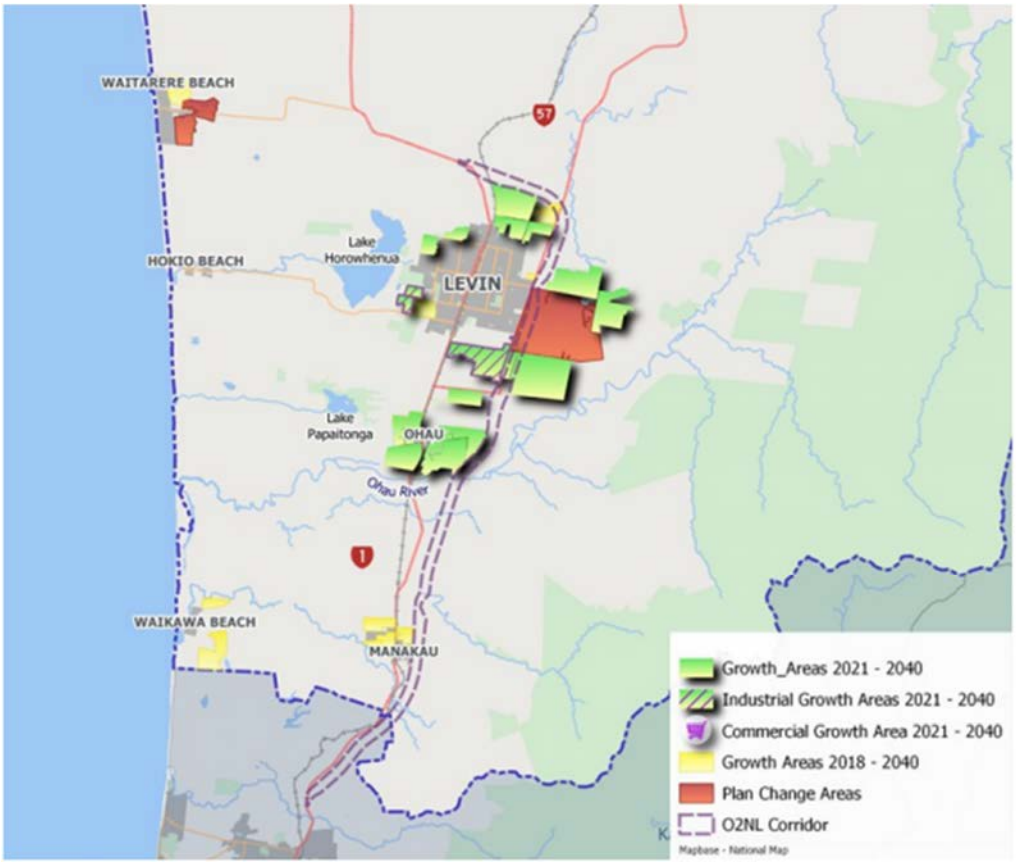


Figure E. 9: Summary map from HDC Growth Strategy (Source: Horowhenua Blueprint 2040, HDC)

139. Much of the newer residential development appears to be located to the east and north of Levin.

140. The Tara-Ika Growth Area (HDC Plan Change 4) is a 420ha block of land located to the east of Levin and is planned to accommodate at least 3,500 houses, a small commercial area, new parks and reserves and educational facilities (see the proposed masterplan below in Figure E.10). These development plans were subject to a recent plan change process, which has now been approved (subject to Environment Court appeals, which do not challenge the main elements of the plan change). Construction of housing is anticipated to start in the relatively near future. Figure E.9 shows the location of the Tara Ika development (Plan Change Area in red to the east of Levin area) in relation to the Project.

Figure E. 10: Extract from the Tara-Ika master Plan (November 2020)

Community identity and vision

141. Levin has been developed as a strategic service town based on its rail and transportation connections, in particular being part of the north-south highway and NIMT Line, which connect it to cities to the north and south (eg Palmerston North and Wellington).

142. From our review of community consultation, community documents and our own engagement with community members, it is clear that Levin residents value its sense of history; both the historic buildings within the town centre and the natural resources and history of the land, including the Māori heritage of the area. Levin is strongly connected to its rural surroundings, noting that productive land and the rural lifestyle is highly valued.

143. During consultation Levin residents confirmed that the surrounding landscapes are a part of their identity ("sea to the mountain"), including Punahau/Lake Horowhenua, the coast, and the Tararua Range. Queen Street enables the Tararua Range and Punahau/Lake Horowhenua to be seen through the town, which is a strong point of the town's landscape setting.[16]

[16] Horowhenua Development Plan June 2008.

144. As identified in the CEDF (Appendix Three to Volume II) the natural character is characterised by:

    (a) West of Levin comprises Punahau / Lake Horowhenua, beyond this is a band of sand-dune country.

    (b) East of Levin comprises flat terraces and beyond this are the foothills of the Tararua Range.

Cultural interests and identity

145. Ngāti Raukawa ki te Tonga have interests in the area. Their CIAs (Cultural Impact Assessments (Volume V)) step through the rich history and relationship with the land within and surrounding the Project.

146. Punahau / Lake Horowhenua has significant mana whenua associations. The Tararua Range has important historical connections including the bush remnants along the hills.

147. Punahau / Lake Horowhenua, the Tararua Range, their catchment and connections are regarded as an ancestral taonga for Muaūpoko people, with kaitiakitanga handed down from their ancestors. These areas and features are central to the mauri, wairua and identity of the Muaūpoko people (source: Muaūpoko advisors). The lake, maunga, whenua and waterways are highly valued taonga, as sources of food and natural resources, they provided for the physical and spiritual sustenance of Muaūpoko (Wai 2200 Muaūpoko Oral Evidence and Traditional History Report).

148. The Assessment of Effects on Muaūpoko values (Cultural Impact Assessments (AEE Volume V)) describes their relationship to the land and waters including Punahau/Lake Horowhenua and wider environs surrounding the Project in greater detail.

Community political and social connections

149. A clear and commonly identified value of the Levin community is the residents' 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. As the largest town in the district Levin has many organised community groups for different sectors of the community; these include church groups, Horowhenua District Ratepayers and Residents Association Incorporated, Age Concern, Keep Levin Beautiful and others. A recent review of HDC identifies development of a number of Council forums including the Youth Network and Older Persons Network.[17]

Ohau and Kuku – Local Community

Key demographic information and geographic extent

150. The Ohau area comprises a village, semi-rural and rural community located directly south of Levin and north of the Ohau River. Similar to Levin, the existing SH1 bisects the village, which is situated to the west and east.

151. Both Ohau and Kuku areas extend from the coast (west) and the Tararua Range to the east. The proposed designation will be located east of SH1 within the semi-rural and rural sector of the community. Ohau is 5.5 km south of Levin, and Kuku is 7.7km south of Levin.

152. Kuku is the semi-rural / rural community east and west of SH1 from Ohau River to Waikawa River. Ohau Village clusters around SH1 with a church, school, and reserve at the SH1 intersection with Muhunoa East and West Roads (see Figure E.11). It is surrounded by low-density housing which transitions to larger lifestyle lots and rural farms.

153. It is recognised that the geographic extent of this area represents areas with separate identities, including Ohau, Kuku, and Muhunoa East. However, Ohau Village, and in particular the primary school, provides for the wider area including Kuku and Muhunoa East and West Roads.

154. Ohau has a usually resident population of approximately 1,320 people (2018 Census), which represents an increase of 11% since the 2013 census. This was a similar population increase to that which occurred between 2006 and 2013 (12%). The median age of the usually resident population is slightly higher than the regional average at 50 years. Forty-eight percent of the population is between 30 and 64 years and 22% are 65 years or older. From

[17] This provides an overview of groups within the community. The SIA specifically consulted with residents and broader community groups organisations that provided an overview of the community and contained members of the community represented by these groups.

2006 to 2018 the proportion of the population over 65 years increased from 12% to 22%. The proportion of those aged between 15 and 29 years also increased from 2013 to 2018 from 11% to 15%. See Appendix E.4 for a full table of data.

155. According to the 2018 census 89% of the population identified as European, which is higher than that of the national and regional average (70% and 81% respectively). Seventeen percent identified as Māori, which is less than the average across the region but similar to the national average. Seventeen percent of the population were born overseas.

156. There is limited commercial industry within Ohau. Employment opportunities are sought in Levin, but also in Ōtaki and further afield in Palmerston North and Wellington. Equestrian, agriculture and horticulture are the primary land use industries beyond the village hub. Local produce is sold at a monthly market at Ohau. Approximately 3% of the population over 15 years old are unemployed, 48% are employed full time, 15% are employed part-time and 34% are not in the labour force.

157. The median personal income across the statistical areas in the Ohau community is approximately $29,850, ranging from $24,200 west of Kuku to $43,300 south-east of Ohau (between Muhunoa East Road and Ohau river, including Ohau terraces). See Appendix E.4 for full demographic details.

Transport

158. SH1 and the railway run parallel to each other (north to south), and through the centre of Ohau and Kuku. The railway partially distances itself from the state highway at the centre of the community, forming a slight curve to the east. A tunnel under SH1 provides pedestrian access for school children, but it was noted during consultation that children often choose to cross the road rather than use the underpass.

159. SH1 currently divides the east and west of Ohau. Some community facilities (such as the community hall) are on one side of SH1 while other facilities like the café and domain are on the other side, which results in some severance between what could otherwise be a focal point for the community. During Project consultation community members spoke of delays and safety concerns turning right onto SH1 from local side roads. There have been 13 fatal and serious crashes on SH1 within the Ohau and Kuku area between

2017-2021 (number extracted from Figure 3 of Technical Assessment A (Transport)).

160. The dominant mode of transport is by car, with 78% of residents travelling to work via motor vehicle (Census, 2018). Key locations are Levin (5.5km) and to a lesser extent Ōtaki (14km) and Palmerston North (53km) and Wellington (90km). Only 2% of households in Ohau do not have a motor vehicle and 73% of households own two or more vehicles. Public and active transport use is low, with 3% travelling to work by train, none by bus, 1% by bike and 2% by foot.[18] Due to the semi-rural character of Ohau Village, many roads do not have footpaths (Ohau Community Plan, 2020). The Ohau Community Plan (HDC, 2020) identifies the provision of walking, cycling, and horse-riding pathways as an important action for the community to improve transport choice.

Key locations and social infrastructure

161. 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 from years 1 to 8 and attracts students from the wider area, including Kuku and Muhunoa. After year 8, students have to travel to Levin to attend the local high schools (approx. 5.8km) or further afield for private secondary schooling in locations such as Palmerston North or Wellington.

162. Ohau Domain provides a sports ground and neighbourhood park – including a rugby club and fields and a small BMX track. 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, are held at the Ohau Public Hall, providing a valued central meeting space for the community. There are also two marae located within the Ohau and Kuku communities: Kikopiri Marae and Te Iwi o Ngāti Tukorehe.

163. The main reasons for local people to visit Ohau (according to survey responses) are for social visits and to access the beach from Ohau (being the coast west of SH1) and river (Ohau River). People travel to Levin or Ōtaki or further for groceries and services. Figure E.11 below shows the location of key community facilities in Ohau.

[18] These percentages do not add up to 100 (when taken alongside the percentage for motor vehicle use) as the remaining residents worked from home on the day of the 2018 census and a further 1% used other modes of transport which were not specified.

Figure E. 11: Key Social facilities/services in the Ohau Community (Source: HDC GIS 2018)

Growth and development

164. There were approximately 489 households in Ohau in 2018 with an average of three people per household. A higher proportion of residents are owner-occupiers than in Levin, with 87% of households either fully or partially owning their own home or holding their dwelling in a family trust. Twenty-six percent of people in the 2018 census have lived in the same house for one - four years and 47% for longer than four years.

165. Ohau has a relatively low density of residential housing, with small lots near the centre of the village, and larger lots towards the periphery (Horowhenua Growth Strategy 2040). Ohau is experiencing population growth (primarily semi-urban and larger lifestyle lots), with a particular increase in the number of rural-residential dwellings, and has been identified by HDC as a growth area. According to the Census Data, Ohau East (East of SH1) experienced the most growth with a population increase of 74% between 2013 and 2018; this reflects the increase of greenbelt development in this area. The key areas identified for potential residential growth are outlined in Figure E.12

below. The predicted demand for additional houses is 290 from 2020 to 2030 and 450 from 2030 to 2040 (HDC Growth Strategy 2040).

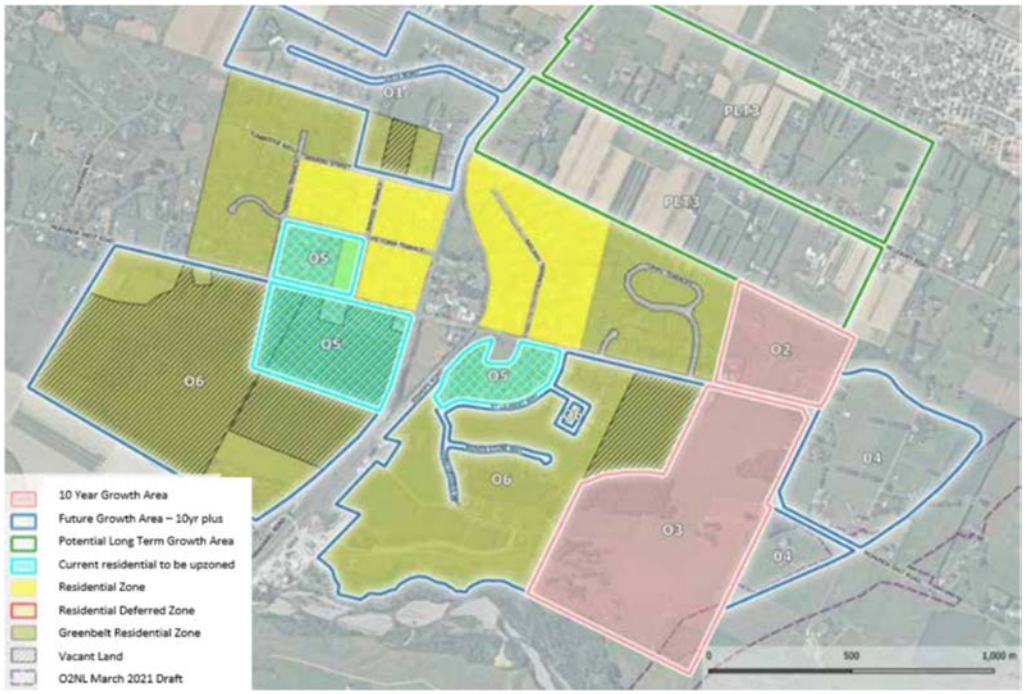


Figure E. 12: Ohau future growth areas (Horowhenua Growth Strategy 2040)

Identity and vision

166. Ohau Village has a semi-rural character. Within the village, housing density is relatively low and on the outskirts of the village are a number of newer rural lifestyle developments. Beyond the village is a wider rural area.

167. Natural features within close proximity include Ohau River, Lake Papaitonga, the beach on the western coast and the Tararua Range to the east. The wider landscape of Ohau and Kuku is characterised rural farmland.

168. Ohau community and HDC worked together to produce the Ohau Community Plan (2020) which establishes a community vision. The overall vision is:

> "*Ohau is a safe, connected village that is surrounded by a productive rural environment widely known as nature's playground. Ohau will have a healthy clean environment and will protect its rural, village character even as it grows*"

169. Three key community values were identified:

    (a) Environmentally sustainable: including nurturing their environment, improving the environment, creating a place where people can experience the natural environment.

(b) Caring for each other: knowing and looking after members of the community, welcoming new members and retaining a sense of 'knowing your neighbours'.

(c) Sense of identity: taking pride in their history and identity, celebrating community diversity – Māori and non-Māori, farmers and producers, rural village character and natural environment.

170. A strong theme from the research (approximately 27 survey respondents) and community consultation (Ohau community meeting and Ohau community consultation day) was that Ohau residents spoke to value the rural, village feel of their community. It was repeated that people in Ohau know their neighbours and look out for one another. In addition, people reported valuing the peace and quiet in Ohau (but noted that traffic congestion disturbs this quiet). It was noted several times during consultation and in several phone interviews that many people have moved to Ohau for the rural lifestyle and slower pace of life. Some residents, for example, still work in Wellington but live in Ohau for the serenity and sense of getting away from the city each night (See Appendix E.1).

171. People also strongly value connections to the natural environment. Both the coastline and the Tararua Range are accessible from Ohau, and residents value the fact that they are surrounded by nature but also have access to urban amenities.

172. As identified in the draft CEDF (Appendix Three to Volume II) key natural characteristics include:

(a) Terraces between Levin and the Ōhau River;

(b) Lake Papaitonga;

(c) Tararua foothills to the east; and

(d) Ohau River, Waikawa Stream.

<u>Cultural interests and identity</u>

173. The CIAs (Volume V); step through the rich history and relationship of the two iwi groups with the land within and surrounding the Project.

174. Within this area is Māori freehold land and there are also two marae located within the Ohau and Kuku communities: Kikopiri Marae and Te Iwi o Ngāti Tukorehe.

Manakau – Local community

175. Manakau is located on either side of SH1 approximately 13km south from the centre of Levin and 7km north from Ōtaki.

Key demographic information and geographic extent

176. Manakau is a small village, semi-rural and rural community. Manakau Village (including the core residential area and most of the key community facilities such as a local church, school, bowling club, and pub) is located east of SH1, where it is set back from SH1 behind the railway corridor. Several rural lifestyle properties are located on the periphery of the village.

177. Manakau has a usually resident population of approximately 831 people (2018 Census). This a 23% increase in population since the 2013 Census when there were approximately 678 people. The population increase is reflective of the lifestyle developments in the area, particularly around Manakau Heights (south of Manakau Village) and on Waikawa Beach Road. The median age (50 years) mirrors that of the Horowhenua region. Twenty-four percent of the population are 65 years and over and 18% are under 15 years old.

178. Similar to Ohau, Manakau has a high European population with 87% identifying as European in the 2018 Census. Eighteen percent of the usually resident population identify as Māori, which is also a similar proportion to Ohau. Fourteen percent of the population were born overseas.

179. Three percent of the usually resident population are unemployed, 49% are employed full time, 18% part-time, and 30% are not in the labour force. The most common occupation of residents is managers (24%), followed by professionals (16%) and technicians and trades workers (16%). The most common industries where residents work is construction (17%), agriculture, forestry, and fishing (10%), and retail trade (10%).

180. The median personal income for the area is $33,900, the highest of the communities along the corridor. This ranges between $26,600 and $36,100 across statistical areas within Manakau, all of which are higher than the median income for the Horowhenua District. This median personal income

has increased by $8,500 since the 2013 Census ($25,400). See Appendix E.4 for full demographic details.

Transport

181. The current road and rail transport corridors run through the village with the main portion of residential development being located on the eastern side of SH1. During consultation for the Manakau Community Plan (HDC, 2020), community members expressed safety concerns with the difficulty of travelling from east of SH1 to the facilities located along or west of SH1 such as the Manakau Domain, Manakau store and other cafes and shops. There have been 8 fatal and serious crashes on SH1 within the Manakau area between 2017-2021 (number extracted from Figure 3 of Technical Assessment A (Transport)).

182. Like in Levin and Ohau, cars are the predominant mode of transport in Manakau. 69%[19] of residents use a vehicle to get to work. Only 2% of households in Manakau do not have a motor vehicle, while 70% of households own at least two vehicles. Five percent of residents in the 2018 Census caught the train to work and 1% walked. Public bus services are limited, and residents did not record travelling to work by bus on the day of the 2018 Census.

Key locations and social infrastructure

183. Manakau School is a key focal point of the community and attracts pupils from both within the village and to the north and south of the community. In 2020, the school had a roll of approximately 123 students.[20]

184. The Manakau Domain is another focal point of the village; 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. The school and hall are located on the east of the existing SH1, while the domain is on the western side. Ngāti Wehi Wehi Marae is also located on the west of SH1, slightly to the north of the village.

185. Beyond the village, camping facilities to the west and east of Manakau provide locations for local residents, and people from elsewhere, to camp,

[19] It is noted 31% is unreported, it is anticipated given the rural nature of the area the remainder may work from home.
[20] Data sourced from the New Zealand government's 'Education Counts' website, 2021

access local natural attractions, and provide locations for school camps. Waikawa Campsite (approximately 3km east of SH1 on North Manakau Road) is part of the Department of Conservation reserve and is located within the Tararua Forest Park.

186. A few commercial enterprises exist within the village. Beyond the village, the land use is primarily rural lifestyle and horticultural and agricultural use. Figure E.13 shows the locations of community facilities in Manakau:

Figure E. 13: Key locations and social infrastructure in Manakau (Source: HDC 2020)

Growth and development

187. There were approximately 318 households in the 2018 census, a 14% increase from 2013, with an average of 3 people per household. Similar to Ohau, a large proportion are owner-occupiers with 86% owning, partially owning, or having their dwelling held in a family trust. Twenty-five percent have lived in the same house for 1-4 years, similar to that of the Levin and Ohau communities.

188. Recent development has occurred to the south of the village where several rural subdivisions such as Manakau Heights and Mountain View have been established. Future residential growth in the Manakau area is planned to occur to the west of the existing state highway (see Figure E.14 below). The HDC Future Growth Strategy 2040 predicts a demand of 180 houses from 2020 to 2030 and 290 from 2030 to 2040.

