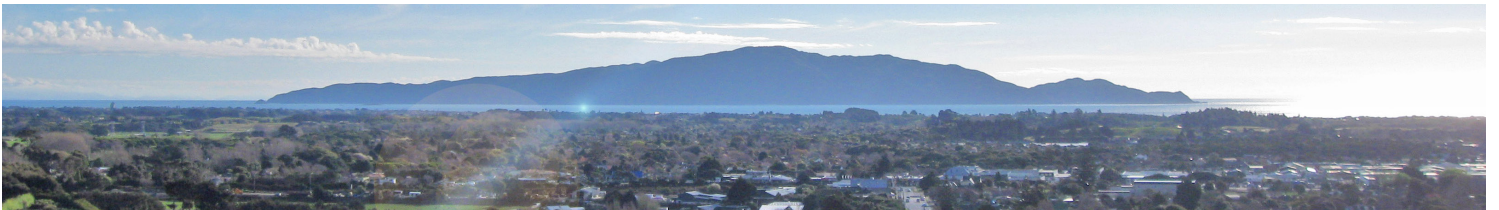


MacKays to Peka Peka Expressway Project Assessment of Environmental Effects Report

Prepared by Beca, Boffa Miskell and Incite

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Report prepared by Beca, Boffa Miskell and Incite



for the NZ Transport Agency



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Table of Contents

Executive Summary	1
PART A: INTRODUCTION	17
1 Introduction	17
1.1 The requiring authority / applicant	17
1.2 The Project.....	18
1.3 MacKays to Peka Peka Expressway Alliance.....	19
1.4 Purpose and scope of this report.....	19
1.5 Integrated engineering and environmental assessment process.....	20
1.6 Structure of this report	21
1.7 RMA requiring authority status	22
1.8 Consideration of the Project as a Proposal of National Significance.....	23
1.9 Aspects not covered in this report	23
2 Background to the Project	24
2.1 Introduction	24
2.2 History of the Project	25
2.3 Context of the Project	29
2.4 Need for the Project.....	33
2.5 Benefits of the Project.....	35
2.6 Project objectives	36
2.7 Property acquisition	37
PART B: STATUTORY CONTEXT	40
3 Authorities sought under the Resource Management Act 1991	40
3.1 Introduction	40
3.2 Purpose and principles of the RMA.....	40
3.3 Proposals of National Significance	42
3.4 Notice of requirement for a designation.....	45
3.5 Outline plans	47
3.6 Land subject to existing designations.....	48
3.7 Project designations to be reviewed after construction	49
3.8 Applications for resource consent.....	49
3.9 Activities requiring resource consent.....	52
3.10 Classes of activities	57
3.11 Resource consents sought	59
4 Statutory considerations	66
4.1 Introduction	66
4.2 National Policy Statements.....	67
4.3 New Zealand Coastal Policy Statement 2010	68

4.4	National Environmental Standards	69
4.5	Regional Policy Statements	71
4.6	Regional Plans	72
4.7	Kāpiti Coast District Plan 1999	75
4.8	Other relevant regulations	76
4.9	Other relevant matters	76
5	Additional considerations	85
5.1	Introduction	85
5.2	Land Transport Management Act 2003	85
5.3	Public Works Act 1981	87
5.4	Historic Places Act 1993	87
5.5	Reserves Act 1977	88
5.6	Wildlife Act 1953	89
5.7	Te Ture Whenua Māori Act 1993.....	89
5.8	QEII National Trust Act 1977	90
5.9	Freshwater Fisheries Regulations 1983	90
	PART C: DESCRIPTION OF THE ENVIRONMENT	92
6	Description of the environment	92
6.1	Introduction	92
6.2	Regional context	93
6.3	Built and human environment	107
6.4	Sector 1 – Raumati South	118
6.5	Sector 2 – Raumati/Paraparaumu	122
6.6	Sector 3 – Otaihanga/Waikanae.....	128
6.7	Sector 4 – Waikanae North.....	134
	PART D: DESCRIPTION OF THE PROJECT.....	139
7	Operation of the Project.....	139
7.1	Introduction	139
7.2	General project description.....	141
7.3	Sector specific project description	163
8	Construction of the Project.....	182
8.1	Introduction	182
8.2	Pre-construction considerations	183
8.3	Construction programme.....	188
8.4	Construction establishment	191
8.5	General construction activities	196
8.6	Sector specific construction activities	201
	PART E: CONSIDERATION OF ALTERNATIVES.....	217

9	Consideration of alternatives	217
9.1	Introduction	217
9.2	Statutory requirement to consider alternatives	218
9.3	Base information - constraints analysis	220
9.4	Assessment of alternative route options	221
9.5	Assessment of alternative alignments and interchanges – phase one	236
9.6	Assessment of alternative alignments and interchanges – phase two	243
9.7	Identification of a preferred alignment	253
9.8	Mitigation option assessment.....	254
	PART F: CONSULTATION AND ENGAGEMENT	257
10	Consultation and engagement	257
10.1	Introduction	257
10.2	Statutory framework	258
10.3	History of consultation.....	258
10.4	Objectives and purpose of consultation	259
10.5	Consultation phases	260
10.6	Parties consulted	261
10.7	Communication and engagement with directly affected landowners.....	265
10.8	Communication with key stakeholders	267
10.9	Communication with the general public	269
10.10	Consultation and engagement methods	269
10.11	Consultation brochures and postcards	270
10.12	Submission methodology and analysis	274
10.13	Consultation feedback 2010 - 2011	275
10.14	Summary of key stakeholder consultation	295
10.15	Consultation feedback 2011	300
10.16	Summary of issues.....	320
	PART G: ASSESSMENT OF ENVIRONMENTAL EFFECTS	328
11	Assessment methodology.....	328
11.1	Introduction	328
11.2	Purpose of the assessment	328
11.3	Environmental assessment undertaken.....	329
11.4	Assessment methodology	330
11.5	Structure of the assessment	331
12	Traffic and transport	333
12.1	Introduction	334
12.2	Traffic and transport issues and objectives	334
12.3	The existing transportation and traffic environment.....	336
12.4	Traffic flows and travel times	344
12.5	Methodology for assessing effects.....	345

