

BOARD OF INQUIRY

Peka Peka to North
Ōtaki Expressway

Draft Report and Decision

of the Board of Inquiry into the

Peka Peka to North Ōtaki Expressway Proposal

Volume 1 of 2: Draft Report and Appendices

**BEFORE THE BOARD OF INQUIRY CONCERNING A REQUEST FOR
TWO NOTICES OF REQUIREMENT AND APPLICATIONS FOR
RESOURCE CONSENTS TO ALLOW THE PEKA PEKA TO NORTH
ŌTAKI EXPRESSWAY PROJECT**

IN THE MATTER

of the Resource Management Act 1991 and the deliberations of a Board of Inquiry appointed under Section 149J of the Act to consider a request for two Notices of Requirement and Applications for resource consents by New Zealand Transport Agency and KiwiRail Holdings Ltd, in respect of the Peka Peka To North Ōtaki Expressway Project

**DRAFT DECISION AND REPORT OF BOARD OF INQUIRY UNDER
SECTION 149Q OF THE ACT**

**BEFORE A BOARD OF INQUIRY
PEKA PEKA TO NORTH ŌTAKI EXPRESSWAY PROJECT**

IN THE MATTER of the Resource Management Act 1991 (RMA)

AND

IN THE MATTER of the deliberations of a Board of Inquiry appointed under s149J of that Act

AND

IN THE MATTER of a Notice of Requirement and Resource Consent Applications by the NZ Transport Agency for the Peka Peka to North Ōtaki Expressway Project

AND

IN THE MATTER of a Notice of Requirement by KiwiRail Holdings Limited (trading as KiwiRail) for realignment of a section of the North Island Main Trunk railway line

Board: Hon Sir Hugh Williams, QC (Chair)
Mr Mark Apeldoorn (Member)
Dr Jeff Jones (Member)
Professor Roger Maaka (Member)
Ms Pamela Peters (Member)

Legal Representation: Messrs Paul Beverley, David Randal and Mark Mulholland appearing for the New Zealand Transport Agency (NZTA)
Mr James Gardner-Hopkins and Ms Emma Matheson appearing for KiwiRail Holdings Limited (KiwiRail)
Ms Kerry Anderson and Mr Mathew Booth appearing for the Greater Wellington Regional Council (GWRC)
Mr Mathew Conway appearing for Kāpiti Coast District Council (KCDC)
Mr Bennion for Generation Zero

Hearing: Southwards Car Museum, Paraparaumu, from 23–27 September, 30 September and 1–2 October 2013

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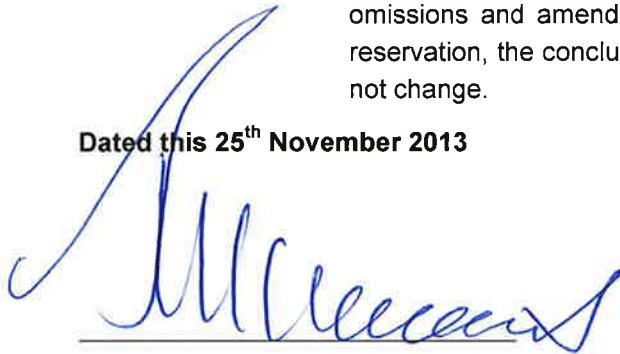
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1. DECISION

- [1] This is the draft Report on the PP2O Project required by s 149Q.¹
- [2] After considering all the matters discussed in this Report, our unanimous Decision is to confirm the requirements and grant the designation and resource consents, in both cases on the conditions set out in Volume 2.
- [3] To implement that:
- a) The Board directs the EPA to circulate the draft Report to those listed in s 149Q(3) and invite those persons to send any comments on minor or technical aspects no later than 20 working days after the invitation.
 - b) The comments on minor or technical aspects of the Report must conform with s 149Q(5) and to that extent the Board reserves the right to vary the wording of this Report, rectify omissions and amend the conditions, but subject to that reservation, the conclusions in the Board's final Report will not change.

Dated this 25th November 2013



Hon. Sir Hugh Williams QC
(Chairperson)



Mr Mark Apeldoorn



Dr Jeff Jones



Professor Roger Maaka



Ms Pamela Peters

¹ Section 149Q(3)–(4) of the RMA. All statutory references in this Report are to the RMA unless specified otherwise.

2. INTRODUCTION

- [4] By Notices of Requirement (NoR) dated 13 and 7 March 2013 respectively, NZ Transport Agency (NZTA) and KiwiRail Holdings Limited² (trading as KiwiRail) (KiwiRail) lodged with the Environmental Protection Agency (EPA) NoRs for designations under ss 145 and 168 for what, in brief were described as:

“NZTA gives notice of a requirement for a designation for a public work (or for a project or work or in respect of any land, water, subsoil, or airspace where a restriction is necessary for the safe or efficient functioning or operation of a public work or a project or work), being the construction, operation and maintenance of the Peka Peka to Ōtaki Expressway Project (the Project) in the Kāpiti Coast District Plan.”

“KiwiRail gives notice of a requirement for a designation for a public work (or for a project or work or in terms of any land, water, subsoil, or airspace where a restriction is necessary for the safe or efficient functioning or operation of a public work or a project or work), being the construction, operation and maintenance of a re-aligned section of the North Island Main Trunk (NIMT) through Ōtaki, named the Ōtaki Rail Realignment, and being part of the Peka Peka to Ōtaki Expressway Project (the Project) in the Kāpiti Coast District Plan.”

- [5] The NoRs comprise two NoRs, and Applications for 24 land use consents, 19 water permits and six discharge permits. These include the resource consents required by KiwiRail to facilitate the realignment of the NIMT through Ōtaki. Details appear throughout this Report and are listed in Appendix 2.
- [6] The resource consents sought for the PP2O Project involve land use consents, water permits and discharge permits and are for restricted discretionary and discretionary activities. They are grouped and relate to bulk earthworks, construction, erosion and sediment control; crossing, occupation, reclamation and realignment of streams; construction of bores and groundwater take; and reclamation and diversion of wetlands. Some of the consents sought cover a number of activities. Some relate to multiple resource consent Applications. All are expected to be issued subject to conditions to avoid, remedy or mitigate the effects of the work on the environment. The wording of the conditions was modified prior to and during the Board Hearing to the point where most wording was agreed by the respective experts before the Board Hearing concluded.
- [7] The location of the Project in the overall scheme of the Wellington Northern Corridor Roads of National Significance (RoNS) is illustrated below.³

² Formerly NZ Railways Corporation.

³ James, EIC, figure 1.



2.1 DESCRIPTION OF THE PROJECT

General

- [8] The Wellington Northern Corridor RoNS extends from Wellington International Airport to North Ōtaki. The Peka Peka to North Ōtaki Expressway (PP2O or the Project or the Expressway) is one of seven current projects developed by NZTA to address different sections of the Wellington Northern Corridor RoNS. The Project includes a short realignment of the North Island Main Trunk (NIMT) railway line to facilitate the Expressway construction.
- [9] NZTA proposes in its Application to designate land and obtain resource consents to construct, operate and maintain the PP2O section of the Expressway. This Project extends from Te Kowhai Road in the south – the northern point of the MacKays Crossing to Peka Peka (M2PP) section of the Expressway – to Taylors Road north of Ōtaki, an approximate distance of 13km.
- [10] The Project will provide an Expressway with two lanes of median separated traffic in each direction. Connections to existing local roads, new roads and accesses over the Expressway to maintain safe connectivity between the western and eastern sides of the Expressway are proposed. The Expressway will also provide a dual bridge crossing of the Ōtaki River, along with crossings of other watercourses throughout the Project's length.
- [11] On completion, it is proposed that the Expressway become State Highway 1 (SH1). Subject to compliance with statutory requirements, including consultation requirements, there would then be the potential for the existing SH1 between Peka Peka and North Ōtaki to become a local road. This would assist the separation of local and through traffic.
- [12] During the Hearing, an agreement dated 27 August 2013 between NZTA and Kāpiti Coast District Council (KCDC) was produced. The agreement's purpose was to establish a process of set criteria to ensure the present SH1 remains fit for purpose and safe when its State highway status is revoked, (though the agreement makes clear that the power to declare roads to be State highways or revoke State highway status resides with the Secretary of Transport, not with NZTA). Following the Hearing, the Board was advised that KCDC, on 3 October 2013 gave its final approval to the agreement.
- [13] KiwiRail proposes to designate land in the Kāpiti Coast District Plan (KCDP) for the construction, operation and maintenance of a realigned section of the NIMT through Ōtaki. While the NIMT work is primarily to facilitate the Expressway, overall it will yield operational and safety benefits.
- [14] The realignment is of approximately 1.2km of NIMT and will be constructed within new designation boundaries. In order to connect with the new alignment, short lengths of line at each end (approximately 300m long) within the existing NIMT designation boundaries are also to be altered. The total length of the realignment of the NIMT is approximately 1.8km.
- [15] As part of physically constructing the Project and connecting to the adjoining Expressway section, a section of the existing SH1 at Mary Crest will no

longer be able to be used. In order to ensure a local road alternative to the Expressway is available, a new section of SH1 will be built on the western side of the Expressway. This new section of SH1 will connect to the existing SH1 to the south of the Project and will ultimately become a local road.⁴

NZTA Description

[16] A more detailed description of the PP2O Project, taken from NZTA's Application, follows:⁵

At the southern end, the four-lane Expressway is located over the existing SH1, and a replacement section of arterial road is to be built, predominantly through low-lying areas and undulating mounds associated with sand dunes.

North of Te Hapua Road, the Expressway and new arterial road are proposed to pass through sand dunes and curve east to avoid the culturally and ecologically significant area at Mary Crest, where the Expressway crosses from the west to the east of the NIMT and the arterial road joins the existing SH1.

North of Mary Crest, the Expressway is proposed to run adjacent to the existing transport corridor (i.e., the NIMT and the current SH1) until the Ōtaki River, across generally flat topography and properties primarily associated with agriculture or horticulture.

The Expressway is proposed to cross the Ōtaki River and run across the floodplain, then through an urban area to the east of the Ōtaki Railway Retail area. It is in this area that the section of NIMT is proposed to be realigned to run parallel to the Expressway.

The Expressway and realigned NIMT are proposed to pass under the existing SH1 as it exits the Ōtaki Retail area, in a northward direction, where the NIMT rejoins the current rail alignment.

The Expressway is proposed to pass through a sand dune system immediately north of Ōtaki (as is the NIMT) before it reduces to two lanes, crosses the Waitohu Stream, and traverses flat rural land at the northern end of the Project area.

Design criteria include seeking to avoid or minimise the Project's effect on high-value ecological habitats. Most notably, the Project avoids existing significant indigenous vegetation at Mary Crest (which is also an area of significance to the tangata whenua).

The Project is proposed to traverse four larger catchments and numerous smaller catchments, flowing east to west to the Kāpiti coast. The Ōtaki River is the largest watercourse.

Network utilities near the Project area include local electricity distribution lines, gas and water supply pipelines, and

⁴ AEE chapter 1, pp 3–5.

⁵ AEE Non-Technical Summary, sections 3–4, pp 6–9.

telecommunications cables. The Arcus Road irrigation scheme draws groundwater from near the Ōtaki River.

The Expressway has been designed to NZTA's Expressway standards, which features four lanes (two in each direction) with continuous median separation.

Local access to and from the Expressway is provided by half-interchanges to the north and south of Ōtaki, which will be clearly signposted and will provide legible access to Ōtaki and Te Horo. Direct access is deliberately prevented elsewhere along the alignment.

Key design features of the roading aspects of the Project include the following:

- a) The Project will incorporate construction, operation, and maintenance of an Expressway of approximately 13km in length, a new section of local arterial road near Mary Crest, and new or reconfigured local roads (including connections from properties to local road) throughout the Project area.
- b) The Expressway will have a sealed carriageway up to 26m wide, including 2.5–3m sealed shoulders on each outer edge. The new local arterial road will have a sealed carriageway approximately 10.6m in width, including a 1.8m wide shoulder on each side.
- c) Buffer areas will be provided on either side of the formed carriageway to enable landscape treatment, ecological enhancements, and other facilities including stormwater controls.
- d) Project earthworks will all take place within the proposed designations. Landscape treatment is provided for earthworks areas.
- e) The Project will include ten bridge structures, comprising two parallel two-lane Expressway bridges across the Ōtaki River, one two-lane Expressway bridge across the Waitohu Stream to the north of Ōtaki, six grade-separated overbridges to maintain local road connections, and one overbridge where the Expressway crosses the NIMT near Mary Crest.
- f) A low-noise road surface will be used near the Ōtaki urban area, from the Ōtaki Railway Station to Waitohu Valley Road.
- g) The Expressway will be lit at the interchanges only.
- h) The Project will bring about a net increase in the physical extent of indigenous vegetation, wetlands, and stream-related habitat and “no-net-loss” of ecological values associated with those areas.
- i) Mass planting will be carried out along stream edges and in other areas affected by the Expressway.

- j) Stormwater runoff from the new roading infrastructure will be collected and treated using swales, filtration-type devices and constructed treatment wetlands.
- k) Construction works will include earth embankments, areas of cut and fill, reinforced soil embankments, and piling and mechanically-stabilised earth walls with concrete facing panels, predominantly around bridges.
- l) There will be approximately 800,000m³ of excavated (cut) material which will be used as fill within the designations.
- m) In addition, approximately 45,000m³ of imported fill will be required to construct the Project.
- n) Comprehensive erosion and sediment control measures will be provided for all earthworks, and particular safeguards will be adopted for works in and around water bodies.
- o) Construction will be undertaken by a number of work crews working on different parts of the Project, both at the same time and in different stages. Construction is expected to take approximately four years.

The NIMT realignment is designed to ensure that the NIMT continues to operate to its current standard and clears the proposed Expressway alignment through Ōtaki.

The NIMT realignment will be built along with the Expressway as an integrated construction Project, so the earthworks management and mitigation measures will be largely common to both the roading and rail aspects of the Project.

The design of the NIMT realignment incorporates the following proposed features:

- a) The realignment through Ōtaki maintains features of the current designation including an existing passing loop past Ōtaki Railway Station, to allow trains travelling in opposite directions to pass each other, and future-proofed double track formation.
- b) The design standards for the NIMT realignment provide for an 820m minimum radius for the horizontal track curvature and a minimum 5.5m vertical clearance (for example, where a road bridge passes over the rail corridor), to future-proof the line for electrification.
- c) The Ōtaki Railway Station building will be reoriented on its current site so that the building and platform remain parallel to the realigned railway line.

2.2 RELEVANT HISTORY OF THE PP20 EXPRESSWAY PROJECT (INCLUDING CONSULTATION)

The PP20 Proposal in Context

- [17] Evidence on the historical background of the Project and the need for it was given principally by Mr Rod James, NZTA's Regional State Highways Manager for Wellington.
- [18] Complementary evidence was given by Mr Blackmore, NZTA's principal Project Manager, Roads of National Significance Development, and Mr Coulman, Opus' Principal Project Delivery. Ms Butler's evidence on behalf of KiwiRail is reviewed later. There was no contrary evidence from any party and although there was criticism by some submitters concerning the history of the Expressway Project, that was principally confined to issues of claimed inadequate consultation, and is considered later in this section.
- [19] Mr James said plans for a motorway through the Kāpiti district began as early as 1956 when a mid-line Proclamation for a "*proposed motorway*" was issued for a route through the coastal duneland from south of Paraparaumu to north of Levin. It became known as the "*sandhills route*". Part of the proclamation from Peka Peka northwards was uplifted in the late 1980s.⁶
- [20] Currently SH1, the only south/north route through Kāpiti, carries all national, regional and local traffic movements and with population growth in the Kāpiti district as well as the general national increase in vehicle and trip numbers, accidents, delays and congestion have worsened. This scenario led to a number of studies to investigate upgrading the State highway network throughout the region.⁷
- [21] In 1998 Transit NZ, NZTA's predecessor, and Land Transport NZ commissioned a report on the most appropriate route for SH1 from Waikanae to Himatangi. That report considered coastal and central routes, the latter generally following the existing SH1.
- [22] A strategic study report of January 2000 recommended a four lane highway using the existing corridor between Levin and Waikanae, with consultation before confirmation.
- [23] The following year a "*scheme assessment report*" for the section between Ōtaki and Peka Peka considered six route options and combinations.
- [24] Then in 2003, following consultation into an alternative western route for the Kāpiti Expressway (the "*Te Waka Road route*") the Transit Board approved a central route to the east of SH1 for both an Ōtaki Bypass and a Te Horo Expressway.
- [25] That was followed in 2005, when Transit with GWRC commissioned a study to investigate the principal options for all transport modes in the region's Western Transport Corridor from Ngauranga to Ōtaki. This confirmed the need for a four lane alignment for SH1 from MacKays Crossing to north of

⁶ James, EIC, paragraphs 46–55.

⁷ James, EIC, paragraph 47.

Ōtaki. In 2007 a further strategic study followed, developing and assessing options for upgrading SH1 within Kāpiti.

- [26] The alignment approved by the Transit Board in 2003 was reconsidered in two reports between July 2008–August 2009, the second of which while broadly endorsing the 2003 alignment, recommended removal of a proposed interchange at Te Horo to limit growth pressures in line with local planning instruments and altering interchange on and off ramps to improve access to Ōtaki.
- [27] Public engagement for the area of the Project culminated in consultation on options for the M2PP Expressway and in December 2009 NZTA Board restated a preference for the central route following the existing transport corridor, but subject to further design refinements. Significant issues stemming from those studies were safety, congestion and travel time, unreliability and the need to create efficient journeys for all traffic.
- [28] NZTA's involvement in that process arose following its establishment on 1 August 2008 as the statutory body charged with operating the State highway network under the Land Transport Management Act 2003.⁸ That sets NZTA's statutory objective as including to *“undertake its functions in a way that contributes to an affordable, integrated, safe, responsive and sustainable land transport system”*.⁹
- [29] The functions of NZTA, having regard to its objective, are to *“manage the State highway system including planning, funding, design, supervision, construction maintenance and operations in accordance with this Act and the Government Rounding Powers Act 1989”* and to *“manage funding of the Land Transport System”*.¹⁰ To meet its objectives and functions NZTA is required by the Land Transport Management Act 2003 to exhibit social and environmental responsibility, to avoid to the extent reasonable in the circumstances adverse effects on the environment, and to use revenue in a way that maximises value for money.¹¹
- [30] The Land Transport Management Act 2003 requires the Minister of Transport to issue a Government Policy Statement (GPS) every three years to guide NZTA and the Land Transport sector on the outcomes, objectives and goals the Government wishes to achieve through the National Land Transport Programme (NLTP) from allocations from the National Land Transport Fund (NLTF). NZTA is required to give effect to the GPS.
- [31] The 2009/10–2018/19 GPS identified the Government's goal for seven initial RoNS, a listing continued in the current 2012–13 to 2021–22 GPS. The RoNS are an important part of the Government's economic growth and productivity priority and a significant part of the National Infrastructure Plan,

⁸ AEE chapter 1, pp 2.

⁹ Section 94 but as amended by the Land Transport Management Amendment Act 2013 with *“effective, efficient and safe land transport system in the public interest”* taking the place of the former wording after *“contributes”*.

¹⁰ Section 95 but amended by the Land Transport Management Amendment Act 2013.

¹¹ Section 96 but amended by the Land Transport Management Amendment Act 2013.

being essential routes requiring significant development to reduce congestion, improve safety and support economic growth.

- [32] The Wellington Northern Corridor RoNS from Wellington International Airport to Levin is one of the seven RoNS and part of a network said to be central to the efficient movement of people and freight, to the tourism sector and to providing economic links for New Zealand businesses. The RoNS programme is designed to address major issues resulting from high volumes of traffic in New Zealand's major centres.¹² The RoNS are important to address the needs of supply chains and to increase economic growth and productivity.
- [33] The NLTP sets out NZTA's planned land transport investments for three years. They include the State highways. Activities are not eligible for funding from the NLTF unless included in the NLTP.
- [34] The Wellington Northern Corridor RoNS is accorded priority in the NLTP's Wellington Regional Summary because the SH1 corridor between Wellington International Airport and Levin is recognised as a strategically important sector of the route, both nationally and regionally. It is the primary route between Wellington and the rest of the North Island, plus it services the inter-Island ferry traffic to and from the South Island. NZTA classifies SH1 as "*national strategic*" as its Wellington segment meets the thresholds for six of the seven criteria for that classification. It is also in the high volume subset of "*national strategic routes*" because it currently has:
- High freight traffic volumes of more than 1,200 heavy commercial vehicles daily.
 - An annual average traffic of more than 35,000 vehicles per day.
 - A major city of more than 100,000 people.
 - Port access for freight of more than 2 million tonnes or \$3 billion annually.
 - Airport access for more than 3 million passengers annually.
 - International tourist flows of more than 60,000 travellers annually.
- [35] The standard of the upgrade to SH1 will generally¹³ result in a median-divided dual carriageway with grade separation at interchanges to improve safety and traffic flow. One of the largest construction programmes in New Zealand, it entails the investment of over \$2 billion for its combined sections over approximately the next 10 years through both construction of new roads and works undertaken on sections of the existing State highway. Once complete, a number of the sections of the expressway will bypass the existing SH1 and these are likely to become part of the local road network after consultation with relevant stakeholders.

¹² James, EIC, paragraphs 16–33.

¹³ The Ōtaki to Levin State highway will be four laned over time with a series of safety improvements. It will be future-proofed to meet future demand. James, EIC, paragraph 69.

[36] To improve safety, reduce congestion, travel time and unreliability, improve route security, amenity and social effects and meet the needs of a growing population, Mr James listed the needs and objectives of the Project as:¹⁴

“The Project is needed to ameliorate each of those issues, which are summarised below and described in more detail in Part A of Volume 2 of the Assessment of Environmental Effects report lodged in support of the Project’s applications.

- a) *Road safety is compromised along current SH1 because the road performs a dual function, providing for both local traffic and movements of through-traffic (including heavy vehicles). There were 12 serious crashes, two of which involved fatalities, on the existing SH1 within the Project area between 1 July 2007 and 30 June 2012.*
- b) *As many people who travel through the area will know, SH1 experiences severe congestion, in particular through Ōtaki, during weekends and over public holidays. This contributes to unreliable journey times, which affect freight, commuter, and other road movements.*
- c) *In the event of a serious accident or emergency on SH1 through the Project area, there are limited alternative routes that can be used. If a significant earthquake or flood were to compromise use of the Ōtaki River Bridge, for example, it would close access along SH1 and require a lengthy detour via SH2 through the Wairarapa.*
- d) *Shopping activity in the Ōtaki Railway Retail area (such as on-street parking with high turnover, vehicle turning movements, and pedestrians crossing the road) creates conflict with through-traffic and causes significant delays. Equally, high volumes of through-traffic result in a poor environment for pedestrians and shoppers.*
- e) *The Project is proposed in an area of high population growth, and increased demand on SH1 would exacerbate the issues it experiences currently. It is also expected that road-based freight movements will increase significantly in the coming years.* 15

[37] Mr James also emphasised the relationship between this Project and other Wellington RoNS projects. Though each stands alone, each is interconnected as part of the overall corridor seeking improved standards for the travelling public. He particularly emphasised the Transmission Gully Motorway (TG) providing an inland highway from Linden to MacKays Crossing alternative to existing SH1 to provide a safer, more resilient and more efficient highway for travellers and freight in and out of Wellington and the project to the immediate south of the PP2O Project, M2PP, stretching

¹⁴ James, EIC, paragraph 57.