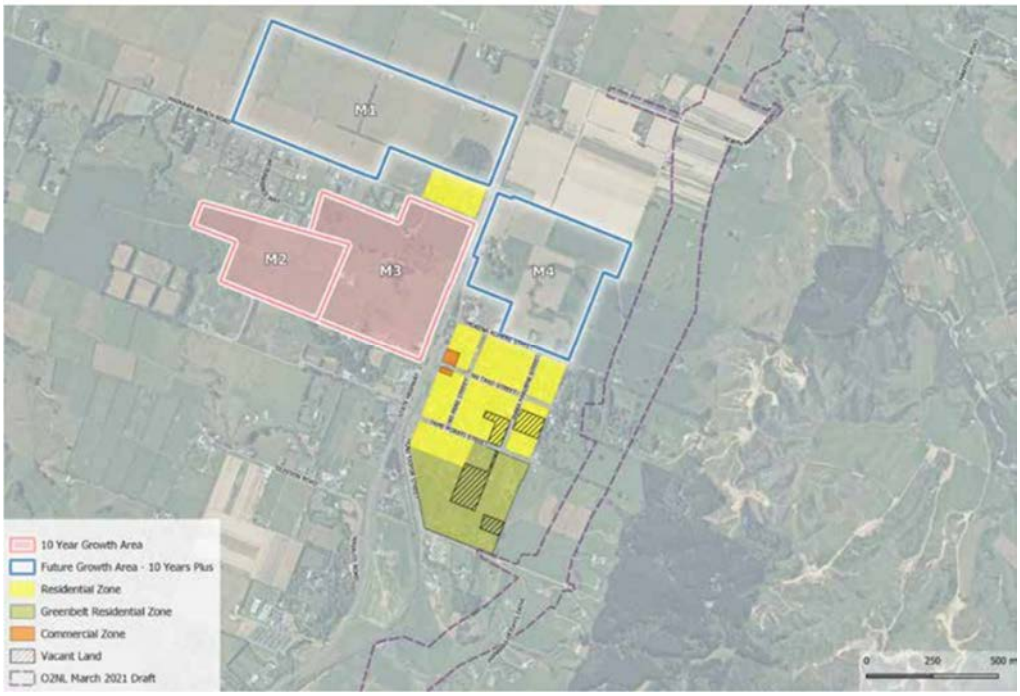


Figure E. 14: Manakau future growth areas (Horowhenua Growth Strategy 2040)

Culture and Identity

189. Manakau centres around the village, which is largely on the eastern side of SH1 with some development on the western side. It has developed around SH1 and the railway. 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 village is largely low density residential and is set within a rural landscape consisting of lifestyle development and agricultural activities. Manakau is bordered by the Tararua Range to the east.

190. Members of the community acknowledge the connection to the rural and peri-urban lifestyle as being important to them (sourced from the community surveys and HDC Manakau Community Plan, October 2020). Tranquillity and a connection to the natural environment through sight, sound and access are seen as strong identifiers of the area. The rural aspect of the

environment was reported as being valued, including the productive soils and ability to live off the land while still being near urban amenities. During consultation several residents described Manakau as a 'hidden gem'; a beautiful, small village that only reveals itself to those who travel off SH1.

Cultural interests and identity

191. The CIAs (Volume V) step through the rich history and relationship of the two iwi groups with the land within and surrounding the Project.

192. The Tararua Range and Pukehou Hill have important historical connections, including the bush remnants along the hills.

193. Ngāti Wehi Wehi Marae is also located on the west of SH1, slightly to the north of the village.

Community political and social connections

194. Manakau District Community Association[21] was founded in 2012. Membership is open to residents of the Manakau Village and they gather and voice 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.

Regional Community

195. The regional community extends from Palmerston North in the north to Wellington in the south (see Figure E.15 below). This region crosses two regional council areas: Manawatū-Whanganui Regional Council ("**Horizons**") and Greater Wellington Regional Council ("**GWRC**") and is under the jurisdiction of multiple territorial authorities including HDC, KCDC, Upper Hutt City, Lower Hutt City, Porirua City, and Wellington City councils.

[21] The Manakau community group representatives were interviewed see Appendix E.1.

Figure E. 15: Regional Community

196. Currently SH1 is the main connection between Wellington Region and the Levin communities (as per above) and businesses. SH57 provides a direct connection to the Palmerston North community.

197. The regional community is defined based on the large numbers of people who travel within these areas to work, transport goods and services, and access facilities. Travel patterns show that during morning peak travel 26% of traffic is heading north of Levin via SH1 and 33% are heading north of Levin via SH57 (refer to Technical Assessment A (Transport)). Overall, current volumes indicate approximately 16,700 vpd south of Taylors Road (North Ōtaki),11,500 vpd on SH1 north of Levin and 9,400 vpd on SH57 north Levin.

198. The Horowhenua District offers a range of natural attractions associated with the Tararua Range and beaches of the Tasman Sea. Whilst visitor numbers

are not specified in the Horowhenua District Annual Economic Profile[22], the profile notes that tourism accounts for 2.4% of Horowhenua District's economic output, up from 2.2% ten years ago.

199. The local communities surrounding the study area are around an hour's drive from the two major urban centres of Wellington and Palmerston North. Levin is a 45-minute drive from Palmerston North and Ōtaki is a one-hour drive from Wellington. People travel to these centres and within the region to work and go to school as well as to access regional facilities. They also use this passageway for business and recreation. The region's hospitals are located in Palmerston North and Wellington as well as universities and domestic and international airports.

200. Within Horowhenua, public transport by bus makes up approximately 0.1% of the mode share of work trips and 14.7% of trips for education (refer to Technical Assessment A (Transport)). Technical Assessment A (Transport), reports that this is due to the low population density, low demand and limited public bus services available in Levin and surrounding areas. A Levin to Palmerston North commuter bus (one return service per day) runs Monday to Friday.

201. Rail makes up about 1% of the mode share of trips to work and education in the Horowhenua District, with the Capital Connection providing a daily commuter rail connection between Levin and Wellington (noting the Ōtaki station is located south of the Project Area). There are no rail stations between Ōtaki and Levin. In the Manawatu-Wanganui region, within which the Ō2NL Project is located, vehicles are the dominant mode of transport. In the Ministry of Transport's NZ Household Travel Survey for 2015 to 2018, 85% of trip legs were undertaken using a car.

202. There is not currently a regional cycling network. HDC has produced a Shared Pathways Strategy (2016) to provide the strategic framework for a future shared pathways trail network to link the District's major communities. There are currently individual tracks throughout the district, but these are not inter-connected. Two of these tracks are within the Project area (see Figure E.16). At Queen St East, a walking and cycling overbridge (over the Ō2NL Project) is proposed which provides east-west connectivity between Levin and Queen Street pathway.

[22] Horowhenua District Annual Economic Profile 2021 – Infometrics https://ecoprofile.infometrics.co.nz/horowhenua%20district/PDFProfile.

203. As previously discussed, the whole region has been experiencing population growth; in the Horowhenua District growth is occurring at a much faster rate in the last five years than the previous ten years. HDC projections to 2040 estimate an additional 16,000-26,000 people living in the district (please refer to Technical Assessment A (Transport) for further detail). It is estimated that by this time more than 760,000[23] people will live within an hour's drive of the district.

204. The Ō2NL Project is the next section of major roading infrastructure in the region with the current construction of PP2Ō nearing completion. These are part of the overall Wellington Northern Corridor project that will improve the connections and movement of people and goods throughout this region. The Wellington Northern Corridor connects Wellington to the central and upper North Island. It also provides an essential economic connection to Palmerston North, the largest freight node in central New Zealand. The Project SUP will directly connect into PP2Ō.

[23] https://www.horowhenua.govt.nz/News-Notices/News/Population-growth-rate-in-Horowhenua-will-continue-to-outpace-the-country

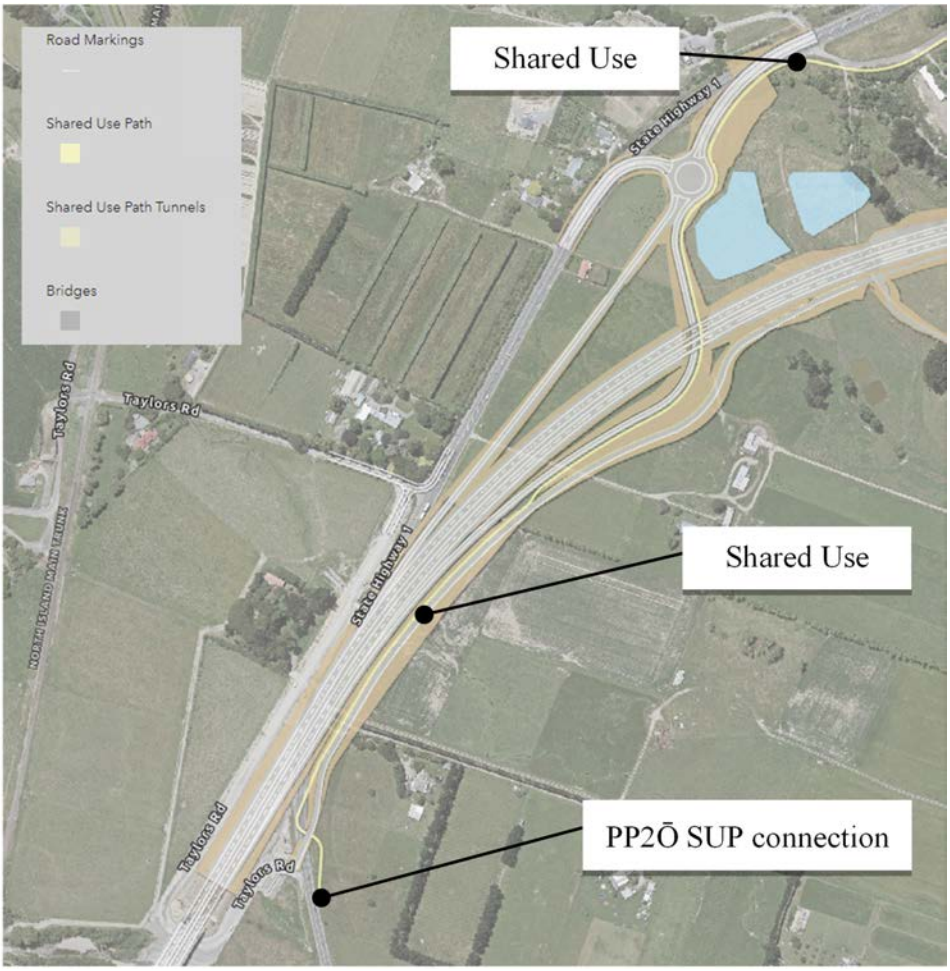


Figure E. 16: Shared Use Path – PP2Ō connectivity (Source: Technical Assessment A (Transport).

205. Once established there will be a continuous walking and cycling connection from Levin to Raumati South (southern end of Mackays to Peka Peka Expressway) (see Figure E.17). This will extend the inter-regional cycle network.

Figure E. 17: Wellington Northern Corridor highway projects (Source draft CEDF (AEE Appendix Three to Volume II)).

PROJECT SHAPING AND AVOIDING AND MINIMISING EFFECTS

206. The social impact team has been involved since 2018 in Project shaping, from option assessment and selection to route refinement. This has included:

    (a) a desktop SIA of the shortlist Project corridor/route options (Preliminary SIA of the Ōtaki to North of Levin Transport Corridor Short List Options);

    (b) participation in route refinement MCA workshops analysing options (including site research and reporting);

(c) providing advice on options to avoid, remedy or mitigate potential impacts.

207. Information has been provided to the Project team on the potential social impacts that may occur for each option for the assessment of alternatives in the route selection process.

208. 'Fears and aspirations' of the community were assessed during the options assessment phase. It was assessed that fears with regards to the future of their community were most likely to occur up to and including route selection and route refinement, and for mitigation to be effective it needed to be enacted prior to the consenting / statutory approval phase. It is noted that this included setting up a Project office in Levin (including a public phone / email and drop in facility), continued Project communication and engagement and local community meetings throughout the options assessment phase (see Appendix E.3).

209. Identification of community aspirations and design opportunities – for example to connect the SUP into local community functions such as the established walking paths and community assets such as Manakau School (see Appendix E.1 and Appendix E.3).

210. During the route refinement phase, specific advice has been provided on where options can be modified to improve social outcomes or to avoid adverse social outcomes. Social research was conducted (see Appendix E.1), and advice provided on how best to retain community connections (such as identifying where key community resources are located such as walking paths, recreation areas, school catchments) and where an option may result in further social impacts.

211. A number of design iterations have been included to respond to identified potential social impacts, or to improve social outcomes or community concerns including:

(a) Connecting the SUP to community resources in Manakau – the SUP was designed to include a link onto Mokena Kohere Street to improve the connection between the school and the Manakau Heights area.

(b) Improvement of local road connections – the aim was to retain access, way of life, and community connectivity and street communities where possible.[24] Implemented advice included:

(i) Local road reconnections using bridges – various locations on the corridor to retain east / west local road connections (such as North Manakau Road, Kuku East Road and Muhunoa East Road). Much of the recreation opportunities for the community are to the east on these local roads and the community services such as village / town centres, schools and services are to the west.

(ii) New local road links – such as the at-grade local road parallel links around Arapaepae, Kimberley, and Tararua Road to maintain access, community connectivity, and way of life and avoid excessively long detours.

(iii) Alignment shifts such as Sorensons Road, or the half interchange proposed near Taylors Road to provide enhanced connectivity to the state highway for Manakau and Ohau communities.

(iv) Maintenance of Queen Street walking and cycling connection to connect to the local walking path out to the Trig.

(v) Connectivity within Manakau Village – maintaining Honi Taipua to maintain a way of life, community cohesion, and provision of community services (alternative access for emergency vehicles).

ASSESSMENT OF EFFECTS

212. This section of this Technical Assessment should be read in its entirety to understand the range of social impacts for each community with respect to positive and adverse effects during construction and operation. The potential social impacts have been initially assessed pre-mitigation; refer to the Mitigation section and Table E.4 and E.5 for the overall assessment, mitigation and residual impacts.

213. The type, duration, likelihood, severity and extent of potential social impacts for infrastructure (both in construction and operation) often differ relative to

[24] The Ō2NL Project is part of the New Zealand Upgrade Programme ("NZUP") and has a stated purpose to "improve safety and access, support economic growth, provide greater route resilience, and better access to walking and cycling facilities". The objectives of the Project include to provide appropriate connections that integrate the state highway and local road network to serve urban areas.

direct proximity to the Project (for example, while operational noise is greater closer to the works, benefits of improved accessibility may be more evenly distributed across a local or even regional community). In addition, linear infrastructure often traverses different communities and because of this, the nature of the social outcomes can also be different. Therefore each local and associated sub-local community are assessed separately.

214. Positive and adverse effects consider both regional, local, and sub-local communities and people may be part of all these communities. The conceptual relationship of the communities identified in this report is provided in Figure E.18 below. People can experience both positive and negative social impacts simultaneously, acknowledging that the communities they are part of will also experience the project differently. For example, people might benefit from the accessibility changes afforded to their local community, but they may also part of a community that experience negative impacts at a sub-local neighbourhood level due to physical changes to the environment which are near the Project. This assessment does not evaluate individual household impacts but acknowledges that these will also be experienced due to individual household circumstances.

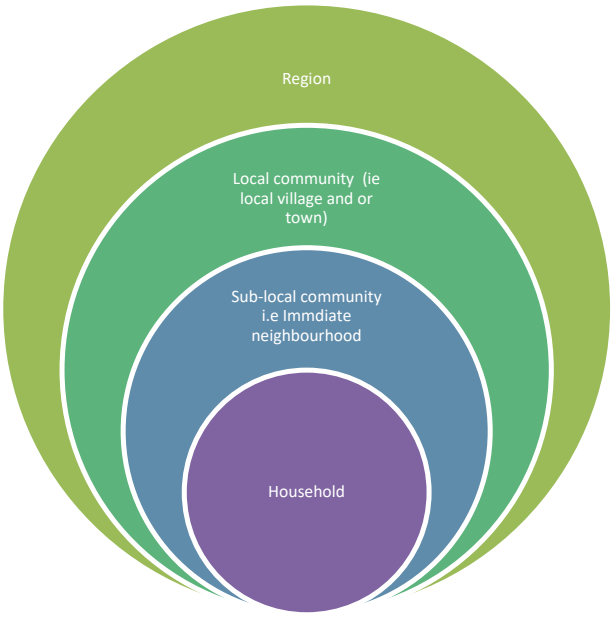


Figure E. 18: Diagram of conceptual relationship of defined communities

Potential planning effects (route selection and pre-construction impacts)

215. During the planning phase the Project potentially impacts community' fears and aspirations and health and wellbeing (stress and anxiety). This is in regard to the uncertainty of the location of the proposed designation and anticipating the changes that will occur both during the process (ie loss of property or neighbours) and once it is operational (ie change of environment).

216. People reported that the uncertainty of the location of the Project and potential property requirements impacted (sources: community surveys and Project consultation):

    (a) The ability to plan for the future (ie property development).

    (b) Fears / concerns that envisioned futures would not be realised.

    (c) Fears / concerns that current lifestyles would be disrupted.

    (d) Fears / concerns that people would have to leave their current community.

    (e) Stress and anxiety relating to dealing with the uncertainty and potential impacts of the above.

217. It is acknowledged that many of these impacts have already occurred or are happening now. Scoping for this Project was first reported on in 2012 (Ōtaki to north of Levin Expressway – Scoping report – MWH 2012). At this phase of the Project, potentially impacted landowners have been identified and contacted. Most properties confirmed for full acquisition have been met with by the property and Project team and potential partial acquisition property discussions are underway. As of August 2022, approximately 50 properties have already been acquired by the Crown; the timing of movements off the property will be subject to individual negotiations.[25]

218. Mitigation for these effects has already commenced. This is in the form of the provision of information and responding to public queries through the Project communication and engagement processes. This includes regular communication of ongoing Project investigations, Project drop-in centre open to public (Levin Project Office[26] which was open to the public during Summer

[25] The majority of movement of people as a result of property acquisition is likely to occur after the consenting process and just prior to construction (when land is required to construct the Project) the discussion of impacts on people moving out of the area and impacts on way of life and sustaining oneself will be dealt with in the next Section to avoid repetition.

[26] Opened in July 2021 for Waka Kotahi projects and November 2021 to Feb 2022 (on specific dates) for Project consultation and again May 2022, the office is located in the commercial centre of Levin on Oxford Street.

2021/22), newsletters, posting on the website, community meetings, public consultation and letters and meetings with affected property owners (see Part F of Volume II for a summary of these activities and community feedback). It has been observed that as consultation sessions have progressed people appeared more informed in relation to the Project, citing as examples information sources from previous sessions they have attended, information read online or meetings with the Project team. However, it is acknowledged there was still a mix of those who understood how the Project impacted them and those who were still awaiting further discussion and expressed an ongoing sense of uncertainty. It was observed that the Project team took the contact details of these people expressing ongoing uncertainty, to arrange future discussions.

219. Whilst it is acknowledged that many of these effects have already occurred, and that mitigation of uncertainty related effects is underway, it is still important to acknowledge these social impacts and identify what is likely to continue to occur and whether ongoing mitigation and management is appropriate / required. Uncertainty of Project impacts and subsequent stress and anxiety is likely to continue for some landowners (though these numbers are reducing). Therefore, continued engagement and consultation is recommended for mitigation.

220. These impacts have been and will potentially continue to be experienced at primarily the sub-local (directly impacted landowners) and to a lesser extent local level (impacts on community cohesion, fears and aspirations). Impacts range in duration from short term (where property requirements were confirmed early) to longer-term (ie it is envisaged that such effects could be experienced for more than two years for some, relating to the uncertainty of the change of environment due to the Project). This is dependent on when certainty is provided both in terms of location of Project, property requirements and mitigation proposed. The above impacts potentially negatively impact how people work (acquisition of property), future plans and aspirations for property and community and personal wellbeing (stress and anxiety regarding uncertainty of property impacts and future environment). The severity will be dependent on the extent of direct impacts and how long a person/persons has/have to wait for confirmation of potential property impacts and proposed mitigation. Overall, impacts are therefore assessed as moderate negative depending on level of potential direct impact (ie the closer

proximity to the Project the higher the potential fears and anxiety) and duration of the effects and uncertainty.

Potential construction effects - Positive

221. ***Way of life*** – During construction there will be increased activity in both the regions and local communities. This is both in terms of jobs constructing the Project, local support required by the Project and activities of people on the Project (such as local spend and accommodation requirements). Technical Assessment O (Economics and Town Centre Impacts) notes that potential economic benefits of these activities during construction include:

    (a) increased Gross Domestic Product ("**GDP**") (local and regional spread of profits is dependent on distribution of spend);

    (b) employment and return of income to households (estimated income regionally and locally equates to between 480 and 1440 persons employed in the Horowhenua District); and

    (c) positive economic effects on Levin town centre (and businesses in other local communities) – due to activities such as increased retail and service demand (ie accommodation).

222. The potential positive social impacts of these activities include potential job opportunities for the unemployed, localised jobs for those that currently commute, and generation of additional business for various local businesses. All of this has the potential to improve locals' ability to sustain themselves and contribute to future aspirations such as employment goals and business expansion. This was expressed by local iwi, the community and individuals interviewed who identified positively the potential opportunities in terms of training, business opportunity, local jobs, and increased activity (retail spend and service requirements).