12.6 Summary of changes in traffic flows	350
12.7 Effects based assessment methods	351
12.8 Operational traffic and transport effects.....	352
12.9 Effects assessment conclusions.....	353
12.10 Measures to avoid, remedy or mitigate actual or potential adverse effects	354
12.11 Managing operational traffic effects	355
12.12 Construction traffic and transport effects management	355
13 Archaeology and built heritage.....	359
13.1 Introduction	359
13.2 Existing environment – archaeology and built heritage	360
13.3 Assessment of effects on archaeology and built heritage	362
13.4 Measures to avoid, remedy or mitigate actual or potential adverse effects on archaeology and built heritage	364
14 Tangata Whenua and cultural heritage	367
14.1 Introduction	367
14.2 Existing cultural environment	368
14.3 Assessment of effects on Tangata Whenua.....	375
14.4 Measures to avoid, remedy or mitigate actual or potential adverse effects on tangata whenua	382
15 Network utilities	385
15.1 Introduction	385
15.2 Existing environment – network utilities	385
15.3 Assessment of effects on network utilities	390
15.4 Measures to avoid, remedy or mitigate actual or potential adverse effects on network utilities	394
16 Urban form and function.....	395
16.1 Introduction	395
16.2 Investigation and assessment methodology.....	396
16.3 Existing environment – urban form and function patterns	397
16.4 Assessment of effects on urban form and function patterns	398
16.5 Measures to avoid, remedy or mitigate actual or potential adverse effects on urban form and function.....	413
17 Landscape and visual.....	414
17.1 Introduction	414
17.2 Existing environment: landscape and visual.....	415
17.3 Actual and potential landscape and visual effects.....	417
17.4 Summary of landscape and visual effects.....	424
17.5 Measures to avoid, remedy or mitigate actual or potential adverse effects on landscape and amenity.....	425
18 Lighting	431

18.1 Introduction	431
18.2 Lighting environment	432
18.3 Assessment methodology	435
18.4 Assessment matters	436
18.5 Assessment of operational lighting effects	438
18.6 Assessment of construction lighting effects	440
18.7 Measures to avoid, remedy or mitigate actual or potential adverse effects of lighting	440
19 Noise and Vibration.....	442
19.1 Introduction	443
19.2 Existing environment - noise	443
19.3 Construction noise effects	444
19.4 Operational traffic noise effects	446
19.5 Existing environment - vibration	454
19.6 Construction vibration effects.....	456
19.7 Operational traffic vibration effects	459
19.8 Mitigation of construction noise and vibration effects	460
19.9 Mitigation of operational noise and vibration effects	461
19.10 Summary of effects after mitigation	462
20 Air quality.....	463
20.1 Introduction	463
20.2 Existing air quality	464
20.3 Sensitive receptors.....	465
20.4 Assessment of effects on air quality.....	466
20.5 Measures to avoid, remedy or mitigate potential adverse effects on air quality	470
21 Terrestrial ecology.....	472
21.1 Introduction	472
21.2 Existing terrestrial ecological values	473
21.3 Assessment of effects on terrestrial ecology	483
21.4 Assessment of effects on terrestrial ecology (including wetlands) during construction	484
21.5 Assessment of operational effects on terrestrial ecology	491
21.6 Positive ecological effects resulting from the Project.....	493
21.7 Measures to avoid, remedy or mitigate actual or potential adverse effects on terrestrial ecology.....	494
22 Freshwater ecology.....	499
22.1 Introduction	500
22.2 Existing freshwater ecosystems	500
22.3 Assessment of effects on freshwater ecology	510
23 Marine ecology	517
23.1 Introduction	518
23.2 Ecological investigations and modelling	518

23.3 Existing marine ecosystems characteristics	519
23.4 Existing ecological values.....	523
23.5 Assessment of effects on marine ecology.....	524
24 Stormwater and hydrology.....	529
24.1 Introduction	529
24.2 Existing hydrological environment	530
24.3 Hydrological and hydraulic modelling and design principles	535
24.4 Assessment of hydrological and stormwater effects during construction	537
24.5 Assessment of hydrological and stormwater effects during operation.....	537
24.6 Measures to avoid, remedy or mitigate actual or potential adverse effects on hydrology and stormwater	538
25 Groundwater	543
25.1 Introduction	543
25.2 Existing environment	544
25.3 Potential groundwater issues	546
25.4 Investigations and groundwater modelling	550
25.5 Assessment of potential construction and operational effects on groundwater	551
25.6 Measures to avoid, remedy or mitigate actual or potential adverse effects on groundwater	554
26 Ground settlement.....	557
26.1 Introduction	558
26.2 Existing environment	558
26.3 Methodology.....	560
26.4 Assessment of construction effects on ground settlement.....	564
26.5 Assessment of operational effects on ground settlement	567
26.6 Monitoring	568
26.7 Managing unanticipated ground settlement effects	569
27 Land and groundwater contamination	571
27.1 Introduction	571
27.2 Existing environment – contaminated land and groundwater	572
27.3 Areas of potential contamination	572
27.4 Assessment of contamination effects to land and groundwater during construction	573
27.5 Assessment of contamination effects to land and groundwater during operation	574
27.6 Measures to avoid, remedy or mitigate actual or potential adverse effects of contamination to land and groundwater	575
28 Water quality	576
28.1 Introduction	576
28.2 Existing water quality	577
28.3 Water quality modelling.....	580
28.4 Assessment of water quality effects during construction	582