¹⁵ Some witnesses disputed aspects of this evidence, particularly Mr Elliott of the Lorax Partnership in relation to (b) and Mr Elliott and Mrs Christie of Ōtaki Motel in relation to (d).

approximately 16kms from the northern end of the TG Motorway to the southern entry point for the PP2O Project.

KiwiRail

- [38] Companion evidence to Mr James' was given on behalf of KiwiRail by Ms Butler, its Senior RMA Advisor.
- [39] The background of rail in New Zealand is, Ms Butler said¹⁶ that the Government has been the owner and operator of virtually all New Zealand's rail passenger and freight operations, but in 1993 the network and freight operations were sold to a consortium led by Wisconsin Central Limited. What was then New Zealand Rail Limited was renamed Tranz Rail Holdings Limited in 1995. In 2003 that company was renamed Toll NZ. The rail land on which the rail assets were situated was retained by Government throughout those changes and was leased to Tranz Rail and Toll NZ. But in 2008 the Government repurchased the rail network and the operations previously sold, so the New Zealand rail industry again became one single vertically-integrated entity operating as KiwiRail. The prime legal entity within that group was the NZ Railways Corporation established by the NZ Railways Corporation Act 1981, a state owned enterprise, and the entity with requiring authority status under the RMA.
- [40] In 2012 NZ Railways Corporation was restructured, and from 31 December 2012 a new entity KiwiRail Holdings Limited, took over the business, became the operator of the rail network and took over the designations previously held by NZ Railways Corporation. KiwiRail became a requiring authority in respect of the network utility operation of its lines.
- [41] But for the proposed alignment of the Expressway through Ōtaki, KiwiRail had no need to realign its NIMT but it agreed to a 1.2km section running through the township of Ōtaki being realigned (at NZTA's cost) prior to construction of the Expressway.
- [42] The NIMT through Ōtaki carried in the 2011-12 year, in excess of 1.6m tonnes of freight, 9% of KiwiRail's total. In addition, a passenger service currently operates on the line twice a day between Palmerston North and Wellington.
- [43] KiwiRail sees benefits in the realignment from a gentler curved gradient through Ōtaki, allowing increased speed and the closure of five level crossings at other points in the Project, reducing noise pollution and improving safety overall. The realignment and relocation of the historic Ōtaki Railway Station also allows KiwiRail to future proof that part of the NIMT for double tracking through the Project area, plus possible future provision of a second platform, provision of stabling for rolling stock at Ōtaki and other lesser improvements.
- [44] The only adverse effect of the realignment identified by Ms Butler was increased noise levels at 230 Main Highway and Ōtaki Motel. Accordingly

¹⁶ Butler, Rebuttal, paragraph 2.2.

she supported the noise mitigation measures proposed as regards those properties.

Consultation and Engagement

- [45] NZTA has engaged in significant consultation with those affected by the Project over a lengthy period, though the genuineness and extent of that consultation was challenged by a number of witnesses.
- [46] According to the Applications,¹⁷ the following is a résumé of the consultation undertaken.
- [47] While consultation is not required under the RMA, both Applicants accepted it as best practice and have written it into their policy. In any event, the LTMA¹⁸ requires NZTA to exhibit a sense of “*social and environmental responsibility*” in meeting its objectives and undertaking its functions and it has an obligation to maintain opportunities for Māori to contribute.¹⁹ NZTA also has a Public Engagement Policy 2008 committing it to ensuring people affected are informed and to providing inclusive opportunities for public consultation.
- [48] Alternative routes to SH1 having been under consideration for so lengthy a period, consultation has been similarly lengthy. It began in 1998 concerning investigation of the two key routes then under consideration and continued in 2001 when effectively six proposals were developed and effects on the environment and property owners considered. The Ōtaki Community Board was consulted at that time and a newsletter distributed in that year and in 2002. There was also a public open day in Ōtaki on 25 July 2001 with over 150 attending plus submissions and telephone inquiries from others.
- [49] By 2002, when the preferred route of an Ōtaki to Te Horo Expressway was under consideration, further consultation was undertaken. It included letters to all land owners possibly affected and follow up meetings, a newsletter, letters to local bodies, relevant government agencies and utilities companies, an information website, a media briefing, graphic displays at community sites and two open days in Ōtaki and Te Horo on 4 and 5 December 2002 respectively. Transit approved the central route in 2003.²⁰
- [50] The next major phase of consultation occurred in 2009 following the announcement of consultation on the four lane Expressway proposals covering M2PP and PP2O. That consultation focused on affected communities, key stakeholders, Iwi, the general public and community bodies, and ran for 10 weeks. 26,500 brochures were posted to persons in the Kāpiti district, including KCDC and local Iwi. They drew 1,720 submissions, 1,363 of which supported the proposal, despite doubts expressed by some about the Expressway’s effect on local communities and directly affected individuals.

¹⁷ AEE chapter 10, pp 134–160.

¹⁸ Section 96 but amended by the Land Transport Management Amendment Act 2013.

¹⁹ Section 18H but amended by the Land Transport Management Amendment Act 2013.

²⁰ AEE, chapter 2, section 2.2.2, p 13.

- [51] Further consultation was undertaken in 2011 on the PP2O section of the Expressway, giving information about the extent of the Project, its proposed route, and seeking community input into decisions about interchanges, transport linkages, connectivity, safety and the social and environmental effects. This consultation phase occurred between 7 February 2011 and 18 March 2011 and was followed by two community newsletters describing the outcomes. The location of the Ōtaki interchanges and the cross-corridor connections for Rahui Road and Te Horo were emphasised, with a further newsletter distributed in September 2011.
- [52] Further consultation occurred in 2012 after the Project had been further refined and mitigation proposed affecting the details of the altered route.
- [53] Following further refinement of the location and form of the Expressway and the NIMT realignment in January 2012, a further newsletter was circulated in June 2012, the feedback from which was used to finalise the mitigation measures for the Project.
- [54] Both the 2011 and 2012 consultations included open days, workshops, stakeholder letters, brochures, newsletters and briefings.
- [55] Those consulted, the means by which that consultation was undertaken, the topics on which consultation occurred and the alterations to the Project over time resulting from consultation are detailed in the Application.²¹
- [56] Mr James²² summarised some of the key issues raised during the consultation and their influence on and changes to, the Project. They included matters relating to property purchases and the need and extent of land requirements, potential visual and noise effects and their mitigation, alterations in access to Te Horo taking account of the discouragement of growth in that area in the KCDP, development of the north and south Ōtaki interchanges and development of signage, amendments to access for Stresscrete, and amendments to the Project to facilitate access for emergency services (especially at Te Horo). Also covered were issues of connectivity across the Expressway, treatment for the Ōtaki Railway Station, amendments to the Project to mitigate for the loss of most of the Pare-o-Matangi Reserve and submissions' influence on design qualities and street lighting. There was also feedback on heritage values at the significant historical sites affected by the Project and cultural and ecological alterations to the Project and to mitigation as a result of consultation with tangata whenua. Many of those refinements are now reflected in the conditions proposed for the designation and the resource consents sought.
- [57] Notwithstanding those consultation and information measures, a number of submissions and witnesses asserted it had been inadequate and that, even

²¹ AEE, chapter 10, section 10.5, lists key stakeholders consulted (including land owners), consultation with the public by open days, media releases, a Project website and phone line, brochures and newsletters, feedback analysis, feedback topics and resume of feedback from Ōtaki Racing Club, KCDC, NZ Historic Places Trust and Ōtaki Community Board.

TR Vol 3, reports TR22A–22AH include such things as copies of letters to affected land owners, open day material, the brochures and the feedback form for February–March 2011. TR22B–22BJ contains similar material for the June–July 2012 consultation, including copies of submissions.

²² James, EIC, annexure B, pp 60–64.

though it may have been undertaken by the means described, the consultation was not genuine, in the sense that NZTA brought and maintained fixed attitudes to it. By way of example, Mr Greg Elliott of Lorax Partnership was concerned that a record of the consultation with it was not included in the Application and that it had had no response to its expressed views; Mrs Chris Christie, both personally and on behalf of Ōtaki Motel, alleged her submissions were “*probably unread, certainly not responded to*” and Mrs Sharyn Sutton suggested her submissions (and those of the Te Horo Road Action Committee (THRAC), of which she was a member) were misinterpreted or, from 2009 resulted in no alternatives being offered. Submitters were concerned at the stress and anxiety experienced by land owners over the long period during which the PP2O Project has been developed at the methods they claimed NZTA used to persuade property owners to sell and the clauses requiring confidentiality and a lack of opposition included in their contracts.

- [58] NZTA witnesses responded by pointing to the obligations imposed on it by the various policies mentioned and asserted that its consultation was undertaken genuinely and with a genuine desire to obtain feedback from the communities and organisations involved and to accommodate their views as far as practicable. They pointed to significant changes in the Project undertaken as a result of the consultation process. They expressed appreciation for the time and trouble taken by so many residents, organisations and businesses affected by the Project in making their views known.
- [59] While not a statutory requirement, the Board is concerned to assure itself that reasonable, genuine and open-minded consultation has taken place with the organisations, citizens and businesses likely to be most affected by a project of this magnitude, one which will undoubtedly have significant effects on so many people, their pursuits and wellbeing.
- [60] The Board concludes that consultation and engagement with the community satisfying that standard has occurred. That said, the Board does not minimise the complaints made and summarised earlier, nor the effect that the lengthy period involved in bringing the PP2O Project to this point has brought about for those affected and the genuineness of the concerns expressed by them.
- [61] The matters that lead the Board to its conclusion include:
 - a) Of all the people, organisations and businesses affected by the Project, 36.2% opposed it, 43.1% supported it and the remainder were mixed or neutral. 24.1% urged the Board to decline it entirely and the remaining 6.9% held no view. Overall 69% supported either granting the Applications or granting them with conditions. The inference is that a large majority of those affected by the Project felt the consultation with them had been adequate, their concerns addressed to a reasonable extent, and the Project should proceed.

- b) The consultation was both lengthy and ongoing. Even during the Hearing NZTA and Ngā Hapū o Ōtaki entered into a Memorandum of Partnership (MoP) to set the guidelines and expectations of both to continue the *“mutually positive relationship that has already been established between them”* and *“outline the protocols for collaborative actions and works”*.²³
- c) While it is accepted that iterative changes to a project as significant as this may cause confusion to those consulted, and disappointment if their aspirations are not met, that does not lead to the conclusion that the consultation undertaken over the lengthy period during which the PP2O Project has been in gestation was inadequate or not a genuine consultation seeking to improve the proposal and accommodate, as far as was reasonably practicable, the views of residents and the needs of users of the Expressway.
- d) The touchstone for all of that is that the consultation and information campaigns undertaken by NZTA concerning the PP2O proposal brought about significant alterations to the Project as originally proposed. A prime example was altering the line of the Expressway from west to east of the NIMT just south of Mary Crest to avoid an area of ecological significance and one of importance to tangata whenua. Another is the proposal for a full road bridge at Rahui Road. The list of alterations resulting from consultation, set out in Mr James's evidence is impressive.

[62] For all those reasons, the Board concludes that the consultation undertaken by NZTA in relation to the PP2O Project accorded with its obligations.

²³ James, Rebuttal, Annexure A.

3. STATUTORY FRAMEWORK: PROPOSALS OF NATIONAL SIGNIFICANCE; BOARDS OF INQUIRY; STRUCTURE AND OTHER FRAMEWORKS

3.1 GENERAL

[63] Where, as here, applications for resource consents, changes to conditions, local authority plan changes or NoRs are decided by the Minister for the Environment to be Proposals of National Significance, Part 6AA contains the governing provisions for their decision.

[64] The RMA includes a number of statutory and other criteria which must be satisfied before Proposals of National Significance can be approved or declined. This section deals with those.

3.2 BOARD OF INQUIRY

[65] Proposals of National Significance are to be decided by a Board of Inquiry or the Environment Court and where, as is the case with PP2O, the Minister's decision is to refer the matter to a Board, the matter must be decided under ss 149J–149S.

[66] Sections 149J and 149K prescribe the qualifications for membership of a Board. Section 149J(3)(b) requires the Chair to be a “current, former, or retired Environment Judge or a retired High Court Judge”: the Chair of the PP2O Board is a retired High Court Judge. Section 149K(4) requires the Minister, when appointing other members of the Board, to consider their knowledge, skill and experience relating to the RMA, the type of matter the Board will be considering, tikanga Māori and the local community: the other four Members of the PP2O Board amply meet those requirements.

3.3 STATUTORY MATTERS REQUIRED TO BE CONSIDERED (INCLUDING CONDITIONS)

[67] Boards have the powers and discretions of a consent authority under ss 92–92B and ss 99–100 as if the matter before them were an application for a resource consent,²⁴ and in relation to an NoR for a designation or alteration, are required by s 149L(4) to have regard to the matters set out in s 171(1) and comply with s 171(1)A as if they were a territorial authority. They have power to cancel or confirm the requirement or impose conditions as they

²⁴ Section 149L(1) of the RMA.

think fit, and may waive the requirement for an outline plan under s 176A.^{25,26}

[68] Section 171 requires territorial authorities, and here the PP2O Board, to consider the effects on the environment of allowing the requirement, having particular regard to:

- a) *Relevant provisions of National Policy Statements, New Zealand Coastal Policy Statements, Regional (or proposed) Policy Statements and plans or proposed plans;*
- b) *Whether adequate consideration has been given to alternative sites, routes or methods of undertaking the work if, here, it is likely the work will have significant adverse effects on the environment;*
- c) *Whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority,²⁷ and*
- d) *Other matters the Board considers reasonably necessary to make a recommendation.*

[69] Section 149P provides that Boards must:

- a) Have regard to the Minister's reasons for making a direction on the matter;
- b) Consider any information provided by EPA under s 149G; and
- c) Apply ss 104–112 and 138A as if they are consent authorities.²⁸

[70] The Applications also require to be considered under ss 104, 104B–D and 105, which relevantly read:

“104 Consideration of applications

- (1) *When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to–*
 - (a) *any actual and potential effects on the environment of allowing the activity; and*

²⁵ Initially NZTA's conditions opposed certification by GWRC or KCDC respectively but it changed its stance following receipt of the evidence from the Council, and by the time the hearing began NZTA's proposed conditions included certification by KCDC. The board was advised in NZTA's opening that if it confirmed the NoRs with conditions, NZTA would still need to submit an outline plan under s 176A unless it was waived by KCDC, but in the event of confirmation of the NoRs, KCDC intends to waive the outline plan requirement under s 176A(2)(c), provided the conditions include certification of management plans by KCDC and NZTA provides the additional information that would otherwise be in such a plan.

²⁶ Section 149P(4) of the RMA.

²⁷ Both NZTA and KiwiRail have requiring authority status.

²⁸ Section 149P(1)(2) of the RMA.

- (b) *any relevant provisions of–*
 - (i) *a national environmental standard:*
 - (ii) *other regulations:*
 - (iii) *a national policy statement:*
 - (iv) *a New Zealand coastal policy statement:*
 - (v) *a regional policy statement or proposed regional policy statement:*
 - (vi) *a plan or proposed plan; and*
 - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
- (2) *When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.*
- ...
- (2B) *When considering a resource consent application for an activity in an area within the scope of a planning document, a consent authority must have regard to any resource management matters set out in that planning document.*
- (2C) *Subsection (2B) applies until such time as the regional council, in the case of a consent authority that is a regional council, has completed its obligations in relation to its regional planning documents under section 93 of the Marine and Coastal Area (Takutai Moana) Act 2011.*
- ...
- (3) *A consent authority must not–*
- ...
- (c) *grant a resource consent contrary to–*
 - (i) *section 107, 107A, ... or 217:*
 - (ii) *an Order in Council in force under section 152:*
 - (iii) *any regulations:*
 - (iv) *wahi tapu conditions included in a customary marine title order or agreement:*
 - (v) *section 55(2) of the Marine and Coastal Area (Takutai Moana) Act 2011:*
 - (d) *grant a resource consent if the application should have been ... notified and was not.*
- ...
- (5) *A consent authority may grant a resource consent on the basis that the activity is a controlled activity, a restricted discretionary activity, a discretionary activity, or a non-complying activity, regardless of what type of activity the application was expressed to be for.*

- (6) *A consent authority may decline an application for a resource consent on the grounds that it has inadequate information to determine the application.*
- (7) *In making an assessment on the adequacy of the information, the consent authority must have regard to whether any request made of the applicant for further information or reports resulted in further information or any report being available.*

...

104B Determination of applications for discretionary or non-complying activities

After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—

- (a) *may grant or refuse the application; and*
- (b) *if it grants the application, may impose conditions under section 108.*

104C Determination of applications for restricted discretionary activities

- (1) *When considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which—*
 - (a) *a discretion is restricted in national environmental standards or other regulations;*
 - (b) *it has restricted the exercise of its discretion in its plan or proposed plan.*
- (2) *The consent authority may grant or refuse the application.*
- (3) *However, if it grants the application, the consent authority may impose conditions under section 108 only for those matters over which—*
 - (a) *a discretion is restricted in national environmental standards or other regulations;*
 - (b) *it has restricted the exercise of its discretion in its plan or proposed plan.*

104D Particular restrictions for non-complying activities

- (1) *Despite any decision made for the purpose of section 95A(2)(a) in relation to adverse effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—*
 - (a) *the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or*
 - (b) *the application is for an activity that will not be contrary to the objectives and policies of—*
 - (i) *the relevant plan, if there is a plan but no proposed plan in respect of the activity; or*
 - (ii) *the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or*

- (iii) *both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.*
- (2) *To avoid doubt, section 104(2) applies to the determination of an application for a non-complying activity.*

...

105 Matters relevant to certain applications

- (1) *If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(1), have regard to–*
 - (a) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (b) *the applicant's reasons for the proposed choice; and*
 - (c) *any possible alternative methods of discharge, including discharge into any other receiving environment.*²⁹

[71] Because the Application includes discharge permits, s 105 requires the Board, in addition to the s 104(1) matters, to have regard to the nature of the discharge and the sensitivity of the receiving environment to adverse effects, NZTA's reasons for its choice and possible alternative methods of discharge, including discharge into any other receiving environment. Discharge permits authorising discharging contaminants into water or onto land resulting, after reasonable mixing, in the contaminant or water being likely to give rise to the effects on receiving waters listed in s 107(1)(c)–(g), are debarred unless the Board is satisfied that exceptional circumstances justify the granting of the permit, or the discharge is temporary or associated with necessary maintenance work and it is consistent with the RMA to grant the permit.³⁰

[72] To sum up at this point:

- a) A comprehensive consideration of the actual and potential effects of the Project on the environment appears later in the Report (section 4).
- b) Consideration is given to the assessment of alternative sites, routes or methods in section 7 of the Report.
- c) The Minister's reasons for making her Direction appear in section 5.
- d) The information provided by EPA under s 149G is listed in section 6.
- e) Whether the work and designation are reasonably necessary to achieve the objectives of the requiring authority appears in section 8

²⁹ For completeness, it should be noted that s 107(1) is inapplicable to PP2O having regard to s 107(2).
³⁰ Section 107(2) of the RMA.

- f) Consideration of the various policy statements and standards listed in ss 171 and 104 appears in section 9
- g) The other matters the Board considers reasonably necessary to consider making a decision appear in section 10

[73] Sections 104 and 171(1) are expressly subject to Part 2. That Part is in this case, effectively ss 5–8. They are listed and considered elsewhere in the Report.

[74] Still considering general matters, the requirement of s 5(2)(c) to promote sustainable management of natural and physical resources while “*avoiding, remedying, or mitigating any adverse effects of activities on the environment*” invokes s 3, which defines “*effect*” in the following way:

3 Meaning of “effect”

In this Act, unless the context otherwise requires, the term effect includes—

- (a) *any positive or adverse effect; and*
- (b) *any temporary or permanent effect; and*
- (c) *any past, present, or future effect; and*
- (d) *any cumulative effect which arises over time or in combination with other effects—*
regardless of the scale, intensity, duration, or frequency of the effect, and also includes—
- (e) *any potential effect of high probability; and*
- (f) *any potential effect of low probability which has a high potential impact.*

[75] The s 2 definition of “*environment*” includes:

- (a) *ecosystems and their constituent parts, including people and communities; and*
- (b) *all natural and physical resources; and*
- (c) *amenity values; and*
- (d) *the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters.*

[76] At this point the Board notes and adopts, the observations of the M2PP Board as to what amounts to an existing environment. That Board said:³¹

*“The Court of Appeal decision in Hawthorn is the leading authority on what must be considered an existing environment.”*³²

‘In our view, the word ‘environment’ embraces the future state of the environment as it might be modified by the utilisation of rights to carry out permitted activity [sic] under a district plan. It also includes the environment as it might be modified by the implementation of resource consents which have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented. We think

³¹ MacKays to Peka Peka Report and Decision, section 8.2.1, paragraphs 170–171.

³² *Queenstown Lakes District Council v Hawthorn Estate Ltd* [2006] NZRMA 424 at [65] and [66] (CA).

Fogarty J erred when he suggested that the effects of resource consent that might in future be made should be brought into account in considering the likely future state of the environment. We think the legitimate considerations should be limited to those that we have just expressed.'

*In Villages of NZ (Mt Wellington) Ltd v Auckland City Council, the Environment Court held:*³³

'... The fact [an] appeal concerns an NOR does not place it outside the findings in Hawthorn, which concerned the effect of the subject matter of resource consents on the future environment. Nor do we find it a point of difference that Hawthorn was concerned with an offsite future receiving environment whereas the focus here is onsite.'

- [77] The requirement under s 3 to consider positive or adverse effects or the other forms of effect listed in the section makes clear the RMA is not a “no effects” statute. As it was put by the Board into the Transmission Gully (TG) Proposal:³⁴

“... we do not believe that it is a requirement of the RMA that no net loss be achieved in any given case. The principle of sustainable management requires a broad consideration of a range of sometimes competing factors. A consenting authority is entitled to conclude that consent ought to be granted to a proposal notwithstanding that all adverse effects of the proposal have not been avoided, remedied or mitigated. In other words there may be a net loss of some values or aspects of the environment. The significance of that loss and its ‘weighting’ against the benefits of any given proposal is a matter to be determined by a consent authority applying s 5(2).” (Emphasis in original)

3.4 CONDITIONS

- [78] From the outset, the Applicants proposed the designation be approved and the resource consents granted subject to numerous conditions. As mentioned elsewhere, the conditions originally proposed were substantially amended in conferencing between the various experts and particularly in conferencing between the expert planners. This reached the point that, by the end of the Hearing, the wording of all but a handful of conditions had been agreed either by all the planners or at least by those retained by the Applicants and KCDC and GWRC. Where disagreement persisted, the form of the conditions needs to be decided by the Board.
- [79] All experts, particularly the planners, are to be commended for the positive way they cooperated in approaching their task of assisting the Board. The input of Mr John Kyle of Mitchell Partnerships, the planner appointed by the Board to assist it is particularly appreciated.

³³ *Villages of NZ (Mt Wellington) Ltd v Auckland City Council* A23/2009, 20 March 2009 (EnvC) at [32].

³⁴ Transmission Gully Final Report and Decision, section 12.5, paragraph 462.