223. Overall, these impacts have the potential to be experienced at a regional, local, and sub-local level. Due to being construction impacts these are temporary but will occur over several years due to the long construction period. They positively impact how people work (increased business or new work opportunities), live (increased income), and sustain themselves. Therefore, they have the potential to have low to moderate positive impacts (dependent on the distribution of spend and local opportunity).

Potential construction effects - Adverse

224. The following assessment is pre-mitigation. It is made on the information that is available at this time in relation to construction as described in the Project description above and provided in the DCR (Appendix Four to Volume II).

225. ***Way of life -*** The works will take place over five years, with pre-construction works prior (as described above). The majority of works will not be on established roads, however there will be construction traffic on local roads and SH1 and SH57 to access these sites (average of around 500 truck movements and 1,300 light vehicle movements per day) (Technical Assessment A (Transport)), noting some will of these movements will be within the Project designation. Technical Assessment A (Transport) assesses that in general local roads can accommodate additional traffic, as most movements will be outside peak traffic and additional queuing from construction traffic will be minimal. However, there will be potential congestion effects and or increased travel time on SH1 and SH57 where construction directly enters construction sites from these existing state highways, and where there are local road or individual property access diversions. Many residents are dependent on SH1 and SH57 to get to work, education and services within Levin and Ōtaki and further afield. At a regional, local, and sub-local community level, increased traffic, or temporary closures/diversions on SH1, SH57 and local roads have the potential to impact how people move about the area in terms of potential delays and increased journey times.

226. No formal recreation areas are within or adjacent to the Project designation but use of some areas informally for recreation is potentially impacted by construction activities. People who recreate outside on their properties close to the construction area (those within the sub-local communities) may also experience disruption of activities such as gardening, or entertaining outside (during construction hours due to noise, dust or visual disturbance). This is more likely where current noise levels are low (furthest from existing SH1 and SH57). It is noted that this will be temporary and works at weekends and evening will be limited.

227. During construction, some landowners (those whose access is impacted, or farm is split due to the location of the proposed designations) may experience some disruption / change on the property (in particular farm operations) and moving in and out of their properties for their way of life

(work, education, recreation, and general living). In terms of access, Technical Assessment A (Transport) identified that properties provisionally identified for partial acquisition have been considered, and property access to the road network will be retained. Travel times will only be impacted for a few properties; the remaining properties' access will remain unchanged or the proposed access will provide a like-for-like solution. Of the few properties identified as being impacted, increased travel times range from 0.9 minutes to 3.2 minutes. However, it is further noted that none of these properties are identified as having dwellings on them (eg rural production property). Therefore, it is anticipated that there will be minimal disruption to way of life, limited to how people work when accessing the properties identified to carry out farming activities.

228. In terms of splitting "an existing property", only a small portion may be separated from the remainder of a property, due to the location of the Project designation. However, the retention of this land by the landowner is subject to property negotiations and the operational functions that landowners intend. Of particular consideration is whether the owner wishes to retain this land and continue to operate it and whether this is practicable to do so. Where the owner wishes to retain land either side of the designation and operate the property as a "whole" working farm, access options will be negotiated where necessary. The outcome will be part of the PWA process. For those who choose to retain and work the land either side of the Project there may be temporary disruption to work activities during construction. During construction, access will need to be retained so work can continue (this may be temporary access during construction before more permanent solutions are provided once the Project is operable). From a social impact perspective, the property negotiation process provides an opportunity for people to provide for their way of life via continuing to retain land that is functional or mitigate by purchase.

229. The noise assessment identifies that those living closer to construction may experience higher levels of noise during construction (Technical Report B (Noise and Vibration)) that may potentially be disruptive to people's way of life. For those working from home within 200m of construction (note that due to COVID, as with national trends, this number is likely to have significantly increased in the last two years), they have the potential to be disrupted particularly when noise becomes intrusive and/or disruptive. In addition, those who require sleep during the day (eg babies and young children and

shift workers) may be disturbed during increased periods of elevated noise. Technical Assessment B (Noise and Vibration) indicates these elevated noise periods are likely to be for short periods, and that most people will be able to continue normal domestics activities with minor adjustments, and that this will be assisted if they are communicated with prior to these construction activities occurring.

230. A number of properties will be subject to full acquisition, for many of these owners, where a house is part of the property, this will mean moving and a change to way of living. This could include where people work, socialise and go to school. For some, particularly those living in residential properties around East Levin and North Ohau, people may be able to find alternative accommodation within the same community (if given adequate time to search). For others coming from smaller communities and on larger properties it may be difficult to stay within their community and therefore they will experience many more changes to way of life as stated above.

231. Overall, it is anticipated that the above impacts without mitigation will disturb daily lives, although the impacts will be experienced temporarily (depending on construction activities and phasing). While the construction duration overall is relatively long, construction activities will change at different sites over this period. It is assessed as likely to impact those closest to construction the most (sub-local community), acknowledging that traffic disruptions to way of life will extend over a larger geographical extent. Those experiencing full property acquisition and having to move out of the area where their work, social and education activities are (noting this is a smaller subset) will experience greater change. Therefore, potential social impacts on way of life during construction without mitigation are potentially low to moderately adverse. It is considered that some of these impacts are able to be mitigated (see the Mitigation section and overall assessment).

232. ***Community -*** As a consequence of property acquisition members of the community will move out of the area and for some of the sub-community areas this will be a larger proportion of that community. This could be due to limited housing stock for sale within the same community, for example in smaller communities where there are limited "like for like" properties available for lifestyle and farming properties. This potential impact could also include people who have relatives within the community and/or long associations with the community. The loss of these community members and their roles in forming community cohesion and stability will be more apparent in smaller

local communities and sub-local street communities. At a sub-local level this will be particularly notable in East Levin (southern end of Sorensons Road, MacDonald Road, Waihou Road, Kimberley Road (western portion) and Kuku (Kuku East Road) where a higher portion of properties within these streets / roads will be acquired.

233. Change in community make-up over the property acquisition process is assessed as an effect that will be experienced over months to years but needs to be considered with acknowledgement of the dynamic and changing nature of communities, including in the Horowhenua. The potential impacts of this process depend on patterns of growth in the community and the specific nature of the roles and connections of those people leaving the community and where they move to. This is assessed to have a potential adverse impact of destabilising communities, particularly in sub-local communities where losses will be felt most acutely. This potential impact is mitigated by starting property acquisitions early (relative to construction) to help reduce disruption, for example by providing those impacted with more time to find properties in local areas.

234. The potential social impacts of the Project are not evenly distributed, and during planning and construction it is assessed that potential negative social impacts will be most strongly felt by those directly impacted by property requirements or living adjacent to the Project. As a result of this, there is the potential that these people / groups may feel isolated from the wider local community who have different experiences of the process, concerns, and levels of impact. This has been observed in some Project community meetings where the wider community focussed on opportunities that the Project offers, where it was observed that those located closer to the proposed designations expressed more concern about the level of change the Project presents for them. This disruption or potential impact on social cohesion was particularly apparent during the options assessment phase where different options were located within different local communities and people expressed concerns about communities having to ‘choose’ who will be impacted. These concerns are still evident during this consenting phase between the local and sub-local communities.

235. Overall, impacts on community services are assessed as potential very-low adverse impacts, as disruptions are temporary, and all services can be accessed and will continue to operate. Potential impacts on community cohesion are anticipated to be potentially very-low to low adverse for local

communities and moderate for sub-local communities, due to the level of destabilisation, disruption, and social change to community experienced during construction. These effects are expected to dissipate over time as the community adjusts to the changes.

236. ***Health and wellbeing -*** During public consultation some landowners noted a concern that dust from construction may impact water supplies (where rainwater tanks were used). Technical Assessment C (Air Quality) confirms that potential air quality impacts on health and wellbeing from dust will be at a sub-local level. Potential sensitivity of receptors ranges from high, the closer the household (people) / property is, to low when receptors are 100 - 200m away from construction activities (this would be dependent on the individual health of the receptor, ie if they have pre-existing respiratory conditions sensitive to dust). It has been identified that there is potential for dust to settle on food gardens, crops (dependent on timing) and water tanks. However, washing food from gardens and replacing filters in rain roof collection are normal practices that would also address these potential impacts, in addition to construction dust management (which includes communication strategies to provide advice to landowners where required).

237. Technical Assessment B (Noise and Vibration) assesses that there should not be significant night works near households and that potential sleep disturbance effects should be limited. It is anticipated that with communication these can be managed and there is not likely to be ongoing health impacts.

238. During consultation sessions some participants spoke of dangerous incidents of trucks on side roads when encountering local traffic due to the narrowness of the roads particularly around Manakau. Construction will increase the presence of trucks on side roads. The presence of heavy construction vehicles on local roads may have potential safety impacts for pedestrians and cyclists (although numbers of those walking and cycling is low), including those who use these roads for recreation or to get to and from school (it is noted that due to feedback the construction routes have been diverted around Ohau School to avoid this). Health and safety issues have the potential to arise from the shared use of local roads between construction traffic and local traffic. Technical Assessment A (Transport) identifies that safety issues are minimal, but may occur at specific intersections and on local roads where there are existing potential crash issues. Technical Assessment A (Transport) has considered this in recommendations for

mitigation and assesses that these can be adequately managed through construction traffic management.

239. Overall, these potential health and safety impacts are assessed as minimal and temporary, limited to those within 200m of the corridor and unlikely to occur with mitigation. Therefore, the potential for social impacts arising is considered to be very-low negative.

240. ***Quality of the living environment -*** Changes to the quality of the living environment during construction will include changes to the landscape and the noise generated by the Project construction activities. Technical Assessment D (Landscape, Visual and Natural Character) assesses that these visual effects during construction will include the raw appearance of earthworks and construction clutter. Technical Assessment B (Noise and Vibration) notes that most disturbances would be temporary and during the day. This has the potential to change the rural living environment for the sub-local communities, including the natural outlook and experience of nature including bird sounds and quiet environment. These attributes were identified in the survey by many as what people valued about living in the area (see Appendix E.1).

241. There is the opportunity to mitigate potential impacts through construction management plans for noise, air quality and visual effects. The extent of effects is likely to be limited to those in close proximity to the Project (many in the local community will not experience change in the quality of the living environment). Further, the potential construction noise and visual effects will be temporary. Therefore, impacts on the quality of the rural living environment is considered to be low to moderate for the sub-local community and negligible for the local community.

Potential operational effects - Positive

Regional Community – positive operational effects

242. As described above, people can be part of multiple communities and experience the benefits at each level. In this scenario, positive impacts are likely to have a trickledown effect from the largest to smallest community sub-set.

243. This section primarily assesses the proposed highway, but where relevant, includes the SUP which is being constructed as part of the overall Ō2NL Project.

244. ***Way of life -*** The Ō2NL Project will improve the way people will be able to move around the region. This will impact road users within the region using the new state highway to participate in daily activities such as work, education and recreation. Within the region people travel between Ōtaki and Levin and also beyond to access recreation across the region including playing other sports teams within the region, travelling to holiday homes along the west coast and accessing the Tararua Range for activities such as camping, hiking, and hunting. Regional travel also includes travel for leisure, shopping and education (particularly in Wellington and Palmerston North), specialist health services (Wellington and Palmerston North), work opportunities throughout the region, and connecting with friends and family. Businesses and employees throughout the region (including regional freight services) are dependent on travelling between Ōtaki and Levin for reaching places of employment and moving goods that businesses are reliant upon (source: Stakeholder and individual interviews Appendix E.1, Technical Assessment A (Transport) and Technical Assessment O (Economics and Town Centre Impacts)).

245. The Project provides improved ability to 'connect' across space. This will be achieved by the Project providing a new transport connection that improves both the efficiency and reliability of the network. Technical Assessment A (Transport) assesses that the Project will improve journey times by approximately ten minutes if entering or exiting Levin via SH1 and 11 minutes if exiting or entering Levin via SH57. In terms of reliability, if an incident occurs along the Project, SH57 or SH1 due to an accident or natural hazard (eg, flooding) there will in future be an alternate route to divert to that is not available presently, allowing these journeys to be made. In addition, the new transport connection will be safer (reducing likelihood of accidents) and is built to be able to withstand significantly greater natural hazards (including flooding) as detailed in the Technical Assessment A (Transport). This is in line with the overall objective of the Project in accordance with the NZUP, which includes to improve safety and access, support economic growth, provide greater route resilience, and better access to walking and cycling facilities.

246. As indicated above social connections across the region will be more reliable and efficient. Commuters for work and education will potentially have shorter journey times and be subject to less disruptions on this section of the transport network. Businesses will have improved connections both in terms

of reliability and travel times, therefore positively impacting business operations. Specifically, the Technical Assessment O (Economics and Town Centre Impacts) identifies that the improved connections could result in improvements to business cost structures, ability to access different market and ability to compete.

247. The Project will positively impact most regional road users as it will form the main north to south connection between Palmerston North and Wellington which the region is reliant on for business, commuting for work and education, accessing health services, socialising and accessing retail services. It provides efficiency by addressing the existing roading environment where road users experience delays and issues with the resilience of the corridor. In addition, the Technical Assessment A (Transport) assesses that it will also cater for future growth, ensuring sustained longer-term benefits. In summary, this has the potential to have a moderately positive impact on the region. Recognising for those that frequently use this network this has the potential to be high to very high.

248. ***Community -*** The SUP has the potential to become a key regional resource as it will link to shared path facilities built as part of PP2Ō and M2PP projects, extending the regional cycle network and connecting communities using alternate forms of transport. In our experience, this can be a transformative change for the way the community uses cycling, both for recreation and work. The SUP will have a low positive social impact at the regional level. This is a potential low positive impact because a smaller portion of the region is likely to use the SUP at these distances, therefore the benefits are limited to a relatively small portion of the regional community.

249. ***Health and Wellbeing -*** As specified in the Technical Assessment A (Transport) in the five years to 2021 this section of SH1 and SH57 has resulted in crashes that caused 72 deaths and serious injuries. In addition, there were 107 minor injury crashes and 303 non-injury crashes in this time period. The social impacts of these events are experienced at a personal, household and community level. This includes emotional trauma, loss of income and potential future income, loss of skilled resources / members of the workforce, loss of members of families and communities who serve various roles within these social structures, loss of quality of life (individual and families), impacts on health costs and health resources.[27] Depending on

[27] The evidence base for this is well established. One example includes the Ministry of Transport paper: The Social Cost of Road Crashes and Injuries, June 2019 Update (ISSN 1173-1370)

the origin of people affected these events would have had regional consequences.

250. The Ō2NL Project is expected to save in the order of 35 DSIs per five-year period following its opening (see Technical Assessment A (Transport)). This represents an approximate 55% reduction in DSIs on the state highway network and a 10% reduction on local roads when compared to the 'Do-Minimum' scenario (see Technical Assessment A (Transport) for details).

251. Overall, the Ō2NL Project will reduce significant future adverse social impacts on the region by reducing the likelihood and severity of outcomes of crashes. This is a significant and important improvement. As such there is potential for there to be high positive impacts on the health and wellbeing of the region.

Local and sub-local community – positive operational effects

252. The potential positive operational social impacts have been assessed at local geographic scale but are considered applicable to the sub-local scale (in other words, this group will experience the same positive operational effects as experienced at the local scale).

Shared Use Path – Local and sub-local positive operational effects

253. ***Way of life -*** Currently the only way for people to walk or cycle between Levin and Ōtaki is along the existing SH1. This is a high-speed zone that creates an unsafe environment for pedestrians and cyclists. During social research and Project consultation, members of the community reported that most people were deterred from cycling in the area (particularly on SH1) due to unsafe conditions and accidents involving cyclists and or pedestrians. The Transport Assessment (Technical Assessment A) notes that, between 2017 and 2021, eight high severity crashes affected vulnerable users; six involving pedestrians and two involving cyclists. Two fatal crashes involved vulnerable users struck on SH1; one pedestrian and one cyclist.

254. Similarly, the ability to travel east-west or west-east across the existing SH1 and SH57 by cycle and/or foot was reported to be quite dangerous along most local roads within the Project area. The Ohau Community Plan (HDC, October 2020), and Manakau Community Plan (HDC, October 2020), report that SH1 currently presents a significant barrier for people of these respective communities wanting to get from one side of the state highway to the other by walking or cycling. These communities are advocating for improved

connectivity (including walking and cycling) between parts of their communities.

255. At Project-organised community meetings and stakeholder meetings on the SUP (see Appendix E.3), attendees stated that the proposed SUP provided opportunities for the local communities such as:

    (a) recreation (including where it connected into Queen Street walking path);

    (b) commuting for those working in different towns / villages along the proposed designation; and

    (c) potential to integrate the SUP into a walking / cycling school bus in a location such as Manakau (provision of SUP connection to the school is part of the Project).

256. Currently, visitors to each of these local communities mainly travel by car. Public transport by bus makes up about 0.1% of the mode share for work trips and 14.7% of trips to education in the Horowhenua District (Technical Assessment A (Transport)). For those without transportation or families with one vehicle (these groups include low-income families), there are limited low-cost options to move between these communities, particularly for those living in rural areas.

257. The SUP provides a potential attraction for both locals and those out of area to use the path to visit local areas for activities such as food and markets and could provide business for local communities (as indicated in community meetings on the SUP and the stakeholder meeting). It is estimated that initial daily use will be around 190 new cyclists a day (and additional walkers); this is likely to grow over time as population in the area grows.[28] It also provides affordable alternative transport options for households with limited options. It achieves the Project objectives of enabling mode choice for journeys between local communities. The SUP provides a central network for local shared pathways to connect into. The HDC Long Term Plan 2021-2041 aims to provide footpaths and shared pathways across the district that meet the community's needs and has set aside funding for this. Both the Manakau Community Plan (HDC, October 2020), and Ohau Community Plan (HDC,

[28] This is based on 75th %tile growth scenario by 2029. Source: Ō2NL Detailed Business Case.

October 2020), indicate value in both the SUP and wider opportunities for shared pathways in the community to connect into this.

258. The SUP will positively impact pathway users from the sub-local and local communities. For those that use it for daily commuting it will have a significant positive impact on way of life providing a safe pathway to use for daily commutes (this is anticipated to be a small portion of the community (according to the detailed business case this is anticipated to be around daily users initially). This number is likely to increase in the future as areas develop as per the indicative growth strategies. It will also benefit recreation users (anticipated to be a higher proportion of users based on initial engagement on intended use (see Appendix E.3)) as it is it is very likely to improve cycling experiences (providing a safe alternative to access other recreation opportunities across the area).

259. The SUP will link into the shared path facilities built as part of the PP2Ō highway (and further afield to M2PP). This will extend an inter-regional cycleway network and enable pedestrians and cyclists to actively connect between townships. The SUP also provides future opportunities to link in with current (eg Queen Street) or future footpaths, cycleways and access to recreation and key community resources (eg Manakau School). For some schools, it may also provide opportunities for walking school buses or cycle routes. This will have long term benefits that can build over time as the SUP is integrated with local infrastructure.

260. Overall, there are low (initially) to potentially moderate positive impacts of the SUP on way of life including how people sustain themselves (the full realisation of this benefit will be dependent on uptake and how the local cycling and walking network develops to connect into the SUP). It is anticipated that use of the SUP will grow over time (based on experience from other shared path projects). This positive impact will be higher for those using the path frequently and lower for occasional users. This will be felt at a sub-local and local level across the whole Project area.

261. ***Community -*** Currently the local communities (and to a degree sub-local communities) largely rely on vehicles to connect between and (to a degree) within communities. Walking and cycling provide more opportunity for social connection and unplanned interactions.

262. Locals engaged with during community SUP meetings and stakeholder interviews spoke of the SUP opening up options to visit other local

communities for markets, recreation destinations and dining options (Appendix E.3). They spoke of the SUP potentially attracting other people from out of the area and making their communities a destination. The SUP has the potential to improve the character of the community by encouraging more walking and cycling, particularly in Manakau, where it is close to the village centre. People stated that they aspire to have alternative transport options across all communities (Ohau Community Plan (HDC, October 2020), and Manakau Community Plan (HDC, October 2020), Consultation Summary, Part F of Volume II). During community SUP meetings many reported enjoying walking and/or cycling. The Ohau (HDC, October 2020), and Manakau Community Plans (HDC, October 2020), noted that most people who provided feedback during engagement mentioned some form of active activity they enjoyed doing locally or would like to do locally (including walking and cycling).

263. The Manakau Community Plan (HDC, October 2020) noted that those consulted for the plan wanted more choice including public transport, cycle lanes, and footpaths along key roads. Specifically, a desire was expressed for a shared pathway to be established between Manakau and Levin. The Ohau Local Plan (HDC, October 2020) identifies a desire to connect Ohau to Levin via a dedicated walking and cycling path.

264. The SUP will link into the shared path facilities built as part of the PP2Ō highway (and further afield to M2PP). This will extend an inter-regional cycleway network and enable pedestrians and cyclists to actively connect between townships.

265. Overall, the SUP has the potential to have low to moderate (moderate is dependent on local community connections to the SUP in the future) positive impacts on cohesion, character, and community services within the communities. This will be for users of the pathway and the communities that become connected via active transport (as outlined in local plans as a desire of the community) and would be an enduring impact.