28.5 Assessment of water quality effects during operation	584
28.6 Assessment of marine water quality effects	586
28.7 Measures to avoid, remedy or mitigate actual or potential adverse effects on water quality	587
29 Economic effects	588
29.1 Introduction	588
29.2 Existing economic environment	588
29.3 Methodology for assessing economic effects	589
29.4 Investigation and assessment process	590
29.5 Assessment of economic effects	590
29.6 Measures to avoid, remedy or mitigate actual and potential adverse economic effects	592
30 Social effects	593
30.1 Introduction	594
30.2 Existing social environment	595
30.3 Summary of regional social effects	599
30.4 Summary of social effects on the community during construction	599
30.5 Social effects from the operation of the proposed Expressway	603
30.6 Conclusions of the social effects assessment	613
30.7 Measures to avoid, remedy or mitigate actual or potential adverse effects on the social environment	614
PART H: MANAGEMENT OF ENVIRONMENTAL EFFECTS	616
31 Environmental management and monitoring	616
31.1 Introduction	616
31.2 Project delivery framework	617
31.3 Management plan framework	620
31.4 Summary of mitigation, monitoring and other measures to manage adverse effects	625
31.5 Proposed conditions	663
32 Proposed designation conditions	664
32.1 Guide to reading the conditions	664
32.2 Proposed NZTA designation conditions	664
33 Proposed resource consent conditions	679
33.1 Guide to reading the conditions	679
33.2 Proposed NZTA resource consent conditions	679
33.3 Proposed consent conditions for earthworks and discharges to land	688
33.4 Proposed consent conditions for earthworks and discharges to land	693
33.5 Proposed consent conditions for borehole construction and groundwater takes	695
33.6 Proposed consent conditions for wetland reclamation and vegetation clearance	697
PART I: STATUTORY ASSESSMENT	698
34 Approach to the assessment	698

34.1 Introduction	698
34.2 Approach to the statutory planning assessment	698
35 Statutory assessment.....	703
35.1 Introduction	703
35.2 National Policy Statement for Freshwater Management 2011	704
35.3 National Policy Statement for Electricity Transmission 2008	708
35.4 NZ Coastal Policy Statement 2010	708
35.5 Relevant National Environmental Standards	711
35.6 Wellington Regional Policy Statement 1995.....	712
35.7 Proposed Wellington Regional Policy Statement 2009	712
35.8 Wellington Regional Freshwater Plan 1999	725
35.9 Wellington Regional Air Quality Management Plan 2000	734
35.10 Wellington Regional Coastal Plan 2000	735
35.11 Wellington Regional Plan for Discharges to Land 1999	736
35.12 Wellington Regional Soil Plan 2000.....	738
35.13 Kāpiti Coast District Plan 1999.....	739
35.14 Other relevant documents	745
35.15 Assessment of Section 105 matters	755
35.16 Assessment of Section 107 matters	756
35.17 Assessment of Part 2 matters and conclusion.....	758
 PART J: APPENDICES	
Appendix A – Guiding Objectives for Project Alliance Board	762
Appendix B – Resource Management (Approval of Transit New Zealand as Requiring Authority) Notice 1994.....	766

Executive Summary

Introduction

The NZ Transport Agency (NZTA) has lodged a notice of requirement for designation and resource consent application for the MacKays to Peka Peka Project.

The application seeks approval for the proposed designation of the MacKays to Peka Peka Project corridor (as shown in Figures I and II) to allow the construction, operation and maintenance of a State Highway formed to an expressway standard from north of MacKays Crossing to Peka Peka. The planned Expressway passes through part of the Kāpiti district. The NZTA is responsible for the proposed designation and subsequent public works.

Since the 1950s, there have been plans and legal protections in place for a future major transport route for much of the planned MacKays to Peka Peka route. Originally identified as future motorway, the legal protections for it over the decades have been modified several times to reflect evolving thinking on safe and efficient highway design and management. A designation in this corridor is currently held by the Kāpiti Coast District Council for a local arterial road known as the Western Link Road. The planned Expressway will supersede this.

The planned Expressway is sufficiently different in terms of design standards and alignment from the Western Link Road that a new designation is being sought.

Once constructed, the planned Expressway will shift State Highway 1 (SH1) from its present alignment to a new route. This will deviate from the current State Highway near Poplar Avenue and re-join current SH1 at Peka Peka. The proposed designation deviates from the Western Link Road designation in several locations in response to a range of RMA considerations around ecological, environmental, social, cultural and economic matters.