- [80] The high level of agreement makes s 108 of less relevance, but nonetheless the Board notes that s 108(1) provides that a “*resource consent may be granted on any condition that the consent authority considers appropriate*”, including the detailed provisions set out in subs 2. Section 108 is provided in Appendix 6.
- [81] However, it is further noted that to be valid, a condition must be for a resource management purpose and not for any ulterior purpose; must fairly and reasonably relate to the proposal which is the subject of consent or designation; must not be so unreasonable that no reasonable decision-maker could have approved it; and may not involve an unlawful delegation of the decision-maker’s duties.³⁵

3.5 MANAGEMENT PLANS

- [82] In projects such as the present, management plans commonly form part of the framework of conditions in order that management, construction, and other effects of the Project can be specifically detailed and monitored as they are proposed, undertaken and become operational. The management of the Project can thereby be both simplified and reactive to any adverse impacts. The conditions imposed should require the requiring authority or consent holder to finalise the management plans in general accordance with drafts provided in the Applications, require the management plans to specify how certain results will be achieved and how the relevant local authority is to have a degree of oversight in respect of the finalised plan, either by certification that it achieves the condition results, or by commenting on its contents and requesting changes as part of an outline plan process.
- [83] The importance of conditions incorporating management plans was emphasised by the TG Board.³⁶ The PP2O Application was supported by a number of draft management plans with their content being governed by the conditions as refined by the expert witnesses and planners. The wording of such conditions and the management plans needs, however, to be sufficiently flexible to adapt to changing circumstances and the passage of time before and during construction. They must be sufficiently inflexible as to delineate as accurately as possible the adverse effects of the various aspects of the Project, the measures to address them and, if necessary, to enable enforceability. It is important, however, that the wording of the conditions is not such that they can be said to amount to abdication by the Board of its decision-making obligations in favour of the local authorities.
- [84] Although the Applications initially opposed the Board issuing conditions requiring certification of management plans by the territorial authorities, as earlier noted the Board’s consideration of that aspect of the proposal was considerably assisted when the Applicants, having received the opposing

³⁵ *Newbury District Council v Secretary of State for the Environment* [1980] 1 All ER 731, 739, (HL), approved in the RMA context in *Housing NZ Ltd v Waitakere City Council* [2001] NZRMA 202, [14] p 207, and [18] p 208.

³⁶ Transmission Gully Final Report and Decision, section 11.8, paragraph 187.

submissions, accepted a certifying role for KCDC and GWRC. That resulted in considerable adaption of the conditions as initially proposed. The agreement is now reflected in the conditions appearing as Volume 2.

[85] It is pertinent to record that three tiers of management plans were proposed for the PP2O Project: an overarching Construction Environmental Management Plan (CEMP); a number of topics-specific Management Plans as appendices to the CEMP addressing aspects of the Project; and Site Specific Environmental Management Plans (SSEMP) giving detailed information about the environmental management measures for specific sites.

[86] GWRC will certify the:

- Construction Air Quality Management Plan (CAQMP);
- Bulk Earthworks Contaminated Land Management Plan (BECLMP);
- Ecological Management Plan (EMP);
- Erosion and Sediment Control Plan (ESCP);
- Groundwater Management Plan (GMP).

KCDC will certify the:

- Construction Traffic Management Plan (CTMP);
- Landscape and Urban Design Plan (LUDP);
- Construction Noise and Vibration Management Plan (CNVMP);
- Network Integration Plan (NIP).

[87] Both local authorities will certify the SSEMPs which relate to their respective statutory functions.

[88] The balance of the management plans require no certification.

3.6 ADAPTIVE MANAGEMENT

[89] In light of the agreements reached between the parties and the experts, particularly those relating to certification and the conditions, there is no need to discuss adaptive management to the extent the TG and M2PP Boards found it necessary. It is sufficient to adopt the following from the TG Report as adopted by M2PP.

[90] The Board in TG aptly defined adaptive management as:³⁷

“Put briefly, adaptive management is a system for managing the effects of (generally) large projects where the nature and extent of those effects is uncertain and the outcome of methods proposed to avoid, remedy or mitigate them is similarly uncertain. Adaptive management regimes are commonly established through conditions of consent incorporating management plans which seek to manage the effects of any given activity in a flexible and responsive manner.”

³⁷ Transmission Gully Final Report and Decision, section 11.8, paragraph 170.

- [91] Further, they cited from their s 42A Report prepared for the TG Board as follows:³⁸

“Adaptive management plans are to enable an adaptive management approach whereby environmental management of a particular activity, or effect can evolve and adapt in response to measured data or best management practices.”

Adaptive management enables a ‘plan-do-check-act’ approach to be undertaken whereby the on-going monitoring and reporting that is proposed creates a continuous feedback loop from the effects being created, allowing for the most appropriate solution to be utilised or change of method made for any particular environmental effect, however adaptive management must not be used as a substitute for industry best solutions to mitigate a potential adverse effect.”

- [92] Following that discussion, the TG Board identified two issues for determination in relation to adaptive management. The first was whether or not the use of adaptive management regimes is an appropriate means of managing environmental effects. The second, what were the essential features of such regimes.

- [93] In relation to the first, the TG Board stated:³⁹

“Insofar as the first issue is concerned, the answer is clearly yes. The essential test of any method of managing effects under RMA is whether or not it achieves the purpose of the Act set out in s5(2). There is no reason why an adaptive management regime cannot achieve that purpose. The Environment Court has previously accepted the use of adaptive management regimes ... Whether or not any particular proposal for use of an adaptive management regime achieves the purpose of RMA is a matter to be determined by the relevant consent authority in any given instance.”

- [94] In the present context it is unnecessary for this Board to discuss the second point identified by the TG Board.

3.7 BASELINE

- [95] On what constitutes the permitted baseline for consideration of Applications such as the present, the Board again cites and adopts, the observations of the M2PP Board where it said:⁴⁰

“The Court of Appeal in Hawthorn also provided a useful summary of the process involved in considering the permitted baseline. There they stated:⁴¹

‘We have earlier expressed our view that the ‘permitted baseline’ has in previous decisions of this Court been limited to a comparison of the effects of

³⁸ Transmission Gully Final Report and Decision, section 11.8, paragraph 172.

³⁹ Transmission Gully Final Report and Decision, section 11.8, paragraph 180.

⁴⁰ MacKays to Peka Peka Report and Decision, section 8.2.2, paragraphs 179–183

⁴¹ MacKays to Peka Peka Report and Decision, section 8.2.2, paragraphs 179–183

the activity which is the subject of the application for resource consent with the effects of other activities that might be permitted on the subject land, whether by way of right as a permitted activity under the District Plan or whether pursuant to the grant of a resource. In the latter case, it is only the effects of activities which have been the subject of resource consents already granted that may be considered, and the Consent Authority must decide whether or not to do so: Arrigato Investments Limited v Auckland Regional Council at [30] and [34]-[35].'

As the permitted baseline assessment is only relevant to the land subject to the present requirement and applications (ie where both WLR and the expressway overlap), its usefulness in the present circumstances is somewhat questionable. Further, as noted in Beadle v Minister of Corrections:⁴²

'... neither the Act nor the case-law [on permitted baseline] states whether the obligation to make permitted baseline comparisons extends to designation requirements or to applications for regional resource consents...'

In that case, Judge Sheppard, in the absence of submissions to the contrary, accepted it should apply to both.

For completeness, assuming this to be correct, we adopt the same approach.

As summarised in Beadle:⁴³

'There are three different aspects of permitted baseline comparisons. The first is to compare the environmental effects of the activity the subject of consideration with the environmental effects of activity actually being carried out lawfully on the land. The second is to compare them with the environmental effects of hypothetical activity that (not being fanciful) could occur on the land as a permitted activity under the relevant plan. The third is to compare the environmental effects of the subject activity with those of an activity authorised by an earlier resource consent that has not been implemented.'"

⁴² *Beadle v Minister of Corrections* A74/2002, 8 April 2002 (EnvC) at [991].

⁴³ *Beadle v Minister of Corrections* A74/2002, 8 April 2002 (EnvC) at [991].

4. EFFECTS OF THE PROJECT

General

- [96] Postponing the Board's discussion of other statutory criteria at this juncture, it turns to the dominant section of its consideration, namely the effects of the PP2O proposal on the environment, to which the Board must have regard under s 104(1)(a). As has been seen, that consideration was materially assisted by the widespread agreement on conditions resulting from the experts' Joint Conferencing Agreements and other agreements mentioned, including that on certification.
- [97] The following discussion of the many effects of the Project on the environment is arranged for convenience, alphabetically. It assists the overall balancing of the various effects, but is not intended as a ranking in importance.
- [98] In this section of the Report, the Board differentiates between submitters and witnesses. The latter term refers to those who gave evidence or expanded on their submissions at the Hearing. However, the Board wishes to emphasise that all submissions were carefully read and have been taken into account.
- [99] Throughout this section of the Report, the Board frequently refers to the Technical Reports (TR) relating to the various effects. The TRs formed part of the AEE⁴⁴, the principal document supporting and forming part of the Applications.

4.1 AIR QUALITY

- [100] Evidence on the subject of Air Quality was received from an expert witness:
Mr Andrew Curtis for the Applicants.
- [101] Witnesses were:
Mr Bryce Holmes from Rahui Enterprises Ltd
Mr Greg Elliott
Mrs Josephine McLean
Mr Chris Christie for the Ōtaki Motel
Dr Marie O'Sullivan for the Alliance for a Sustainable Kāpiti (ASK).
- [102] Related Conditions:
Designation Conditions: 55–60

General

- [103] Mr Curtis assessed air quality and provided expert evidence for both NZTA and KiwiRail. He was the author of TR13: Assessment of Air Quality Effects,

⁴⁴ AEE Vol. 3.

was involved in determining a suitable location for the establishment of a weather monitoring station (at the corner of Gear Road and School Road), and also undertook some short term ambient monitoring in Ōtaki. Mr Curtis also prepared the draft CAQMP which was included as Appendix B of the CEMP.

- [104] TR13 described the assessment methodology and its basis in accepted standards and guidelines.⁴⁵ The Board heard how the Project exists within the Kāpiti Coast Airshed,⁴⁶ an area gazetted under the National Environmental Standards (NES) provisions. Mr Curtis assessed⁴⁷ the significance of this status. He described the basis for establishment of the airshed as relating to:⁴⁸

“... concentrations of PM10 measured at Paraparaumu are considered to have the potential to exceed the 24-hr average PM10 standard.”

- [105] The assessment said that while such potential is considered to exist at locations of significant population there is little potential for such broad occurrence in relation to the wider Project alignment. The existing environment is defined, including the supplementation of existing base data with Project-specific field survey information. TR13 defined and identified 26 potential sensitive receptors at section 5.2 and Table 5.1. The determination of these was described as having been made in accordance with NZTA Guide for Assessing Air Quality Effects for State Highway Asset Improvement Projects.⁴⁹
- [106] A range of reports and submissions dealt with air quality. Section 149G(3) reports were prepared by GWRC and KCDC. The EPA also undertook post-lodgement completeness assessments that involved technical reviews, which included an expert review of the air quality assessment. The Board wrote to NZTA and KiwiRail on 10 June 2013, providing those parties with an opportunity to consider and respond to matters raised by reviewing technical experts. Those matters were responded to in Appendix B of the evidence of Mr Curtis. The s 149G(3) matters were also responded to in paragraphs 108 to 116 of his evidence.
- [107] The effects on air quality are assessed separately insofar as they derive from construction and operational activities. These separate sources of potential effect are considered in other sections of this Report.

⁴⁵ National Environmental Standards for Air Quality, NZ Ambient Air Quality Guidelines, World Health Organisation Standards and Greater Wellington Regional Quality Targets, section 5 NZTA Environmental Plan, the NZ Transport Strategy, the GWRC Air Quality Management Plan, the Wellington Regional Land Transport Strategy and the KCDC District Plan are also relevant. TR13, paragraphs 3.3 and 4.1–8.

⁴⁶ Airsheds are areas where ambient concentrations of air pollutants could reach levels higher than the NES for Air Quality. TR13, section 4.9.

⁴⁷ TR13, section 9.4.

⁴⁸ TR13, section 4.9, paragraph 2. PM10 is an MfE Ambient Air Quality significance criterion of a concentration of 2.5 µg/m³ averaged over a 24 hour period or 1.0 µg/m³ averaged annually.

⁴⁹ TR13, section 5.2, paragraph 1.

Construction Air Quality

- [108] The assessment of construction air quality effects was set out at section 8 in TR13 and further developed in Mr Curtis's evidence. The principal contributors to construction air quality effects are defined as those derived from dust or from construction vehicle emissions. The assessment found that:⁵⁰

"Generally receptors more than 300 m from the construction activities are unlikely to experience any construction dust related nuisance and therefore have only been considered where there is some special factor (such as any cut material containing high quantities of material less than 100 µm in size with little or no clay), that it might generate dust that can travel further than normal.

Receptors within 100 m of construction activities have a greater potential to experience nuisance effects and mitigation measures will be required to ensure that any effects on these receptors will be minimised."

- [109] The report went on to identify:⁵¹

"What is important is that sensitive receptors are identified and appropriate mitigation developed to minimise effects on those locations."

- [110] In relation to combustion-generated emissions, TR13 said that construction vehicle activity is expected to generate the equivalent of up to about 131 additional vehicles per day. This is in the context of the current baseline traffic volume of some 16,000 vehicle movements per day.⁵² Mr Curtis concluded that this level of activity will not exceed the NES. A recommendation was, however, made that there should be mitigation measures established with the objective of minimising these potential effects. The range of mitigation measures intended were set out at sections 9.1 and 9.2 of TR13 and consists of management measures to minimise dust emissions from earthworks and stockpiles (including using water to manage dust), mitigation measures to deal with potential odour (though none is expected) and traditional mitigation measures for construction yards, including shelter and transfer points and conveyor belts.⁵³

- [111] Submissions on construction air quality predominantly expressed concerns as to the potential for loss of amenity, pollution or air quality effects in relation to specific places of residence or work. Mr Curtis identified these residences, and made site specific assessments of these locations in his evidence.⁵⁴

- [112] Rahui Enterprises Ltd is a function centre comprising the former Rahui Milk Treatment Station and Social Hall. It lies immediately southeast of the

⁵⁰ TR13, section 8.1, paragraphs 2 and 3.

⁵¹ TR13, section 8.1, paragraph 4.

⁵² TR13, section 8.2, paragraph 1.

⁵³ TR13, section 9.1.2–5, pp 64–5.

⁵⁴ Curtis, EIC, paragraphs 118–136.

proposed Rahui Overbridge and the Expressway. It submitted that the potential nuisance effects for it arising from construction will not be compatible with some of the activities it conducts. The relief it sought was in general terms, for the constructor to work with the submitter and to provide specific details and methods, along with mitigation measures. Mr Curtis accepted that there is potential for nuisance effects during construction at this location. He described Condition 55c) as specifically providing for the outcomes sought. This site is one identified by Mr Curtis as a sensitive location, for which specific consideration within the CAQMP is recommended.

Operational Air Quality

- [113] Operational air quality effects were described and assessed at section 10 of TR13. The potential for change in levels of NO₂, CO and PM₁₀ were assessed. TR13 described that, in accordance with the Ministry for the Environment Good Practice Guideline for Assessing Discharges to Air from Land Transport these pollutants are good indicators for other potential pollutants. The report described that:⁵⁵

“If, NO₂, CO and PM₁₀ concentrations are found to exceed air quality assessment criteria, then a more detailed assessment of VOC, O₃ and PM_{2.5} concentrations may be required.”

- [114] The broad conclusion of the assessment was that there is potential for an increase in concentrations in some locations, generally within 200m of the Expressway, and also generally east of the Expressway alignment. The increases are small in concentration and are in all cases well within the NES guidelines. The assessment ultimately concluded:⁵⁶

“Overall, the Expressway will improve air quality in the project area as a result of improved traffic flows which corresponds to reduced traffic emissions.”

- [115] Some submissions raised concerns in relation to the Expressway operational effects on air quality. In the particular case of Mr Elliott's property (Lorax Partnership) at 38 Ōtaki Gorge Road, Mr Curtis stated:⁵⁷

“My assessment, presented in Section 10.3.1 of Technical Report 13, indicates that the Expressway will result in minor increases in predicted NO₂ concentrations at this property, which are less than the significance criteria set out in Table 3, and total concentrations will be less than all relevant guidelines.”

- [116] The assessment of NO₂ levels at sensitive receptors described in section 10.3.1 of TR13 stated:⁵⁸

“Even when the maximum predicted background concentration of 53µg/m³ is added to the predicted road contribution, concentrations at all locations are well below the NES for all future scenarios considered, with the highest cumulative

⁵⁵ TR13, section 3.2.2, paragraph 7.

⁵⁶ TR13, section 13.2, paragraph 6.

⁵⁷ Curtis, EIC, paragraph 123.

⁵⁸ TR13, section 10.3.1, paragraph 3.

concentrations being 124µg/m³ for the 'Without Project' and 113µg/m³ for the 'With Project' scenarios. Both cumulative concentrations are well below the NES of 200µg/m³."

- [117] Dr O'Sullivan's presentation said there was no evidence linking improved air quality with reducing congestion and improving traffic flow. She suggested that some studies indicate that local congestion is likely to increase when the Expressway is built, with car dependence and forced car ownership increasing local traffic and leading to increased air pollution.⁵⁹ TR13 describes that the future year (2021 and 2031) traffic modelling forecasts were adopted as the basis for determining the potential traffic generated operational emissions.⁶⁰

Findings on Air Quality

- [118] The most persuasive evidence before the Board was that of Mr Curtis. The Board notes that this was unchallenged by any other contrary expert evidence. The assessment undertaken adopts the Ministry for the Environment (MfE) Good Practice Guidelines methodology for a Tier 3: Detailed Assessment. The input traffic modelling data was sourced from the transportation modelling work undertaken for the Project, which included induced traffic effects. Emissions arising from locomotive emissions were also described and included in the assessments made.
- [119] Sensitivity analyses (TR13: Appendix G) were also undertaken by varying the potential contributing proportion of emissions from heavy commercial vehicles as well as changes due to speed. The overall finding of the Expressway operational assessment was that the air quality outcomes are not sensitive to changes in parameters, within the range of probable operations.
- [120] The evidence is clear that concentrations of particulate matter and emissions from either construction activity or from operation of the Expressway will increase in some areas close to the proposed Expressway. These changes are very small. The evidence is that they will be well within accepted NESs.
- [121] The evidence also indicated that local concentrations of emissions are expected to drop in many locations, particularly adjacent to the existing SH1. These levels are at present below NESs and will continue to be so, albeit in an enhanced air quality environment. Again, these changes are expected to be small in standards compliance terms.
- [122] The designation Conditions 55 to 60 describe the mechanisms for mitigation and management of air quality effects. They propose preparation and certification of a CAQMP; specific measures to address sensitive locations; independent peer review; monitoring and measurement in accordance with accepted best practice in New Zealand; and zero tolerance limits in relation to odour, dust and fumes beyond the site boundary, which in the opinion of an enforcement officer is noxious, offensive or objectionable.

⁵⁹ Hearing transcript, page 765.

⁶⁰ TR13, section 6.2.1, para 4.

- [123] Based on the weight of evidence before it, the Board is satisfied that the potential effects on air quality arising during either construction or operation of the Expressway will either be well within acceptable standards or are able to be satisfactorily mitigated; and further, that they will be no more than minor.

4.2 AQUATIC ECOLOGY

[124] Evidence on the subject of Aquatic Ecology was received from a number of expert witnesses:

Dr Scott Larned for the Applicants

Dr Ian Boothroyd for GWRC and KCDC

Ms Jennie Marks for GWRC

Ms Paula Warren for Rational Transport Society (evidence principally dealing with terrestrial ecology matters).

[125] Witnesses were:

Mrs Gyllian & Mr Barry Hart

Mr John Camm & Ms Christine Stone.

[126] Related Conditions:

Resource consent Conditions: G31–G47

General

[127] The Expressway crosses 12 large catchments and several smaller catchments, with some 23 natural waterways and excavated drains crossing its alignment, 19 of the 23 are intermittent. The largest waterway is Ōtaki River, with the second and third largest being the Waitohu and Mangaone Streams, and the fourth largest, the Mangapouri Stream is spring fed.⁶¹

[128] The Board took particular notice of Dr Larned's observations that all waterways crossing the Project alignment are currently modified in terms of riparian zones, channels, flow regimes, and/or water quality. He described the extent of such modification and, in particular, observed that:⁶²

"Most of the waterways are in grazed farmland, with minimum or no riparian setback, minimal or no riparian shading and riparian vegetation composed of pasture grass and other non-native plants."

[129] Dr Larned identified a number of potential adverse effects of the Project on these waterways and aquatic ecology. He proposed detailed mitigation measures for each of those potential adverse effects.⁶³

[130] The Board noted that sediment runoff from earthworks during construction has the potential to have adverse effects on both fresh water habitats and species. This issue is discussed in the "Stormwater and Sediment" section of this Report, as are the sediment control measures proposed, including monitoring during and post construction, fish rescue and relocation.

⁶¹ Larned, EIC, paragraph 13.

⁶² Larned, EIC, paragraph 15.

⁶³ Larned, EIC, paragraphs 17–25.

- [131] Dr Larned's view was that because of the low risk of elevated sediment input into waterways, given the measures that have been proposed to control sediment runoff, the effects of the Project construction on waterways were expected to be low and acceptable.⁶⁴
- [132] In a similar vein, he advised the Board that runoff from roads, once built, can adversely affect water quality and consequently aquatic ecology. It was his contention that overall the Project will bring about a net improvement in the level of contaminants entering the waterways as the new Expressway design incorporates formal treatment of road surface runoff that is not provided for the existing SH1. The Board also deals with this matter under the "Stormwater and Sediment" heading.
- [133] Dr Larned described how the use of culverts and modification of waterways has the potential to impair fish migration. He detailed the measures proposed to ensure that the passage of fish is incorporated into the design of all culverts for those streams which have the potential to carry fish. His opinion was that the effects of the Project on fish passage would be low and acceptable.⁶⁵
- [134] He accepted that the Project would bring about the loss or alteration of streambeds and wetlands, including part of the Ōtaki Railway Wetland. He advised the Board that extensive riparian planting would be established to offset streambed effects and that wetland restoration was proposed in the vicinity of the Railway Wetland to address the effects on that wetland's habitat. It was his view that these offsets addressed the effects of the Project on aquatic habitat.
- [135] The expert witnesses on this Topic for GWRC and KCDC, Dr Boothroyd and Ms Marks, detailed their outstanding concerns in their evidence. These were:
- The inadequacy of mitigation for alteration and loss of waterway and wetland habitat;
 - The design and operation of temporary and permanent diversion channels;
 - Controlling and monitoring sediment input to waterways caused by construction activities.
- [136] The most significant of these was the adequacy of mitigation for alteration and loss of waterway and wetland habitat.
- [137] Expert conferencing, before the Hearing partly resolved the above issues, with the exception of the adequacy of mitigation for alteration and loss of waterway and wetland habitat.⁶⁶
- [138] However, in his opening, Mr Beverley, counsel for NZTA, advised the Board that an enhanced ecological offset for Mary Crest had been agreed to by NZTA. He advised the Board that all the experts now agreed that this

⁶⁴ Larned, Rebuttal, paragraphs 16, 17 and 73.

⁶⁵ Larned, EIC, paragraphs 77-81.