266. ***Health and Wellbeing -*** Currently residents report that cycling and walking is largely limited to within each local community due to the safety issues on SH1 (as outlined in Local Plans and community meetings on the SUP (Appendix E.3)). Of the 53 high severity crashes between 2017-2021, eight involved vulnerable users, six of whom were pedestrians, and two involved cyclists (including two fatal incidents, one a pedestrian and one a cyclist)

(Technical Assessment A (Transport)). Those engaged with at local community meetings for the SUP (noting there are no formal cycling groups in Levin, but the group included those that cycled for sport and recreation) indicated that those who were current cyclists (both sport and recreation) would want to use the SUP, and those who don't currently cycle due to road conditions would be interested in using it for recreation. This was reiterated in local plan consultation in Manakau and Ohau where safety conditions of the highway and local roads were indicated as deterrents to walking and cycling (Ohau and Manakau Community plan, HBC October 2020).

267. The provision of the SUP has the potential to positively contribute to the physical, mental, and social and spiritual wellbeing of users of the path due to the benefits of active modes of transport. It will also protect the wellbeing of people by providing a safe walking and cycling environment. Given that it is a safe, off-road, facility this is likely to provide health and wellbeing benefits for users of the path (both locally and sub-locally) over the long term. The overall social impact is anticipated to be low to moderately positive (reflective previous serious and fatal crashes involving cyclists and pedestrians of SH1 and SH57). The assessment recognises the uncertainty, at this stage, on the level of use of the SUP. It therefore also factors in the benefit derived from the opportunity for this activity compared to the current transport options.

268. ***Quality of the living environment –*** Currently there are no safe or dedicated provisions for walking and cycling between local communities.[29] The SUP will provide an amenity for the local communities. At community meetings and stakeholder meetings on the SUP (four community meetings and a workshop), the attendees reported it would make their community more vibrant as people rode along the shared path and stopped for local amenities such as food and drink (many of those spoken to based this observation on use of and observation of M2PP, as a local example of how a SUP could be (Appendix E.3)). It will provide improved access to local communities and resources such as walking paths, the river, and reserves.

269. The SUP will have high positive benefits on the amenity of the environment for people using the path regularly. However, overall, this will initially be a small subset of the community (around 190 cyclists daily,[30] plus walkers) that will experience long term amenity benefits. Therefore, it is assessed as a low

[29] It is noted that there is a shared use path on Queen Street and on Arapaepae Road that connects the rural lifestyle area with central Levin.
[30] Ō2NL Detailed Business Case.

(initially) to moderate (over time – this would be partly dependent on how the local community connected into the network with local walking and cycling paths) positive impact on the local communities as a whole due to the potential to activate these local communities.

New state highway – local and sub-local positive operational effects

270. ***Way of life -*** People from the local and sub-local communities travel within the local communities and beyond for work, education, services, and recreation (due to the locations of these services). Within the local community people reported a lack of resilience of the existing state highway, safety issues particularly in crossing or entering SH1 and SH57 and congestion as deterrents to moving around the area, including across SH1 and SH57 (sourced from interviews, consultation, community meetings and surveys (Appendix E.1 and Appendix E.3)). People reported that they limited trips into town and avoided travelling on public holidays or busy weekends (sourced from follow-up survey interviews and stakeholder interviews (Appendix E.1)). School staff interviewed reported that there were occasions where parents were delayed picking up children from school due to incidents on SH1 or SH57 (sourced from school interviews).

271. Technical Assessment A (Transport) reports that SH1 is not resilient due to high risk of closure from earthquakes, flooding (two recent large-scale events closed the highway between Ohau and Manakau; one for 90 minutes and the other for over 24 hours) and crashes (high severity crashes occurring on SH1 between Manakau and Ohau usually result in highway closures for several hours (24 high severity crashes occurred between 2017-2021)). When a crash occurs where the road is closed there is no alternate route, resulting in traffic congestion. The Technical Assessment A (Transport) reported that for a period 2017/18 to 2021/22, SH1 had an average of over five unplanned closures per year (28 overall); most were due to crashes. The average closure duration was around four hours. Closures on the SH57 section of the Ō2NL Project area have been less frequent than SH1 (five since 2017/18, around one per year), with the average duration also around four hours.

272. According to Technical Assessment A (Transport), the Ō2NL Project will provide a more efficient and reliable connection for those moving between the local communities. This is achieved through improved resilience to natural hazards, improved safety conditions and travel time savings. The social benefits of this, in particular, for those travelling on a daily or weekly

basis, are improved access to work, services, friends / family, and recreation. This benefits all local and sub-local communities. Depending on the frequency of use and reliance on this route, the operation of the Ō2NL Project will potentially have low to moderate positive impacts.

273. Palmerston North and Wellington provide work and education options for local residents. Major health services and specialists including inpatient services are provided in Palmerston North. Residents from the local communities travel to these locations to access these work and employment opportunities and health services.

274. In addition, Levin provides a hub for the surrounding areas for employment, retail, education, recreation (clubs and facilities) and services (health (limited) and professional). SH1 traverses through the main street of Levin requiring those travelling east to west or vice versa and north and south to navigate this traffic, which includes heavy haulage trucks, often experiencing queuing during peak periods. For example, delays for shorter journeys such as through Levin Town Centre were found to be 20% longer during the afternoon peak period (see Technical Assessment A (Transport)). Several residents interviewed reported that due to the traffic within Levin they sought to avoid the centre of Levin, seeking online shopping alternatives.

275. The Project will detour through traffic around Levin therefore reducing such traffic moving through the centre of Levin. This will improve the function of the town centre for working, recreating and retail (for example socialising in restaurants and coffee shops) and provide the opportunity to develop it into a more pedestrian-friendly and attractive destination (as identified in HDC Transforming Levin Town Centre Strategy).[31] It will make traversing across Levin north-south and east-west for work, education, and recreation easier and provide better opportunities to walk and or cycle to these destinations (refer to Technical Assessment A (Transport)).

276. Businesses and employees in the local area are dependent on travelling between Ōtaki and Levin for reaching places of employment and moving goods that businesses are reliant on. The Ō2NL Project will provide improved resilience in terms of providing an alternative route, adaptive capacity regarding population growth and improved safety conditions (reducing the incidents of crashes and potential road closures) (Technical Assessment A (Transport)). It also provides travel savings (refer to Technical

[31] Transforming Taitoko/Levin - Levin Town Centre Strategy - Horowhenua District Council.

Assessment A (Transport)). Combined, these improvements will positively impact people within the local communities reliant on this area for work and transportation of goods, being able to sustain themselves by reliably reaching their destinations and reducing travel time. This is assessed as having a moderately positive impact on all local and sub-local communities.

277. For Levin as a whole, removing traffic (especially heavy vehicles) from the main street will have a moderate positive impact on the way people move around the town centre for work, education, daily routines and play. Technical Assessment O (Economics and Town Centre Impacts) concludes that population growth in the region (partially attributed to the Ō2NL Project) would have flow-on, positive effects on the amount of retail demand that would be directed to the Levin Town Centre. In addition, the changes in traffic flows, especially potential reduction in congestion and crowding in the town centre, will make it a more attractive destination for district residents and visitors. Technical Assessment O (Economics and Town Centre Impacts) concludes effects in combination are expected to more than offset any reduction in town centre sales because SH1 traffic no longer passes through the centre. On this basis, it is concluded that these will be potentially positive impacts on way of life for this local community.

278. For Ohau, Kuku and Manakau communities there will also be long-term moderate positive impacts to way of life particularly for those traversing the existing SH1 daily (at least 50% or more of the population). Depending on the revocation process and the resulting changes to the 'old' SH1 environment, this could be a high positive impact particularly improving the east to west movement for these communities.

279. ***Community –*** Currently SH1 bisects Levin, Ohau, Kuku and Manakau creating some community severance issues due to traffic volumes, including heavy vehicles, an unsafe crossing environment (particularly where there are no signalised intersections, with the exception of Levin, which provides two sets of signalised intersections). As of 2019 volumes of traffic range from 18,250 vehicles per day along SH1 between Ohau and Kuku, 14,100 going through central Levin and 9,500 on SH57 (Technical Assessment A (Transport)). Data taken from Technical Assessment A (Transport) shows that with projected population growth traffic volumes will increase significantly including 20,100 vehicles per day traversing through the Town Centre on SH1 by 2039 with a do-minimum scenario. This indicates that without the Project, the existing 'severance' issue is likely to be exacerbated.

280. Examples of the implications of this severance include:

(a) In Ohau the school and community hall are on either side of the state highway.

(b) For Tūkorehe Marae and Ngāti Wehi Wehi Marae, local iwi is located either side of the state highway and have to traverse the highway to the local urupā during tangi and to access the Marae.

(c) In Manakau some of the residential community live on either side of SH1, and the underpass has limited use, meaning people use their cars to connect within the village (Manakau Community Plan, HDC, October 2020). This includes for accessing the school, café, monthly market and local shops (sourced from local Project consultation and stakeholder interviews).

281. The Ō2NL Project will take traffic off SH1 and SH57, it will provide a dedicated state highway designed to move people through the area. This is unlike the current SH1 and SH57 that must function as both a state highway, the main street, and as a local road providing access to private properties and connecting communities to the north, south, east, and west. Traffic volumes will be reduced (long-term) on the existing SH1 and SH57 (see Technical Assessment A (Transport)). Those highways are likely to go through a revocation process option and become a local road for these communities. The reduction of traffic alone will improve community cohesion and access to all members of the community on either side of SH1 and to a lesser degree SH57. Overall, the Project is assessed as having potentially moderate to high (depending on how the existing SH1 and SH57 function in the future) positive impacts on community cohesion.

282. ***Health and Wellbeing -*** As specified in Technical Assessment A (Transport), over the five-year period to 2021 there have been crashes resulting in 72 deaths and serious injuries ("**DSI**") on this section of SH1 and SH57. The impacts of these losses can impact both the health and wellbeing of both those injured and those connected to those injured or killed.[32] Local communities have spoken of these losses and the magnitude of impacts both on the household and wider community (sourced from interviews during social research and in consultation feedback and Project engagement). There is a general community acknowledgement of a need for a safer

[32] The evidence base for this is well established. One example includes the Ministry of Transport paper: The Social Cost of Road Crashes and Injuries, June 2019 Update (ISSN 1173-1370).

connection and the need to minimise crashes. Those spoken to in interviews and public consultation reported stress and anxiety in relation to crossing the current SH1 and SH57 particularly during high volumes of traffic (ie commuting and school drop-off and pick up runs).

283. As noted in the assessment of regional impacts the Ō2NL Project is expected to save in the order of 35 DSI's per five-year period following its opening (Technical Assessment A (Transport)) by reducing traffic turning onto the new state highway, separating traffic and providing an appropriate high-speed environment. The reduction of crashes will have long-term significant future social impacts on the local area by significantly reducing the likelihood and severity of outcomes of crashes, and associated impacts such as being witnesses to these events (particularly those living along SH1), having these events occur within their local community (stress and anxiety) and being connected to those directly or indirectly impacted. It is also likely to create a safer environment on SH1 and SH57 by reducing traffic therefore potentially reducing existing stress experienced on these roads. This is assessed as having high positive impacts on the health and wellbeing of local communities and sub-local communities.

284. ***Quality of living environment -*** Currently, numerous residential properties are located directly adjacent to the existing SH1 and SH57. SH1 also acts as the main street through Levin. The high traffic volumes, and particularly heavy vehicles, reduces the amenity of the main street of Levin and living environment for these residential properties. In particular, for Levin, residents consulted with reported aspirations for the future that included being able to enjoy the main street more, go for walks, and have coffee without the loud traffic noises and smell from stock trucks detracting from the experience (Appendix E.1 and Appendix E.3). The Levin Town Centre Strategy (HDC November 2018) recognises that the Project will divert traffic from the main street (which may have business impacts – discussed later in this assessment) giving the Council a greater ability to alter the layout of the main street to make it more pedestrian friendly and provide other revitalisation opportunities.

285. For residences and businesses located along the existing SH1 and SH57 (particularly on the western side) in North Ōtaki, Manakau, Kuku, Ohau and Levin, the reduction of traffic will reduce noise and provide an ability to appreciate a more rural or suburban environment including the outdoor environment. For each local community, this improves the quality of

environment (removing traffic off SH1 and providing opportunity for future enhancements) for the existing SH1. SH1 is the main transport corridor through each of these communities, and of which these centres are located around.

286. This is assessed as having potentially high positive impacts for all of Levin as it is focussed on the town centre (noting that negative impacts of traffic being diverted are discussed further down in this report) and low to moderate positive impacts for the Ohau and Kuku, Manakau and North Ōtaki communities (as it is dependent on future use and development of the existing SH1). It is recognised that the some of the existing negative quality of environment experiences of SH57 and SH1 will be transferred to other members of the community who are now located near the new state highway. It is noted, however, that the new state highway will generally be located much further away from houses (as compared to current SH1), have improved road surfaces which provide much higher standards of noise management, and will include extensive landscape planting and stormwater treatment measures to integrate the road into the landscape.

Potential adverse operational effects

287. Many potentially negative social impacts associated with the Project are of a more fine-grained spatial scale, as they relate to the change of physical and consequentially social environment immediately around the Project. As discussed above, these have been assessed at a local and sub-local level specifically.[33] This approach is considered appropriate to acknowledge the particular vulnerability of this part of the community and the different experiences for them (relative to the wider regional community).

Levin – Local Community – potential adverse operational effects

288. ***Way of life -*** For Levin as a whole, people currently work, educate / learn, access services, and recreate within Levin and out of town, in particular in Wellington and Palmerston North (as indicated in survey, traffic data and community consultation). The Project will shift the state highway from the centre and east of town to further east. Local roads will be reconnected over the new state highway generally aligned east to west. For most (noting the difference for the sub-local communities discussed below) at the local community level the physical changes in accessibility and connectivity are

[33] Acknowledging that the degree of impact generally increases the closer you are to the Project corridor and that these are experienced by a smaller part (or subset) of the wider 'community of impact'.

not considered to have potential adverse impacts on way of life (see Technical Assessment A (Transport)).

289. An area of potential local community scale change is the accessibility of recreation opportunities to the east of Levin particular along Kimberley Road to Ohau River and Kimberley Reserve. The direct link from Kimberley Road in and out of Levin is being severed and as a result, those currently able to access this connection via very short journeys from one end of Kimberley Road to the other will take up to four minutes longer (refer to Technical Assessment A (Transport)). This is not considered to be of a sufficient scale or extent (given the frequency of this particular movement and the extent of the population impacted) to be any more than a negligible adverse impact on way of life for the local community overall.

290. It is recognised that there are some local businesses such as horticultural properties and agricultural farms impacted by the Project that potentially provide employment for people within Levin and provide income for the owners of these businesses. While the direct business impacts for owners and operators are managed through the PWA process, it is acknowledged that the removal of some businesses will also result in the potential loss of jobs for some local employees. While the specific number is not quantified, the following observations are made:

    (a) At the local community level there are five fully impacted businesses (there are additional partial impacts however at this stage it is unknown if businesses will continue until property negotiations are undertaken). This includes farms, market gardens and orchards, who may employ people from the local community (the exact numbers are unknown). However, given the scale of the business impacts, relative to the scale of rural business in the area, it is assessed that this is a small impact. For example, using a conservative estimate[34] of 30 employees coming from the local area (eg ten people for each market and two for farms that are fully acquired (recognising farming is likely to be self-employed / low employment and market garden may be higher but seasonal), this would be less than 1% of those currently employed in Levin.

[34] This is a conservative estimate at the sub-local level. The Economics and Town Centre Impacts Assessment (Technical Assessment O) has made an assessment at the regional level based on productive land and yield, estimating overall economic loss equated to around 25 jobs for the whole project area (some of which will be with North Ōtaki) which represents less than 0.2% of the economy.

(b) Further, the nature of employment in this industry often relies on an employment base that works across a number of horticultural properties (eg recognising the production and seasonal peaks of activity) and therefore employee numbers are likely to be less.

(c) There is a wider socio-economic change anticipated by the Project relating to increased transport efficiency resulting in productivity and economic gains (Technical Assessment O (Economic and Town Centre Impacts)).

291. For the above reasons, it is assessed that this is a low potential adverse impact experienced at the local community level.

292. There is also commentary and views expressed by locals that the removal of through traffic from SH1 through Levin could both see a downturn in retail and hospitality activity from travellers passing through the area and, conversely, that there will be increase in trade as the transport route through the area will be quieter and the town centre a more attractive place to shop/ visit.

293. Technical Assessment O (Economic and Town Centre Impacts) assesses this, and reports that it is highly likely that there will be a temporary adverse economic impact from loss of some business. However, it is anticipated that within a fairly short time of the Ō2NL Project opening, induced growth and its associated additional spend in the town centre will outweigh the impact of a loss of passing traffic on SH1. Furthermore, it is understood HDC has plans to revitalise the Levin Town Centre, which relies on the Ō2NL Project taking through movements out of the town centre (HDC's Revitalising Levin Town Centre Strategy). From a social perspective, the temporary decline could result in reduced income of businesses and reduced household income for those businesses or employees of those business impacting how people support themselves.

294. Overall, it is assessed that without mitigation (such as signage along the new state highway directing people to services within Levin) for Levin, the operation of the Project will initially have potential very-low to low negative impacts on way of life as businesses adjust to changes of activity (removing traffic from the main street) and people adjust to new local road connections. Over time this is anticipated to reduce to negligible (the positive impacts of removal of traffic have been captured in positive impacts above).

295. ***Community -*** Currently both SH1 and SH57 creates some severance within Levin due to traffic volumes, heavy vehicles, reduced resilience of the corridor and safety issues; particularly for pedestrians crossing these corridors, as SH1 and SH57 bisect residential and commercial areas. However, SH1 and SH57 do have permeability in that the local roads directly link in, businesses and houses are located alongside them, and they function both as a state highway and a 'local road' for the Levin community. This permeability mitigates the experience of a severance (particularly for those travelling by car).

296. The Project will remove 'through traffic' from the centre of town (existing SH1) and on the eastern outskirts (SH57). The new state highway will create a less permeable border to the east of Levin. This is due to fewer connections to local roads being provided and its function as a higher speed through road. Whilst it is acknowledged that there are local road connections retained, some people interviewed (see Appendix E.1 and Appendix E.3) during survey interviews noted concern that the rural and urban Levin community would become more segregated. This may impact cohesion east to west with both established communities to the east and the proposed Tara-Ika development.

297. In regard to Tara-Ika (HDC Plan Change 4) the Ō2NL Project is referenced in the Tara-Ika master plan (see Figure E.10 above), but future residents may feel separated from the West Levin as state highways tend to form physical barriers to community permeability. It is noted that all local roads will be reconnected and HDC are lodging an application for an east-west arterial across the Project connecting Tara-Ika, providing additional connections and mitigation for this separation. Additionally, the proposed designation has been identified in the planning processes for this development area and the community.

298. Furthermore, connections between and to community services are retained (and in some cases enhanced due to the improved safety environment of the existing SH1 and SH57 and cycle / pedestrian provision on the bridge). No identified community assets are physically impacted by the Project. At a local community scale, this reduces the potential that severance effects will give rise to adverse way of life impacts.

299. At the Levin community level, the degree of community change through acquisition is not considered significant:

(a) Out of the 61 full property acquisitions and 23 partial acquisitions within this approximately sub-local area approximately 55 houses are impacted. This is approximately 0.7% of Levin households (as of Census 2018) - noting that this will be an approximate number as some will be subject to upcoming property negotiations.

(b) The impacted houses are spread from north-east Levin to the southern extent of this local community. There are clusters of impacted houses around Sorensons Road, Waihou Road and MacDonald Road.

(c) In Levin at the last census 34% had lived in their house less than a year demonstrating a higher degree of movement.

300. In this regard, while it is acknowledged that the impacts of property acquisition will be felt at a household level and have potential adverse impacts for 'sub-local communities' (discussed further below), this is not assessed as a risk or potential adverse impact that could destabilise or adversely impact overall community cohesion at the local community level.

301. As noted in the positive impacts section, the Project aligns with Levin community aspirations and improves sense of place and cohesion. Overall, the impacts are largely at a sub-local level. At a local community scale, this is assessed to impact less than 1% of the community, minimising potential disruption to community cohesion (noting further than impacts will adjust / reduce over time). Roading links will be retained, connecting the community for both vehicles, walking and cycling. Therefore, the potential adverse impacts identified will have very low to negligible impacts on the overall Levin community.

302. ***Health and wellbeing -*** At a local community level the main changes to the environment will be having a larger state highway near some residential properties (discussed further in the sub-local level assessment below). Additionally, provisions will be made for the navigation of cyclists and pedestrians across the state highway at the Tararua interchange (grade separated with Tararua Road over the top) and the two northern interchanges (both of which are roundabouts). Given the existing environment makes no dedicated provision for pedestrians and cyclists wanting to cross the existing SH57 it is considered that connectivity for these users will be improved by the Project. Overall, it is assessed that there are no potential adverse impacts on health and wellbeing for the local Levin community.

303. ***Quality of living environment -*** As noted above, the proposed designation does not traverse any major community assets within the Levin local area that would change the amenity. Community members engaged with reported valuing a thriving main street but currently identified that the presence of heavy vehicles on the existing state highway through the centre detracts from environmental amenity (sourced from Project consultation, interviews, and community meetings (Appendix E.1 and Appendix E.3)). In this respect, it is assessed that the removal of these vehicles from the town centre will provide opportunities for an improved sense of place within the town centre (this is supported by the Levin Town Centre Strategy (HDC November 2018)) which notes the deterrents of heavy traffic on the main street. Therefore, it is assessed that there will be no potential negative social impacts on Levin's quality of environment at a local level.