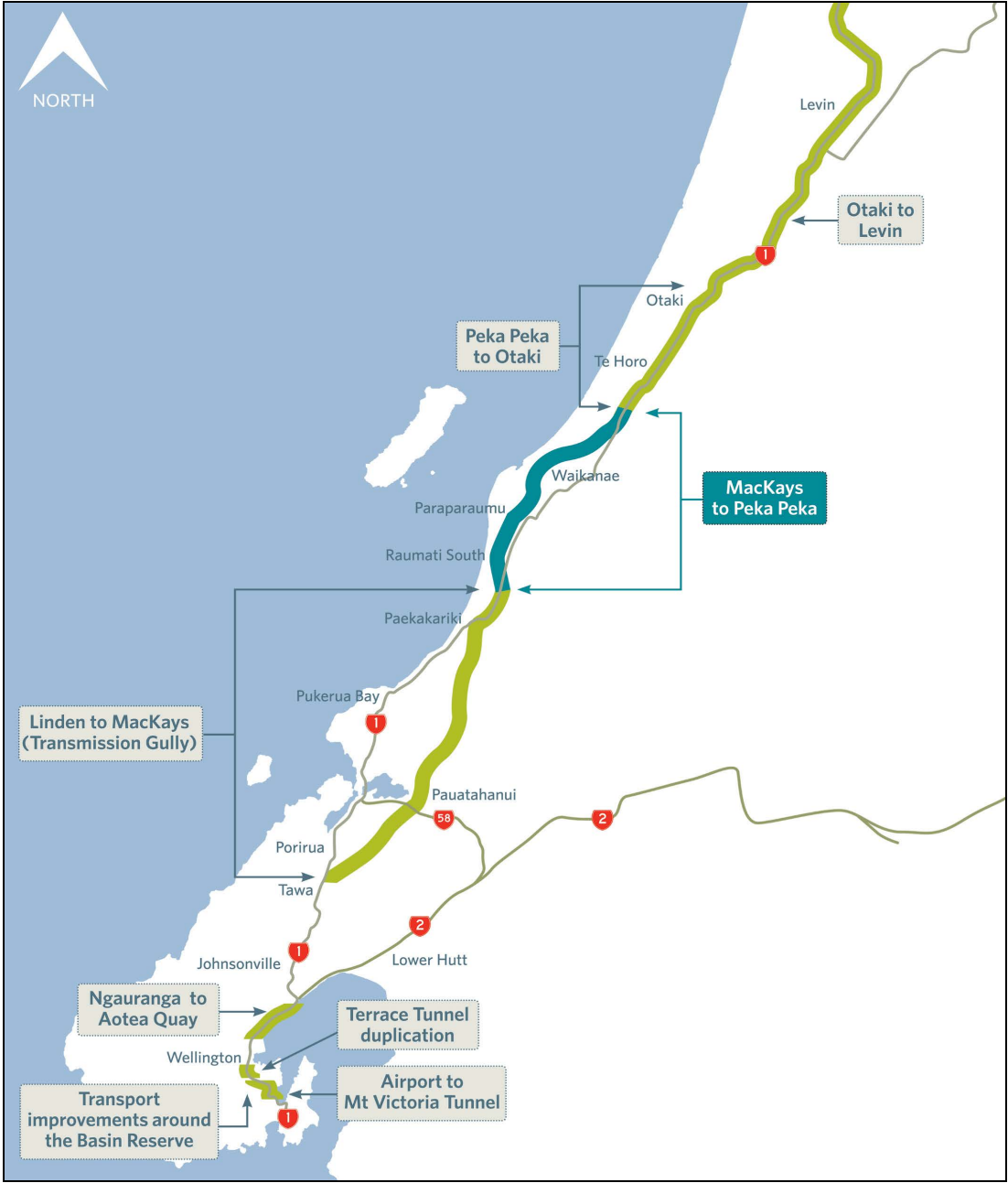


Figure I: Wellington Northern Corridor road of national significance



Figure II: MacKays To Peka Peka planned route

Background to the Proposal

The MacKays to Peka Peka Project culminates 60 years of state highway thinking for the Kāpiti district on how best to provide a safe, efficient, long-term route through one of the fastest growing parts of the Wellington region.

Strategic studies and investigations have varied as to their conclusions on the best solution for moving traffic through the Kāpiti district. Evolving design assumptions for safety, efficiency, cost and other factors have seen options considered ranging from a four-lane motorway (broadly following the 'Sandhills corridor' being used by the planned Expressway), to most recently, a lesser standard upgrade of the current SH1 augmented by a new parallel local arterial road (known as the Western Link Road).

In March 2009, this section of SH1 was classified by the Government as part of the Wellington Northern Corridor road of national significance, one of seven major state highways identified as priorities for upgrading. In mid-2009, a NZTA review of long-term route options for this section of SH1 concluded that the general corridor within which the planned Expressway is located best meets national, regional and district needs for a State Highway.

The Project provides benefits in terms of safety, travel time savings and route security with respect to the overall Wellington Northern Corridor road of national significance. Accordingly, the Project is a key component of a number of national, regional and local transport strategies, policies and plans to improve transport in the Wellington region and nationally.

The Project provides the following benefits:

- Improved safety for motorists compared to the existing SH1 between MacKays Crossing and Peka Peka.
- Improved route security and resilience of the Wellington region's state highway and the Kāpiti district's networks in the event of significant earthquake, road accidents or other disruption.
- Travel time benefits and improved travel time reliability along key routes.
- Increased local accessibility within the Kāpiti district's travel network due to the provision of an additional crossing across the Waikanae River as well as full Waikanae and Paraparaumu interchanges.
- Enhancement of the Kāpiti district's cycling, walking and bridleway network through a new shared route adjacent to the planned Expressway.
- Removal of long-distance traffic from Waikanae and Paraparaumu centres thus allowing easier movement across the existing highway for local traffic, pedestrians and cyclists, and enabling the revitalising and upgrading of the town centres.
- Regional and district economic benefits from improved accessibility to the major business zonings at Paraparaumu.
- Promoting future residential and business growth in the Kapiti district.
- Regional economic benefits resulting from travel time savings, improved trip time reliability and increased accessibility to and throughout the Wellington region.

Management of Environmental Effects

The effects of the planned Expressway on the environment have been avoided, remedied or mitigated through an integrated design process and a comprehensive set of Project conditions. In the event that the RMA statutory authorities are granted, the implementation of mitigation and conditions will be overseen by the Greater Wellington Regional Council for regional consents, and Kāpiti Coast District Council for designation conditions.

Development of the Project design and associated conditions has involved a multi-disciplinary team of technical experts and been informed by public consultation and on-going stakeholder engagement.

Potential operational (when open for traffic) effects of the planned Expressway were, in the first instance, addressed by alignment design choices e.g. using natural dune features for screening. A multi-disciplinary process was also used to identify the comprehensive use of mitigation measures in the design of the route. Examples are the provision of a new shared walkway/cycleway, keeping most local roads at ground level to assist ease of movement for local users, the use of planted bunds, noise barriers, storm water runoff treatment, landscaping and visual-screen planting, native re-vegetation and wetland management.

Prior to, during, and following construction, a programme of monitoring will provide information to help develop and implement the measures to be used and adapted to manage effects.

A comprehensive suite of conditions for the designation and resource consents is proposed. The conditions include an environmental monitoring and management programme for construction effects. Implementing these conditions and framework enables the effects of the Project to be adequately and appropriately avoided, remedied or mitigated in accordance with statutory requirements and the NZTA's commitments to best practice.