⁶⁶ Expert Conferencing Joint Witness Statement, Ecology, Annexure A.

enhanced Mary Crest proposal, in addition to the other mitigation proposed (riparian planting and the already proposed wetland offset), plus appropriate consent conditions, would meet the mitigation requirements for the loss or alteration of wetland and waterway habitat as a result of the Project.⁶⁷

- [139] Consequently, as counsel for the parties indicated no wish to cross-examine on this issue and given the comprehensive nature of the written evidence from Drs Larned and Boothroyd, and the agreement reached on the enhanced ecological offset, the Board saw no reason to examine either and excused both from attendance at the Hearing.
- [140] During the course of the Hearing there was further conferencing between planners about the final wording of the relevant condition, Condition G46, which led to agreement being reached. The Board is satisfied that this Condition, containing a provisional alternative, (whichever alternative is ultimately implemented) will mitigate any potential adverse aquatic ecological effect arising from the necessity to either eliminate or alter waterways or wetland habitats to enable the Expressway to be constructed on the proposed alignment.
- [141] Submitter and expert witness Ms Warren's concern was related to the extent of the aquatic ecology assessments undertaken by Dr Larned. Following conferencing, both Drs Larned and Boothroyd agreed that the assessment methods used or proposed to determine the state of the aquatic ecology were appropriate. Ms Warren, who attended that conferencing session, disagreed.⁶⁸
- [142] Given the level of their qualifications and in particular their significantly more extensive experience in aquatic ecology matters, the Board prefers the position of Drs Larned and Boothroyd on this matter.
- [143] Witnesses Mr and Mrs Hart, and Mr Camm and Ms Stone, gave evidence about the extent and maintenance of the proposed offset riparian planting along the banks of the Mangaone Stream in the vicinity of their properties, with particular reference to weed control. The Board is satisfied that the expert ecologists' agreement reached on the terms of Condition G34 appropriately addresses their concerns. It provides that the proposed EMP includes in its relevant subsidiary SSEMPs, required by Condition G28, a five year maintenance period for the riparian planting along the Mangaone Stream.
- [144] Ms Donovan and Mr Lill were opposed to riparian planting on their property at Te Horo Beach Road. Dr Larned noted that the proposed planting would not only be necessary to mitigate the Project's effects but would also be designed to complement the owners' existing planting and should further enhance bird life on their property.⁶⁹ The Board accepts Dr Larned's view on this matter.

⁶⁷ Beverley, Opening, paragraph 154.

⁶⁸ Expert Conferencing Joint Witness Statement, Ecology, Annexure A, No.4.

⁶⁹ Larned, EIC, paragraphs 175–176.

Findings on Aquatic Ecology

[145] The Board is satisfied that the imposition of the relevant conditions, in particular Condition G46, will result in any potential adverse effects on aquatic ecology being either avoided, remedied or suitably mitigated.

[146] Indeed, the Board agrees with observations made by Dr Larned, that the net result of the acceptance by NZTA of:

- a) the creation of either 1.1 or 1.6 ha of wetland offset at Mary Crest,
- b) the already proposed 2,061 metres of 20 metre wide riparian planting as specified in the conditions and shown on the Landscape Plans LA01–LA08 (R1) tabled at the Hearing,
- c) the development of the proposed Kennedy Wetland between the realigned NIMT and the former NIMT embankment,

will significantly enhance the aquatic ecology of the environment along the proposed Expressway alignment.⁷⁰

⁷⁰ Larned, Rebuttal, paragraph 162.

4.3 ARCHAEOLOGY

- [147] Evidence on the subject of Archaeology was received from one expert witness:
- Ms Cathryn Barr for the Applicants.
- [148] Witnesses were:
- Ms Josephine McLean
- Mrs Sharyn Sutton.
- [149] Related Conditions:
- Designation Conditions: 49–54
- [150] In addition to the witnesses, the Board received a number of other submissions on this Topic, including a substantial submission from Ngā Hapū o Ōtaki, whose representatives found themselves unable to appear as witnesses and presented their evidence in writing.
- [151] The only expert presenting evidence on Archaeology was Ms Barr for NZTA. She has been involved with the Project since 2010 and was involved in the preparation of the heritage impact assessment for NZTA and the assessment of alternative routes for the Expressway. She prepared TR17, which dealt with the effects of the Project on the archaeological resource.
- [152] As part of her archaeological assessment, Ms Barr reviewed existing archaeological and historical information for Ōtaki and the Kāpiti Coast. She also consulted with Ngā Hapū o Ōtaki and the NZ Historic Places Trust (NZHPT) to identify archaeological sites that were not on any database.
- [153] In the preparation of her report Ms Barr worked closely with expert witnesses Mr Niketi Toataua (TR17, Cultural Impact Assessment) and Mr Ian Bowman (TR18, Built Heritage). In the preparation of her evidence she walked the area several times to identify archaeological resources. A number of those times were with tangata whenua representatives. She also attended several hui with tangata whenua to discuss sites of significance in the Project area.
- [154] The identified sites and areas of archaeological importance were:
- Te Hapua Road to Mary Crest;
 - Rahui Road to Taylors Road;
 - Ōtaki Railway Station;
 - 230 Main Road;
 - Clifden Cottage.
- [155] Ms Barr noted that, in addition to the identified sites, the northern and southern extents of the Project are areas of archaeological potential. She advised that, because of difficulty in early identification of these sites, complete avoidance of the archaeological resource is not possible.
- [156] Ms Barr identified three archaeological sites within the footprint of the Project, six in proximity to the Project and two areas of potential

archaeological risk. Her overall assessment of the risks to the archaeological resource within the Project footprint was low to medium. Her view was that the mitigation measures proposed appropriately addressed these effects.

Te Hapua Road to Mary Crest

- [157] Ms Barr noted that within the southern extent of the Project area the recorded archaeological sites are avoided. However, because of the imprecise nature of the recording it was possible that two sites (R25/5 and R25/7) may be within the footprint of the Project. She also noted that in her opinion the settlement of the Te Horo Pā (now named Haowhenua on advice from Ngā Hapū o Ōtaki) extended into the footprint area and that sub-surface archaeological deposits may be discovered. This also applies to work on the realignment between Te Hapua Road and Mary Crest.
- [158] The Board notes that the current realignment is a variation of the original plan. It was adopted partly on the suggestions of tangata whenua to avoid two significant stands of native trees and has the effect of moving the Expressway further from the Haowhenua Pā.
- [159] There is a reasonably high probability that archaeological resource will be found during removal of the sand dunes. If so, NZTA will be required to apply to NZHPT for authority for work to continue. Any authority will require them to undertake archaeological investigation in conjunction with tangata whenua. This process will facilitate the appropriate recording, sampling and investigation before construction work can continue. “Appropriate” includes absence of time pressures associated with construction work.

Clifden Cottage at Bridge Lodge

- [160] The Ōtaki Historical Society has established that Clifden Cottage was built in 1870 for an early settler, William Small. It is possibly the oldest house in Ōtaki. As the current site will be affected by the construction of the Expressway, it is planned to relocate the cottage to 91 Gear Road, a site identified and recommended by Mr Bowman.
- [161] In addition to the archaeological sub-surface investigations carried out on the original site, Ms Barr recommended that investigation according to archaeological best practice and at the appropriate level in accordance with the *Guidelines for the Investigation and Recording of Building and Standing Structures* produced by NZHPT be carried out.
- [162] A positive effect of this work is that it will make a significant contribution to understanding the history of the area.

Ōtaki

- [163] There are two recorded sites within Ōtaki township which will be affected by the Project.

Ōtaki Railway Station

- [164] The Railway Station is to be moved to remain parallel with the realigned NIMT. Constructed in 1910, it does not come under the archaeological

provisions of the NZ Historic Places Act (HPA). However, as it is the third railway station on the same site, the ground it stands on and its surrounds have potential archaeological significance.

230 Main Highway, Ōtaki

- [165] The Expressway and realigned railway line will cross the eastern portion of the grounds of 230 Main Highway, a pre-1900 house associated with a prominent 19th century politician, Hema Te Ao. The house will not be affected by the Project, however an area on the eastern side of the property where both the NIMT and the Expressway will cross the property is a site of potential archaeological deposits.
- [166] Archaeological investigations will be carried out at both sites, the area managed as an archaeological site until earthworks commence and thereafter monitored by an archaeologist. Any archaeological deposits found will be recorded, sampled and analysed according to best archaeological practice.

Rahui Road to Taylors Road

- [167] There are no known archaeological sites in this section of the Project. However, Ms Barr considers this area to have archaeological potential on the basis of the known level of Māori occupation of the area, especially from the Pare-o-Matangi Block to the Waitohu Stream. This area has been included in the proposed archaeological monitoring and investigation programme, to which tangata whenua will be invited.

Memorandum of Partnership

- [168] NZTA and Ngā Hapū o Ōtaki signed a Memorandum of Partnership (MoP) on 2 August 2013. The MoP contains specific archaeological conditions. The mutually agreed discovery protocols will include:
- Storage arrangements for any koiwi, taonga and artefacts discovered and NZTA agreement to pay for the cost of storage of these items;
 - NZTA will consult with Ngā Hapū o Ōtaki on applications to destroy or modify any archaeological site;
 - NZTA will confirm the Project Archaeologist with Ngā Hapū o Ōtaki;
 - Efforts will be made to arrange for a trainee to work alongside the Project Archaeologist.
- [169] Not in the MoP but included in Condition 52d) are rights to conduct traditional ceremonies where appropriate and in accordance with the tikanga of Ngā Hapū o Ōtaki. All other conditions in the MoP are incorporated in Archaeological and Built Heritage Conditions 49–54.

General Mitigation Measures

- [170] In addition to the site specific mitigation measures, the following are proposed to mitigate the overall effects of the Project on the archaeological resource:

- a) The production of an Accidental Discovery Protocol and training for contractors on discovery of an archaeological resource;
- b) Investigation and recording of any archaeological resource discovered during construction;
- c) Pre-construction archaeological monitoring in areas of archaeological potential;
- d) Public information measures such as open days and fixed interpretive signs.

[171] The concerns of submitters Mrs Sutton and Ms Mclean were addressed by Ms Barr in rebuttal.

[172] Mrs Sutton's concerns for sites of significance for Iwi have been addressed in the MoP with Ngā Hapū o Ōtaki, and other archaeological sites affected by the Project have been duly recorded and are provided for in the mitigation measures. Ms Mclean's submission referred to her property at 50 Rahui Road. It does not come under the definition of an archaeological site and is considered in the report of Mr Bowman.

[173] The NZHPT was satisfied with the proposed archaeological mitigation actions in Archaeological and Built Heritage Conditions 49–54.

[174] Condition 52 lists the requirements to be included in a protocol for the accidental discovery of cultural or archaeological artefacts or features. These cover:

- Training for all contractors to identify the possible presence of cultural or archaeological sites or material;
- The parties to be notified in event of an accidental discovery;
- The procedures upon accidental discovery;
- The procedures on the recommencement of work in the vicinity of the discovery.

[175] Condition 53 requires a pre-construction monitoring of the sites that have been identified as high archaeological potential. These are:

- The dune area between the Waitohu and Mangapouri Streams;
- The dune area south of Mary Crest;
- The grounds of the property at 230 Main Highway, Ōtaki.

Findings on Archaeology

[176] The Board is satisfied that the archaeological investigation of the Project area has been full and comprehensive and that appropriate and adequate protection and mitigation measures are to be implemented. The Board notes and commends the extensive engagement with Ngā Hapū o Ōtaki on archaeological concerns.

4.4 BUILT HERITAGE

[177] Evidence on the subject of Built Heritage was received from two expert witnesses:

Mr Ian Bowman for the Applicants

Ms Julia Williams for KCDC.

[178] Witnesses were:

Mr Greg Elliott from Lorax Partnership

Mr James Cootes from Ōtaki Community Board

Ms Chris Christie for the Ōtaki Motel

Ms Josephine McLean

Mrs Sharyn Sutton

Mr Bryce Holmes for Rahui Enterprises Ltd.

[179] Related Conditions:

Designation Conditions: 49–54

[180] Evidence on Built Heritage was received from NZTA's expert, Mr Ian Bowman. He was the author of TR18, Assessment of Built Historical Heritage Effects. In his report he identified four registered heritage structures and two non-statutorily recognised structures that will be affected by the Project. He inspected three other sites and determined that these buildings did not have sufficient heritage values to reach the threshold for statutory recognition.

Registered Buildings

- The Ōtaki Railway Station;
- The former Rahui Milk Treatment Station;
- The former Rahui Factory Social Hall;
- The former Te Horo Railway Station.

Non-registered Structures

- The beehive kilns and other structures associated with the renowned potter Mirek Smíšek;
- Clifden Cottage.

Ōtaki Railway Station

[181] The present Station was built in 1910 and played a significant role in the economic development of Ōtaki and the district. It is also an example of the work of the architect Gordon Troup. The Station is classified as a category LL (No 4099) by NZHPT, “a place of historical or cultural significance or value”, and category B, a “notable survivor”. It is also included on the Heritage Register of KCDC.

- [182] The Station and associated elements are to be moved to remain parallel to the realigned NIMT. The conservation plan first prepared in 1997 will be updated to ensure that the relocation and re-establishment of the Station meet relevant requirements of the International Council on Monuments and Sites (ICOMOS), Charter 2010, which are:

5. *Respect for surviving evidence*

The removal or obscuring of any physical evidence of any period or activity should be minimised, and should be explicitly justified where it does occur.

9. *Setting*

Where the setting of a place is integral to its cultural heritage value, that setting should be conserved with the place itself.

10. *Relocation*

In exceptional circumstances, a structure of cultural heritage value may be relocated if its current location is in imminent danger, and if all other means of retaining the structure in its current location have been exhausted. In this event, the new location should provided a setting compatible with the cultural heritage value of the structure.

Former Rahui Milk Treatment Station

- [183] Built in 1924, the former Milk Treatment Station is registered as a Category II Historic Place (NZHPT No 4102 and KCDC item B7). It is being redeveloped as a hotel and convention centre.
- [184] Mr Bowman's view is that there will be no adverse effects on the heritage values of the former Milk Treatment Station from the Project.

Former Rahui Factory Social Hall

- [185] The Hall, which was built in 1893 and was formerly a church, became part of the Rahui Milk Treatment Station and is registered as a Category II Historic Place (NZHPT No 4101 and KCDC item B8). A small area of land in the south-west corner will be taken for the Project. Mr Bowman's view is that the loss of this land for the Project will not affect the architectural and heritage values of the former Social Hall.
- [186] To mitigate adverse visual effects, screen planting is proposed to be added to the existing vegetation on both sites. Mr Bowman supports this proposal.

Structures associated with the work of Mirek Smíšek

- [187] The late Mirek Smíšek was a potter of international renown and although his beehive kilns and associated structures are not registered by either the NZHPT or KCDC, in Mr Bowman's assessment they have significant cultural, historical, scientific and technological heritage values. The Project will occupy a significant proportion of the site and NZTA has accepted Mr Bowman's recommendation to relocate the kilns in accordance with a heritage conservation plan drawn up by a suitably qualified Conservation Architect. Information on the kilns and associated structures on the present site will be recorded and used for interpretation purposes. There is

proposed vehicle access for the general public to the site and additional planting is proposed to provide visual screening from the Expressway.

Former Te Horo Railway Station

- [188] The former Te Horo Railway Station has a confused history and the date of the present building is uncertain. It is registered by KCDC but not by NZHPT. The Station was moved from its original site to land owned by Mr Smíšek some time ago and consequently does not have the same historical value as stations of similar age and construction that remain on their original sites. Additions have been made to it. The Project avoids this building, and architectural and historical values will not be affected by its association with plans to relocate the other structures associated with Mr Smíšek.

Clifden Cottage

- [189] Mr Bowman's view was that Clifden Cottage has moderate local architectural and heritage values. It is now part of Bridge Lodge at 30 Ōtaki Gorge Road, a setting which detracts from its heritage values. It is not included in the KCDC Heritage Register or registered by NZHPT. Its site will be occupied by the Expressway and the road approach to an underpass forming part of the works for the South Ōtaki interchange.
- [190] Mr Bowman identified a Crown owned site at 91 Gear Road, Te Horo, as a suitable location for Clifden Cottage. Its relocation in accordance with a Heritage Conservation Plan is covered by Conditions 49–51.
- [191] These conditions also deal with mitigation measures and recommendations, including heritage plans prepared by suitably qualified and experienced Conservation Architects, in consultation with NZHPT. Those conditions also relate to all other structures covered by the built heritage evidence.

Other Mitigation Measures

- [192] NZTA has accepted the recommendations regarding heritage buildings and structures. They are:
- a) Realigning the Ōtaki Railway Station to maintain its current visual and physical connection with the NIMT railway line, in accordance with an updated conservation plan;
 - b) Relocating the beehive kilns, recording them (and the Te Horo Railway Station and Mr Smíšek's former house) on their current site, preparing interpretative material, screening the Project, and allowing public viewing of the site and remaining structures;
 - c) Relocating Clifden Cottage to the suitable site at 91 Gear Road, Te Horo.

Witnesses

- [193] Of those making individual submissions on this Topic Ms McLean (50 Rahui Road) the Ōtaki Community Board, Rahui Enterprises Ltd, and KCDC, all accepted that their initial concerns had been satisfied with the proposals in TR17 and the suggested conditions on this Topic.

- [194] Ms Warren suggested that Condition 50 should be extended to require approvals under other legislation to be provided to the requiring authority and also be available to the public. The Board accepts these are public documents that are outside the RMA and are already publicly available, and accordingly the extension is not necessary.
- [195] Mrs Sutton's submissions expressed concerns relating to the effect of the Project on built heritage but gave no specific examples.

Findings on Built Heritage

- [196] The Board is satisfied that the built heritage structures within the footprint of the Project have been professionally and appropriately investigated, there has been adequate consultation with affected parties and the effect on those structures of the Project will be appropriately mitigated by compliance with Conditions 49–51. The Board notes the conditions provide for the preparation of Heritage Conservation plans by suitably qualified and experienced Conservation Architects which will be finalised in consultation with NZHPT, and will be monitored through ongoing consultation with tangata whenua and community groups.

4.5 CONSTRUCTION NOISE AND VIBRATION

[197] Evidence on the subject of Construction Noise and Vibration was received from two expert witnesses:

Dr Stephen Chiles for the Applicants

Mr Malcolm Hunt for KCDC.

[198] Witnesses were:

Mrs Sharyn Sutton

Mr Bryce Holmes for Rahui Enterprises Ltd.

[199] Related Conditions:

Designation Conditions: 35–39

[200] A range of submissions, including from Mrs Sutton, expressed concern at the potential for noise and vibration effects arising from construction activities.

Issues

[201] Major earthworks, including significant land clearance, cutting and filling using large earthmoving and compacting machinery, and involving the carting of material from the cut to fill areas of the roadway, are normal activities for road construction. In this Project there are some significant structures, notably the twin large river bridges over the Ōtaki River, the bridge over the Waitohu Stream and the three overbridges involving piling at Rahui Road, Te Horo and Mary Crest. Such activities generate noise and vibration.

[202] The scale of the equipment used and the operations means that noise and vibration from road construction works has the potential to cause disturbance to people who live nearby, particularly if works are at night when people are trying to sleep or at other times when noise-sensitive activities are occurring.⁷¹

[203] The Applicants' approach to dealing with construction noise, the Board was told, is one of proactive management of the effects. This was defined by Dr Chiles to mean:

"Continual assessment, adaption of mitigation/operations, communication and review during construction."

[204] He noted that such proactive management is *"the best method to control adverse effects and produce the best outcome for residents"*.⁷²

[205] Dr Chiles outlined a management framework he had developed for NZTA, to address construction noise and vibration.⁷³ Based on the construction

⁷¹ Chiles, EIC, paragraph 16.

⁷² Chiles, EIC, paragraph 17.

⁷³ Chiles, EIC, paragraph 21.

methodology proposed for the Project, he advised that his team were able to predict noise and vibration levels based on generic equipment. He reassured the Board that the techniques he has used in other projects to mitigate noise and vibration effects from construction activities have been consistently conservative to the point where the predicted noise and vibration levels have generally been higher than the actual levels.⁷⁴

[206] He advised the Board that in his opinion, the most significant noise-generating construction activities, from both a timing and extent point of view, are the main roadworks. This will involve bulk earthworks, transporting fill, grading, levelling and compaction, followed by the preparation of basecourse and the surface, which will involve the spreading of fill, the distribution of chips or asphalt and compaction. In addition to these, carriageway roadworks, kerbing, safety barriers and roadside furniture, will be installed, and line marking will be conducted.⁷⁵

[207] After detailing the various likely sources of construction noise, he referred to his TR15: Construction Noise and Vibration. This Report set out a range of good practice measures which would avoid, remedy or mitigate construction noise. He told the Board that these included:⁷⁶

- Managing times of activities and minimisation of night works;
- The use of reversing beepers;
- Routine maintenance of equipment;
- The use of bored (rather than driven) piles where practical;
- Selecting low noise or attenuating equipment;
- Ensuring that the location of the site compound is remote from receivers;
- Promoting heavy vehicle access by State highway rather than local roads;
- Using a Construction Noise and Vibration Management Plan (CNVMP) and schedules;
- Using NZTA construction noise and vibration management tools.

[208] He proposed that these good practice measures be given effect to by requiring as a condition the production of a CNVMP. He referred to the relevant conditions, Conditions 35–39, which require the production and certification of a CNVMP and specify matters which must be addressed in it.⁷⁷

[209] His expert opinion was that the proposed conditions would support a robust management framework that would result in the adoption of the standard good practice measures he had outlined and listed above. As well, they will

⁷⁴ Chiles, EIC, paragraph 25.

⁷⁵ Chiles, EIC, paragraph 27.

⁷⁶ Chiles, EIC, paragraph 33.

⁷⁷ Chiles, EIC, paragraph 34.

provide processes to manage site specific effects that he detailed in his evidence.⁷⁸

[210] His overall conclusion regarding construction noise effects was that while the majority of the Project construction works will be separated from neighbours, the works will be audible in many places. He considered that construction noise will generally remain within reasonable limits, as determined by NZS6803 using standard noise management controls. He conceded that there are a small number of specific locations where residents are close to the works and for them enhanced controls will be required to manage noise disturbance.

[211] As far as construction vibration is concerned, he acknowledged it may be felt at some locations but would be generally within the guideline criteria outlined in TR15 at section 2.4.⁷⁹

[212] Dr Chiles advised the Board that the two areas where particular attention was required were the areas north of Ōtaki and in the vicinity of Old Hautere Road. He also advised there was a need for special attention to be paid to the former Rahui Milk Treatment Station and the former Rahui Factory Social Hall.

[213] Overall, he concluded that the enhanced management he proposed for the effects arising from the works near houses in the areas north of Ōtaki township and in Old Hautere Road would be acceptable. He also found that:⁸⁰

“The adverse amenity effects resulting from construction noise and vibration at the former Rahui Milk Treatment Station and former Rahui Factory Social Hall to be acceptable. With respect to the risk of cosmetic damage, the identification and repair of any damage effectively mitigates that potential effect.”

[214] On the other hand, Mr Hunt for KCDC expressed concern at the construction phase generation of adverse noise and vibration effects, particularly where works were carried out at night, as was proposed in some situations.⁸¹ He noted the AEE proposed that such night-time work would occur at 11 locations, albeit for short periods.⁸²

[215] While accepting that NZ6803:1999 was the relevant standard for assessing construction noise under the proposed KCDP, he had other concerns in relation to:

- The extent of night-time work;
- The Protected Premises and Facilities (PPF) locations likely to be affected;
- The lack of detail of mitigation measures proposed and the need to detail them in site specific construction noise management plans.

⁷⁸ Chiles, EIC, paragraph 35.

⁷⁹ Chiles, EIC, paragraphs 38 and 39.