Levin – Sub-local Community – potential adverse operational effects

304. ***Way of life -*** Currently these sub-local communities that are east of the proposed designation have local roads that connect to the Levin town centre via SH57. As a result of the Project, according to the Technical Assessment A (Transport), trips will be altered for:

    (a) Kimberley Road (trips to and from one end of Kimberley Road to the other will take approximately four minutes longer). This may affect activities such as visiting neighbours or accessing Speldhurst Retirement Village for recreation activities;

    (b) Waihou Road (it is being severed and those on the eastern side will have around 2.5 minutes extra travel time to go south into Levin). This may be for work, education or other services provided in Levin; and

    (c) Avenue North Road (those wanting to go north will have to travel 800m south to access the southern intersection of Avenue North Road and SH1, taking approximately 1.3 minutes longer). This may be for work or education in places like Palmerston North.

305. Other individual properties may have access changes where their current access to SH57 is severed.

306. This will change how people in this specific area move about and connect to with local the community, particularly as for many, one or more trips a day are made into Levin for services, school, and work. This is only for a sub-set of the sub-local community.

307. Technical Assessment A (Transport) assesses that the changes in travel times for this sub-local community will have minor adverse effects. It is acknowledged, however, that this will depend on how often a person travels the journey that is impacted (by increased travel times) on a daily basis. Therefore, it is considered that in social terms the changes for some are very low but for others it may have low adverse effects.

308. For those walking and cycling (reports from community groups, schools and residents surveyed and interviewed indicate that this is currently a very small number) that are directed to use the Northern and Tararua interchanges, the journey may be longer due to detours and traffic volumes when crossing (albeit safer).

309. The Project may impact how people live and work from home. With anticipated changes to levels of background noise, some sub-local residents reported (sources: interviews and in the survey) that they may alter their lifestyles and spend less time outdoors due to changes to the environment from the Project. Technical Assessment B (Noise and Vibration) assesses that the "likely subjective" response to noise identifies 42 properties (noting many are subject to acquisition) that will notice a change in the noise environment and may adjust behaviours in response (ie short periods of blocking out the noise). For approximately eight households in this sub-local community, it is assessed that this could be more disruptive on way of life. Of those eight, those not acquired will be assessed for further mitigation (ie building modification). There may also be cumulative impacts for those living between SH57 and the new state highway (noting there are only a few houses in this location) as even though they are used to a noisier environment from SH57, they may have positioned their outdoor / quiet activities away from SH57 and now these will also experience the noise of the Ō2NL Project.

310. The extent of this impact is for those within close proximity and at a higher disturbance level. It is assessed that this is approximately eight properties. For this small subset of the sub-local community, there may be greater changes to how people live (although this can be reduced through noise mitigation). A greater portion of the community will change how they move around the area; however, the consequences are low in potential severity (small increase in journey time). Therefore, there is overall very low to low potential negative impacts.

311. ***Community*** – Currently, many of the streets off SH57 operate as smaller street communities, including activities such as neighbourhood watch, informal social gatherings, organised community gatherings or just general neighbour relationships. For Sorensons Road and Waihou Road, the street community will change more noticeably with Waihou Road losing the eastern side and the connection to SH57 and Sorensons Road losing the most southern portion.

312. There are approximately 220 households in this sub-local community. Approximately 35 houses (16% of households) will be impacted (though it is noted a small portion may build on another part of their section, if their property is only partially impacted). On smaller roads this will be felt more keenly, as well as where the household has been there for a long time or if occupants at a property have a role in local community or street functions. For these communities it is anticipated that there will be low to moderate impacts and over time these communities will create a 'new normal' responding to the changed community dynamics. It is noted that some of these houses may be purchased but not removed and in the future new people may move into the sub-local area.

313. Following the construction of the Project there will be a small number of properties located between the new state highway and SH57 (approximately eight existing residential dwellings). These households are essentially severed (the new corridor forms a physical barrier) from the eastern community they were likely connected to (this is more likely for those located on side roads than those located off SH57). This subsection of the community (existing, and future community of the portion of Tara-Ika growth area located between the Project and SH57) may form its own sub-community. Other areas will retain connections such as Sorensons Road (via the underpass).[35]

314. In summary, there will be a period of transition where sub-local communities adjust to smaller communities or changes in residents. Local road connections will have been re-established, but a smaller part of the sub-local community may feel more isolated due to having the separation of the new state highway. It is anticipated that people will adjust and future development indicated will establish new communities. Therefore, potential adverse

[35] This is an example where previously options were explored to separate this southern section completely, isolating them from the remainder of the street. Design has been adjusted to provide connection to the existing community.

effects of this will reduce over time. It is therefore assessed to have a potential low negative impact on community cohesion.

315. ***Health and wellbeing -*** Technical Assessment B (Noise and Vibration) notes that the current road traffic noise environment ranges from a distant hum to a prominent noise. Technical Assessment B (Noise and Vibration) indicates that even with mitigation some residents may experience annoyance and sleep disturbance due to the degree of change from the existing environment (noting that this will be a small number as the assessment estimated sleep disturbance health outcomes likely for approximately 18 people across the whole project).

316. Residents travelling to central Levin within this sub-local community have to cross SH57. Some residents in interviews and during Project consultation reported that turning right onto SH57 was a stressful experience (as they often felt unsafe) primarily at peak traffic times. Some consulted with reported near misses or being impacted by a crash on this corridor (directly or indirectly). Technical Assessment A (Transport) reports that five fatal and serious crashes occurred on SH57 between 2017-2021. As noted above, it is anticipated that the reduction in traffic volumes (from being diverted onto the new state highway) will improve this environment and therefore health and safety wellbeing outcomes.

317. Overall, there will be improvements to safety and the ability to cross SH57. In terms of potential negative impacts, it is assessed that the Project may potentially have negligible to low negative impacts on health and wellbeing due to the stress of the change of environment and change of noise environment for some members of the east Levin sub-local community. It is anticipated that these will reduce over time.

318. ***Quality of the living environment -*** Those currently residing in close proximity to SH57 already experience noise and high traffic volumes from SH57 (even if it is semi-rural). For others, located further away from SH57, the current environment is quieter. Some residents reported (in interviews and surveys (Appendix E.1) and Project consultation (Appendix E.3)) that privacy and connection with nature (eg bird song) are important features of living in this environment. The operation of the Ō2NL Project will change the living environment for these residents (particularly where they are currently some distance from the existing SH57), by increasing traffic noise (increase

of noise environment reported in Technical Assessment B (Noise and Vibration).

319. For those close to the new interchanges or between SH57 and the Project there will be less connection to the more rural environment to the east which may impact their desire for a more rural lifestyle. This is a smaller portion (less than 20 households identified on project aerials) of this sub-local community (taken from the location of houses in the sub-local community), as most of this area is close to SH57 already and the urban environments of Levin. It is also close to the planned Tara-Ika growth area which is currently part of the rural environment but will be changed to urban as discussed above.

320. For residents of Waihou Road it is assessed that there will be a high degree of change due to the western side of the Road being acquired by the Project changing the street environment (the SUP and landscaping potentially providing some buffer).

321. Overall, these changes are assessed to have a low to moderate negative impact on the quality of the living environment due to long term changes to the noise and visual environment and relative to the quality of the existing living environment. The biggest degree of change; residents on Waihou Road and residents who currently live in quieter environment farther from SH57 and/or SH1 and will be located in close proximity to the new state highway.

Ohau and Kuku Local Community - Local Community – potential adverse operational effects

322. ***Way of life -*** The local roads will still connect to SH1 except for changes made to McLeavey Road (noting the difference for the sub-local communities discussed below), which will not impact travel time (see Technical Assessment A (Transport)). At the local community level, the physical changes in accessibility and connectivity are not considered to have potential adverse impacts on way of life.

323. It is recognised that there are some local businesses (such as horticultural properties and agricultural farms) that are subject to property acquisition, and which may provide employment for people within Ohau and Kuku and provide income for these businesses' owners. While the direct business impacts for owners and operators are managed through the PWA process, it

is acknowledged that the removal of some businesses may also result in the potential loss of jobs for some local employees. While the specific number is not quantified, the following observations are made:

(a) Three businesses (to be acquired) are fully impacted by the Project. These are farms (additional businesses are partially impacted but at this stage prior to property negotiation it is not understood if the business will continue), all of which may employ a percentage of the local population, (the exact numbers are unknown), noting farms are more likely to be self-employed.

(b) Even at a conservative estimate[34] of approximately six employees coming from the local area (noting only three properties are full acquisition – all farms), this represents approximately less than 1% of those currently employed in Ohau and Kuku as of 2018 population. It is noted that agriculture and horticulture is not identified in the top three occupations in this area.

(c) As most business impacted are only partially impacted it is assumed that some economic activity and therefore employment may continue on these properties.

324. With regards to how people move around the area, local road access is maintained, or is subject to minor changes, and therefore it is assessed that overall, these communities will not be negatively impacted in terms of way of life. In terms of way of life and how people sustain themselves this is more likely to be very low at a community level due to the small extent of the community likely to be impacted and anticipating people will find alternate sources of income.

325. ***Community -*** Currently SH1 severs Ohau and Kuku with community resources such as churches, community hall, school, reserve, and marae being located on both sides of SH1. SH1 functions as both a local road and state highway for locals. People who responded to the survey (see Appendix E.1) and who were interviewed identify being connected to both their local community and a larger community depending on where they work, where children go to school, or clubs they are involved in. Many identified their local community as Ohau / Kuku and the wider community as Levin. The community already experiences community severance from SH1 which forms a physical barrier to community cohesiveness in that they are dependent on a car to connect east-west.

326. The Project may improve the SH1 environment by lessening traffic thereby reducing the existing severance. However, the Project will create a physical barrier, where some located to the east of the Project may feel more physically separated from those located to the west (noting local roads are connected).

327. It is noted that due to property acquisition the local community may experience changes to community stability. Approximately 5% of the total households in Ohau and Kuku are impacted by the property acquisition process stretched along the project corridor. This is likely to have minimal impacts at a local level. This will be dependent on the role people in these households play within the local community in terms of the scale of local community impact.

328. The new state highway is located near parts of Ohau and Muhunoa East that are currently very rural in character and are further away from major roads. The Project will change the rural character of these areas by creating a busier road environment and therefore changing the visual and acoustic character of the area.

329. Overall, the negative impacts to community cohesion and character at a local level to the whole of Ohau and Kuku is assessed as a potentially very-low to low negative impact. It is anticipated people will adjust over time at this local community scale; and most impacts are restricted to a smaller subset and spread across the area.

330. ***Health and wellbeing -*** At a local community level, the change (noting impacts are identified at a sub-local level) in the health and wellbeing of the community will be largely centred around the treatment and management of the existing SH1. The community village and denser residential settlement is in closer proximity to SH1. Traffic reduction and potential road safety improvements and the revocation process is likely to have positive impacts on the health and wellbeing of the local community. Beyond this, many at a local scale will not use the new state highway unless they choose to join at Tararua interchange to go north or south and travelling longer distances for services, work, education and or recreation. Overall, the Project will have no negative impact on health and wellbeing of the local community.

331. ***Quality of living environment –*** At a local level, changes to the quality of living environment relate to proximity to the new state highway and are therefore largely experienced only by the sub-local community.

332. People in this community value the connection to the sea (to the west) and the Tararua Range (to the east) (see Appendix E.3 and the CEDF (Appendix Three to Volume II) for further details). Whilst the road network connections remain, the Project creates a bigger physical barrier to this connection than the existing SH1 although new vantage points will be created on local road overbridges across the Project.

333. Therefore, it is assessed that there will be very low potential negative impacts on the quality of the living environment for Ohau and Kuku at a local level. Whilst this applies to the entire local community it has a very low level of severity and people are likely to adjust to the new environment over time.

Ohau East, Muhunoa East (Western portion) and Kuku East Sub-local community - potential adverse operational effects

334. ***Way of life -*** Individual property impacts, particularly acquisition, will be largely managed by the PWA process. However, for few who continue to operate farms, where they will now be located either side of the new state highway there will be changes to their daily operations and how they move machinery or stock across the property (this will be confirmed when property negotiations are complete). The PWA process will consider operability and access in negotiations and if not practicable purchase of the smaller portion of land is a potential mitigation.

335. For some members of these sub-local communities the way they currently enter Levin via Arapaepae, and Kimberley Roads will change, and if they work in the southern portion, they will have to travel up to Tararua interchange. For some who have private accesses severed this may change how they access the community (although it is noted that within Kuku those properties where access is impacted and travel times are increased are not currently residential (land only) (Technical Assessment A (Transport)).

336. Overall, there are potential low negative impacts on way of life. This is due to the low likelihood that this will occur, that less than 10% of the sub-local community will be impacted, and overall consequence (in relation to the community only a few will have moderate changes to the way they work and sustain themselves – which can be mitigated).

337. ***Community -*** Within the local street communities, it is noted that some have formed smaller sub-communities (source: surveys, resident interviews and consultation meetings (Appendix E.1 and Appendix E.3). For these small

communities the number of households impacted and therefore moving (for removal or to be owned by Waka Kotahi)[36] makes up approximately 25% of sub-local households. This will impact the remaining community particularly if impacts are borne by long established community members with relatives in the area, and will potentially change the sub-local community dynamics. This could potentially leave some without neighbours and more physically isolated (this was commented on particularly in consultation during the option assessment phase where it was mentioned family members would be leaving the area).

338. For others living between SH1 and SH57, they will be separated physically from the rural community (although will still have local road connections). The local road connections will retain most community links but at a street level, although connected, they will now be either side of a large state highway, although the current SH1 and SH57 will experience much less traffic (see Technical Assessment A (Transport)).

339. These communities will experience quite a bit of change and disruption to community cohesion initially due to the proportion of households impacted and potentially leaving the sub-local community (up to 25% of households - noting some may rebuild on the property where there is partial acquisition). Local road connections are retained via over or underpasses, but the physical presence of the Project creates a physical barrier between neighbours.

340. Overall, it is assessed that there may be moderate negative potential impacts on the sub-local community (impacting over a quarter of the community), this may reduce to low over time as communities' transition and adapt.

341. Health and wellbeing – Technical Assessment A (Transport) notes minimal changes to the way people will travel around the sub-local community and a safer roading network. Technical Assessment B (Noise and Vibration) identifies a high degree of change for the properties located in the more rural and remote section of this community. Potentially, these changes could create disruptions such as sleep disturbance and annoyance for some (this may be subjective). This is due to the degree of change from the existing noise environment (Technical Assessment B Noise and Vibration).

[36] Note this is a provisional number subject to property negotiations.

342. Overall, these changes in the visual and noise environment, connectivity and changes in travel patterns may cause stress for some households (in close proximity to the Project) and individually some initial sleep disturbances (this is likely to be a small percentage people across the whole corridor identified as potentially experiencing sleep disturbance according to Technical Assessment B (Noise and Vibration)). There may be potentially very low to low negative impacts on the health and wellbeing of the sub-local communities (impacts are anticipated to reduce over time as residents adjust to the changes in environment).

343. ***Quality of the living environment -*** For approximately a third of this sub-local community, residents live in close proximity to SH1 and experience a noisier, busier environment within a rural location. Properties further from SH1 currently are more rural in nature and people report the rural / quiet / natural living environment as important including the privacy and connection with nature this environment provides (Appendix E.1 and Appendix E.3).

344. Where sub-local residents are currently some distance from SH57 and SH1, the Project will change the sense of place from a quiet rural area to being in close proximity to a major state highway and may negatively impact their experience of their living environment. The greatest degree of change is in rural Ohau / Muhunoa East due to the current quiet environment and the degree of change residents will experience from the introduction of traffic noise from the new state highway.

345. For those close to both the existing SH1 and the new state highway, there will be reduced amenity as there are visual changes and a loss in connection to the more rural environment to the east. This is particularly for those adjacent to the corridor further from SH1 in the more rural areas where the environment will become more urban as a result of living between two state highways. Technical Assessment D (Landscape, Visual and Natural Character) notes that the Project will have low-moderate impacts on the rural amenity (prior to mitigation) of this sub-local community. The assessment notes a higher degree of impact on private views from households (noting planting mitigation is recommended to mitigate this).

346. Collectively, the impact on the sense of place and quality of the living environment for those currently living in a more rural / remote environment is assessed as potentially having moderate negative impacts. This is due to

the long-term degree of change discussed above for more than 10% of the sub-local community.

Manakau local community – potential adverse operational effects

347. ***Way of life -*** Manakau Village is the hub for community activities for the local community. The community is made up of the village (located on either side of the existing SH1) which has more dense residential housing, moving to more lifestyle blocks, including the newer development of Manakau Heights, and then more rural communities to the north, south and west. These communities travel both west and east, and north and south depending on where they work, schools are located and the location of the clubs they belong to are; this may be Ōtaki or Levin or further afield. They are dependent on the existing SH1 for all north - south travel and connecting the community east and west.

348. The Ō2NL Project is located on the eastern edge of the village outskirts. It is parallel to SH1 travelling north and south on the eastern side. For most people in Manakau, there will be little change for them as they will continue to use SH1 albeit the traffic volumes will reduce, and safety conditions will improve (as noted in positive impacts). The main local road connectors east will be retained: South Manakau Road (an underpass - local road under), Manakau Heights Road and North Manakau Road overpasses (local road over).

349. People will be able to move around the community as they currently do (impacts at a sub-local level will be discussed below) and improvements to SH1 through traffic reduction and the revocation process will have further benefits (discussed in positive impacts). Some local residents reported during Project community meetings that they thought that less traffic will use their local roads as 'rat-runs' to avoid SH1 congestion (see Appendix E.3).

350. At a local level approximately 34 properties will be fully impacted and approximately four partially impacted.[37] It is recognised that there are some local businesses such as horticultural properties and agricultural farms impacted by the proposed designation that may provide employment for people within Manakau and provide income for the owners of these businesses. While the direct business impacts for owners and operators are managed through the PWA process, it is acknowledged that the removal of

[37] This is provisional numbers these will be subject to property negotiations and may be partial or full acquisitions.

some businesses will also result in the potential loss of jobs for some local employees. While the specific number is not quantified, the following observations are made:

(a) Three local businesses will be fully acquired by the Project. This includes a farm and two market gardens, each of which may employ local workers (the exact numbers are unknown). At a conservative estimate,[34] this could affect around 22 employees (ie ten employees per market garden and two per farm).

(b) There are additional businesses partially impacted, however at this stage it is unknown if they will continue to operate. This will be confirmed during property negotiations.

(c) However, as an indication of the potential scale of impact, the loss of around 20 – 25 jobs[34] represents approximately less than 5% of the working population in Manakau (noting this could be even less, as it is likely that some of these employees do not come from Manakau and some properties are run by self-employers).

(d) As most business impacted are only partially impacted, it is assumed that some economic activity, and therefore employment may continue. It is noted that horticulture and agriculture is not among the top three occupations (54% of local employment) identified for this local community.

351. For these reasons it is assumed that these estimated employment impacts are unlikely to be fully realised and overall are likely to have low negative impacts.

352. Reduction of volume on SH1 may also impact a few businesses dependent on passing trade. Technical Assessment O (Economics and Town Centre Impacts) assesses that those effects on centres such as Manakau will be very small due to the limited range of convenience-orientated retail and service businesses.

353. The Project is assessed to potentially have low negative impacts on the way people live, work, sustain themselves and recreate at a local community level. This is due to local connections being retained and the likelihood of the extent of employment impacts assessed as low.

354. ***Community -*** Currently, SH1 severs Manakau with community resources and residents being located either side of SH1 such as the domain, market, school, reserve, and local store. People in the social research survey (Appendix E.1) identified as being connected to both their local community and a larger community depending on where they work, where children go to school, or clubs they are involved in. Many identified Manakau and Levin or Ōtaki as communities they belong to.

355. Some residents and stakeholders (source: stakeholder and resident interviews – Appendix E.1) reported changes to the community dynamics over the last decade with many new houses being built and there being an 'old Manakau' and 'newer Manakau'. Currently, the village on the eastern side naturally extends out into larger lifestyle properties and then the rural community, doing the same on the western side where there is a cluster of houses and services and then transitioning to lifestyle and rural properties. The new corridor will create a physical barrier on the eastern edge between these communities (the rural and residential) in particular the village and Manakau Heights area, where much of the new building has been focused, and the more rural sections of the community to the northeast and southeast.

356. The Project will also result in residents leaving due to the property acquisition process if a 'like for like' property cannot be located (due to limited supply stock in Manakau). Additionally, others may choose to leave (as some have indicated) due to the change in environment. Approximately 4% of households within the local community are impacted (removed or acquired by Waka Kotahi). It is noted that in the last census approximately 28% of households had lived at their location less than a year; this is more movement than is anticipated by the Project in terms of households leaving / moving (noting local road connections are retained).

357. It was reported by some residents during public consultation and stakeholder interviews that they were concerned that the character of the community would change particularly around the eastern sector of the village that would now be between SH1, the railway and the new state highway. These anticipatory changes related to being visually connected to nature, connected to its rural surroundings and being "tucked away" in the hillside. Technical Assessment D (Landscape, Visual and Natural Character) assesses that the Project largely avoids adverse effects on Manakau Village itself (acknowledging sub-local impacts).