Description of the Environment

The planned Expressway passes through a mixture of semi-urban, urban, semi-rural and rural environment along its 16km route:

- At the southern end, the route traverses a small part of the north-eastern corner of Queen Elizabeth Regional Park;
- Between Poplar Avenue and the Wharemauku Stream, the route is located within the residential neighbourhoods of Raumati South and Raumati including part of the undeveloped corridor that separates these communities;
- North of the Wharemauku Stream to Otaihanga Road, the route runs adjacent to the Paraparaumu town centre and Kāpiti Airport, as well as number of residential neighbourhoods on either side of the undeveloped corridor;
- North of Otaihanga Road to the Waikanae River, the route passes through semi-rural and rural settings in the Otaihanga neighbourhood;
- North of the Waikanae River to Te Moana Road, the route traverses a mix of semi-rural and urban land, part of which is of recreational and cultural importance;

- North of Te Moana Road, the route passes through semi-rural land zoned for future urban development;
- At the northern end, the route passes through a predominantly rural area containing rural-residential enclaves.

The Project area consists of areas of native and exotic vegetation, sand dune systems, wetlands, pasture and discrete areas of urbanised land. Much of the Kāpiti district has been modified by human activity over several hundred years resulting in a variable range of terrestrial (land-based) ecological habitat along the route. Design criteria for choosing the Project route included seeking to avoid entirely, or if that was not feasible, minimise the planned Expressway effect on high-value ecological habitats.

The Project traverses seven hydrological catchments. The ecological values of the streams in these catchments vary and range from highly to moderately modified catchments.

All catchments flow east to west to the Kāpiti coast. The Waikanae River and its tributaries is the largest of these catchments and contains wetland and estuarine ecosystems with significant ecological value.

Network utilities present along the route include:

- The 220kV Haywards to Bunnythorpe electricity transmission line which crosses the route between Smithfield Road and Peka Peka. This line will not need to be relocated.
- A high-pressure gas pipeline between the Waikanae River and Te Moana Road. The relocation of this pipeline will be subject to its own separate consenting process.

Description of the Project

The planned Expressway has been designed to an NZTA expressway standard which comprises a minimum of four lanes (two in each direction) with continuous median separation.

Local access to and from the alignment is primarily via two new interchanges - one at Kāpiti Road, and one at Te Moana Road. In addition, the interchanges at the northern and southern tie-ins to the existing SH1 provide partial access:- south-facing ramps only at the southern tie-in at Poplar Avenue, and north-facing ramps only at the northern tie-in at Peka Peka.

At the Poplar Avenue, Kāpiti Road and Te Moana Road interchanges, the planned Expressway passes over the local roads. At the Peka Peka interchange, the planned Expressway passes under the local road which connects back to the existing SH1.

Key features of the Project include the following:

- A sealed 26m-wide carriageway within a 100m-wide designated corridor.
- Provision of buffer areas on either side of the formed carriageway to enable landscape treatment, ecological enhancements, noise attenuation measures and other facilities. The width of the corridor also allows for the retention of existing features and vegetation wherever practicable.
- Provision of comprehensive landscape treatment and for finished slopes of all cuts and fills.

- Quality design of all bridges and structures located in highly visible public locations such as at Kāpiti Road and the Waikanae River Crossing.
- Provision of a new shared walking and cycle track running adjacent to the planned Expressway. This pathway would also act as a bridleway north of Te Moana Road.
- Noise-reducing road surfaces in urban areas with preference for use of planted bunding (earth mounds) where practicable and noise barriers as necessary in other locations.
- No lighting along the planned Expressway except at interchanges, with lighting designed to respond to different urban and rural environments.
- No bridge piers are proposed within the streams or river channels. All bridge and culvert structures include design or associated erosion protection works to prevent scouring during storm events.
- A net increase in the extent of significant vegetation, wetlands or stream related habitat.
- Mass planting along stream edges and in other areas affected by the planned expressway.
- Stormwater runoff is to be collected and treated using swales, filtration-type devices and constructed treatment wetlands.
- Enabling works would include the formation of construction lay-down areas and site compounds. The main construction compound is to be located at the former Otaihanga Landfill next to the planned Expressway route.
- Construction works include earth embankments, areas of cut and fill, reinforced soil embankments, piling and mechanically stabilised earth walls with concrete facing panels (predominantly around bridges).
- Approximately 2.3 million cubic metres of excavated (cut) material will be used as fill within the designation. In addition, there will be approximately 350,000 cubic metres of imported fill, approximately 240,000 cubic metres of sand exported off-site (to quarries), and approximately 200,000 cubic metres of peat exported off-site (to various locations). The total volumes of exported material are anticipated to reduce through further refinements during the construction phase.
- Comprehensive erosion and sediment control measures are to be provided for all earthworks and for works in and around water bodies.
- Construction will be undertaken by a number of work crews working on different parts of the Project either at the same time or at different stages. Construction is expected to take approximately four years.

Consideration of Alternatives

An assessment of route alternatives was undertaken by the NZTA in 2009 to choose the overall Project corridor. Options for constructing an Expressway between MacKays Crossing and Peka Peka that were considered included a route along the existing SH1 as well as alternative alignments further to the west towards the coast including what is known as the 'Sandhills' route. The NZTA's conclusion was that the 'Sandhills' route best addressed environmental, safety, efficiency, value for money, constructability, property impact, and wider community considerations.

In 2010, the initial alternative route evaluation work was further refined and updated. This assessment agreed with and further reinforced the original conclusions as to the appropriateness of the 'Sandhills' route. This process is provided as background report to the application and is available for viewing on the NZTA website.

In parallel, a detailed evaluation process for defining the Expressway route was conducted over 2010 and 2011. This process focused on specific Expressway route choices and the location of interchanges. The process was informed by specialist inputs from a multi-disciplinary team across environmental, social, cultural and economic factors. Two rounds of public consultation and stakeholder engagement further informed and shaped thinking on options.