⁸⁰ Chiles, EIC, paragraph 46.

⁸¹ Hunt, EIC, paragraph 25.

⁸² Hunt, EIC, paragraph 31.

- [216] In particular, the Board noted he sought certification of the CNVMP by KCDC because of its overall responsibility for the control of noise in its district.⁸³ This was resolved after joint conferencing with NZTA agreeing that the CNVMP, along with a number of other management plans, would be submitted to KCDC for certification.
- [217] As a result, when the two experts appeared before the Board at the Hearing, very little of their evidence dealt with construction noise and vibration issues. Both concentrated on the more complex issue of operational noise and vibration, which is dealt with in a separate section.
- [218] Examination of both witnesses by the Board was limited to clarification of aspects of the application of NZS6803, the construction noise standard, and specific issues associated with construction noise and vibration effects on Rahui Enterprises' property adjacent to the proposed Rahui Road overbridge. The Board received satisfactory clarification on these matters.

Submitters' Concerns

- [219] Mrs Sutton's concerns with regard to construction noise was limited to her observation that the construction would result in noise and that this would potentially occur for *"four years or more if there are construction delays"*. This overlooks that construction will occur in stages, each of no more than a maximum of 2 years and probably less. She had more to say about operational noise and, as noted above, this aspect is dealt with elsewhere.⁸⁴
- [220] Dr Chiles addressed this issue to the Board's satisfaction when he clarified that due to the lineal nature of the Project:⁸⁵
- "The construction activity in any one area, for example at Te Horo, would not be continuous for four years and associated noise would vary throughout the period."*
- [221] Mr Holmes, for Rahui Enterprises, amongst other things, sought special provision for ongoing consultation and communication with his client over construction noise and vibration issues, given its proximity to the construction of both the Expressway and the Rahui Road Overbridge and the nature of their business (for example wedding receptions and conferences).
- [222] Under examination from Mr Beverley, he accepted that his client's concerns were addressed by Condition 37i), cross-referenced to that amendment to Condition 7a)iii) which specifically referenced his client.⁸⁶

Agreed Conditions

- [223] Ms Beals appeared on the final day of the Hearing and produced a further draft set of conditions on which agreement had been reached between the Applicant and the two Councils. Ms Beals advised that this agreement had

⁸³ Hunt, EIC, paragraph 45.

⁸⁴ Sutton submission, paragraph 4.

⁸⁵ Chiles, EIC, paragraph 49.

⁸⁶ Hearing transcript pages 801–802.

been reached following further conferencing at planner level during the Hearing. The Board notes that this set includes Conditions 35–39A dealing with construction noise and vibration.

- [224] The Board notes, however, that Condition 39A in that set referred to the requirement to mitigate operational noise from the realigned NIMT. The Board considers that this does not sit comfortably under the heading of “Noise and Vibration – Construction”.
- [225] The Board notes that Conditions 61–73 deal with “Noise and Vibration Management – Operation” but for some reason are restricted to NZTA’s Application.
- [226] The Board has now placed the Operational Noise Condition originally number 39A in a separate section dealing with that Topic and re-numbered it 60A.

Findings on Construction Noise and Vibration

- [227] The Board compliments those concerned on the agreement reached between the Applicants and the major submitter on this issue KCDC, and notes that this agreement has been given effect to in Conditions 35–39.
- [228] The Board is satisfied that any adverse effects arising from the inevitable noise and vibration as a result of the construction of this major roading work and its associated structures will generally comply with the provisions of NZS6803 and that in the few situations where this is not practicable, special provisions will be made to mitigate those effects, noting that such circumstances are expected to be limited in terms of occurrence and duration and are or will be detailed, together with proposed mitigation measures, in the CNVMP.
- [229] Thus on balance, the Board accepts that any adverse effects from construction noise and vibration which cannot be avoided have been or will be remedied or mitigated to a recognised acceptable level.

4.6 CONSTRUCTION PROGRAMME AND METHODOLOGY

[230] Evidence on the subject of Construction Programme and Methodology came only from expert witnesses on behalf of the Applicants:

Mr Derek Holmes

Dr Stephen Chiles

Mr Tony Coulman.

[231] Witnesses were:

Mrs Sharyn Sutton

Mrs Gyllian and Mr Barry Hart

Mr Bryce Holmes for Rahui Enterprises Ltd.

[232] The relevant Conditions are more specifically described in relation to the effects discipline areas separately addressed in this Report.

General

[233] In this section of the Decision, a brief overview of the proposed programme and methodology for the construction of the Expressway is set out. It draws primarily from Section 8 (Part D) Construction of the Project in the AEE, TR5: Construction Methodology and the evidence of Mr Derek Holmes for NZTA on Project Construction.

Programme and Sequencing

[234] The total Project length is approximately 13 kilometres (km). It is proposed to be constructed in four primary stages, commencing with Sections 1 and 2 in the north and progressively moving south towards Peka Peka. The principal sections of work are described as:

- *Section 1 – Ōtaki North to Ōtaki River Bridge Ch[ainage]0000 to Ch3500 (including the NIMT realignment);*
- *Section 2 – Ōtaki River Bridges to Old Hautere Road Ch3500 to Ch5250;*
- *Section 3 – Old Hautere Road to Te Horo Ch5250 to Ch8600;*
- *Section 4 – Te Horo to Peka Peka Interchange Ch8600 to Ch12250.⁸⁷*

[235] A 3.5 to 4 year construction period is described. Annexure B to Mr Holmes' evidence shows the indicative construction sequence of the four sections. Each is expected to involve 1.5 to 2 years of construction activity. A more detailed sequence of maps is shown in TR5, section 5.6. In Sections 1 and 2, bridges are the initial elements, followed or paralleled by connecting sections of earthworks and pavements on the Expressway. The bridging elements at Ōtaki River and Rahui Road are to commence early in the programme to minimise effects in the Ōtaki township. Early works will also involve the bridge over the railway line at North Ōtaki. Collectively these

⁸⁷ Holmes, EIC, paragraph 18.

preparatory works will facilitate the relocation of the NIMT, and provide for movement of cut material.

Site Access and Construction Compounds

- [236] Site access is principally planned to occur via existing side roads off the existing State Highway. Mr Holmes describes the need for long term CTMPs or in some cases more SSTMPs.⁸⁸ Construction compounds are planned at four locations within the designation proposed. These are shown on the diagram at Annexure A. TR5, section 4.5.1 describes the functions and construction sequencing for the main compound, indicatively on the northern side of the Ōtaki River, and also for those sites described as local compounds in each of the three other sections.

Earthworks

- [237] The earthworks programme will involve an estimated 800,000m³ of cut to fill and an additional 45,000m³ of imported fill across the four construction sections. Figure 4.1 in TR5 shows the distribution of the predominant cut locations. These are generally defined as occurring at chainages 1,000, 4,000, 5,000, and 15,500, and will provide the substantive fill material across the Project. The potential sources of imported material are Kāpiti Quarry, Ōtaki Quarry and Waitohu Quarry.
- [238] Some materials are defined as unsuitable for construction. Section 4.10 of TR5 describes a range of options for dealing with these materials, including complete removal (typically up to a depth of about 3m), preloading or a combination of the two. Four principal locations are defined as potentially involving unsuitable material. These are described in Table 9 of TR5.

Bridges

- [239] A total of nine bridges are proposed, including one over the Waitohu Stream and dual bridges over the Ōtaki River. Section 4.13 describes the location of each and the general construction sequence. SSEMPs are proposed for each bridge site. The relevant and specific environmental considerations are described and considered separately in other sections of this Report.
- [240] About one week of night time construction is expected in relation to each of five⁸⁹ bridges where they cross either the NIMT or the existing road environment. Additionally, short term night work is expected at 11 tie-in points to the existing road network. This will involve night time lighting, the effects of which are assessed under the Lighting section of this Report.

Pavement Construction

- [241] Mr Holmes summarised the pavement construction methodology,⁹⁰ following initial earthworks, subgrade, and drainage preparatory works. He described a typical granular pavement course being constructed involving traditional spread, grade and compaction methods. Cement stabilisation of pavements is proposed in some locations. Pavement surfacing is expected to involve a

⁸⁸ Holmes, EIC, paragraphs 20–21.

⁸⁹ Holmes, EIC, paragraph 35(a).

⁹⁰ Holmes, EIC, paragraph 50–54 and in TR5, Section 4.14.

two-coat chip seal for most of the Expressway. Open-Graded Porous Asphalt (OGPA) or an equivalent attenuating surface has been identified for application as an overlay in noise sensitive locations, approximately 12 months after the two-coat chip seal is applied. Dr Chiles identified this as occurring between chainage 1,300m and 2,350m, through the Ōtaki town environment.⁹¹

Construction Working Hours

- [242] The Board understands that construction activities are proposed to be undertaken in accordance with the effects based controls that have been proposed in the various conditions, rather than by way of specifying a particular working day. The short term night works have been described above.
- [243] The construction noise and vibration conditions provide the best control of construction activity correlated with hours of the day. The standards established around each control set draw from nationally accepted standards. These are predominantly NZS6803: 1999, Acoustics – Construction Noise, and BS5228-2: 2009, Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration.
- [244] Both standards identify night time as between 2000 hours and 0630 hours. NZS6803 also defines markedly more stringent construction noise controls for parts of Saturdays, and in particular for Sundays and Public Holidays as it relates to residential receptors.

Submissions

- [245] A range of submissions were received in relation to the effects of construction activity and these were acknowledged by Mr Holmes.⁹² The areas of particular focus included such effects as noise, vibration, dust, ecology, traffic, hydrological and water effects, access and landscape effects. These matters are considered in the relevant sections of this Report.
- [246] The Winstone Aggregates and Stresscrete submissions more particularly addressed the effects of the construction programme and methodology, the impact on their site access and their continuity of operation. In its submission, Winstone Aggregates described the extent that its site is impacted by the proposed designation corridor and Expressway footprint. By way of relief, both sought a condition to require, amongst other things, the maintenance and continuity of access to the State Highway and also the preparation of relevant management plans in consultation with them.
- [247] Mr Coulman consulted both Winstone Aggregates and Stresscrete about the access provisions.⁹³ Further to this, NZTA confirmed that issues between the parties had been resolved through enhancements and inclusions to the conditions as proposed during the Hearing.⁹⁴ The Board notes the inclusion

⁹¹ Chiles, EIC, paragraph 34.

⁹² Holmes, EIC, paragraph 83.

⁹³ Hearing transcript, page 136.

⁹⁴ NZTA Closing submissions, paragraph 24.

of a specific reference to both Winstone Aggregates and Stresscrete at Condition 25A, involving the preparation of SEMP's. Winstone Aggregates advised on 20 September 2013 that it no longer wished to be heard in relation to its submission.

- [248] KCDC separately raised a concern about operation of the Winstone Aggregate access, primarily in relation to the effects on residents opposite the entrance to their plant from construction vehicles, involved in night work and truck movements. NZTA noted in its closing submissions that an amendment to Condition 37I) addressed those concerns.⁹⁵

Findings on Construction Programme and Methodology

- [249] The proposed construction programme and methodology will result in some residents being subject to periods of construction activity and related effects. For some it may be up to a year to 18 months. Properties near the Expressway and NIMT works in Ōtaki, and Te Horo properties close to the Expressway will be most affected.
- [250] The potential for effects on some properties reinforces the need for the designation and consent conditions to minimise and/or mitigate against adverse effects from construction activities. It also supports the independent peer review and approval processes discussed during the Hearing.
- [251] Accordingly, the Board concludes that the construction programme and methodologies have been well thought through, as far as it is practicable to do so at this early planning stage. The Board is satisfied the approach planned will be effective in minimising potential effects through the relevant designation and resource consent conditions proposed.

⁹⁵ Hearing transcript, page 919.

4.7 CONTAMINATED LAND

[252] Evidence on the subject of Contaminated Land was received from one expert witness:

Mr Gregory Haldane for the Applicants.

[253] Related Conditions:

Resource consent Condition: E10

[254] At this early stage of the Project, although there are five general areas identified as potentially containing contaminated land, no specific sites have yet been identified.

[255] Mr Haldane, was the only expert witness on this Topic. Having regard to the fact that no substantive evidence, expert or otherwise, was provided by any other party directly related to contaminated land, and the clarity of his written evidence, the Board saw no reason to examine him and excused him from attendance at the Hearing.

[256] Both GWRC and KCDC in their submissions commented on the risks associated with the discovery of contaminated land in the course of construction of the Project, but called no expert witnesses on the matter. Their comments included concerns that there is a need to:

- Provide information on the risk of contamination migrating off site and its potential effects on groundwater quality;
- Include a contingency plan should unexpected contaminated sites be encountered;
- Include a general section on reporting in the Contamination Land plan;
- Require that any re-use of contaminated fill is managed to international best practice standards;
- Sort out which of the Councils is more appropriate to certify the proposed Bulk Earthworks Contaminated Land Management Plan (BECLMP).⁹⁶

Issues

[257] TR16: Contaminated Land Assessment, noted that there are sites within or adjacent to, the Project area that could potentially be contaminated. Five were identified as having the highest potential. There is no information currently available on whether any of these sites exceed the Guidelines in the NES for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCO), which would trigger the requirement for a resource consent under Regulation 10 of that national standard.⁹⁷

[258] Mr Haldane advised that he had prepared a draft BECLMP which would provide a framework for the management of any contaminated site discovered, either during the investigative phases immediately preceding

⁹⁶ Haldane, EIC, paragraphs 25–36.

⁹⁷ Section 42(a) Report, section 4.3, paragraph 8.

final design or during construction. This would include management of the risk of any potential discharge of contaminants arising. He considered the draft BECLMP provided appropriate general and site-specific management and control procedures for any contaminated land issues that could reasonably be expected to be encountered during construction.

- [259] He drew the Board's attention to the fact that the draft BECLMP also provided guidance for obtaining consents as and if required for soil disturbance and other activities related to the management or assessment of contaminated land under the NESCS.
- [260] The Board noted the draft BECLMP will be updated as required and would receive certification by GWRC prior to the commencement of construction works.
- [261] The Board accepts that the BECLMP as proposed provides a sufficiently robust and broad framework for the avoidance (or reduction to an acceptable level) of the discharge of contaminants to the environment related to the Project works on any discovered contaminated sites. The Board notes that approach and methodology, and that Mr Haldane's evidence lists the areas where particular attention will be given to investigation into the existence of contaminated sites.⁹⁸

Response to Submissions

- [262] The submission of KCDC sought inclusion of a general section on reporting in the BECLMP, commented whether it was proposed to reuse any "contaminated" fill and a role for KCDC in approving any future updates to the BECLMP. These were not supported by Mr Haldane, as he considered that should a contaminated site be discovered, then the NESCS consents required will deal with the first two matters. With respect to the third, he considered the BECLMP was only intended to provide a framework for contaminated land management and that any specific matters requiring attention would be dealt with through the consent process.⁹⁹
- [263] With respect to the submission of GWRC, it was Mr Haldane's view that most of the matters raised had either been dealt with or would be more appropriately dealt with when the final BECLMP is prepared and submitted for certification to GWRC (and KCDC, as subsequently agreed between the parties with reference to most of the management plans).¹⁰⁰
- [264] Mr Haldane's final conclusion is, with respect to any contaminated sites discovered in the course of the Project, that:¹⁰¹

"Over the long term, I consider that the project would result in a reduction in the potential for adverse effects to the environment due to isolation (capping) and removal of contaminated soil and structures not suitable to remain within the project corridor."

⁹⁸ Haldane, EIC, paragraph 20.

⁹⁹ Haldane, EIC, paragraph 25–27

¹⁰⁰ Haldane, EIC, paragraph 31–35

¹⁰¹ Haldane, EIC, paragraph 39.

Findings on Contaminated Land

- [265] Given there was no other expert evidence, and the Board was satisfied with Mr Haldane's qualifications and experience in contaminated land matters, the Board accepts his evidence and agrees with his final conclusion.
- [266] The Board is satisfied that on the basis of the Draft BECLMP, and the process to which the final BECLMP will be subjected, including certification (all required through Conditions G19/E10), there will be adequate provision for the identification and treatment of any contaminated land discovered in the course of the Project. The detail will be regulated under the recently enacted NESCS.
- [267] The Board therefore accepts that the process for the finalisation and implementation of the BECLMP as provided for in the conditions will provide an appropriate method to avoid, remedy or mitigate any contaminated land issues associated with PP2O.

4.8 CULTURE AND HERITAGE

[268] Evidence on the subject of Culture and Heritage was received from one expert witness:

Mr Niketi Toataua for the Applicants.

[269] Related Conditions:

Designation Conditions: 8–10

[270] Evidence on Culture and Heritage came from Mr Toataua, the author of TR19: the Cultural Impact Report, the Cultural Impact Assessment (CIA) and submissions came from, amongst others, Messrs Caleb Royal, Pataka Moore and Rupene Waaka, all of Ngā Hapū o Ōtaki.

[271] In compiling his evidence Mr Toataua conferred with Ngāti Raukawa and Muaūpoko as well as Ngā Hapū o Ōtaki, who represent tangata whenua, and these two Iwi in regard to this Project (the Kaitiaki and Manawhenua status of Ngā Hapū o Ōtaki is also confirmed in the CIA, 11.1, 11.2). He considered NZTA engagement with Iwi was positive and constructive. His engagement overlapped with the work of other expert witnesses on Archaeology, Terrestrial Ecology, Alternative Routes, Project Design and Consultation, and Project Construction. Ngā Hapū o Ōtaki were contracted by NZTA to undertake the CIA, and they signed the MoP with NZTA on 2 August 2013.

Memorandum of Partnership

[272] The relationship between Ngā Hapū o Ōtaki and NZTA in regard to this Project was formalised with the signing of the MoP, which sets guidelines, protocols, engagement and expectations of both parties. It is an agreement to work cooperatively and constructively together on the Project with the purpose of the MoP being to:

- Co-operate fairly, openly and honestly, and in good faith;
- Mutually respect the needs of both parties;
- Establish a working relationship and partnership;
- Recognise and respect the legal and statutory rights and obligations of both parties.

[273] Specific conditions included agreement as to discovery and storage protocols for koiwi, taonga or artefacts and other conditions concerning the appointment of a Project Archaeologist.

[274] The involvement of Ngā Hapū o Ōtaki in deciding on the location and accessibility of the Ōtaki gateway signage receives special mention in the MoP, as does consultation on landscape planting and design. This includes:

- Development of an architectural/landscape design for the Expressway that will recognise and acknowledge the tangata whenua sites, hapū and marae within the area;
- Support for eco-sourced and indigenous planting within the area of the designation.

Cultural Impact Assessment

- [275] The CIA identified sites of significance to tangata whenua which will be affected by the Project. The most prominent was the Pare-o-Matangi Reserve, which was once part of a larger block of Māori owned land. Today, this reserve is not only of significance to tangata whenua but to the whole community. Mr McKenzie's landscape evidence noted that the Project will result in significant loss of usable reserve land, thereby diminishing its value as a community amenity and site of significance. As a suitable mitigation package, he recommended incorporating into the reserve an L-shaped block of land within the designation and partly surrounding the Ōtaki Motel land.^{102,103} As noted in the MoP, Ngā Hapū o Ōtaki wish to be engaged in the reconfiguration and landscaping of Pare-o-Matangi.
- [276] Ngā Hapū o Ōtaki are kaitiaki of the Project area and as such have stewardship over the natural environment in the footprint area of the Project. The CIA notes that the Expressway will not interfere with their kaitiakitanga.

Accidental Discovery Protocols

- [277] Potential sites for archaeological discovery and of significance to tangata whenua were discussed in detail in the reports and evidence on Archaeology, and are discussed in that section. The Accidental Discovery Protocols require consultation and engagement with Ngā Hapū o Ōtaki, including observance of their tikanga.
- [278] Ngā Hapū o Ōtaki will also engage with the Project through involvement in the Community Liaison Group (CLG). They will also be consulted on the proposed Ecological Management Plan (EMP) and the ESCP. The MoP provides for Ngā Hapū o Ōtaki to have the use of native timber from felled trees for cultural purposes and be involved in the landscaping of the "gateway" areas of the Expressway to the north and south of Ōtaki.
- [279] Ngā Hapū o Ōtaki did not give evidence but did, however, submit a letter dated 30 September 2013 requesting that the Board support the implementation of the MoP, and require NZTA to work in partnership with them in the naming of new wetlands and waterways, the treatment of stormwater before discharge and the future of buildings that will be relocated.
- [280] The Ngā Hapū o Ōtaki standards for the disposal of stormwater referred to in the letter are not set out. However, stormwater disposal is covered fully in the report and evidence on that subject, which notes that stormwater will be disposed of in accordance with NZTA's SWTS. Stormwater is also covered in Conditions SW1–SW4. The concerns of Ngā Hapū o Ōtaki about the disposal of stormwater have been adequately covered in the relevant conditions.
- [281] No buildings were specified in their request to be consulted on the relocation of buildings other than the house at 230 Main Highway (TR18, 6.2.2 and

¹⁰² No. 47 on Land Information Plan Sheet 3.

¹⁰³ McKenzie, EIC, paragraphs 80, 82 and Annexure 2.

TR17, p40), which will be affected but not relocated. None of the structures considered in either the Archaeology or Built Heritage reports have been identified as having a special relationship for tangata whenua.

[282] In his evidence Mr Toataua supported the requests in Ngā Hapū o Ōtaki's submissions and evidence to be involved in the naming of new areas and the incorporation of traditional ceremonies. He also saw value in including Ngā Hapū o Ōtaki in discussions on the relocation of houses, but notes there may be commercial sensitivity and other reasons why this may not be possible.

[283] Mr Toataua's evidence concluded:¹⁰⁴

"In my opinion the proposed measures - including those that seek to draw on the knowledge and skill of kaitiaki in finalising and implementing the Project's mitigation measures - will effectively mitigate any adverse cultural effects of the Project."

[284] In its opening submissions, NZTA acknowledged its obligations under s 5 of the RMA to take into account the principles of the Treaty of Waitangi and raised the following points:

- Tangata whenua have been engaged during all development phases of the Project;
- NZTA has formed a close working relationship with Ngā Hapū o Ōtaki, including signing the MoP between NZTA and Ngā Hapū o Ōtaki;
- NZTA commissioned representatives of Ngā Hapū o Ōtaki to prepare the CIA.¹⁰⁵

[285] Ngā Hapū o Ōtaki, as the Iwi-accepted representative voice for tangata whenua of the Project area, have a MoP with NZTA, and are included in the CLG, whose position is covered in Conditions 8–10. The Hapū is also specifically mentioned in Condition 52 Archaeology; Condition 75 Urban design and Te Pare-o-Matangi Reserve and the EMP. In addition to these specific conditions, Ngā Hapū o Ōtaki have requested to be consulted on the naming of new waterways and wetlands.

[286] In the MoP NZTA agrees to consider ceremonies prior to and on completion of construction. The Board considers a firm commitment by NZTA to these ceremonies is within the spirit of constructive engagement, both implicit and explicit in the MoP.

Findings on Culture and Heritage

[287] The Board supports the position of Ngā Hapū o Ōtaki as set out in the MoP.

[288] The Board finds that NZTA in this Application has satisfactorily met its obligations to tangata whenua under s 5 of the RMA to take into account the principles of the Treaty of Waitangi.

¹⁰⁴ Toataua, EIC, paragraph 58.

¹⁰⁵ NZTA Opening submission, paragraph 307.