358. Overall, for the local Manakau community as a whole, the Project is assessed to have potential low negative impacts on community cohesion due to the small degree of change likely to be experienced at this scale.

359. ***Health and wellbeing -*** At a local community level the change (noting impacts are identified at a sub-local level) in the health and wellbeing of the community will be largely centred around the treatment and management of the existing SH1, based on road safety improvements and the revocation process. I t is also noted that reduced traffic on the existing SH1 will result in noise reduction in this area. Beyond this many on a local level will not use the new state highway unless they choose to join at the Ōtaki or Tararua interchange to go north or south for travelling longer distances for services, work, education and or recreation. Overall, the Project will have no negative impact on health and wellbeing at a local community level.

360. ***Quality of the living environment -*** A few local residents during Project consultation described Manakau Village as being tucked away, a 'hidden gem' and feared that the proposed designation would change that feeling and amenity. In the Manakau Community Plan (2020) people identified connections with nature as a highly important value. The proposed designation effectively creates a physical border around the eastern edge of the village severing its currently uninterrupted connection with nature and the Tararua Range (it is acknowledged this is primarily a 'severance' of visual connection rather than change in physical accessibility). Technical Assessment D (Landscape, Visual and Natural Character) assesses that the Project largely avoids adverse effects on Manakau Village itself (acknowledging sub-local impacts). It notes that the Project will have a good fit with the landscape patterns behind Manakau but will cut across the picturesque landscape of South Manakau (although discussed at a sub-local level). At a local level this will impact the quality of the living environment for this sector of the local community.

361. Therefore, it is assessed that there are potential low negative social impacts on Manakau at a local level. It is assessed that this effect will be experienced by the whole community, particularly for those that value this connection to the natural environment (the physical barrier, noting that there are local road connections). The adverse impacts on quality of environment are most greatly felt within the sub-local communities concentrated around the proposed designation; these are discussed in the assessments of the sub-local communities below.

Manakau – Sub-local Communities – potential adverse operational effects

362. ***Way of life -*** The local road connections will be retained including the main local road, North Manakau Road, South Manakau Road (an underpass - local road under) and Manakau Heights Drive overpass (local road over). Manakau Heights Drive will have some aspects of amenity improved, including a new footpath where it is realigned including the section of Honi Taipua Street across the new state highway.

363. For those operating farms, there may be some property level changes where the Project severs their farms (approximately seven properties, subject to final property negotiations). This will change how people work in terms of moving stock and machinery. Changes to private accesses onto roads may impact how properties currently function, for example accesses to cow sheds, stock yards or accessing community resources etc.

364. Due to changes to both noise and visual amenity, some residents within 200m of the Project may experience changes in how they choose to operate outside, such as recreating outside.

365. Overall, those remaining in the sub-local community will be able to continue carrying out daily activities and utilising restored local road connections. There may be some changes to operations due to access and change in size in property and amenity of property (potentially limiting outside recreation). There will be adaptation, however it is likely there will be longer term impacts to a sub-section of this sub-local community (less than half). Therefore, it is assessed that there are potentially low negative social impacts on way of life.

366. ***Community -*** Some small neighbourhood communities appear to have established throughout this area ie Manakau Heights, Mountain View, North Manakau Road and Manakau Village itself. For these small communities, even a few households leaving will temporarily change community cohesion and stability at the sub-local level, leaving some without neighbours. Approximately 18% of households within the whole sub-local community will be acquired (for removal or owned by Waka Kotahi). This impact will be felt particularly strongly if those leaving are long established community members with relatives in the area. It is noted that around the Manakau Heights Drive area much of the land has been sub-divided and cul-de-sacs have been created for future sub-local communities. As a result of the Project many have remained empty and now approximately 15 of these sections are to be, or have been, acquired for the Project. This means that

this sub-local community will not develop as originally intended and those earlier residents that have already developed may become or feel isolated.

367. In addition, the Project will create a physical barrier to those living in the east of the village from feeling connected to the community (noted this will be four-five properties). An access road will be provided, however due to property acquisition and the physical barrier the small community to the east may become more isolated and lose some neighbours.

368. Due to the small populations of these sub-local communities, at a small scale, these changes will impact a large portion of the remaining sub-local community, in particular Manakau Heights. It is assessed that the community will adjust and re-form over time. The Project is assessed to have a low negative impact on the current sub-local community in terms of community cohesion, and stability that is likely to reduce to very-low / low over time as the community adjusts to the changing character of the environment.

369. ***Health and wellbeing -***Technical Assessment B (Noise and Vibration) identified that in Manakau Village and Manakau Heights there are properties identified as being impacted from operational noise from the Project as they overlook the new state highway. The subsequent environmental changes likely to be experienced by sub-local residents in these areas could cause high levels of stress and potential anxiety. Sleep disturbance could be experienced as residents adjust to the environmental changes (Technical Assessment B (Noise and Vibration) assessed approximately 18 people across the corridor may experience sleep disturbance due to the Project; a small percentage of these are likely to be within this sub-local community).

370. These impacts are dependent on individual responses to the environmental changes and are likely to reduce over time. Overall, at a sub-local community level the potential impacts on health and wellbeing are considered to be low.

371. ***Quality of the living environment -*** Some members of the community already live in close proximity to SH1 and experience a noisy and busy environment even though they are rural. During stakeholder interviews and Project community meetings (Appendix E.1 and Appendix E.3) residents (particularly those living on a ridge) reported that given the amphitheatre type topography (east and southeast) they can hear the existing SH1, although it is largely background noise. For others located further away they reported little existing noise.

372. Those further away from SH1 (including on the ridge) reported during stakeholder interviews (Appendix E.1) that the rural / quiet / natural environment is highly valued, and values such as privacy, connection with nature and rural character are important features of this living environment.

373. The presence of the Ō2NL Project for this sub-local community will change the quality of this living environment. It may compromise the aspirations residents identified during interviews and Project community meetings (Appendix E.1 and Appendix E.3) in terms of their rural lifestyle and rural views. Therefore, it could change the way they experience and enjoy their environment particularly when outdoors. For those now close to SH1, the new state highway potentially lessens the connection to the more rural environment to the east, but reduced road traffic noise from the current SH1 may mean that overall living environments improve, although for some impacts it may not change the existing environment or may be experienced as being negative. For residential properties adjacent to the Project, further from SH1 in the more rural areas where properties currently directly connect to nature and the Tararua Range, they may experience negative impacts to their living environment due to noise and visual impacts.

374. Technical Assessment B (Noise and Vibration) notes a potential moderate to high degree of change for residential properties furthest from existing SH1. Technical Assessment D (Landscape, Visual and Natural Character) identified moderate to high degree of change for residential amenity particularly around Manakau Heights.

375. More than half of the sub-local community will experience a moderate to high degree of change on the quality of their living environment, potentially impacting how they experience their living environment, in particular existing benefits of location including views, sounds of nature and a quiet lifestyle. Overall, there are potential moderate to high impacts on the quality of the living environment.

North Ōtaki – Sub-local community– potential adverse operational effects

376. In this part of the Project there is not a distinct local community (see above); the area is made up of a small number of rural properties east of SH1 and a few properties on Taylors Road (between SH1 and the railway line) west of SH1. Residents residing between Ōtaki and Manakau (within the Kāpiti District) identified with either or both of these local communities dependent on where social connections were formed and where recreation, education

and/or employment was accessed (as reported in both social research and surveys (Appendix E.1)). This area is a rural community.

377. ***Way of life -*** This sub-local community is primarily rural and sparsely populated. Properties largely have access off SH1. Land use consists primarily of agricultural, large rural lifestyle properties and some horticultural activity. There are no services in this area; residents are dependent on commuting to local villages and towns for education, work (when not working from home) and other amenities.

378. It is not anticipated that there will be negative impacts on how people move around the sub-local and local communities. Local road realignment will be undertaken at Taylors Road. These residents will continue to have access north and south; Technical Assessment A (Transport) does not identify any impacts on travel times. There are a few properties subject to partial acquisition whose private access to SH1 will change; Technical Assessment A (Transport), assesses that the travel times for these properties will not change and a like for like travel solution will be provided.

379. The Ō2NL Project may change how people move around within their properties. For those operating farms there may be some property level changes where the Project severs their farms, changing how people work in terms of moving stock and machinery (this is likely to be only one or two farms as most will have remaining land on only one side of the new state highway). Potential social impacts will be addressed at an individual property level by the PWA process in terms of access provision, purchase of fragmented land or options to operate both parts of the property. This will be dependent on landowner requirements and functionality of the property (including access). Mitigation will be in the form of purchase or access provision where required.

380. Approximately four farms will be fully acquired (others will be partially impacted but subject to property negotiations - it is assumed they will be able to operate). Within this small sub-local community this has the potential to impact local employment although in a minor way; they are all agricultural farms and some will be self-employed. A conservative estimate[31] is that eight jobs (two employees per farm) are impacted (most identified, may be the owners who will be managed by the PWA process). This is approximately 8% of those employed within this sub-local area. Agriculture is not identified within the top three occupations in the area (Appendix E.4).

381. Most impacts will be experienced at an individual property level which will be managed by the PWA process, including most employment impacts. Only six properties will be partially impacted, with potential that this may impact how they operate. At a wider sub-local community level, the community will continue to be able to move around the area. There may be a few locals who will have to seek new employment due to farming properties being purchased. Overall, this is assessed as potentially having a low negative impact on way of life for the sub local community (prior to mitigation) as most remaining will be able to continue operating as they do currently.

382. ***Community -*** This area is centred around SH1 and residents state that they are more connected to either Ōtaki or Levin dependent on where they work, educate, recreate or have social connections (in surveys and social research (Appendix E.1)). Those engaged with did not directly reference connections to neighbours. However, there is potential for neighbour connections to be disrupted during the property acquisition process. The Project has the potential to disrupt what cohesion this area has formed in terms of long-term residents. It is identified that due to the new state highway there are properties that will be separated from neighbours and most neighbours are some distance from each other. Approximately 28% of households in this area are impacted (approximately 10 houses). The impacted houses are spread throughout this sub-local community and some are houses on the same property (ie main house and workers cottage).

383. Whilst this sub-local community may operate largely independently of each other, this is a high degree of change and may potentially disrupt existing connections. Given these are spread out throughout this area and not clustered, the potential impacts on community cohesion may be lessened. In addition, the character of this rural community will change, particularly for those now located between SH1 and the new state highway. For this reason, it is considered that there are potentially low to moderate negative impacts.

384. ***Health and wellbeing –*** Most residents within this sub-local community live in close proximity to the existing SH1 and experience traffic emissions from this environment. Technical Assessment C (Air Quality) confirmed there are no health impacts from the Project, and cumulative concentrations of emissions remain well below the relevant health criteria.

385. Most of this sub-local community is already impacted by noise from SH1. With regards to potential health and wellbeing impacts from noise it is noted

that assessed noise levels are likely to reduce for many within this sub-local community due to decreased traffic on SH1. Approximately six properties are assessed as 'subjectively' likely to have a response to the change in noise resulting in minor to more disruptive behavioural changes (Technical Assessment B (Noise and Vibration)). For a few households these may have potential health impacts such as sleep disturbance, but for many the increase in noise levels will not be discernible, comparable to their existing environment.

386. Whilst the physical environmental change is anticipated to be low for most, there will be a lot of change in the community due to property acquisition. For those remaining, there is potential to become quite isolated (it is recognised that these are large rural properties and are dependent on neighbour relationships) and for that reason there might be a higher level of stress and anxiety initially.

387. Overall, less than a quarter of this sub-local population is subject to the potential adverse health and wellbeing impacts identified above. Further, it is anticipated that these impacts will reduce over time as they adjust. Overall adverse impacts on this sub-local community are potentially very low to low.

388. ***Quality of the living environment -*** Most people already live in close proximity to SH1 and experience a noisy, busy environment within this rural environment. The Ō2NL Project may not change the noise environment for most. Technical Assessment B (Noise and Vibration) assesses that the noise from the new state highway will result in a potential change in the quality of the living environment for six properties. This may change how people enjoy their environment, particularly outdoors.

389. Currently most properties are within close proximity of the existing SH1 but have an undisturbed rural outlook towards the east. Those to the west of the new state highway will still be able to view this outlook but the visual amenity will now change due to the presence of the Project and in particular the interchange. Those to the east will also experience visual changes to the environment. For those adjacent to the new state highway (who are currently further from SH1 in the more rural areas where properties currently directly connect to nature and the Tararua Range) this will be a more noticeable change in amenity. Visually this is very different from the sparsely populated rural environment that currently exists, and the majority of remaining properties will be in between SH1 and the new state highway. Technical

Assessment D (Landscape, Visual and Natural Character) assesses that 13 properties will have a higher degree of visual effect from the new state highway prior to mitigation (planting has been recommended to soften the presence of the new state highway).

390. In summary approximately up to a third of properties in this sub-local community will experience changes to either the acoustic and/or visual amenity of their property. For the most potentially impacted properties this may change the rural outlook and rural quality of the living environment. The degree of impact may depend on whether the living / bedroom and outdoor spaces are orientated towards or away from the new state highway. This impact is likely to occur but will be somewhat dependent on individual perception. Whilst it will not stop people using any spaces, it may reduce the enjoyment. This is potentially a long-term impact; however, it is anticipated that many will adjust to this over time. These impacts can be reduced through mitigation directed toward noise management and visual buffering of the new state highway. Prior to mitigation there are potentially moderate negative impacts to the quality of the living environment for this sub-local community.

Operational effects summary (Without Mitigation)

391. The entire community will benefit from the positive social impacts of improved safety, efficiency, and resilience of the operation of the Ō2NL Project. From the regional to the sub-local scale people will experience improvements in way of life (how they move around the area and transportation of goods to sustain oneself), cohesion (ability to connect), quality of living environment (removal of traffic off SH1 and centre of town / villages) and health and wellbeing (safety and SUP).

392. These potential social impacts are a result of the outcomes of the Project purpose to "improve safety and access, support economic growth, provide greater route resilience, and better access to walking and cycling facilities".

393. Potential negative social impacts relate to the social changes experienced from the operation of a new state highway within a residential, rural and greenfield environment. Many of the potential impacts relate to proximity to the Project and therefore the highest degree of impact is at a sub-local scale.

394. Overall, without mitigation the potential negative social impact from operation at a local scale will be low to very-low. At a sub-local scale these will be very low to high.

395. The following figure (E.19) demonstrates the distribution of impacts.

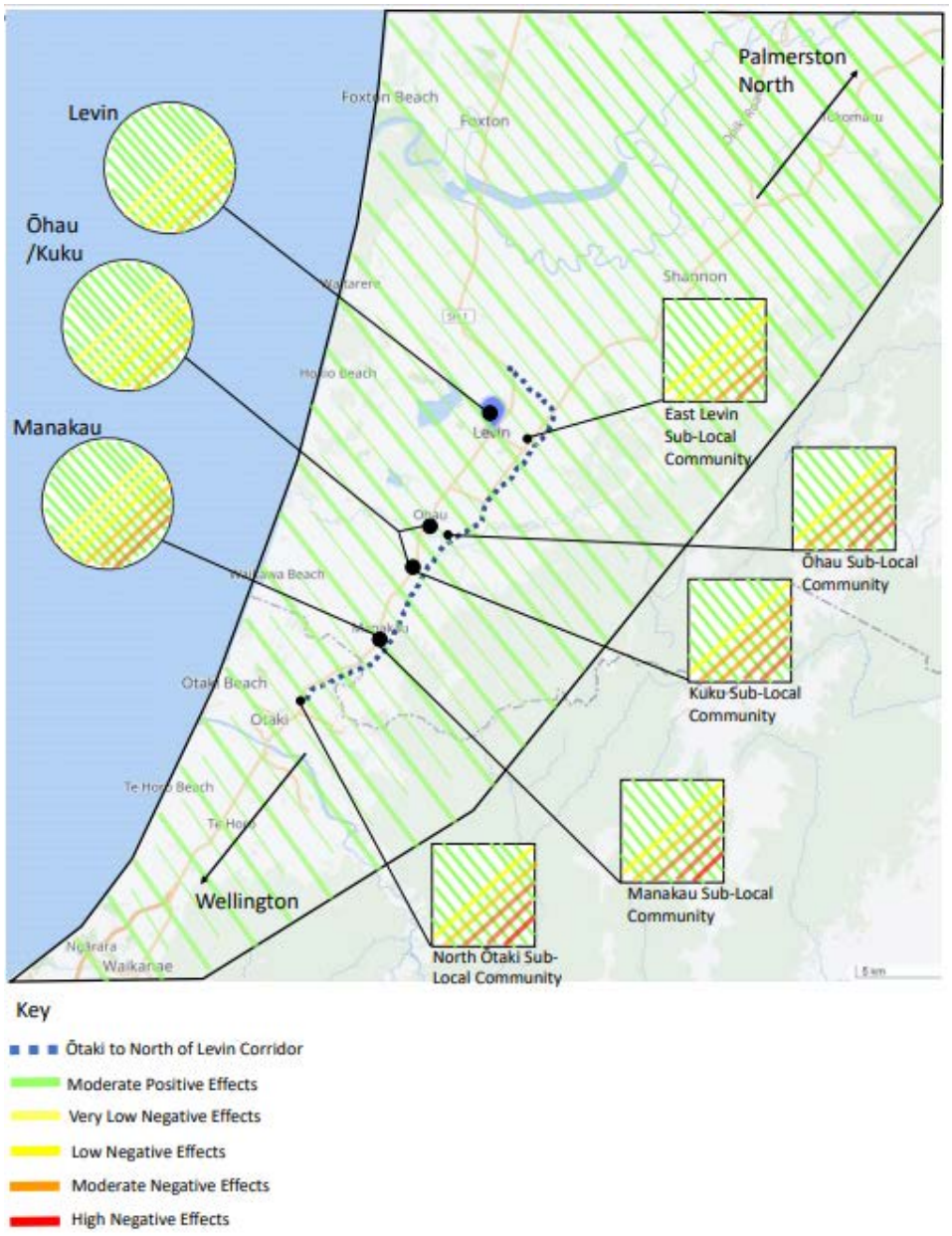


Figure E. 19: Illustrative representation of impacts

396. Table E.3 provides a summary of potential impacts.

Table E. 3: Operational Impacts (without mitigation)[38]

Spatial Distribution	Impacts	**Regional**	**Local**			**Sub-local**			
Type of Impact			**Levin**	**Ohau and Kuku**	**Manakau**	**East Levin sub-local**	**Ohau East, Kuku East and Muhunoa East (Western portion)**	**Manakau sub-local**	**North Ōtaki sub local**
Way of life	• Improved resilience, safety, and efficiency of moving around the community • Improved recreation opportunities - walking and cycling • Traffic removed from town/village centres, improving ability to carry out daily activities	Moderate positive	High Positive	Moderate positive	Moderate positive	High Positive	Moderate positive	Moderate positive	Moderate positive
	• Way people move around the area • Carry out work • Recreate • Lifestyle • Sustaining oneself	N/A	Very low to low negative	Very low negative	Low negative	Very low to low negative	Low negative	Low negative	Low Negative
Community	• Improved active mode connections between communities • Opportunities to revitalise the community by removing traffic from main street/SH1 • Reduced community severance by removing traffic from main street/SH1	Low Positive	Moderate to high positive	Moderate to high positive	Moderate to high positive	Moderate to high positive	Moderate to high positive	Moderate to high positive	Moderate to high positive
	• Loss of community connections • Reduced sense of connectivity • Change of community character	N/A	Very low to negligible negative	Very low to low negative	Low negative	Low negative	Low to Moderate negative	Low to very-low negative	Low to Moderate negative
Health and Wellbeing	• Improved safety of community • Reduced incidents of road crashes causing deaths and serious injuries	High Positive	High Positive	High Positive	High Positive	High Positive	High Positive	High Positive	High Positive
	• Stress of change of acoustic and visual environment		Nil	Nil	Nil	Negligible to low negative	Low to very low negative	Low Negative	Very Low to Low Negative
Quality of living environment	• Town centre environment – reduced traffic • Improved living environment resulting from reduced traffic on SH1/SH57	N/A	High	Low to moderate positive	Low to moderate positive	Low to moderate positive	Low to moderate positive	Low to moderate positive	Low to moderate positive

[38] For all outcomes tables colour coding has been used to aid in visualisation of impacts: Positive impacts are green (the darker the colour the higher the positive impact). Negative Impact: Yellow (negligible to low negative impacts), Orange (in part or fully moderate negative impacts), Red (High negative impacts).

	• Loss of rural living environment • Loss of quiet environment • Loss of nature outlook		Nil	Very low negative	Low negative	Low to Moderate negative	Moderate negative	Moderate to high negative	Moderate negative

MEASURES TO REMEDY OR MITIGATE ACTUAL OR POTENTIAL ADVERSE SOCIAL EFFECTS

397. We recommend the following measures to manage and mitigate the identified impacts:

Construction

398. During construction the main impacts are derived from:

    (a) Property acquisition;

    (b) Construction traffic;

    (c) Construction activity (visual effects);

    (d) Construction noise; and

    (e) Construction dust.