Design decisions incorporated from this process include:

- Deciding that the optimal arrangement for full interchanges is one at Kāpiti Road and one at Te Moana Road on the basis of best balancing State Highway and local needs.
- At the southern end, the alignment enables long-term urban form opportunities north of Leinster Avenue, reduces the impact on ecological areas, wetlands, terrestrial habitat, public open space in QE Park and on two schools. It also reduces the likelihood for disturbance of potential archaeological sites and/or locations with cultural significance.
- Ensuring the alignment avoids the loss of QEII covenanted wetlands which contain significant indigenous native habitats, and in other non-covenanted areas as far as practicable.
- Provision for replacement of ecological areas and mitigation of adverse ecological effects.
- Selecting an alignment north of the Waikanae River which seeks to reconcile a complex set of values and issues including avoidance of heritage buildings and known archaeological sites, minimising impact on residential properties, recreational value and, seeking to reduce the extent of intrusion into the registered Wāhi Tapu compared with earlier roading proposals.

Consultation and Engagement

Consultation on the Project has been guided by recognised good practice approaches and has included significant levels of interaction with stakeholders at all required levels. Extensive use has been made of one-on-one and group meetings.

In addition, a series of public open days, a written submission process, a freephone service, information centre, and newsletters to households have enabled the sharing of information, views and ideas. In addition, web-based online material has been available throughout the process.

On-going involvement and communication with the relevant regulatory agencies has also been undertaken as part of the preparation of regulatory consent documentation. This engagement will continue as the Project progresses.

Assessment of Effects on the Environment

An Assessment of Effects on the Environment (AEE) of the Project has been carried out in accordance with the relevant provisions of the RMA. The AEE concludes that the Project will have a range of actual or potential positive and adverse effects. The effects vary in significance, scale (local, regional and

national), intensity and duration, and are described in the AEE. Effects also differ during construction compared to when the route is open for traffic.

Traffic and Transport

The Project will have significant positive transport effects at a local, regional and national scale including:

- Improved route security and resilience for the region's state highway network and for district level emergencies.
- Improved safety and reduced road accident risk.
- Significant travel time savings and reduced trip time variability.
- More efficient freight movement and associated economic benefits.
- Improved connections to regional freight hubs and airports including those at Paraparaumu, Wellington Port, Wellington International Airport and other distribution centres.
- Improved local accessibility through the provision of interchange connections to a second north-south route (i.e. the planned Expressway in addition to existing SH1).

During construction, there will be localised short-term traffic effects including delays or inconvenience arising from increased heavy construction traffic and the need to do work on some local roads adjacent the planned Expressway. The use of local roads by construction traffic will generally be minimised with the main direct access to be provided from the existing state highway. The effects on local traffic will be managed as per the Construction Traffic Management Plan provided with the application.

Property Effects

The land that is required for the Project includes Crown land, Council-owned land including road and reserves, Māori land, and privately-owned property. The majority of land is already owned by the Crown or District Council for roading purposes. The NZTA has an active purchase programme which seeks to acquire all required land for the Project that is in private ownership along the route.

Property owners whose land is required for the expressway have been advised and made aware of the extent required (either full or partial acquisition). Effects on other properties (such as site access) have been identified and have been, or are being addressed through property agreements or consultation processes with property owners.

Network Utilities

Protection and/or relocation of utilities located within the planned Expressway will be required. These works will mainly be undertaken as enabling works for the Project. The NZTA has worked closely with the relevant organisations and is satisfied that any adverse effects on network utilities will be able to be managed appropriately.

The most significant extent of effect on a network utility is the Vector high-pressure gas pipeline which runs along the planned Expressway alignment north of the Waikanae River. The consent required for the relocation of the pipeline will be applied for by Vector separately to the MacKays to Peka Peka Project.

The planned Expressway runs below electricity transmission lines to the south of Peka Peka near Smithfield Road. Requirements for this are incorporated in the design of the expressway.

Noise and Vibration

As the planned Expressway passes through established urban areas, a detailed assessment of noise and vibration effects was carried out along the entire route using the process set out in the appropriate national standard (NZS 6806:2010). The assessment determined that specific noise mitigation measures (e.g. bunds, noise barriers) to manage effects from the operation of the road are required in some localised areas.

These types of measures need to meet the 'best practical option' requirements of the Resource Management Act in that they have to be effective in noise attenuation while being the best fit for local environment insofar as being practicable. To identify measures to mitigate potential noise effects, a comprehensive multi-disciplinary assessment process was undertaken to determine the best practical option within each section of proposed Expressway corridor.

Project design included a generous designation footprint of up to 100 metres width, of which the planned Expressway generally takes up around a quarter. In addition, noise-reducing road surfacing is used in urban areas and, where feasible, planted bunds (earth mounds) are used to shield adjacent houses from noise. Noise barriers are needed in some locations.

Construction noise is to be within the limits of the appropriate national standard (NZS 6803:1999). Where construction works are proposed in close proximity to sensitive receivers (e.g. residential dwellings), methods to manage noise and vibration effects are set out in a Construction Noise and Vibration Management Plan.

Air Quality

Construction of the route, particularly earthworks, is to be managed to minimise risk of nuisance dust or sand blow. This will be managed through the Construction Air Quality Management Plan and includes methods such as water spraying during dry periods.

The effect of vehicle emissions on air quality once the planned Expressway is in operation was also assessed. The assessment concluded that there will be an overall reduction in public exposure to vehicle emissions on a regional basis primarily due to the reduced congestion and the splitting of traffic volumes between the planned Expressway and existing SH1.

Contaminated Land

The route of the planned Expressway was assessed in terms of the potential risks around the discovery and handling of contaminated land during construction. A small number of locations along the

alignment have been identified and the management of this risk involves careful investigation, excavation and management/disposal methods following protocols set out in the Contaminated Land Management Plan.

Hydrology and Groundwater

Hydrological, groundwater and related modelling has been undertaken as part of the environmental assessment and Project design process, with particular attention given to any potential 'barrier' effects of the planned Expressway relative to the natural east-west catchment flows, as well as the interaction with the Kāpiti district's wetland systems and aquifers and bore use. The design of the planned Expressway has been determined to avoid, remedy or mitigate potential adverse effects.

As a consequence of the design process, the changes in flood flows in most locations are negligible and in some instances, the Project results in a small reduction in downstream flood risk by containing and managing flows in high rainfall events.