4.9 ECONOMICS

[289] Evidence and submissions on Economics were received from a number of expert witnesses:

Mr Mike Copeland for the Applicants

Mr Selwyn Blackmore for the Applicants.

Dr Michael Pickford

[290] Witnesses were:

Mr Kent Duston for the Rational Transport Society

Mr Greg Elliott for Lorax Partnership

Mr Bryce Holmes for Rahui Enterprises Ltd

Mr and Mrs Christie for the Ōtaki Motel

Mr Lance Bills for Harrisons Garden Centre

Mrs Sharyn Sutton

Mr James Cootes from the Ōtaki Community Board

Dr Marie O'Sullivan for the Alliance for a Sustainable Kāpiti.

[291] There were 18 submissions that mentioned economics or the financial impact of the Project.

Issues Identified

[292] Economic issues were centred on the following broad subject areas:

- Economic effects of the Project;
- Economic efficiency – Benefit Cost Ratio (BCR);
- Businesses affected by the Project;
- Property values adversely affected.

[293] The economic effects expected from the operation of the Expressway and re-aligned NIMT remained in dispute, notwithstanding the joint conferencing of the experts.

Economic Effects of the Project

[294] In his evidence Mr Copeland said:¹⁰⁶

“The economic wellbeing of people and communities and the efficient use of resources are relevant considerations under the RMA. I consider the project will enable people and communities to provide for their economic well-being and represents an efficient use of resources.”

[295] Mr Copeland contended the Project was consistent with the requirements and purposes of the RMA for sustainable management under s 5(2) as the

¹⁰⁶ Copeland, EIC, paragraph 12.

Project enables “people and communities to provide for their ... economic wellbeing” and under s 7(b) as it promotes, “the efficient use and development of natural and physical resources”.¹⁰⁷

[296] These sections in the RMA provide the evaluation point for the Board. This was indicated by Counsel in their opening statements.¹⁰⁸ The Board concurs with this approach.

[297] Mr Copeland reaffirmed at the Hearing that not only does the Project meet the requirements of the RMA but, he asserted, it will have significant overall net economic benefits to the Kāpiti Coast District and the wider Wellington Region.¹⁰⁹ He drew this conclusion after setting out his assessment and economic evaluation of this project within the RMA context. Mr Copeland considered:

- The effects of economic activity during the Project construction;
- The effects of economic activity once the Expressway is operational;
- The Project’s overall economic efficiency assessment.

[298] In relation to the Project’s approximate four year construction period, Mr Copeland believed it will bring increased expenditure, employment and incomes to local and regional businesses and residents.¹¹⁰ He stated that local firms will be engaged to provide goods and services, local residents would find employment on the Project and that this will have flow-on economic effects throughout the community.

[299] Dr Pickford disputed the claimed economic benefits during the construction period. He referred to international research to illustrate his point.¹¹¹ He questioned whether the benefits listed by Mr Copeland will be achieved within the relatively short construction period. Dr Pickford asserted that “an economic gain for the Kāpiti District would only occur if there were a net reduction in unemployment in the district as a consequence of the building of the PP2O road.”¹¹² He emphasised that, from a national perspective, economic benefits during the construction activity are more a distribution issue and not necessarily a net gain for the country. Dr Pickford summarised his views as:¹¹³

“In short, the construction benefits from the spending of the funds would accrue somewhere in the country, regardless of any decision to proceed with the PP2O proposal. It follows that the decision to spend the funds on the PP2O project would have the effect of allocating the construction benefits (if any) to the Kāpiti District, rather than to another district. As these benefits would occur anyway, somewhere in the country, they cannot, from a national perspective, be counted as a benefit of the PP2O project.”

¹⁰⁷ Copeland, Rebuttal, paragraph 8.

¹⁰⁸ Hearing transcript, page 46.

¹⁰⁹ Copeland, Rebuttal, paragraph 39.

¹¹⁰ Pickford, EIC, paragraph 13.

¹¹¹ Pickford, EIC, paragraph 193.

¹¹² Pickford, EIC, paragraph 195.

¹¹³ Pickford, EIC, paragraph 198.

- [300] Mr Copeland said that the level of national economic activity is likely to be the same with or without the Project. He noted that funds earmarked for the Project, if not spent on it, would be likely to be utilised elsewhere, not necessarily in the Kāpiti District.¹¹⁴ His view however, was that local and regional benefits, as well as national benefits, would occur and were relevant to the Board's Decision.
- [301] Mr Copeland stated that economic benefits will come both locally and nationally with:
- Reduction in travel times;
 - Reduction in accidents and costs;
 - Improvements in trip time reliability both for through and local traffic.
- [302] Mr Copeland concluded that the Project will bring significant local economic benefits in addition to regional and national benefits. The potential for beneficial local effect was illustrated when Mr Copeland referred to TR6: Integrated Transport Assessment which estimated that approximately 90% of the traffic using the Expressway will have an origin or destination within the Kāpiti Coast District.¹¹⁵ From that the Board concludes that the principal economic benefits are likely to be realised by locals on a daily basis by improvements in safety and reliability or reductions in congestion.
- [303] In Mr Copeland's opinion, these improvements will also confer benefits by increased business productivity and competitiveness. And, for residents, the Project improves personal safety and will allow more time for other productive or leisure activities. On a wider scale but with a future lens, he said improving accessibility within and to Ōtaki and the Kāpiti Coast will increase the attractiveness of the local area for future business and residential development.
- [304] Mr Duston from the Rational Transport Society disagreed that the Project would provide overall economic benefits. He said the transport planning involved was largely based on modelling and the assumptions that underlay the Project were, he contended, faulty. Mr Duston said the key driver for the RoNS was economic growth, but "*evidence in the real world*" was the opposite. He asserted that despite the money spent on roads since 2000, there had been negligible to zero productivity growth in the primary and trucking industries. However, he produced no evidence to support this beyond references to newspaper articles. He claimed the Expressway would not produce the outcomes sought, apart from a minor improvement in safety. He asked the Board to decline the Application.¹¹⁶
- [305] Both Mr Copeland and Dr Pickford recognised that some businesses will be adversely impacted by the Project, particularly those heavily dependent on passing traffic on the existing SH1 alignment, some in the Ōtaki retail area, but more particularly, businesses at Te Horo.

¹¹⁴ Copeland, EIC, paragraph 41–42.

¹¹⁵ Copeland, EIC, paragraph 45–46.

¹¹⁶ Hearing transcript, page 356.

- [306] However, Mr Copeland contended that losses in trade for some individual businesses will be offset by increases in trade for others. By the time the Project is completed, Mr Copeland claimed businesses will have had time to react and adapt to the new business environment by downsizing, changing product or possibly relocating. He added that even without the Project, businesses continuously address changing conditions to remain competitive and profitable.¹¹⁷ Mr Copeland claimed that for most businesses in the Ōtaki Retail area the Project will have neutral or positive effects. He added that the Te Horo retail centre is not significant commercially in terms of KCDC planning and the hierarchy of such centres, but acknowledged its importance to residents of that area.¹¹⁸
- [307] In terms of mitigation for the negative effects on businesses, NZTA proposes appropriate signage and gateway features at entry and exit points on the Expressway. They will mention Te Horo but the Board considers this will be of limited assistance for Te Horo businesses.
- [308] In relation to the economic effects both during construction and once operational, the Board prefers the evidence of Mr Copeland and Mr Blackmore. The Board accepts that during construction, there will be more economic activity in the district which should provide significant local economic and other benefits. Potentially there are also regional and national benefits. The Board's evaluation was not limited to national benefits or whether there is a national net gain or loss. While Mr Copeland states locals will be employed on the Project, the Bol process does not permit issuing a requirement for that to occur. NZTA's procurement strategy might well include this.

Economic Efficiency — the Benefit Cost Ratio

- [309] There was much contention at the Hearing as to the significance and calculation of NZTA's use of a Benefit Cost Ratio (BCR) in the RMA approval process, to the RoNS works and to the PP2O Project. The Board notes that this was also a matter in issue in TG and M2PP.
- [310] The place of BCR in the RMA consenting process, and in particular in relation to RoNS and the PP2O Project, remains a matter of longstanding contention between Mr Copeland and Dr Pickford, despite conferencing prior to the Hearing.
- [311] The use of BCR in large infrastructure projects, not just roads, was highlighted in the recent decision of the High Court in *Queenstown Airport Corporation Limited v Queenstown Lakes District Council and Air New Zealand Limited*.¹¹⁹ In issue was an NoR issued by Queenstown Airport Corporation seeking additional land to expand the airport for added operational efficiency, a parallel taxi-way and other aviation activity. Rejecting a submission that the Environment Court erred by determining that

¹¹⁷ Copeland, EIC, paragraph 50–53.

¹¹⁸ Copeland, EIC, paragraph 15–16.

¹¹⁹ HC Invercargill [2013] NZHC 2347 [12 September 2013].

the NoR was deficient in the absence of a cost benefit analysis, the Court held:¹²⁰

“There is nothing in the language of ss 7(b) or 171(1)(b) that imposes a legal duty on the requiring authority to prepare a cost benefit analysis or requires the Court to consider a cost benefit analysis. As the Court noted, such an analysis may be very helpful and the failure to do one may mean that the Court finds that the assessment of efficiency and/or alternatives is inadequate. But rarely will the failure of the Court to require a cost benefit analysis amount to an error of law. Indeed the full High Court in Meridian Energy Ltd v Central Otago District Council considered that the Environment Court erred by requiring a cost benefit analysis.¹²¹ Moreover, it is inherently part of the evaluative function for the Environment Court to determine whether there has been adequate consideration of alternatives or whether the proposal is an efficient use of resources and whether there is a sufficient basis to draw a robust conclusion. In short, the assessment of efficiency and/or alternatives is essentially an assessment of fact, on the evidence, not readily amenable to appeal on a point of law.

Mr Somerville’s submissions sought to distinguish leading authority eschewing the requirement to assess the viability of a project. The submissions also sought to distinguish the observations of the full High Court about cost benefit analysis in Meridian. I readily accept the proposition that the case law dealing with viability has nothing to do with cost benefit analysis. Viability is essentially concerned with profitability and the Courts in this context have never been concerned with profitability.

Cost benefit analysis is however concerned with quantifying, in economic terms, whether the costs of a proposed use of a resource exceed the benefits of that use. It is therefore a recognised method for assessing efficiency and/or the relative merits of alternatives, especially in circumstances where the ordinary operation of the market to achieve allocative efficiency cannot be assumed. But, as to the requirement to undertake a cost benefit analysis, the Court in Meridian observed:

Parliament has not mandated that the decisions of consent authorities should be ‘objectified’ by some kind of quantification process. Nor does it disparage, as a lesser means of decision making, the need for duly authorised decision-makers to reach decisions which are ultimately an evaluation of the merits of the proposal against relevant provisions of policy statements and plans and the criteria arrayed in Part 2. That process cannot be criticised as ‘subjective’. It is not inferior to a cost-benefit analysis. Consent authorities, be they councillors, commissioners or the Environment Court, and upon appeal the High Court Judges, have to respect that reality and approach decision making in accordance with the process mandated

¹²⁰ HC Invercargill [2013] NZHC 2347 [12 September 2013] at [132]-[135].

¹²¹ Meridian Energy Ltd v Central Otago District Council [2011] 1 NZLR 482 (HC) at [116].

by the statute. It is not a good or bad process, it simply is the statutory process.

I do not think this reasoning can be readily distinguished, as it is a general statement of principle about the functioning of the RMA. To that extent, it remains apposite to this case. However, unlike s 7(b), the Court under s 171(1)(b) must decide whether 'adequate' consideration has been given to alternatives. It may be that a Court might find that the assessment was inadequate without a cost benefit assessment. But whether that is so is an evaluative matter for the Court and is not a mandatory requirement in every case."

[312] That is helpful in terms of the legal requirements for projects such as the present. What *Queenstown Airport Corporation* makes clear is that a prime consideration under ss 7(b) and 171(1)(b) is to determine whether alternatives have been adequately considered and whether the proposal amounts to an efficient use of resources. Use of a BCR may assist in that evaluation, or it may not. But the decision makes clear it is not mandatory.

[313] The Board was told that BCRs are one of the economic measures for cost efficiency used by NZTA in their appraisal, ranking and consequential application for funding for projects they are assessing. Use of a BCR by NZTA is confined to its use as a tool to determine the order of projects to be submitted for construction and funding. Given the funding available will never support all possible projects, use of a BCR as a tool assists NZTA in ranking the projects on offer. It is important to recognise that once NZTA's appraisal process – including BCRs for the possible projects – has resulted in one project being ranked ahead of others for implementation and funding, the BCR calculation is no more than one of the many matters to which Bols must have particular regard under ss 5(2) and 7(b). That is, in their assessment of the provision of the efficient use and development of the named resources.

[314] The place held by BCRs in NZTA's assessment, both generally and as applied to PP2O, was described by Mr Blackmore in the following terms:¹²²

The NZTA uses three assessment criteria to determine if proposed activities (i.e. projects or packages of projects) are eligible for funding and, if so, their priority. ... these three assessment criteria ... are 'strategic fit', 'effectiveness', and 'economic efficiency', and how they are evaluated as being either 'high', 'medium', or 'low' for each proposed activity. ... economic efficiency (as expressed by the BCR) is relevant to project funding, but is only one of three criteria used to determine the assessment profile, which in turn determines the priority for programming (and funding) for a proposed activity.

The BCR for the Wellington Northern Corridor RoNS package, of which the [PP2O] Project is an integral part, is included in the Wellington Northern Corridor Detailed Business Case. This business case was used to secure the necessary funding to undertake investigations

¹²² Blackmore, EIC, paragraphs 15–22.

(including consenting), design and property acquisition for the package. The NZTA Board approved funding for these activities on 10 November 2009. Construction funding approval however needs to be sought from the NZTA Board on a project-by-project basis.

When the Wellington Northern Corridor Detailed Business Case was approved in late 2009, the package was evaluated as having 'high' (H) strategic fit, 'high' (H) effectiveness and 'low' (L) efficiency. This 'HHL' assessment profile gave the package a 'Priority order 3' ranking for funding. This is the third highest out of 11 possible priority orders.

The Wellington Northern Corridor package BCR, as identified in the Wellington Northern Corridor Detailed Business Case, was calculated in accordance with the EEM to be 1.1 (which includes agglomeration benefits) and 1.2 if the Petone to Grenada Link Road was included in the calculations. In addition to agglomeration benefits¹, the NZTA believes that the package will generate additional 'wider economic benefits' ("WEBs") relating to labour demand benefits (i.e. additional employment benefits). As such, and as a sensitivity test, the business case identifies that the package BCR would be 1.4 if the additional WEBs were included in the package BCR.

The Wellington Northern Corridor Detailed Business Case (and, by extension, the business case for the [PP2O] Project) has recently been updated ... I expect that the update ... will take into account the recently approved changes to the way BCRs are calculated under the EEM. The key changes to the EEM include a new discount rate (i.e. 6% rather than 8%), an extension of the benefit evaluation period (40 rather than 30 years) as well as the inclusion of the 'new' WEBs. These changes apply to public transport and road improvement projects (such as the Project).

If the update to the Wellington Northern Corridor Detailed Business Case is ultimately approved, then the 'conventional' BCR for the Wellington Northern Corridor RoNS package will be 1.55. The addition of WEBs to the package BCR would increase it to 1.75. The overall funding assessment profile for the package that was identified in the Wellington Northern Corridor Detailed Business Case in 2009 will remain unchanged (i.e. HHL), however.

As set out in the Wellington Northern Corridor Detailed Business Case, the [PP2O] Project BCR is one of eight project BCRs, which combined with the package's agglomeration benefits, make up the package's overall BCR. The 2009 business case identified that the [PP2O] Project BCR was 0.8. At the completion of the scheme assessment addendum phase, in early 2012, the Project BCR had been reassessed as being 0.5. Key reasons for the reduction in the Project BCR included an increase in predicted project costs due to additional property been needed, the addition of the proposed Rahui Road Overbridge, the inclusion of additional mitigation

measures, accounting for annual escalation, and taking into account the economic dis-benefits from vehicles possibly having to travel slower along what will become the 'old' SH1. However, the Project BCR is 0.8 following the recent changes to the way BCRs are calculated under the EEM.

I would like to emphasise that the procedures specified in the EEM are primarily intended to enable the NZTA to prioritise projects for funding allocation purposes, not for an assessment of the economic efficiency of a project in terms of RMA matters. To this end, I would like to emphasise that the total undiscounted benefits of the Project are more than twice the total undiscounted costs, but the 6% discount rate reduces the BCR to the calculated value of 0.8."

[315] Dr Pickford and Mr Elliott were of the view that the BCR for PP2O simply does not justify the Project's approval. Mr Elliott considered the Project contributes to the "*destruction of wealth in New Zealand*",¹²³ and both Dr Pickford and Mr Elliott believed NZTA's use of BCR overstated the benefits by using a discount rate of 6% rather than the 8% recommended by Treasury.¹²⁴

[316] Mr Copeland countered this in rebuttal, saying NZTA projects are now all evaluated using a 6% discount rate because this favours longer life capital cost projects, such as roads.¹²⁵

[317] The Board agrees with Mr Blackmore's rebuttal statement where he stated:¹²⁶

"Dr Pickford is critical of the NZTA's decision making processes and policy for funding its transport projects, and in this instance a roading project. I reiterate that while I understand that economic efficiency is a relevant consideration under the ... RMA, I consider that decision-making processes under the Economic Evaluation Manual ("EEM"), and in particular the Benefit-Cost Ratio ("BCR") tool, have been developed and used for a different purpose—that is, for the evaluation and ranking of projects within the LTMA decision-making framework. I understand this was also how the Boards of Inquiry into the Transmission Gully and MacKays to Peka Peka proposals considered the EEM and BCR."

[318] That evidence picked up the M2PP Board's treatment of this issue. There after discussing broadly similar economic evidence relating to that Project, that Board held¹²⁷ that the "*NZTA EEM tool is one part, and a valuable part of the assessments that are to be made in relation to 'economic wellbeing' and 'efficiency'*" and concluded:¹²⁸

¹²³ Lorax Partnership evidence page 3.

¹²⁴ Copeland, Rebuttal, paragraph 14.

¹²⁵ Copeland, Rebuttal, paragraph 14.

¹²⁶ Blackmore, Rebuttal, paragraph 23.

¹²⁷ MacKays to Peka Peka Report and Decision, section 10.18, paragraph 1135.

¹²⁸ MacKays to Peka Peka Report and Decision, section 10.18, paragraph 1137.

“While it may be helpful for some attempt at quantification to be attached to, for example, social, economic or cultural matters, in each case we consider it could only provide a limited, and somewhat constrained view of the full range of matters to be considered. The BCR analysis in this case helpfully describes, in part, the national viewpoint on economic and efficiency merits of the Project by way of comparison with alternate options. This gives some context to the stand alone BCR for the project, in particular that, on this point, the Project proposed is significantly better than the alternatives considered. To the extent that it is relevant, we consider that the BCR for the Project ought to be considered on the basis that it is part of the wider Wellington Northern Corridor RoNS upgrade, of which it is an integral part.”

- [319] The Board accepts that BCR is an appropriate measure for NZTA to compare costs and benefits between projects. This feeds into a process to identify and prioritise projects from a national perspective. Here, it has not been shown that NZTA's processes were so deficient or unreasonable as to question its methodology or final calculation. The Board accepts that EEM and BCR are NZTA methodologies that will continue to develop over time.
- [320] The Board understands that NZTA assessment of projects involves Strategic Fit, Effectiveness and Efficiency. They provide a broader perspective than just the BCR calculation. That perspective includes public processes over time which involve communities wanting to function more efficiently and safely, and prosper economically. This in turn has led to proposals in regional land transport plans, national roading programmes and now in parts of the RoNS – all aimed at shaping roading and infrastructure to serve broad community needs, including economic prosperity and wellbeing.
- [321] Economic efficiency is relevant under ss 5(2) and 7(b) but needs consideration on a broader front and in that regard the Board concurs with the M2PP Board that this Project should be considered on the basis that it is part of the wider northern corridor RoNS.
- [322] Mr Elliott considered that NZTA funds would be better allocated to improving public transport in the area. Mr Copeland pointed out these funds would be from a different funding pool and there would be no certainty allocation of public transport funds would necessarily be spent in the Kāpiti and Ōtaki areas.¹²⁹ Mr Elliott also pointed to the loss of productive horticultural and agricultural land to the region and country. While he recognised agricultural land would be required, Mr Copeland explained that its value had been assessed and incorporated because the land will need to be purchased for the Project and market prices will reflect its productivity.

Businesses Adversely Affected by the Project

- [323] As with any route selection, people and businesses will be affected differently. Fourteen submissions were received from businesses and trusts, of which 36% were opposed, 43% were in favour and 21% were mixed or neutral. The Board noted there were few submissions from businesses in Ōtaki and Te Horo. The Ōtaki Community Board provided cautious support

¹²⁹ Copeland, Rebuttal, paragraph 15.

to the Project. Mr Cootes, Chair of the Board, requested fair and reasonable consideration of the economic effects of the Project on the Ōtaki Railway Town Centre and requested ongoing community involvement.

- [324] Conditions have been imposed to ensure community liaison and consultation until 12 months after construction is completed. They will assist businesses to schedule, plan and provide a means of dealing with Project Managers on difficulties. Community involvement with signage and gateway features is also included. Monetary compensation for businesses at this time was not proposed, but Mr Cootes said an economic recovery package had been offered. This is a matter outside the Board's consideration.

Findings on Economics

- [325] Overall, and having regard to the matters discussed the Board is satisfied the Project will enable people and communities to plan, provide and enhance their economic growth and wellbeing and that it represents an efficient use and development of natural and physical resources.

4.10 GEOTECHNICAL, SEISMICITY AND SETTLEMENT

[326] Evidence on the subject of Geotechnical, Seismicity and Settlement was received from two expert witnesses:

Mr Pathmanathan Brabhaharan for the Applicants

Mr Brydon Hughes for both GWRC and KCDC (mainly in respect of hydrogeological (groundwater) effects).

[327] Witnesses were:

Mrs Sharyn Sutton.

[328] Related Conditions:

Designation Conditions: 43–48

Evidence/Submissions

[329] The AEE identified that first, the Project is located in an area of high seismicity and that secondly, ground settlement can occur as a result of groundwater drawdown and from the construction of fill embankments on compressible ground. Other relevant geotechnical matters in the AEE were the effects of bridge piling, erosion control requirements on new cut and embankment slopes, and effects on groundwater availability and route security generally. The effects on groundwater availability are covered elsewhere in this Report.

[330] Expert witness conferencing between Messrs Brabhaharan and Hughes resulted in agreement that groundwater issues are not likely to be significant to the Project and that the level of assessment had been appropriate.¹³⁰

[331] Accordingly, as counsel for the parties indicated no wish to cross-examine on this issue and given the persuasiveness of Mr Brabhaharan's written evidence, his wide experience and qualifications, and the agreement reached with Mr Hughes, the Board saw no reason to examine either witness, and excused both from attendance at the Hearing.

[332] Some submitters made comments about the proximity of earthquake fault lines to the Project alignment. No witnesses amplified those comments, which were generally to support their assertions that the alignment should be somewhere else.

[333] Mrs Sutton was concerned about potential settlement as the result of construction of the Expressway and was a witness, but did not call expert evidence to support her contentions.

Geology of the Project Area

[334] Mr Brabhaharan advised the Board the Project area comprised:

¹³⁰ Brabhaharan, Rebuttal, paragraph 9.