399. The relevant technical reports have been reviewed and we consider the following mitigation recommended within these reports as providing appropriate mitigation to the identified impacts:

    (a) The contractor to develop a Construction Noise and Vibration Management Plan including:

        (i) Communication with property owners in advance of any disruptive construction noise or vibration activities.

        (ii) Communication with property owners in advance of night works.

    (b) The contractor to develop a Construction Traffic Management Plan ("**CTMP**") including:

        (i) Traffic management communications plan

        (ii) Measures to manage / limit heavy vehicle construction movements during peak traffic and night-time.

        (iii) Provision for maintaining safe pedestrian and cyclist access movements in the vicinity of the site

        (iv) Provisions for new permanent accesses to be formed at the earliest opportunity to limit the adverse effects of construction and severance.

(c) The constructor to develop a Construction Air Quality Management Plan ("**CAQMP**") including:

(i) A community liaison person and complaints response process for air quality concerns.

(ii) Advance communication to potentially impacted property owners and advice of mitigation options.

(iii) Erosion and sediment control practices to minimise dust.

(d) The CEDF (Appendix Three to Volume II) includes:

(i) Integration of landscape and built environment with local history and culture.

(ii) Narrative story along the SUP to relate to local history and culture.

(iii) Partnership and consultation with local Iwi and community.

400. The traffic, noise, and air quality management recommendations contained in the relevant assessments, will provide mitigation to the identified social impacts as detailed above (for details see Table E.3).

401. Below are the additional recommendations made through a social lens to address the social impacts identified and further reduce potential adverse impacts.

(a) A communication plan for construction will be created. It should include the following:

(i) Up to date project information (in particular closures and delays) via website and other means of communication.

(ii) Provide a community liaison person for queries and complaints with an 0800 number that can take messages 24/7 for the liaison person to respond to during working hours.

(iii) Waka Kotahi has commenced a regular programme of community and stakeholder meetings to discuss the development of the Project. It is recommended that this is extended into the detailed design and construction phase to provide updates and a

forum for concerns to be raised and opportunities to be discussed.

(iv) Include opportunity to participate in relevant detailed design including development of the CEDF (Appendix Three to Volume II) and localised mitigation such as planting, signage and artwork where appropriate.

(v) Meet with individual property owners to discuss / co-design property specific mitigation where required.

(b) The CEDF (Appendix Three to Volume II) to provide guidance for wayfinding signage at new interchanges / roundabouts and along the SUP to connect into local communities along the Project.

Operation

402. During operation the main impacts are derived from:

(a) Property acquisition;

(b) Operational traffic noise; and

(c) Visual effects;

403. The relevant technical reports have been reviewed and we consider the following mitigation recommended within these reports as providing appropriate mitigation to the identified impacts:

(a) Noise mitigation:

(i) Resurfacing recommendations.

(ii) Communication with community re staging of surfacing plan.

(iii) Safety/noise barriers at noise sensitive locations.

(iv) Individual property mitigation where required.

(b) Landscape and visual mitigation:

(i) Strategic native planting along the corridor to provide screening.

(ii) Individual property mitigation where required.

(iii) Provision of art along the corridor in keeping with the local culture and environment.

404. The landscape and noise recommendations will serve to mitigate many of the social impacts identified (see Table E.3). The following are additional recommendations:

(a) To continue local community meetings (already commenced) and have a Project contact person for the first three to six months to aid in the transition and provide opportunity for community members to contact if initial issues arise.

(b) To engage local communities in the existing SH1 revocation process to enhance opportunities and avoid further social impacts.

(c) Provision of a footpath on local road connections over the new state highway (the overpasses and underpasses) to connect residents by foot as well as by car as there will be no verge available for pedestrians.

Construction

Table E. 4: Summary of negative construction impacts with mitigation

	Impacts	Key Mitigation Proposed for local and sub-local communities	Impacts Pre-Mitigation	Impacts after mitigation
Way of life	• Way people move around the area • Carry out work • Recreate • Lifestyle • Sustaining oneself	• Retain local road connections • Communicate delays and diversions • Provide temporary property/local road access before any accesses are removed • Contractors to develop noise, air quality, traffic management plans • Communications plan	Low to moderate	Low
Community	• Loss of community connections • Change of community character	• Communications • Property negotiations • Staged process	Low to moderate	Very low
Health and Wellbeing	• Noise and dust	• Ongoing consultation during construction • Contractor to develop construction noise and vibration management plan and air quality management plan • Communications in advance of works that may result in noise disturbance or dust that required mitigation.	Very low to low	Very low
Quality of living environment	• Loss of rural living environment • Loss of quiet environment • Loss of nature outlook	• Ongoing consultation during construction • Contractor to develop construction noise and vibration management plan and air quality management plan • Communications in advance of works that may result in noise disturbance or dust that required mitigation.	Low to moderate	Low

Operation

Table E. 5: Summary of negative operation impacts with mitigation

	Impacts (summarised from local and sub-local communities in table 3)	Key Mitigation Proposed for local and sub-local communities	Impacts Pre- Mitigation	Impacts after mitigation
Way of life	• Way people move around the area • Carry out work • Recreate • Lifestyle • Sustaining oneself	• Retain local road connections • Provide signage at interchanges to indicate connections to local communities • Provide footpaths over local road connections	Local: Levin - Very low to low negative	Negligible
			Local: Ohau and Kuku - Very low to low negative	Negligible

		• Provide for walking and cycling at roundabouts along corridor • Noise mitigation – surfaces and noise wall (Manakau)	Local: Manakau - Low negative	Negligible
			Sub-local East Levin: Very Low negative	Negligible
			Sub-local Ohau East, Kuku East and Muhunoa East (Western portion): Low negative	Very low negative
			Sub-local Manakau: Low negative	Very low negative
			Sub-local North Ōtaki: Low negative	Very low negative
Community	• Loss of community connections • Reduced sense of connectivity • Change of community character	• Noise mitigation - surfaces and noise wall (Manakau) • Provide signage at interchanges to indicate connections to local communities • Planting and landscaping • Continue to engage local communities in detailed design and mitigation design • Provide signage along the SUP to connect into local community (see draft CEDF(AEE Appendix Three to Volume II))	Local: Levin - Very low to negligible negative	Negligible
			Local: Ohau and Kuku - Very low to low negative	Very low negative
			Local: Manakau - Low negative	Very low negative
			Sub-local East Levin: Low negative	Very low negative
			Sub-local Ohau East, Kuku East and Muhunoa East (Western portion): Moderate to low negative	Very low negative
			Sub-local Manakau: Low to very low negative	Very low negative
			Sub-local North Ōtaki: Low negative	Very low negative
Health and Wellbeing	• Stress of change of acoustic and visual environment	• Ongoing consultation during construction • Community meeting three-six months post operation • Noise mitigation - surfaces and noise wall (Manakau) • Planting and landscaping	Local: Levin - Nil	NA
			Local: Ohau and Kuku - Nil	NA
			Local: Manakau - Nil	NA
			Sub-local East Levin: Negligible to Low negative	Very low negative to negligible
			Sub-local Ohau East, Kuku East and Muhunoa East (Western portion): Low to very low negative	Very low negative to negligible
			Sub-local Manakau: Low negative	Very low negative
			Sub-local North Ōtaki: Very low negative	Very low negative to negligible
	• Loss of rural living environment • Loss of quiet environment	• Noise mitigation - surfaces and noise wall (Manakau)	Local: Levin - Nil	Nil

Quality of living environment	• Loss of nature outlook	• Planting and landscaping	Local: Ohau and Kuku - Very low negative	Negligible
			Local: Manakau - Low negative	Negligible
			Sub-local East Levin: Low negative	Very low to low negative
			Sub-local Ohau East, Kuku East and Muhunoa East (Western portion): Moderate negative	Low to moderate negative
			Sub-local Manakau: Moderate to high negative	Low to moderate negative
			Sub-local North Ōtaki: Low to moderate negative	Low negative

CONCLUSION AND RECOMMENDATIONS

405. Overall, the improved safety, connectivity and resilience of this network and provision of a SUP are assessed as potentially having long term moderate to high positive social impacts on the community at all levels. The Project helps communities (at all scales) respond to current social issues relating to SH1 and SH57, such as lack of resilience, congestion, safety issues and a lack of active transport options. The Project will also accommodate future growth, including community transitions from rural to peri-urban land-use along parts of the corridor (as indicated in future growth plans). By accommodating future growth, it will prevent exacerbation of current SH1 and SH57 issues outlined above.

406. At a regional level potential operational social impacts are wholly positive and at a local community level they are largely positive. As members of these communities, the sub-local residents will also experience these benefits.

407. Notwithstanding these positive effects, there is a concentration of potential negative impacts, and these are highest at the sub-local level both for construction and operation and will generally reduce with increasing distance from the new corridor. Whilst these local and sub-local communities will still be an attractive place to live and offer amenities, the period of transition of change to the environment for the existing residents (particularly at a sub-local level) is assessed as potentially negative (this is not a net social effect - the positive and negative social impacts have been considered separately).

408. During construction the main social impacts are to do with property acquisitions and environmental impacts. This includes people moving out of the area, changes to the way they live, changes to the community make-up, and traffic disruptions (access disruption, local road diversions, heavy vehicles on side roads and potential for increased congestion at points along the corridor), impacting how people access work, education and services and move around the area. Construction noise, dust and visual environmental changes have the potential to impact the quality of living environment, health and wellbeing (specific properties temporarily may experience sleep disruption) and the character of the local and sub-local communities.

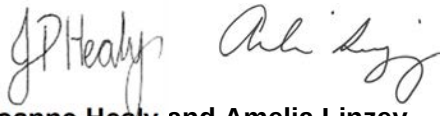
409. Overall, without mitigation potential negative social impacts from construction range in impacts from very-low to moderate. It is identified that most can be mitigated.

410. The sub-communities' participation in mitigation planning and local level design, and noise and visual mitigation, will assist to reduce social impacts of the construction and the operation of the Project.

411. With regards to operation, the large-scale nature of the Project within the sub-local communities represents a high degree of change, particularly in terms of the quality of the living environment experienced by the community. Changes to the rural environment (to a more peri-urban environment) and potential changes in social cohesion are assessed as resulting in ongoing low to moderate adverse impacts to existing sub-local residents (although this may depend on individual values and how effective noise and visual mitigation is – and therefore it is assessed that it will vary across the local sub-community as per the range). This is relative to the environment the community currently values. For future residents, the Project will be operational and therefore will be part of the existing environment.

412. Overall, without mitigation potential negative social impacts from operation at a local scale will be low to very-low. At a sub-local scale these will be very low to high.

413. It is recommended that the Project work in a team with the community to manage impacts and design mitigation that is in keeping with local community values and functional requirements. Providing opportunity for the local and sub-local community to contribute to the design where relevant. Interfacing with the community will provide a means to mitigate the loss or reduction of values that the community have in their environment and will ease the transition to the new physical and social environments, particularly at a sub-local and local level.



Joanne Healy and Amelia Linzey

14 October 2022

APPENDIX E.1: SUMMARY OF SOCIAL RESEARCH

Online residential survey and follow up phone calls

Letters were sent to properties (See Appendix E.2) within 500m to the east and 300m to the west of the initial 300m corridor (June 2020), inviting them to participate in an online survey (see Appendix E.2 for a copy of survey questions). The survey ran from June to July 2020.

This survey asked respondents a series of questions about their community, the values, challenges, and opportunities of this community, services they access in the community, and their thoughts on the Ō2NL Project. To analyse geographical trends across responses, addresses were grouped into four general areas: Levin, Ohau, Manakau, and Ōtaki. The breakdown of responses received was as follows:

- 699 letters were sent in total; 100 responses were received.
- Overall response rate of 14% (this is a conservative estimate of the response rate as it may be higher due to some people owning multiple land parcels/properties and receiving more than one letter).

Key findings from the survey are summarized below:

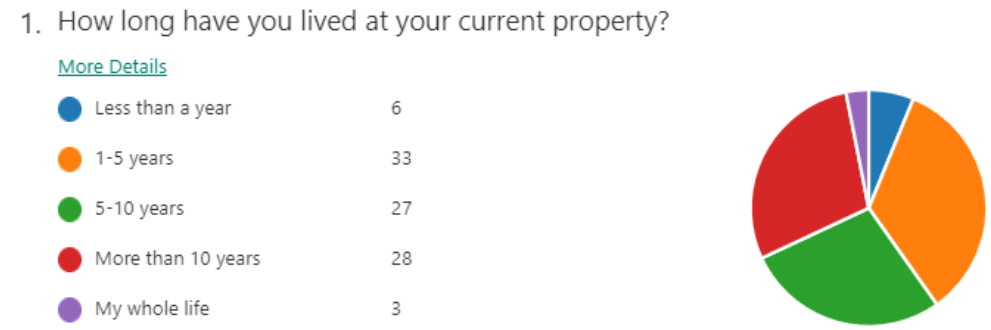


Figure 1. Length of time spent at current property.

2. How long have you and your family/whānau lived in the area?

More Details

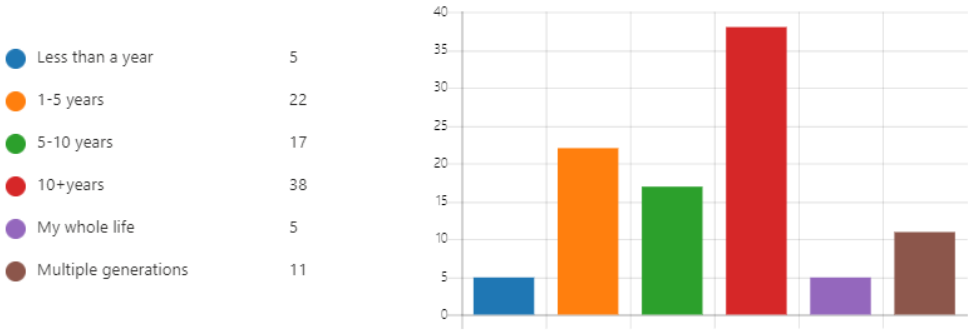


Figure 2. Length of time spent living in area.

Ninety-nine responses were received in total. As Figures 1 and 2 illustrate, over half of respondents (or their families) have lived in the area for at least a decade, with the majority of people also having lived at their current address for at least 5 years. A significant proportion of households (66%) have at least one household member working from home at least some of the time, in a range of industries including home businesses (office based), horticultural and agricultural work and education.

Respondents were asked to note which communities they identified with (noting that they could select more than one community). The majority of respondents identified as belonging to the Levin community (see Figure 3), reflecting the larger size of Levin relative to other centres. Of those who identified as being part of another community, most identified with a larger area such as Kāpiti Coast or Palmerston North.

5. What community do you/your household identify with? Select all that apply (ie you might live in one area but work in another, and identify with both communities).

More Details

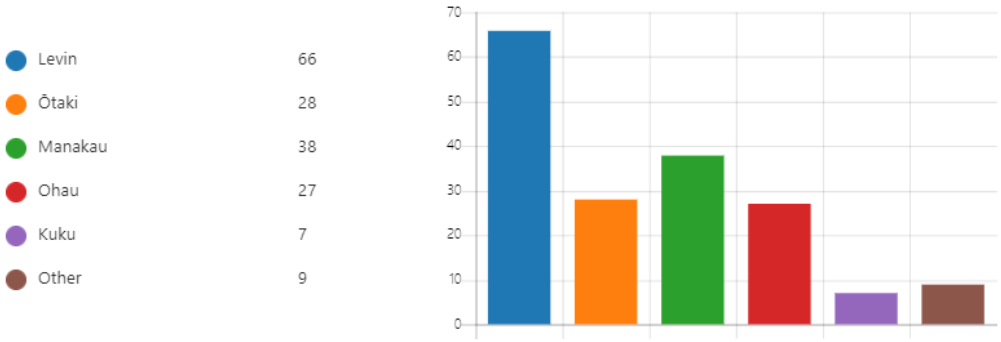


Figure 3. Communities that respondents identify as belonging to.

Access to services:

Levin is home to a wide range of amenities which a vast majority of survey respondents access. Retail (both food retail and other retail shops) and health and medical services are the most popular services in Levin, and the area is also popular for visiting friends and family, as well as parks, beaches and rivers. Around half of all survey respondents have at least one household member who works in Levin.

Ōtaki is also a popular retail centre, although a smaller number of people work in Ōtaki compared to Levin. Many people visit beaches, parks and rivers in and around Ōtaki, as well as visiting family and friends.

People visit Ohau predominantly for social visits or to visit the Ohau River. A smaller number of people visit Ohau for work, retail, and to visit parks and beaches.

The most common reasons for visiting Manakau are social visits, closely followed by food retail and accessing the beach. Parks and rivers are also popular in Manakau, and a smaller number of people attend work, sports and other clubs in the area.

In addition to these local centres, around half of respondents indicated that at least one member of their household travels outside of the immediate community for work. The majority of these people work in either Wellington or Palmerston North, with a smaller number working in centres such as Porirua, Waikanae and Paraparaumu.

Motor vehicle is by far the most popular method of travel for respondents (see Figure 4), although around 20% of respondents also walk and cycle from place to place. Public transport is not widely used.

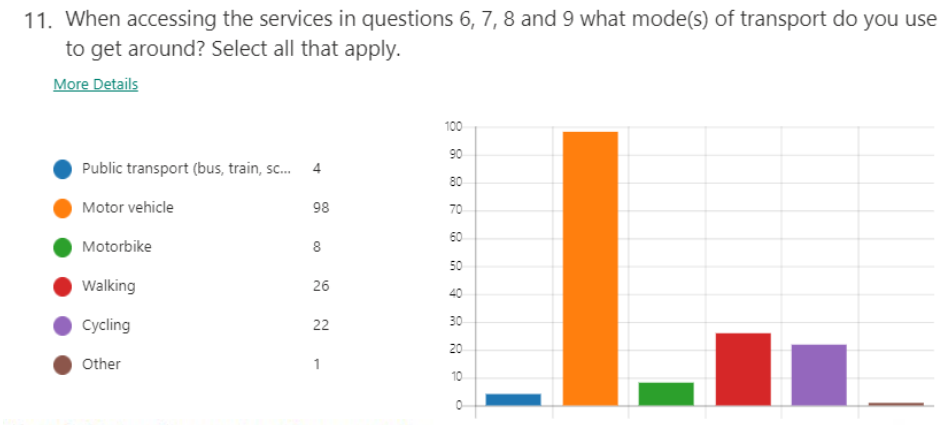


Figure 4. Modes of transport used by respondents.

Community values

Respondents value the rural lifestyle that the Ōtaki – Levin area provides. The community is perceived as being peaceful, quiet, relaxed, safe and private. In addition, people value the proximity to nature that their rural properties offer; including the open space, views of farmland, and abundant bird life. People in the community are perceived as being friendly and helpful, and as looking out for one another.

Access to amenities is also a highly valued quality of the community; respondents noted that parks, beaches and rivers were plentiful in the area, as were amenities like markets, sports clubs, horse riding facilities, quality schools and churches.

Changes to community

When asked to think about changes that they would like to see in their community, most respondents identified changes relating to roading and transport infrastructure. Reducing traffic congestion was a popular request, particularly in town centres and on weekends and public holidays. Safety improvements to rural roads (including installing footpaths) were also commonly identified; it was noted that trucks often drive at speed down roads such as South Manakau Road and Manakau Heights Drive as an informal bypass when SH1 is busy, which makes walking and cycling along these roads difficult for residents.

While residents valued the ease of access to amenities throughout the community, many noted that they would like to see public transport improved throughout the district. In particular, train services connecting through to Palmerston North and Wellington were seen as something which would boost the connectivity of the area, particularly for commuters. In regard to connectivity, some respondents also noted that improved cell phone and internet access across rural areas would allow them to be better connected in both work and personal matters.

Finally, some respondents noted that they would like to see town centres improved, through reduction of traffic congestion (especially trucks) in town centres, the addition of more shopping options, and general town beautification.

Potential impacts of Ō2NL

A wide range of potential impacts, both positive and negative, were identified by respondents. The majority of respondents identified both positive and negative impacts, with only a small minority expressing predominantly negative sentiments about the proposed highway.

The following **positive** impacts were identified by respondents as being a potential positive impact of the proposed highway:

- Reduced traffic congestion, particularly on weekends and holiday periods.
- Reduced congestion in town centres.
- Safer and quieter town centres with more parking available for locals. Currently locals are put off from visiting town centres especially on weekends due to traffic congestion, trucks and traffic noise; town centres could be expected to become more vibrant, pleasant and busy if these negative aspects of the centre are minimised and locals are more likely to visit. This would also have run-on effects for local businesses who could see an increase in patronage.
- Improved access to Wellington: quicker, safer and easier.
- Potential population increase; if the option of commuting to Wellington or Palmerston North from towns like Levin or Ōtaki becomes more viable, more people may move into the area which could boost the local economy and see the development of more housing. The highway could also lead to an increase in property values once the highway is completed, as the improved

accessibility to Wellington and Palmerston North could make living in the area more desirable.