The crossings of water bodies (bridges and culverts) and limited circumstances of stream realignments by the planned Expressway will result in changes to how they flow. By constructing realigned water bodies as close as possible to their existing form (slope, channel size and shape), effects on them (i.e. velocity and flow paths) and hence water quality and ecology are minimised.

Water Quality

Erosion and sediment control management measures meeting best practice standards will be used during construction. These measures will achieve high levels of performance minimising the amount of sediment that enters streams. Consequently, water quality effects during construction are predicted to be minimal, with suspended sediment in water clearing quickly out of streams and with minimal levels of deposition in sensitive locations.

All storm water runoff from finished road surfaces will be treated using natural filtration and treatment methods. As a result, it has been concluded that, in overall terms, contaminants entering the local stream and river systems will decrease from the current situation which will be a positive effect of the Project.

Contaminant levels entering the Waikanae River estuary will remain unchanged.

Terrestrial Ecology

As part of the environmental assessment, the route was comprehensively surveyed by ecologists who confirmed a wide variability of ecology from regionally rare and significant habitats through to urbanised and heavily modified landscapes with limited ecological diversity and values.

The selected Expressway route has enabled avoidance of the most sensitive and highly-valued ecological areas. Ecological input throughout the design process has ensured that adverse effects on terrestrial ecology will be avoided, remedied or mitigated. Around 3.8 hectares of vegetation lost is offset by revegetation of 7.6 hectares.

Unavoidable impacts, such as the culverting or bridging of streams, will be addressed by ecological offsetting consistent with the Greater Wellington Regional Council policy (i.e. ecological enhancements to replace any loss of habitat) e.g. stream restoration and replanting with indigenous (native) vegetation in specified areas. A number of habitats have been identified for revegetation on the basis of the range of potential ecological and hydrological benefits they can provide despite the minimal effects on the Expressway on such habitats.

Effects on the habitat of terrestrial fauna (wildlife) are assessed as minor to moderate and can be effectively managed. Examples include appropriately managing effects on Fernbird and lizard populations, and the recreation of habitats such as wetlands in combination with careful construction management methods.

Freshwater Ecology

Sediment runoff from earthworks during construction has the potential to adversely affect freshwater habitats and species. During construction, the earthworks areas can increase sediment levels in streams particularly during large rainfall events.

Based on the application of best practice sediment and erosion control methodology, the potential ecological impact of predicted sediment runoff is assessed to be negligible. The assessment concludes the ecological effects will be minor as the freshwater species existing in these streams currently face naturally occurring temporary increases in sediment levels and have tolerance to these events. In addition, the need to ensure appropriate fish passage within the water bodies crossed by the planned Expressway will be incorporated in culvert design.

While the need to modify streams has been reduced through route and design decisions, it is not feasible to avoid all effects as the construction of the planned Expressway will require the modification of parts of streams and at the Waikanae River, the need to construct culverts and bridges.

Approximately 5000 metres of streams will be restored or re-established to mitigate approximately 2900 metres of stream that will be modified as a result of the Project.

Mitigation is also provided for the 1.8 hectares of wetlands affected by the Project. This is being offset by 5.4 hectares of wetland restoration.

In addition, ecological value is provided from 13 hectares of mass planted flood storage areas for the planned Expressway.

The Project will therefore result in a net gain in freshwater habitat quality across the Project area. This positive effect will be on-going in association with the indigenous vegetation replanting proposed.

Marine Ecology

There are no works within, or any discharge of contaminants directly into, the coastal marine area. The marine environment is however the ultimate receiving environment for any sediment-carrying water from construction of the route. The use of sound sediment and erosion control methods during construction will ensure that any effects on the coastal environment will be avoided.

Stormwater runoff from the road once it is in operation also carries contaminants which will be managed through the proposed stormwater treatment processes. The potential ecological effects of operational (when the route is open for traffic) stormwater discharges have been assessed as minor. Overall it is likely that there will be a reduction in contaminants from most catchments.

Tangata Whenua

The planned Expressway passes through the mana whenua of several iwi. The rohe of Te Atiawa ki Whakarongotai is the predominant area affected while Ngāti Raukawa, Ngāti Toa and Muaupoko also have interests in the area.

Consultation and on-going engagement with iwi throughout the Project design process has identified key issues as impacts on identified cultural heritage areas, environmental impacts, cultural health effects, and impacts on Māori-owned land. Project design and associated mitigation measures have sought to remedy or minimise adverse effect

Of particular interest to iwi are the direct and indirect effects of construction in the vicinity of the Takamore Wāhi Tapu and the potential ecological impacts of construction. Operational effects include discharge of stormwater from the road surface to streams and eventually to the streams and rivers, and effects on water and habitat quality.

Te Atiawa ki Whakarongotai and the Takamore Trust have provided Cultural Impact Assessments for the Project. These both note a range of matters of significance and acknowledge that the methods proposed by the NZTA seek to manage and mitigate adverse effects on the environment.

Landscape and Visual

The presence of a roading designation over most of the Project route since the 1950s has foreshadowed that significant landscape and visual change could be expected. While the scale of the planned Expressway means that it will inevitably create a significant change to the local landscape, the actual scale and extent of adverse visual and landscape effects varies along the route, and the choice of route and its design have sought to reduce the level of change.

The approach to designing the route and all associated works has been to avoid adverse landscape and visual effects as far as practicable and then to mitigate any remaining adverse effects. During the design of the route, particular focus was given to the design of all significant structures as well as landscape treatment options along the entire corridor including at key points where the planned Expressway will have a visible presence (such as interchanges and the crossing of the Waikanae River). General and specific measures are proposed in the Projects regulatory consent application which avoid, remedy or mitigate the adverse landscape and visual effects resulting from the construction and operation of the expressway. These measures have been underpinned by the urban and landscape design principles developed for the Project and documented in the urban and landscape design framework.

There are also positive visual effects for users of the road and for users of the proposed new shared cycleway/walkway which will offer new vistas of the coast, hills and landscapes of the Kāpiti district that are not currently available.