- a) Sand dunes and interdunal peat deposits underlain by older peat deposits;
- b) Recent alluvium deposited by the Ōtaki River, Waitohu Stream and other streams;
- c) An older alluvial terrace;
- d) Glacial and interglacial deposits underlying the site.¹³¹

Route Security and Natural Hazards

- [335] Mr Brabhakaran's evidence detailed the seismic environment of the Wellington region and in particular the existence of an active fault, the Northern Ohariu Fault, which crosses the M2PP section of the Expressway just south of the Project area.¹³²
- [336] He noted that the Northern Ohariu Fault is shown on geological maps as stopping just short of the Expressway, but conceded it may cross the alignment in the vicinity of the Te Horo Overbridge.¹³³
- [337] He also advised he had led an earthquake-induced liquefaction hazard assessment and mapping project for the Wellington Regional Council in 1992–93, which had identified moderate or less liquefaction hazards either end of the Project alignment. He noted that liquefaction was not an issue between the south bank of the Ōtaki River and Mary Crest.¹³⁴
- [338] He had also led an Opus-GNS Science team which had assessed and mapped the potential for earthquake-induced slope failures in the Wellington region. He advised that that work indicated such failures were not a significant hazard along the Project corridor.¹³⁵
- [339] He noted previous studies he had undertaken indicated that the existing SH1 Ōtaki River bridge is not resilient to large earthquakes and that in such an event, damage to that structure would be likely to close SH1. He acknowledged that in severe earthquake situations, even if continued access over that bridge was available, liquefaction could lead to partial failures of embankments south of Mary Crest, restricting the road to single lane access.¹³⁶
- [340] He advised the Board that the proposed design concept for the Expressway is to aim for resilience from an earthquake up to a local Richter Magnitude 7.5 earthquake event. He expected the Expressway will remain open after such an earthquake, with some limited road deformation from liquefaction along some sections that could be reinstated within a reasonable time.¹³⁷
- [341] His overall conclusion was that the PP2O Expressway (in conjunction with the TG Motorway and M2PP Expressway) will considerably improve the

¹³¹ Brabhakaran, EIC, paragraph 15.

¹³² Brabhakaran, EIC, paragraphs 25–26.

¹³³ Brabhakaran, EIC, paragraph 27.

¹³⁴ Brabhakaran, EIC, paragraph 30.

¹³⁵ Brabhakaran, EIC, paragraph 30.

¹³⁶ Brabhakaran, EIC, paragraph 32.

¹³⁷ Brabhakaran, EIC, paragraph 40.

resilience of access into and out of Wellington when compared with existing routes.¹³⁸

- [342] In the absence of any evidence to the contrary, and having regard to the qualifications and considerable focussed experience of the witness, the Board accepts this view.

Other Geotechnical Aspects of the Project Design

- [343] With regard to other geotechnical matters, Mr Brabhakaran noted that some of the cuts in readily erodible dune sand at the northern and southern ends of the Project alignment would be up to 20m high and set out mitigation measures proposed to ensure stability.¹³⁹ He gave similar evidence to the Board concerning the stability of fill embankments, some of which are likely to be up to 8m high.
- [344] He outlined the problems of constructing a road embankment over peaty ground, noting that such ground would exist at each end of the Project alignment in the interdunal peat zones.
- [345] For the rest of the Project, he also outlined possible ground settlement as a result of the works to both the works and the surrounding ground either side of the Expressway alignment. He concluded in both cases that the level of any subsidence will be negligible as a result of any lowering of the groundwater table from groundwater drawdown from either permanent excavations or proposed construction groundwater takes.¹⁴⁰
- [346] He noted that the effects of any short duration excavation of peat and its replacement in the interdunal peat zones would also be negligible. However, in those areas where peat was so deep it could not practicably be all removed, he described the technique of pre-loading specifically to compress the peat under the proposed Expressway formation. He advised that such settlement would be controlled and monitored.¹⁴¹
- [347] He acknowledged that this process would result in some settlement of the adjacent land, the effects of which, given the current predominantly rural land use, would, in his opinion, be negligible.¹⁴² However, he did accept that there could be some minor settlement to the existing NIMT and the existing SH1 in such areas, but noted that this could easily be repaired, once detected by proposed regular survey monitoring during construction.¹⁴³
- [348] His overall conclusion with respect to settlement issues was that:¹⁴⁴
- “The overall effects of settlement are minor and, through mitigation measures proposed, can be easily managed.”*
- [349] The Board agrees.

¹³⁸ Brabhakaran, EIC, paragraph 43.

¹³⁹ Brabhakaran, EIC, paragraphs 45–48.

¹⁴⁰ Brabhakaran, EIC, paragraph 91.

¹⁴¹ Brabhakaran, EIC, paragraph 55.

¹⁴² Brabhakaran, EIC, paragraph 93.

¹⁴³ Brabhakaran, EIC, paragraph 93.

¹⁴⁴ Brabhakaran, EIC, paragraph 96.

- [350] The likely method of piling for the major bridges was detailed in the evidence, the Board noting that such piling will if possible, be by way of bored piles with only negligible vibration effects when driving or vibrating the pile casings into the ground.
- [351] Mr Brabhakaran advised that at three sites (Waitohu Stream, Ōtaki River and Te Horo Overbridge) piles are likely to be founded in aquifers. However, these are only shallow aquifers that are unconfined or at worst, semi-confined. Thus there would be little or no effect on the local groundwater regime. He detailed the mitigation regime proposed to minimise any adverse effects.¹⁴⁵
- [352] Mr Brabhakaran contended that as far as bridge piling is concerned:¹⁴⁶
- “The overall adverse effects of bridge piling works on groundwater or aquifers will be minor, if indeed there are any, taking into account the mitigation measures proposed.”*
- [353] The Board accepts this contention.
- [354] Mr Brabhakaran detailed the current state of the sand dunes in the Project area, as well as the situation which will exist following the cuttings required through some of the dunes south of Mary Crest and just north of Ōtaki township.
- [355] He detailed mitigation measures. These included rounding of cut edges and revegetation as soon as possible after formation, incorporating, where appropriate, the use of erosion protection geotextile netting or the placement of topsoil or peat on the sloped surfaces.¹⁴⁷
- [356] Mr Brabhakaran’s overall conclusion on the geotechnical engineering issues identified in the Project was that:¹⁴⁸
- “The overall environmental effects of the proposed works in relation to geotechnical issues are minor, and can be readily mitigated through conventional methods.”*
- [357] The Board accepts that his technically unchallenged conclusion is valid and that the conditions which have been agreed will ensure that appropriate mitigation is affected.

Key Issues Report

- [358] The KCDC raised the issue of natural hazards and resilience in their Key Issues Report.
- [359] This matter was later addressed to the satisfaction of the Board.

Submitters

- [360] Mrs Sutton’s concerns regarding settlement due to the construction of the Expressway have been addressed to the Board’s satisfaction in [345] above.

¹⁴⁵ Brabhakaran, EIC, paragraphs 108–111.

¹⁴⁶ Brabhakaran, EIC, paragraph 112.

¹⁴⁷ Brabhakaran, EIC, paragraph 115.

¹⁴⁸ Brabhakaran, EIC, paragraph 117.

Findings on Geotechnical, Seismicity and Settlement

- [361] Expert evidence on these matters by the time of the Hearing was either agreed or undisputed. The Board agrees it properly outlined the detail of the likely adverse effects and any necessary mitigation measures. These demonstrated that the adverse effects were either less than minor or capable of being mitigated to that level.
- [362] Overall on the matter of geotechnical issues, seismicity and settlement, the Board is satisfied that together with both the M2PP and TG Projects, this Project will significantly enhance the security and reliability of access into and out of the Wellington region in, or following, natural hazard events, and that subject to the agreed conditions the effects of the geotechnical engineering, seismicity and settlement aspects of the Project on the environment will be either minor or negligible.

4.11 GROUNDWATER

[363] Evidence on the subject of Groundwater was received from two expert witnesses:

Mr Pathmanathan Brabhaharan for the Applicants

Mr Brydon Hughes for both GWRC and KCDC.

[364] Witnesses were:

Mr John Camm & Mrs Christine Stone

Mrs Gyllian & Mr Barry Hart

Mrs Sharyn Sutton.

[365] Related Conditions:

Resource consent Conditions: BC1–BC4 & GT1–GT7

Evidence/Submissions

[366] Issues were raised by submitters concerning the likely impact on groundwater adjacent to and “downstream” of the Project footprint.

[367] Some submissions, which dealt with other matters as well, expressed concern about the potential adverse effect on groundwater of the Project, and particularly its construction water takes from bores to be drilled at a number of locations adjacent to the Project alignment. No specific evidence was adduced by these submitters.

[368] Subsequent expert witness conferencing between Mr Brabhaharan and Mr Hughes resulted in agreement being reached that groundwater issues are not likely to be significant to the Project, that the level of assessment had been appropriate but that it would be prudent to monitor groundwater levels during construction, and such monitoring should be reported through a specific Groundwater Monitoring Plan (GMP).¹⁴⁹

[369] Accordingly, as counsel for the parties had indicated no wish to cross-examine on this issue and given the quality of the two experts’ written evidence, their expertise and the agreement reached, the Board saw no reason to examine either and excused both from attendance at the Hearing. Their agreement is set out in detail in part of the joint statement of the Hydrology, Groundwater and Stormwater experts.

[370] The Board notes that in particular they agreed that:

- Drawdown resulting from the Expressway excavation and drainage should not affect existing groundwater users;
- Prudence requires monitoring of groundwater levels in water wells and piezometers during construction to confirm this;

¹⁴⁹ Brabhaharan, Rebuttal, paragraph 9.

- Short term groundwater level changes during construction as a result of the removal of peat is unlikely to be a significant issue;
- Long term groundwater level changes in interdunal peat deposits are unlikely to be affected, apart from those immediately adjacent to the Expressway;
- The Mangaone Stream is above an unconfined aquifer across the Hautere Plain and the proposed construction water abstraction in that vicinity is unlikely to cause more than negligible effects to the flow in the stream;
- In the Waitohu Stream vicinity water abstracted from a 35m to 40m depth is also unlikely to significantly affect surface flows. However, flow restrictions may be required during extreme low flows in the stream;
- The discharge of surface runoff through swales is unlikely to have any significant effect on groundwater levels;
- Groundwater is unlikely to be a significant issue for the Project and is far less important than it was in M2PP, given the less sensitive nature of the environment and the greater separation from sensitive wetland areas;
- It would be prudent for the GMP and the proposed monitoring to be documented in one document, cross-referenced to other documents as appropriate. This GMP should address matters including:
 - i) the schedule of monitoring bores identifying piezometer depths, screen length and geological unit;
 - ii) the location of monitoring bores;
 - iii) monitoring frequency;
 - iv) monitoring methods;
 - v) surveying and monitoring existing groundwater users;
 - vi) duration of monitoring pre and post construction;
 - vii) reporting requirements, including identification of departure from “natural” groundwater levels;
 - viii) details of mitigation options, including triggers for implementation of mitigation measures as appropriate;
 - ix) review procedures;
 - x) definition of terms.¹⁵⁰

Issues

[371] Mr Brabhakaran’s evidence drew the Board’s attention to four potential sources of adverse effects from the Project on groundwater.

¹⁵⁰ Expert Conferencing Joint Witness Statement, Hydrology, Groundwater and Stormwater.

- a) Project earthworks leading to a permanent lowering of groundwater levels;
- b) Temporary lowering of groundwater levels during construction;
- c) Potential effects on wetlands or other ecological areas from changes in the groundwater regime;
- d) Effects arising from the abstraction of water for construction activities.¹⁵¹

[372] He noted that:¹⁵²

“Many of these potential geotechnical issues relate to groundwater and aquifers because construction works can affect groundwater levels or the natural state of aquifers. This may in turn have ecological effects or may affect the access to groundwater for other users.”

[373] He then set out his detailed analysis of each of these potential adverse effect sources in turn, and for each of them concluded that it was unlikely that any would have any effect that was more than minor, if not negligible.¹⁵³

[374] Mr Hughes’ concerns were related to his view that Mr Brabhaharan had tended to dismiss the potential for adverse effects, and set out reasons for this conclusion. He felt there was a need to undertake a significant level of monitoring before and during construction to test or verify Mr Brabhaharan’s assumptions.

[375] Mr Brabhaharan also recorded that in his view the matters agreed and other measures proposed through conditions would also address the Camm/Stone and the Harts’ concerns that their existing water sources may be affected.¹⁵⁴

[376] The Lorax Partnership was among other things, concerned at the possible impact of the Ōtaki twin bridge piers’ construction on its water availability from the Amos Water Scheme, which draws its water from a bore situated on the south bank of the Ōtaki River. Mr Brabhaharan assured the Board that in the unlikely event that further detailed design-driven investigation indicated that some or all of the piles would be founded in an artesian aquifer, then proven effective mitigation measures would be taken to ensure that the artesian aquifer was not compromised.¹⁵⁵

[377] The Board was informed during the Hearing that the Arcus Road Water Scheme representative no longer wished to appear as the Scheme’s outstanding issues in relation to the protection or replacement of their main pipeline from their bore adjacent to the Ōtaki River to their distribution network had been resolved with NZTA to their satisfaction. Similarly, their anxiety about the possible use of explosives to assist construction in the

¹⁵¹ Brabhaharan, EIC, paragraph 60.

¹⁵² Brabhaharan, EIC, paragraph 61.

¹⁵³ Brabhaharan, EIC, paragraphs 71–90.

¹⁵⁴ Brabhaharan, Rebuttal, paragraph 10.

¹⁵⁵ Brabhaharan, EIC, paragraphs 106 and 110.

vicinity of their bore had been assuaged following receipt of assurances in this regard from Mr Brabhaharan.¹⁵⁶

Findings on Groundwater

- [378] On the basis of evidence presented, including the agreement reached between the expert witnesses for the Applicant and the two Councils, the Board finds that subject to imposition of groundwater related Conditions BC1–4 and GT1–7, any adverse groundwater effects resulting from the construction and operation of the proposed Expressway will be either avoided, remedied or mitigated to an appropriate level via the provision of performance measures incorporated within those proposed conditions.

¹⁵⁶ Brabhaharan, EIC, paragraph 137.

4.12 HYDROLOGY AND FLOODING (INCLUDING CLIMATE CHANGE EFFECTS)

[379] Evidence on the subject of Hydrology and Flooding (including Climate Change Effects) was received from a number of expert witnesses:

Dr Grant Webby for the Applicants

Dr John McConchie for the Applicants

Ms Sharyn Westlake for GWRC

Mr Robert van Bentum for KCDC.

[380] Witnesses were:

Mr John Camm & Mrs Christine Stone

Mrs Gyllian & Mr Barry Hart

Mr Barry Lucinsky

Mr Paul Howard.

[381] Related Conditions:

Resource consent Conditions: WS1–WS14 & SW1–SW4

Issues

[382] The Project crosses four significant waterways and their flood plains within the Ōtaki Coastal Plain. From north to south these are the Waitohu Stream, the Mangapouri Stream, the Ōtaki River, and the Mangaone Stream. As an elevated transport link, the proposed Expressway will interfere with the natural drainage of these waterways and adequate provision must be made for water to pass, including in flood events.

[383] A number of submitters expressed concern that the Project would increase the frequency or severity of flooding they already experience but, while some documented their concerns with photographs and documents relevant to recent floods, none called any expert witnesses in support. These submitters already experience flooding from the Mangaone Stream and its Overflow.

[384] There were many complex issues addressed by the Applicants' principal expert, Dr Webby. Evidence from the experts for the two Councils initially highlighted significant disagreement on a range of these issues, including:

- a) The design flood which should be used in the hydraulic analysis (and design) of the existing and proposed structures (bridges and culverts) under SH1, the NIMT, some local roads and the proposed Expressway. Of particular significance was the "future proofing" of that design flood having regard to climate change predictions;
- b) The necessity to ensure that any change in flood inundation between the existing situation and the proposed situation, that is, with the Expressway

constructed, should be confined to land within the designation and with reference to KCDC's proposed District Plan's requirement for hydraulic neutrality;

- c) Whether design standards which applied to the adjoining M2PP section of the Expressway should automatically apply to PP2O;
- d) The extent of conservatism that should be applied to the modelling and design process, including the extent to which there should be consideration given to "sensitivity testing" of the impacts of partial debris blockage of bridge waterways or culverts or the flow paths to be taken by super design floods;
- e) The need to extend modelling of the impact of the proposed Expressway downstream of the existing SH1 in some situations.
- f) Access by GWRC staff for flood management;
- g) Details of the proposed Ōtaki River bridge pier design with reference to whether there should be a single or multiple pier structures for each of the twin bridges.

[385] In the Applicants' opening submission, the Board was advised that many of these issues had been resolved as a result of conferencing between the Applicants and the two Councils' experts.

[386] In particular, the recognition of climate change impacts in assessing the quantum of the design flood as inputted to the modelling process was resolved by NZTA agreeing to extend the criteria to ensure that the 1% AEP design floods were adjusted to take into account the predicted effects of climate change on flooding out to the year 2130, rather than the initially proposed 2090, the latter being the latest year for which any published guidance exists.¹⁵⁷ This extension was based on the expected 100 year economic life of the major hydraulic structures, the bridges and culverts, whose design depended on this hydrological assessment.

[387] The Board was also advised that agreement had been reached on the need for further modelling and sensitivity tests meeting specific performance standards and the need to have the detailed hydraulic design of the Project peer reviewed.¹⁵⁸ By the time the Hearing commenced, the only unresolved issues were some of those raised by Ms Westlake for GWRC and Mr van Benthum for KCDC.

[388] When she appeared before the Board Ms Westlake acknowledged the issues raised in her evidence had been largely addressed through the witness conferencing exercise which had been given effect to through amendments to the initial set of conditions. Further issues relating to access

¹⁵⁷ NZTA Opening submission, paragraphs 109–114.

¹⁵⁸ NZTA Opening submission, paragraph 107.

and maintenance had been similarly addressed in further conferencing discussions with NZTA.¹⁵⁹

[389] She addressed the Board on her remaining issues. They included the need to recognise the urban situation surrounding likely flood ponding areas in the Mangapouri Stream, the pier configuration for the Ōtaki River bridges, and appropriate recognition of the effects of the Expressway on flood risks and the scope of the already agreed peer review.¹⁶⁰ Her evidence on these Topics referred to the (amended) coloured flood maps provided by Dr Webby¹⁶¹ which showed the difference between the existing and proposed situations as a result of the 1% AEP flood, adjusted for climate change out to 2130.

[390] Mr van Bentum contended there was further opportunity for engineering mitigation of flooding effects in some locations and where this was not possible he considered the designation should be extended to cover the extra flooded areas.¹⁶²

[391] Before discussing these matters, and in order to put them into some perspective, the Board feels it helpful to note NZTA's intentions to design so as to avoid, remedy or mitigate any flooding effects attributable to the Expressway.

[392] Dr Webby provided a useful summary of these matters at the Hearing, where he advised the Board as follows:¹⁶³

"The existing SH1 and North Island Main Trunk Railway traverse a narrow coastal plain between the foothills of the Tararua Range and the sea and the route of the Expressway essentially follows that same course. And that coastal plain that I talk about is really a sequence of flood plains with watercourses draining water from the hills down to the sea. So the Expressway is going to be exposed to those same flood hazards that the railway line and SH1 are presently exposed to.

We know that both those transport links, or both the railway and SH1, are flood prone in certain areas and I have found as a result of all our work, that the extent of inundation in the larger floods that we are concerned about is quite extensive and that's illustrated by the drainage plans.

The design objective for the Expressway is to achieve a certain level of service so that it remains flood free and in order to do that it will have to be elevated. Of course it intersects all these overland flow paths across the flood plains so there needs to be leakage paths in the form of culverts and bridges for all the watercourses and overland flow paths that the Expressway crosses.

¹⁵⁹ Exhibit 8, page 1.

¹⁶⁰ Exhibit 8, paragraphs 1–4.

¹⁶¹ At the beginning of his evidence Dr Webby handed in an amended set of flood maps in substitution for the set attached to his brief of evidence. The substituted set did not receive an exhibit number.

¹⁶² Revised Expert Conferencing Joint Witness Statement, Hydrology, Groundwater and Stormwater, Annexure B.

¹⁶³ Hearing transcript, pages 392–394.

Now, I have focused on three major waterways, the Waitohu Stream in the north, the Ōtaki River and flood plain and the Mangaone Stream and flood plain, and there's also one area of particular interest, which is a relatively minor stream called the Mangapouri, passing through Ōtaki. And that's of special interest because the existing North Island Main Trunk Railway culvert and the culvert immediately upstream of the County road form a throttle and restrict flood flows and thereby provide flood relief for Ōtaki township further downstream. And the Regional Council and Kāpiti Coast District Council made it very clear to us that it is important that that throttle is maintained and I perfectly understand the reasons for that. If the throttle wasn't there then Ōtaki township itself would be frequently flooded.

Now, the approach to investigating these flood hazards has used a computational harmonic hydraulic modelling approach. Firstly, we have tried understanding existing flood behaviour and flood patterns for the pre-development or existing situation. The models that were being developed for each watercourse have then been adapted for the Expressway situation and using a trial and error approach we've tried to determine suitable measures for maintaining continuity of overland flow paths and continuity of flow paths on those watercourses.

Then having optimised the design of those measures we've looked at the design flood event and undertaken an assessment of the effects of the Project on flood patterns and seen how they've changed relative to the existing situation.

Generally we've used the 1% AEP flood, adjusted for climate change to 2130 to assess effects. In some cases we've actually considered a range of other floods, for example, the Mangapouri Stream where we have a very sensitive environment with houses within two existing flood ponding areas with low floor levels."

(In answer to a question, Dr Webby explained what the term "1% AEP flood" means.) Then:

"Just returning to my theme, we have considered other different size flood events for the Ōtaki River and flood plain. Ōtaki township is currently protected by a stopbank system that's been designed for a 1% AEP flood. There is potential for that stopbank to be overtopped by a more extreme flood, in which case flood waters would flow across the flood plain. And of course that's the same flood plain that the Expressway is going to traverse so it's important that the design of the Project as it crosses that particular flood plain takes account of that potential possibility.

In addition to considering a range of floods we've also undertaken a range of sensitivity testing to assess the sensitivity of model predictions to things like partial culvert blockages, inaccuracies in estimation of frictional resistance of flood plains to flood flows. I'd also say that our works have been subjected to a very rigorous peer review process with the peer reviewer examining the hydraulic models and interviewing me at length in our office. So I consider that our assessment of effects is very robust and with the range of floods that we've considered, fairly conservative.

Many of the areas flooded in the proposed Expressway situation are also flooded in the existing situation. And in the various technical reports that I've produced I've identified flood ponding

areas that occur in the existing situation upstream of both SH1 and the railway line. So in some cases those flood ponding areas are going to be supplanted by the Expressway, for example, at the Mangaone Stream overflow crossing, where flood ponding occurs upstream at the railway line at the moment, that will now occur upstream of the Expressway.

These ponding areas that are an effect of the Project generally cover a very small area because the flood plain is, in a hydraulic sense, steep, so the extent of the ponding does not extend very far upstream, usually no more than about 100 metres.

Because of the magnitude of the floods that we have been considering, they are extremely rare so that flooding would be very infrequent. It would also be of short duration and therefore temporary, and the ponding areas are generally – well, pretty well all – just used for farming purposes at the moment.

Those effects are predominantly upstream of the Expressway. There are some very minor effects downstream where confined leakage paths [are diverted] to culvert locations and so in those areas downstream of the culverts you will get slightly elevated water levels compared to what you would have in the existing situation, and slightly higher velocities.