The following **negative** impacts were identified by respondents as being a potential negative impact of the proposed highway:

- The qualities of the 'rural lifestyle' that people currently value (such as peace, quiet, tranquillity and proximity to nature) could be damaged by the existence of the highway and the noise, light and visual pollution it will create. Noise impacts will be particularly disruptive for those who will be located between two roads as a result of the highway being built.
- Loss of community connectivity due to the road dividing communities and cutting of existing connections, such as between Ōhau and Muhunoa East
- Possible loss of easy access to town centres and schools depending on the location of connections.
- Local centres could see a reduction in visitors and local spending as the number of cars passing through town centres is reduced.
- Sense of loss at the destruction of productive farming land and areas of bush; loss of bird life was emphasised by some respondents.
- Anxiety and stress experienced by property owners due to the uncertainty around where the road will be located and what the impacts on their property will be, if any.
- Potential decrease in property values / difficulty in selling for properties close to the highway
- Disruption to social connectivity as peoples friends, neighbours and family members are potentially displaced.
- Potential that the highway could in fact create *more* traffic by making it easier for people to visit the area (noting that this issue was only raised by several respondents).

Follow-up phone interviews

Eighteen follow-up phone interviews were also undertaken by the research team (August 2020). Interviewees were sampled (from a pool of survey respondents

who had indicated that they would be happy to participate in a follow-up phone call). Interview approaches sought to ensure that people from each of the four geographical areas were included in the follow-up calls. The content of these follow-up calls differed from person to person depending on the responses they had given in the online survey, but broadly canvassed people's views on the following subjects:

- what community do you consider yourself as belonging to, and where would you consider the boundaries of this community to be;
- perceived impacts of the Ō2NL Project (unpacking responses provided in the survey in greater detail);
- impacts on a personal level (how would day to day life and activities change as a result of the Ō2NL Project); and
- people's experience with using the 'old routes' since the MacKays to Peka Peka expressway has been constructed (ie lived experience of how the old existing road and surrounding environment had changed since the new road had been constructed).

Key findings from these interviews are as follows:

- SH1 has terrible traffic congestion which is getting worse – particularly going south. There are safety issues associated with this.
- New highway will make it easier and safer to get around the area and to travel further afield (eg Wellington). Will also free up space on the 'old' roads which will make it easier for locals to get around using these back routes
- Town centres will be more peaceful with less trucks travelling through them and less congestion – people may visit town more often if this is the case.
- Some concerns about the highway changing the peaceful, quiet, rural character of the area, which is what many people moved here for. As a result of noise, dust and vibration, some people anticipate that they will spend less time in their garden.
- Some people may move out of the area because of this – don't want to deal with noise from the highway. Will be hard for people within the corridor (who have to move) to find a like for like property elsewhere.

- The highway may also split some existing communities (such as the rural community in Ōhau)

Stakeholder interviews

Interviews were also conducted with stakeholders in the community (July to August 2020). The majority of these were conducted over the phone, however a small number were carried out in person where this was specifically requested by the stakeholder organisation. These interviews followed a similar structure to the online surveys with stakeholders being asked about their role within the community, their insights into community values, opportunities and challenges, and their perceptions on how the Ō2NL Project could impact themselves and the community they represent.

Interviews were conducted with representatives of the following organisations:

- Horowhenua District Council (strategic planners involved in the Ohau and Manakau Community Plans);
- Fairfield School;
- Levin East School;
- Ōtaki School;
- Ōhau School;
- Manakau School;
- Manakau Residents and Ratepayers Association;
- Horowhenua Ratepayers Association.

Key themes from these interviews are summarised below:

• Theme	• Key findings
• Changes observed in the community over the last 5-10 years	• Area is growing – some wealthier people moving in to 'high-end' homes particularly in new developments. Other families are leaving Wellington and moving to Horowhenua because it is cheaper. Mixed feelings in the community about whether this growth is a good thing (more growth and opportunities) or a bad thing (altering the quiet rural character that people value)

	• There is some stress and uncertainty around when the road is coming and where it will go. Some people have left the area because of this • Congestion is getting worse along SH1 – this is a barrier to people even leaving their homes at peak times because it takes to long to get anywhere • Lots of growth in Manakau with subdivisions occurring • Increased interest in towns like Manakau and Ōhau as land in Kāpiti becomes more scarce/expensive • Some parts of the community are slowly changing from rural to more urban – ie Levin schools are now considered urban schools
• Main 'opportunities' and 'challenges' for people living in the area	**Opportunities:** • Still relatively cheap (compared to other areas) to buy land and build • Lots of recreational areas along the corridor which are valued by the community – i.e the Tararua Ranges, swimming holes, beaches • Rural lifestyle that the region offers is highly sought after by lots of people • Community is growing and becoming more diverse **Challenges:** • Currently very difficult to get around in a timely manner – highway is often congested and if there are accidents on the road people can be trapped for a long time • Safety for children getting to and from school is a concern • Currently young people need to travel out of the area for tertiary education, and many also leave for work and social opportunities elsewhere • Limited public transport as well as limited safe walking facilities • Hard to access services like medical care – Palmerston North is the closest hospital • Difficult for people (particularly youth) to get around without a car
• Positive impacts of O2NL	• Traffic may be redirected away from schools, making it easier to get around • Improved safety for people travelling around the area • Town centres will be more pleasant with fewer trucks • Expressway could encourage more families to move to the Horowhenua region or to visit the area • Improved travel times and reliability for those travelling to and from Wellington each day

• Concerns/adverse impacts of O2NL	• Concern that the highway could split the community. i.e in Manakau, the wealthy and poorer sides of the community could be split. Sense of community could be lost. Same concerns for East vs Western Levin • Highway could change the character of 'hidden gems' like Manakau – currently the community are proud of Manakau being a hidden, special spot but having two busy roads on either side of the village could change this. • Highway might result in less people visiting small towns – interchanges and local roads will be important for maintaining this access. • Noise from the highway will be loud throughout the valley • Issues for people trying to sell their properties when the route alignment is not confirmed
• Other	• For some groups, consultation has felt like a tick-box exercise and they do not feel they are being heard • Communities along the corridor see themselves as quite distinct – i.e Ōhau and Kuku are seen as separate communities with their own identities

APPENDIX E.2: COPY OF SURVEY QUESTIONS AND LETTER TO RESIDENTS

Letter:

Proposed Ōtaki to north of Taitoko/Levin highway – residents survey

Kia ora,

As you may be aware, Waka Kotahi New Zealand Transport Agency is investigating options for the design of a proposed highway (the **Ōtaki to north of Taitoko/Levin highway**). There are a number of environmental investigations that are either underway or are being started to assist the Transport Agency in considering different options for the proposed highway. These include geotechnical, ecology, historical and community effects (social impacts).

Beca have been commissioned to consider the potential **community effects / social impacts** of the proposed options for the Ōtaki to north of Taitoko/Levin highway and its connections to local roads. To assist in this, we are undertaking **surveys and research** of the community. We are inviting over 900 households in the local area to participate in the survey. Our survey asks questions about how you live, work and play in the area, the communities you are part of and how you and your family/whānau move around. We will also be undertaking follow up interviews with some people (phone interviews) and if you are willing to be involved in these, there's an option to leave your phone number at the end of the survey.

If you would like to participate, please complete the survey by 12 July 2020.

This work is separate from the public consultation which is being led by the Transport Agency. The community will be invited to provide feedback on the design options being considered in the near future.

There are a number of ways you can complete our survey:

- You can do this online by scanning the **QR code below**;

-
- You can email us at **otakitolevin@beca.com** and we will automatically send you a web address link (so you can click straight through to it)[39];
- You can phone us from within New Zealand on XX and ask for XX or XX and we will complete the survey with you over the phone.

At the end of the survey you will be asked to provide a unique code which will help us organise responses according to geographical area. Your unique code is **RED.**

If you have any questions about this survey or how it relates to the Ōtaki to north of Levin highway Project, please feel free to give any of our team a call from the 0800 number above: Amelia Linzey; Jo Healy or Kelly Bingham.

Ngā mihi,
Beca social research team

[39] You can access the online survey form at this address: https://forms.office.com/Pages/ResponsePage.aspx?id=JnEPu8WxPk-MoSsk8PdGICvw__lDnYFHqshNEKAJFtZURFlDUE03WTJGOUNJMFRWRkJTVjBFWEpURy4u

Survey questions:

How **long have you lived at your current property?**

- Less than a year
- 1-5 years
- 5-10 years
- More than 10 years
- My whole life

Please indicate which of the following services you or your family/whānau access in LEVIN (please select all that apply)

- Work
- Sports
- Other clubs
- Religious activity
- Marae
- Cultural activity- harveting etc
- Parks
- Beach
- Rivers
- Food retail (supermerket, grocery etc)
- Other retail (eg clothes, shoes, bookstores)
- Recreation facilities (swimming pool, gym etc)
- Health and medical services
- Other social services (eg work and income)
- Social (visiting friends and family/whānau)
- Childcare
- Kindergarten/kohanga reo
- Primary school/kura
- Intermediate school/kura
- High school

- Wanaga/tertiary education
-

Please indicate which of the following services you or your family/whānau access in OHAU (please select all that apply)

- *[same options as above]*
-

Please indicate which of the following services you or your family/whānau access in MANAKAU (please select all that apply)

- *[same options as above]*
-

Please indicate which of the following services you or your family/whānau access in ŌTAKI (please select all that apply)

- *[same options as above]*
-
    - If people in your household access work and/or education outside the above areas, please identify what town/city they work or attend education in
-

When accessing the services in questions 6, 7, 8 and 9 what mode(s) of transport do you use to get around? Select all that apply.

-
- Public transport (bus, train, school bus)
- Motor vehicle
- Motorbike
- Walking
- Cycling
- Other (please specify):

When thinking about the community or area your household identifies with, what are the 3 most important qualities of this community?

-

Is there anything that you or your household would like to see change about your community in the future? If so, what?

-
-

Do you know about the proposed new Ōtaki to north of Levin highway?

- Yes
- No
    - How do you think the proposed Ōtaki to north of Levin highway will change your community, if at all?

        -
        -

What is your unique code (this is the colour noted in the letter you received with this survey)?

- Green
- Red
- Blue
- Orange

APPENDIX E.3: PROJECT ENGAGEMENT SUMMARY - FULL DETAILS AVAILABLE - PART F OF VOLUME II OF THE AEE[40]

Timing	Phase and description	Techniques	Themes
2011-2017	**Phase One – Assessment of corridor options** The inputs and results of the investigations resulted in a modified approach to the project, further consultation focussed on the specific communities. The consultation process concluded with the receipt of feedback to assist in the development of detailed options and the identification of preferred options.	• Targeted consultation with key stakeholders • Public consultation – with community in the form of open days, information sharing and feedback channels. • Letters to affected landowners and some meetings	• Need for ongoing consultation and liaison • Need for a safer roading network • Need for east-west links across the communities to be maintained • Need for walking and cycling facilities • Strong support for the need to bypass Levin and other townships/villages • Uncertainty that the roading proposals could have a negative effect on property values and /or the ability to sell in the short term, particularly for those landowners who currently have their properties on the market. • Landowners wanted certainty on the preferred options as soon as possible. This was most applicable to the SH1/57 connection route options. • Concerns about future business prospects in the area, especially for those landowners who farm and live on their property. • Concerns around the potential effects on fertile agricultural land given the large number of market gardening and horticultural operations in the vicinity of the proposed routes. These effects apply not only to the taking up of land for the highway corridor, but also the diagonal severance of some properties making them impractical to farm. • There was some concern about removing passing traffic and potential trade from Levin, but the majority recognising the need to reduce congestion and to have heavy vehicles out of the town centre.
2018	**Phase Two – Re-assessment of route options** The community was consulted on their perspectives to help Waka Kotahi understand community values and interests, including cultural, environmental, business and social issues. The aim of this was to help the project achieve the best outcome for the region and for road users who travel through the region. This information contributed to the assessment of options and route selection	Public open days, drop-in events, community events, and supported by information boards, an in-person map and Social Pinpoint.	**Overall themes from consultation on options presented** • Universal recognition of need for safer and more reliable transport corridor • Highlighting current safety issues (accidents and difficulty crossing the existing SH1 and SH57) • Need to bypass Levin town centre and reduce traffic from SH1 that passes through Ohau, Kuk and Manakau **Levin** • Safety and access to schools is a priority • Tararua Range is a treasured part of the community in terms of visual landscape and recreation use • Many people in the community have been on the land for multiple generations • Concern re impact on farmland both in terms of economic viability of the community and protecting family livelihoods and heritage • Those in the eastern rural sector make reference to "road families" (eg those families that reside down the east-west roads from Levin) that create irreplaceable communities with values to the land and the historic connections • Concerns re impacts on natural environment in particular quiet rural environment including birdsong, trees and natural vista **Ohau and Kuku** • Maintaining rural and semi-urban connections within community • Maintain rural environment • Protecting farmland

[40] Project engagement report can be accessed via the Project website: https://www.nzta.govt.nz/projects/wellington-northern-corridor/otaki-to-north-of-levin/o2nl-proposed-new-highway/consultation/

			• Many people in the community have been on the land for multiple generations and have connections with neighbours • Concerns re impacts on natural environment in particular quiet rural environment including birdsong, trees and natural vista **Manakau** • Importance of the connection to the rural and peri-urban lifestyle • Concerns re severance of family/neighbour connections - many families have lived in Manakau for years and have formed strong connections with neighbours and have family within the community. • Concerns re impact on tranquillity of environment and connection to the natural environment through sight, sound and access • Concerns re separation of village • Impacts on village and Manakau Heights re amenity of environment and sense of place

2019 onwards	**Phase Three – Assessment of alignment options**
	
	Feedback from the community was used to inform design and refinement of the corridor.
		• Property owner meetings
		
		• Stakeholder workshops, updates and briefings
		
		• Open days, community drop in events, social pinpoint, surveys and email feedback
		
		• A series of community meetings on the SUP and technical reports (ie noise and air quality) were attended by the social research team, in addition two open days in 2022 in Manakau and Ohau were attended
			<u>SUP Feedback</u>
			
			• Need opportunities to connect into local community attractions or services (suggestion to connect to Manakau School)
			
			• Will provide increased recreation opportunities and opportunities to commute between local communities
			
			• Current cycling environment unsafe
			
			• Needs to work for those of all ages and abilities
			
			• People who don't cycle now may be encouraged to try in safer environment
			
			• Could stimulate communities – especially smaller ones could become destinations for coffee stops and markets and other recreation
			
			• Connections on and off SUP need to be easy
			
			<u>Wider project</u>
			
			• Concerns about noise and visual impacts (particular for those closer to the Project corridor) in particular:
			  o Change of natural environment (audible and visual)
			  o Change of rural environment
			  o Change of enjoyment of outside space
			
			• Concerns about construction dust and private water tanks
			
			• Concerns about altered local routes and journey into Levin and/or Ōtaki
			
			• Safety benefits
			
			• Provide alternate route – also remove traffic from using local roads as ways to avoid congestion on SH1 ('rat runs')
			
			• Positive impact on managing traffic and predicted growth
			
			• Avoids people using local roads as rat runs to avoid congestion on SH1
			
			• Take traffic off centre of Levin which may remove heavy trucks and make it easier to park and more enjoyable to be in but concerns re removal of potential business
			
			• Concern re specific property impacts and property take

APPENDIX E.4 – SUMMARY OF DEMOGRAPHIC DATA

2018 Census Data*- Taitoko/Levin

	Local Community (Taitoko/Levin)	Sub-Local Community (North-east Taitoko/Levin)	Sub-Local Community (South-east Taitoko/Levin)
Population 2018	19,461	645	444
Population Change 2013-2018	9%	9%	10%
Average Median[41] Age	50	55	53
Average Median[20] Income	$24,300	$27,900	$33,500
Number of Households	7,749	252	168
Change in Household numbers 2013-2018	6%	1% (3 additional houses)	8% (12 additional houses)
Average number of people per household	2.5	2.6	2.6
Home ownership	66%	83%	48%
Lived in house longer than 1 year	66% (of total, 18% not elsewhere included)	80%	79%
European	78%	89%	90%
Māori	24%	10%	14%
Population under 15	18%	12%	15%
Population between 15- 29	17%	13%	12%
Population between 30 - 64	38%	51%	51%
Population 65 and older	27%	23%	20%
Employed full time	37%	48%	46%
Employed part time	12%	16%	13%
Unemployed	5%	1%	2%
Not in labour force	45%	33%	37%

[41] Median of the median values reported in each Statistical Area unit.

	Local Community (Taitoko/Levin)	Sub-Local Community (North-east Taitoko/Levin)	Sub-Local Community (South-east Taitoko/Levin)
Top Occupation[42]	Labourers (17%)	Managers (25%)	Managers (32%)
Second Top Occupation	Community and Personal service workers (15%)	Professionals (16%)	Professionals (15%)
Third Top Occupation	Managers (14%)	Clerical and Administrative workers (12%)	Technicians and Trades workers (13%) & Clerical and Administrative workers (13%)
Own at least one motor vehicle	83%	92%	54% (45% did not state)
Household does not own a motor vehicle	9%	0%	2%

*Note that this data is from the 2018 Census, development and population growth would have continued since then, particularly in new development areas.

2018 Census Data- Ohau

	Local Community (Ohau)	Sub-Local Community (Ohau east)	Sub-Local Community (Kuku east)
Population 2018	1,320	120	126
Population Change 2013-2018	11%	74%	8%
Average Median Age	50 years	45 years	49 years
Average Median Income	$29,850	$43,300	$29,600
Number of Households	489	39	51
Change in Household numbers 2013-2018	5%	86% (18 additional households)	0% (3 additional households)
Average number of people per household	2.7	3.1	2.5

[42] Occupation data is reported as the percentage of employed residents in the area aged 15 years or over. Statistics NZ advises caution when using occupation data at small geographies as there will be variability in the percentage of administrative data, imputation, or missing data for a given area. This means some small geography areas will have poorer quality data than the overall quality rating (moderate).

	Local Community (Ohau)	Sub-Local Community (Ohau east)	Sub-Local Community (Kuku east)
Home ownership	87%	100%	88%
Lived in house longer than 1 year	73%	80%	81%
European	89%	95%	81%
Māori	17%	8%	31%
Population under 15	15%	20%	17%
Population between 15- 29	15%	8%	12%
Population between 30 - 64	48%	53%	45%
Population 65 and older	22%	20%	26%
Employed full time	48%	53%	53%
Employed part time	15%	13%	12%
Unemployed	3%	6%	3%
Not in labour force	34%	31%	29%
Top Occupation	Managers (24%)	Managers (24%)	Managers (30%)
Second Top Occupation	Professionals (17%)	Professionals (19%)	Professionals (17%)
Third Top Occupation	Technicians and trades workers (13%)	Technicians and trades workers (19%)	Technicians and trades workers & Labourers (13%)
Households that do not own a motor vehicle	2%	0%	0%

2018 Census data- Manakau

	Local Community (Manakau)	Sub-Local Community (Manakau North-east)	Sub-Local Community (Manakau village)	Sub-Local Community (Manakau Heights)
Population 2018	831	180	150	120
Population Change 2013-2018	22.6%	15%	4%	29%

Average Median Age	49.6	53 years	55 years	44 years
Average Median Income	$33,900	$33,100	$26,600	$36,100
Number of Households	318	63	69	42
Change in Household numbers 2013-2018	13.98%	0%	5%	27%
Average number of people per household	2.6	2.9	2.2	2.9
Home ownership	85.9%	90%	87%	86%
Lived in house longer than 1 year	71.84%	72%	76%	70%
European	86.6%	80%	82%	90%
Māori	18.4%	28%	24%	10%
Population under 15	18.41%	17%	16%	25%
Population between 15-29	9.75%	10%	8%	8%
Population between 30 - 64	46.57%	55%	42%	48%
Population 65 and older	23.83%	18%	30%	30%
Employed full time	48.66%	54%	41%	47%
Employed part time	17.86%	14%	20%	20%
Unemployed	2.68%	4%	5%	3%
Not in labour force	30.36%	28%	40%	23%
Top Occupation	Managers (24.16%)	Managers & Labourers (18%)	Managers (24%)	Mangers (33%)
Second Top Occupation	Professionals (16.11%)	Professionals and Trades & technicians	Technicians and trades	Professionals (14%)

		workers (15%)	workers (20%)	
Third Top Occupation	Technicians and trades workers (16.78%)	Clerical and Administrative workers and Machinery Operators and Drivers (12%)	Labourers (16%)	Technicians and Trades workers, Clerical and Administrative workers, Sales workers, Machinery operators and drivers, Labourers (10%)
Household does not own a motor vehicle	2%	0%	0%	0%

2018 Census Data- Ōtaki

	Local Community (Ōtaki)	Sub-Local Community (North Ōtaki)
Population 2018	6,981	93
Population Change 2013-2018	11%	-6%
Average Median Age[43]	47 years	55 years
Average Median Income	$26,350	$29,500
Number of Households	2,832	33
Change in Household numbers 2013-2018	4%	-8%
Average number of people per household	2.5	2.8
Home ownership	67%	82%
Lived in house longer than 1 year	66%	68%
European	73%	84%
Māori	36%	26%

[43] North Ōtaki sub-local community is represented by one Statistical Area unit therefore these values represent the median age and income as reported by Statistics NZ.

Population under 15	19%	16%
Population between 15- 29	15%	16%
Population between 30 - 64	41%	42%
Population 65 and older	25%	26%
Employed full time	38%	54%
Employed part time	14%	15%
Unemployed	4%	0%
Not in labour force	41%	31%
Top Occupation	Professionals	Managers
Second Top Occupation	Managers	Professionals
Third Top Occupation	Technicians and Trades Workers	Technicians and trades workers, Clerical and Administrative workers, Labourers
Household does not own a vehicle	6%	0%