Archaeology and Built Heritage

There are no known high-value archaeological or built heritage sites within the earthworks footprint of the Project. Non-invasive surveys, predictive modelling, stakeholders' local knowledge and use of previous archaeological work in the Kapiti district have informed the planned Expressway route choices and design. As large sections of the planned Expressway are on embankments, this lessens the need for disturbing archaeological sites.

The history of continual occupation of the Kāpiti district over the years does however mean that archaeological finds are highly likely. The process for addressing the potential impact on archaeological sites is managed by the Historic Places Act which sets out the requirements for obtaining the appropriate authorisations. Detailed archaeological surveys are an integral part of the pre-construction work programme, supplemented by construction staff training and accidental discovery protocols to manage any unexpected discoveries during construction.

In terms of built heritage, the route avoids directly affecting all items either registered under the Historic Places Act or identified by the Kāpiti Coast District Plan as having significant historic heritage values. The assessment of built heritage also considered all identified sites and buildings within one kilometre of the planned Expressway route, and only two buildings identified under the Kāpiti Coast District Plan are located within close proximity to the planned Expressway - the former St Lukes Church at El Rancho and the Greenaway Homestead on Puriri Road. No significant effects on the historic heritage values of these buildings were identified.

Social Effects

The Kāpiti district is a rapidly growing and changing area and the Project will add to and possibly accelerate this change dynamic. The social effects range in significance between adverse and beneficial across the community and along the route length. These effects would also vary over time through the Project's construction and operational phases.

Arising from its economic, safety and transportation benefits, the Project will also have social benefits for the region and the district, particularly in terms of those that arise from the predicted improvements to the existing level of connectivity between communities. However, there will be negative social effects which will be largely borne by those in neighbourhoods immediately adjoining the planned Expressway. The Project design sought to mitigate a number of potentially negative social effects e.g. by maintaining or improving local road accessibility throughout the communities, developing a new shared walkway/cycleway, using planted bunds where feasible to provide visual and noise screening, and by comprehensive landscape treatment contributing to better community amenities.

Many of the negative social effects will occur during construction and it is therefore important that these effects are mitigated through effective construction management, communication and community liaison, and through effective management measures implemented through the Construction

Environmental Management Plan (CEMP) and its subsidiary plans for traffic, noise, vibration and air quality. Monitoring is proposed through a proposed community liaison group to identify adverse social effects that may occur during construction and for the group to assist in formulating possible mitigation measures.

Once in operation, the nature of the social impacts from the planned Expressway will alter as people and communities adjust to the presence of the road. Any long-term issues will be addressed through the on-going relationship between the NZTA and the KCDC around managing the State Highway and local network.

Positive social benefits are also identified in parts of the Kāpiti district from employment opportunities created, reduced traffic, enhanced choices for local travel movement through new road and shared walkway/cycleway links, improved air quality outcomes through distribution of traffic and improved local ease-of-access and new opportunities for community cohesion.

Urban Form and Functioning

The construction of the planned Expressway will affect the urban form of the Kāpiti district although the area has developed around a corridor that has long been designated for roading purposes, particularly in Raumati and Paraparaumu. The part of the route that runs through Waikanae North, which has been identified and recently zoned for urban growth, will be adversely affected by the Project and it is anticipated that some revision of the growth management policies for the area will be required. The route of the planned Expressway and the width of the designation corridor will however allow 'green spaces' to be utilised for the benefit of the local area while careful location and design of urban development will also assist in integrating future residential neighbourhoods into the modified environment. Future connections into this area including cross-Expressway links have been considered in liaison with the KCDC.

The planned Expressway will adversely affect some businesses that rely to a greater or lesser extent on passing through traffic and some adjustments are therefore envisaged. However, it is anticipated that the long-term vitality and vibrancy of the area's commercial areas and town centres will be maintained, if not enhanced, by the benefits to the local economy that are envisaged by the planned Expressway. These include increased regional accessibility, an increased rate of commercial and industrial land uptake, and opportunities for town centre enhancement at Waikanae and Paraparaumu provided by the reduction in traffic particularly freight vehicles.

The existing amenity values enjoyed by residents adjacent to the planned Expressway will be adversely affected by the Project. Accordingly, a focus of the design of the route, particularly in terms of landscape treatment and interchange and bridge design, was to have the road fit into the landscape as much as practicable and to utilise the wide designation corridor to mitigate the effects on amenity values through such measures as earthwork formation, bunding and planting. Residents adjacent to the existing SH1 will benefit through amenity improvements arising from reduced traffic flow. Additionally, an opportunity is enabled for enhancing this road after it is returned to the Kāpiti Coast District Council through the revocation process (i.e. reverting to a local road).

Statutory Matters

A wide range of objectives and policies in national, regional and local policy and other planning instruments are relevant to the MacKays to Peka Peka Project. The Project was assessed against these provisions with the main conclusions as follows:

- Overall the Project is not inconsistent with, and will give effect to (as required) the relevant objectives and policies of the statutory planning documents.
- The Project is a key part of the Wellington Northern Corridor road of national significance programme which will, as a whole, provide significant safety improvements, travel time savings between Wellington Airport and Levin, and facilitate more efficient movement of freight and people into and out of Wellington. This is consistent with the transport related policy in the regional planning strategies.
- The Project will promote the sustainable management of natural and physical resources. It is intended to meet the growing transportation needs of the region and district, and includes elements that will support public transport, walking, cycling and the mobility-impaired. In turn, these outcomes will enhance the social, economic and cultural well-being of people and communities.
- The Project will sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations and satisfactorily safeguard the life-supporting capacity of air, soils, water and ecosystems.
- As a nationally significant infrastructure Project, there will be both significant positive and adverse effects from the construction and operation of the planned Expressway. The route, alignment and design considerations, in conjunction with appropriate management and conditions, are considered to adequately avoid, remedy or mitigate the actual or potential adverse effects in the context of the purpose and principles of the RMA.
- The Project provides for, and has appropriately responded to, the matters in sections 6, 7 and 8 of the RMA.
- Overall, the statutory assessment concludes that the Project meets the statutory tests of the RMA.