When you have an elevated transport link traversing a flood plain it is inevitable that you will have that flood ponding effect where you intersect overland flow paths. So those effects cannot be avoided unless, for example, you could construct a very long bridge to try and avoid that, but that would be, I dare say, expensive and also have visual effects.

So the Expressway design has basically sought to minimise flooding impacts upstream and yet achieve an economical design.”

- [393] An unresolved issue raised by Mr van Bentum related to opportunities for engineering mitigation of flooding effects in some locations. Dr Webby in his rebuttal evidence stated that:¹⁶⁴

“The magnitude of flood volumes for these watercourses relative to existing flood storage capacities renders this option impractical.”

- [394] Under examination by the Board, Dr Webby was asked to expand on that statement. His response was:¹⁶⁵

“Yes, I can refer by way of example to the Mangaone Stream. The volume of the flood containment basin, well, the flood containment area that we are proposing upstream of the Expressway, that would only be able to contain 1/80th of the volume of the 1% AEP flood for climate change at 2130 that we were using as a design standard.

So you can imagine if we were to try and create additional flood storage there, it would be inconsequential in terms relative to the

¹⁶⁴ van Bentum, Rebuttal, paragraph 14.

¹⁶⁵ Hearing transcript, page 419.

volume of the flood that we are designing for. So it would have no impact on flood levels whatsoever.”

- [395] When it was put to him that flood storage could be enhanced by excavation, his response was:¹⁶⁶

“You could do that but my – as I said before, it would have an imperceptible difference – result in an imperceptible difference in flood levels for the design flood.”

- [396] In answer to a further question, he confirmed that the reason for the impracticability was the hydraulically steep grade of the catchment upstream of the proposed Expressway.¹⁶⁷

- [397] Mr van Bentum, when the matter was put to him in cross-examination, responded:¹⁶⁸

“I do accept that for the likes of the Mangaone and the Waitohu there are probably no readily identifiable engineering solutions to address any further.”

- [398] Under further cross-examination, Mr van Bentum also accepted on several occasions that matters such as compensation or extensions of designations were matters outside his field of expertise.¹⁶⁹

- [399] On the basis of the cross-examination of Mr van Bentum, the Board considered his approach was overly conservative given that all the hydrology matters were endeavouring to forecast the situation in the future by which time it is likely there will be opportunities for further mitigation. The Board prefers to adopt the evidence of Dr Webby on any unresolved matters.

- [400] With regard to the Ōtaki River bridge pier configuration and the scope of the proposed peer review identified as still unresolved by Ms Westlake, the Board notes that under cross-examination, she agreed that the matter of pier configuration would be dealt with during the preparation and certification process for the SSEMP required to be prepared under Condition G30af).¹⁷⁰

- [401] In a further exchange, Ms Westlake agreed that proposed Condition SW2f) was intended to ensure that the detailed design, including the modelling, properly took into account the various factors listed in that Condition, but disagreed that the scope of the peer review would be *“sufficient to to engage a peer reviewer to actually look at what it is they are peer reviewing”*.¹⁷¹

- [402] The Board notes that in the course of further conferencing at planner level, the residual outstanding concerns of Ms Westlake and Mr van Bentum were addressed with agreed amendments to Condition SW2.

- [403] Agreed Condition SW2c) sets three alternative criteria to be achieved in the design of culvert and bridge waterway crossings and any additional flood

¹⁶⁶ Hearing transcript, page 419.

¹⁶⁷ Hearing transcript, page 419.

¹⁶⁸ Hearing transcript, page 497.

¹⁶⁹ Hearing transcript, pages 498–499.

¹⁷⁰ Hearing transcript, page 472.

¹⁷¹ Hearing transcript, page 449.

storage, all on the basis of the accepted 1% AEP flood adjusted for climate change to 2130 (mid-range prediction).

- [404] The two preferred alternatives require that the predicted maximum extent and peak levels of flood inundation due to the Project are either contained within the designation or are not more than 100mm above the pre-development situation for all waterways other than the Mangapouri Stream. There a more stringent criterion of 50mm has been agreed, having regard to the urban development alongside the stream in the potentially affected area.
- [405] In the event that neither of these two criteria can be met, the reports already required under Condition SW2f) must also describe consultation with the affected land owner(s) about the inundation effects. They will have been informed of the relief available under the Public Works Act 1981 (PWA). This aspect of the report will also detail any mitigation required or any “alternative mechanisms” that will be required to address inundation effects. The Board understands that “alternative mechanisms” may include compensation payable under the PWA.¹⁷²
- [406] Secondly, Condition SW2f) provides clear specification of the scope of the peer review to the satisfaction of NZTA and the two Councils.
- [407] The Board accepts that the amended conditions are a satisfactory resolution to both the outstanding issues, and compliments all the experts involved in reaching agreement on this Condition.

Existing Flooding Situations

- [408] The Board heard from witnesses owning property either side of Te Horo Beach Road, who currently experience flooding from the Mangaone Stream and its Overflow. They included Mr and Mrs Hart, Mr Camm and Ms Stone, Mr Lucinsky and Mr Howard where much of whose land is outside the designation corridor. They were all extremely concerned that the Proposal would exacerbate the already significant problem they experience during floods. Most referred to the four flood events which have occurred since 8 January 2008. They told the Board they were led to believe these four were in the order of 100 year floods.
- [409] The evidence of Dr Jack McConchie indicated those floods were nowhere near that magnitude. He advised that the 8 January 2008 flood, the largest, was a 13.1 year return period flood, with the next three largest being between three year and 2.3 year return period floods.
- [410] The Board accepts the evidence of Dr Webby that the hydraulically neutral design philosophy adopted will not exacerbate the situation. In his rebuttal evidence he advised that the result of his modelling in the extreme 1% AEP plus CC2130 is that:¹⁷³

“Overall the impact on the Project on the inundation area to the west of SH1 is no worse than in the existing situation, even

¹⁷² See condition SW.2.

¹⁷³ Webby, Rebuttal, Annexure A.

though the peak flood discharges through SH1 culvert and over SH1 on the Mangaone overflow are marginally increased.”

- [411] The Board notes, however that Dr Webby has proposed a modification to the Lucinsky Overflow. That includes a lowered bank along the main stream channel adjacent to the Overflow entrance, and installation of a 3.5m by 1m high box culvert through the western approach embankment to the Te Horo Overbridge. This will replicate the original discharge characteristics of this secondary flow path, a situation which he noted, has not existed for some time.¹⁷⁴
- [412] As a result of further investigations into the break-out of floodwaters from the Mangaone Stream which causes floodwaters to flow down Te Horo Road causing damage to the Hart property – raised with the Board during the Hearing by the above witnesses – NZTA has undertaken to provide some relief by constructing a bund along the left bank of the stream near the link road to the Te Horo Overbridge as suggested by Dr Webby.^{175 176}
- [413] The evidence on existing flooding of the Mangaone Stream and its Overflow was forcefully presented by the witnesses. From that, the Board observes that even if there were no proposed Expressway, GWRC, the local authority responsible for the management of the Mangaone Stream and its Overflow, would appear to have significant work to do to improve the situation. If undertaken that should ensure that an acceptable level of service relating to flooding is provided to the people living adjacent to the stream and its overflow.
- [414] For the record the Board notes that all of the issues, some of them quite hydraulically complex, surrounding the Waitohu Stream, the Mangapouri Stream and the Ōtaki River, were resolved at expert conferencing. The agreement reached between the Applicants and the Councils was given effect to by amendments to the conditions, following conferencing by the planners, including Ms Beals.
- [415] Towards the end of the Hearing, Ms Beals presented an amended set of conditions. Following the Hearing, a further set dated 10 October 2013, was furnished to the Board. It incorporated corrections and changes resulting from the planners’ and experts’ agreement.
- [416] The Board accepts that the relevant parts of those agreed conditions now give effect to the satisfactory resolution of all outstanding matters relating to hydrology, flooding and climate change, and subject to any modifications made by the Board, address all the issues surrounding any adverse impacts on the existing flood risks attributable to the Ōtaki River and the Waitohu, Mangapouri and Mangaone Streams as a result of the Expressway.

¹⁷⁴ Webby, Rebuttal, Annexure A.

¹⁷⁵ Hearing transcript, page 397.

¹⁷⁶ NZTA Closing submission, paragraph 125.

Findings on Hydrology and Stormwater

- [417] On this basis, the Board is satisfied that subject to implementation of the relevant conditions, hydraulic neutrality will be achieved to the extent practicable. Any adverse effects on the environment as a result of the assessment of the hydrology and the subsequent hydraulic design of the Expressway waterway crossings, including alternative mechanisms, will be avoided, remedied or mitigated to an acceptable level commensurate with the scale of the works.

4.13 LANDSCAPE AND VISUAL EFFECTS

[418] Evidence on the subject of Landscape and Visual Effects was received from three expert witnesses:

Mr David McKenzie for the Applicants

Mr Bruce Curtain for the Applicants

Ms Julia Williams for KCDC.

[419] Witnesses are:

Dr Marie O'Sullivan for Alliance for a Sustainable Kāpiti

Mr Greg Elliott from Lorax Partnership

Mr James Cootes from the Otaki Community Board

Mr Wayne Jarvis

Ms Josephine McLean

W & M Stevens Family Trust

Mrs Sharyn Sutton

Mr Bryce Holmes from Rahui Enterprises Ltd.

[420] Related Conditions:

Designation Conditions: 74–79

General

[421] Landscape effects are expected from any large infrastructure project involving substantial earthworks and bridging. From the Board's perspective, these effects are assessed under ss 5(2) and 6(a) and (b), and amenity values and quality of the environment under s 7(c) and (f), together with relevant issues from submissions.

[422] The Project will change the landscape. It has potential to change character and landscape values by its cumulative effect, along with infrastructure and temporary landscape effects during construction.¹⁷⁷ To avoid, remedy or mitigate these impacts, significant attention and consideration has been given to selecting a route to avoid damage to sensitive areas. Design will soften the effect of structures, provide landscape mitigation with appropriate vegetation, a design process which will work inclusively with communities and stakeholders on specific areas and make motorists' experience safer, more pleasant and attractive.

[423] Landscape treatment, urban design, and to an extent, terrestrial ecology, are closely linked visually from a road user's point of view, and local communities often blend these different elements in their concerns or mitigation sought.

¹⁷⁷ AEE Vol 2, chapter 16, p 212.

- [424] The Board again acknowledges much agreement between experts on landscape treatment and resolution of submitters' issues in the expert conferencing and from discussions through the Hearing itself.
- [425] As a result of these discussions, many of the landscape issues were resolved or agreed. Key agreed outcomes are listed below:
- a) Certification of the LUDP by KCDC;
 - b) The Project's Urban and Landscape Design Framework (ULDF) will be the integrating document that covers the principles of urban and landscape design that will be used to guide the overall corridor-wide design process;
 - c) The assessment methodology is appropriate to the scale and extent of the landscape context of the Project;
 - d) Draft landscape plans will precede more detailed plans;
 - e) Recognition, if private land owners agree, to protect or enhance remnant native vegetation outside the designation. This has the potential to further mitigate landscape effects. Such an agreement occurred during the Hearing, and is discussed in the Terrestrial Ecology section;
 - f) A period of time for maintenance and quality assurance to ensure successful planting outcomes was agreed, namely, up to 3 years for terrestrial plantings and 5 years for riparian and wetland plantings;
 - g) There will be community input for gateway areas, signage, Pare-o-Matangi Reserve and local bridges.
- [426] Mr McKenzie's summary was that *"overall, considering its entire linear extent, the Project will have moderate adverse landscape and visual effects"*.¹⁷⁸ He said, if analysed section by section, effects in most sections will be of moderate magnitude, with some a little lower (e.g., through the Te Hapua and Kowhai Road area) and others higher (through Ōtaki township). He said that no outstanding natural features or landscapes will be affected by the Expressway.¹⁷⁹ The Board found the visualisations and landscape plans proved helpful in understanding the likely impact on particular sites and the character and extent of landscaping planned.
- [427] A 3.5–4 year construction period is proposed. Mr McKenzie said that will result in *"moderate to high landscape and visual effects"*. They will involve vegetation clearance, earthworks, bridge construction and the associated haul roads, security fencing, night lighting and cranes.
- [428] Mr McKenzie detailed the extensive landscape mitigation measures proposed. This will be, as he said, *"to limit and make good the landscape"*.

¹⁷⁸ McKenzie, EIC, paragraph 15.

¹⁷⁹ McKenzie, EIC, paragraph 16.

and visual effects resulting from construction”.¹⁸⁰ Mr McKenzie stressed the importance of providing appropriate mitigation for the losses and changes associated with effects on the Pare-o-Matangi Reserve. Considerable weight was attributed to the ULDF as a guide to finalisation of design details.

[429] The Board was provided with the detailed landscape plans. These provided an understanding of the proposed visual treatment for Pare-o-Matangi Reserve, the Ōtaki Bridge embankments, gateway features and riparian and terrestrial plantings. The visualisations also demonstrated the use of low plant/grass mixes, shrubs, wetland plants, specimen and native trees. For example, on the Hautere Plains, NZTA proposes to provide at least:¹⁸¹ 1,000 Totara, 100 Titoki, and 100 Matai.

[430] Some of these trees are likely to be planted in ecological areas alongside the Expressway, some along landscaped bunds. The numbers give an idea of scale and there was a commitment to try to use locally occurring sizeable native trees. Details will be in the LUDP produced under designation Conditions 74–78.

[431] Mr McKenzie wrote:¹⁸²

“It is considered that through a sensitive landscape and urban design approach, the actual and potential landscape and visual effects of the Project will be successfully minimised and mitigated to an acceptable level by the measures outlined in this evidence.”

[432] From the Board’s perspective and from the ULDF, LUDP and plans provided, this statement of Mr McKenzie’s is accepted with one exception, which is detailed further below.

Landscape Effects on Properties to the East of the Project from Ōtaki Bridge along Te Horo Straight

[433] Submissions were received on the effects in this area from KCDC and property owners Mrs Sutton, Messrs Stevens, Lonsdale, Jarvis, Parkinson and the Lorax Partnership.

[434] The Board made two site visits to this area to familiarise members with the existing landscape and noise environment. The Board accepts that the proposed sections of landscape bunding to the east of the Expressway will provide acceptable mitigation to this area. A landscape bund is proposed to be located along the eastern edge of the designation corridor from Old Hautere Road to just north of the former Mirek Smíšek property, a distance of 1.5km. This bund will be planted with native trees and shrub species of varying heights, Totara, Titoki and Matai among them.¹⁸³ According to Mr McKenzie, this will aid visual integration of the bund planting with the stands of native bush on the adjoining private properties to the east.

[435] Concern was also expressed about the loss of shelter belts and other established trees. Where existing shelter belts are removed for Expressway

¹⁸⁰ McKenzie, EIC, paragraph 18.

¹⁸¹ See Designation Condition 78.

¹⁸² McKenzie, EIC, paragraph 159.

¹⁸³ McKenzie, Rebuttal, paragraph 26.

construction, these will be replaced¹⁸⁴ in addition to the native tree and plant bunding mentioned above. This Topic is covered by Condition 78j)ii) and is also discussed in the Terrestrial Ecology section.

Landlocked Sites

[436] KCDC commented on the potential future for landlocked sites within the designation, and whether the same land use would be able to continue or whether there would be access difficulties. Some of these areas are currently used for farming.¹⁸⁵ These are relatively large areas near Te Horo Bridge, south of Waitohu Stream and just north of the Ōtaki River.¹⁸⁶

[437] Ms Williams' opinion was that *"the landlocked sites, particularly those within the designation, provide an opportunity for mitigation of landscape and visual effects with the potential for wetland and plantings or reinstatement of native forest cover."*¹⁸⁷

[438] Mr McKenzie's view was that:¹⁸⁸

"the various pockets of land that Ms Williams has identified as 'landlocked' (many of which are in private ownership, with a current use that will be unaffected by the Project) are not necessary for the NZTA to acquire or enhance in order to mitigate the Project's landscape effects"

[439] Mr McKenzie's view was persuasive.

Pare-o-Matangi Reserve

[440] This is currently a significant reserve in Ōtaki that will be severely affected by the Project, with over half of its land area directly required. It is a site of cultural, community and recreational history.

[441] The following mitigation is proposed:

- a) "Like for like" mitigation in planting and area (although all parties recognise this will take years to develop to the mature qualities of the Reserve today);
- b) Incorporation of an L shaped block of unoccupied Ōtaki Motel within the designation land into the Reserve, thus creating a connected passive reserve space¹⁸⁹ of approximately 17,700m², slightly larger than the existing reserve. It will be a potential amenity backdrop for the Motel;¹⁹⁰
- c) Better connection between the Reserve and the Ōtaki Railway Retail area, with walkways and cycleways;

¹⁸⁴ McKenzie, EIC, paragraph 150.

¹⁸⁵ Williams, EIC, figures 1–5.

¹⁸⁶ Williams, EIC, figures 1–5.

¹⁸⁷ Williams, EIC, paragraph 29.

¹⁸⁸ McKenzie, Rebuttal, paragraph 9(c).

¹⁸⁹ No. 47 on Land Information Plan Sheet 3.

¹⁹⁰ McKenzie, EIC, paragraph 80.

- d) Relocation of existing specimen trees where practicable;
- e) Consultation with Keep Ōtaki Beautiful, Ōtaki Community Board and Ngā Hapū o Ōtaki.

Landscape Effects on Properties to the West of Existing SH1 Along the Te Horo Straight

[442] A Topic in contention was the landscape treatment proposed on the west of SH1 at or near Te Horo. The relevant landscape plans showing details are LA05 and LA06, Sheet 17 of 19.

[443] Ms Williams acknowledged that while the selected route avoided a number of adverse effects that would arise had a greenfield route been selected, she considered the scale of the proposed transport corridor to be very different from the scale of the existing road and rail, or the Expressway alone.¹⁹¹ In some areas it is over 140m wide.

[444] In her opinion:¹⁹²

“The cumulative landscape, visual and amenity effects of the proposal extend across the wider transport corridor of the Expressway and SH1 and the adjoining landscape. Restricting planting and noise reduction structures to the areas within the Designation limits the effectiveness of the proposed Urban Landscape Design Framework principles and the subsequent mitigation of effects.”

[445] This cumulative effect of scale in the Te Horo Straight is acknowledged in the AEE as having moderate effects.¹⁹³

[446] Ms Williams explained that for nearly 5km the full width of the corridors will be visible from the Expressway, the existing SH1 to travellers on the NIMT and to some private properties. Ms Williams added that the topography and narrowness of the designation limit the opportunities to screen the Expressway in views from the east, and particularly the west,¹⁹⁴ though the railway embankment will at least partially screen the Expressway.

[447] Asked whether there was a need for that mitigation planting for the full length of the straight or whether planting in clumps would be adequate, Ms Williams said:

“I don’t think there is room to do it for the full length of that route and I don’t actually think that would be necessarily an ideal solution, I am not proposing a barrier, I am proposing some visual relief, if you like, intermittently down the length of that five kilometres or so to break up that wide stretch. It is specific to this particular section of the expressway and I am afraid that in fact mitigation is only possible where there is room and there is a variable verge there, it is less than ideal - I think it’s from 6-16 metres - but where there are opportunities I suggest that a small cluster of trees be planted. Ideally, one would like to think of matai and totara, I don’t think that will be feasible, I think it will be

¹⁹¹ Williams, EIC, paragraph 11.

¹⁹² Williams, EIC, paragraph 12.

¹⁹³ AEE Vol 2, chapter 16, section 16.3.3, p 223.

¹⁹⁴ Williams, EIC, paragraphs 22–23.

whatever can grow to a successful height. So, no, I don't see a sort of an avenue or a boulevard of trees down there, I don't think that would be a successful solution."

- [448] Then asked whether there was potentially a negative outcome for planting within the corridor by taking away views otherwise available to users Ms Williams said:

*"I think given the fact that there is relatively little room and opportunities are not going to be great, it's self limiting by that very factor and it's also my opinion that good design would have clumps and small clusters of trees rather than a complete avenue, then I don't think it will take away from those wider views, as you're suggesting, from the local arterial route, over the rail corridor, over the expressway, to the distant Tararua's."*¹⁹⁵

- [449] The Board notes there were no submissions from local residents to the west of the existing SH1 concerned with the visual impact of the Expressway.

- [450] Mr McKenzie disagreed with Ms Williams' conclusions and found the measures unnecessary. He advised that native screen planting is proposed on the western side of the Expressway on the outer batter. He observed that most individual property owners in the west had planted their own screening to counter the effects of the existing SH1. This will also screen the Expressway.

- [451] The location of the planting proposed by Ms Williams in the passage cited lies outside the Project designation and is thus not a matter for a decision by the Board or the imposition of any condition. As NZTA said in closing,¹⁹⁶ once KCDC assumes ownership of the existing SH1 following revocation of its status it is for the Council to decide whether additional planting is warranted.

Former Rahui Milk Treatment Station and Rahui Factory Social Hall

- [452] NZTA has agreed to consult the owners of the Rahui Milk Treatment Station and Rahui Factory Social Hall on design and landscape plans for Bridge No. 4 (the Rahui Overbridge) and the entrance to their property— Condition 75a)v).

Richard and Sarah Caughley

- [453] The Board heard evidence from the Caughley's at 122 SH1, Ōtaki, on the impact of the Ōtaki South roundabout on their property. They live on the south bank of the Ōtaki River immediately west of the existing SH1. Discussions and plans resulted in agreement for this area and for landscaping treatment. These are included in the Condition 75 a)vi). The Caughleys will be consulted as part of preparation of the LUDP.

¹⁹⁵ Hearing transcript, page 230.

¹⁹⁶ NZTA Closing submission, paragraph 21.

Findings on Landscape and Visual Effects

- [454] The Board prefers the evidence of Mr McKenzie and agrees with his assessment and plans laid out in the Applications. The Board accepts the LUDP and ULDF will guide progress and landscape outcomes in a manner which includes consultation with stakeholders. Using these measures will successfully minimise and mitigate any adverse landscape effects to an acceptable level. Effects on specific sites will be appropriately addressed.

4.14 LIGHTING

[455] Evidence on the subject of Lighting was received from two expert witnesses:

Mr Derek Holmes

Mr Tony Coulman.

[456] Witnesses were:

Ms Sharyn Sutton.

[457] Related Conditions:

Designation Conditions: 42 and 79

[458] The AEE described lighting provisions both in terms of the construction and operational aspects of the Project. Section 8.4.6 of the AEE described the likely need for limited night construction work. This is expected where road or rail activities are near or over existing roads and has the potential to disrupt traffic movements. Portable generator-driven light towers are proposed in those circumstances. In some construction areas where permanent lighting is to be established, the methodology proposed involves early establishment of that lighting, with it being supplemented by portable lighting.

[459] Mr Holmes described¹⁹⁷ the particular locations where night work is expected. These include five bridge locations and 11 local road tie-in points. He estimated works involving about one week of night time activity at each of these locations.

[460] Construction yard areas may also be lit, subject to construction activity and timing, for the purpose of security, guiding staff and plant movements. In these temporary construction lighting situations, the effects are described as being controlled by the placement, orientation and shielding of light spill, to protect adjoining properties and dwellings.

[461] Section 6.2.5 Traffic Services of the AEE describes planning in relation to operational lighting. It states:

“Lighting is to be provided around interchange locations (north and south of Ōtaki) and intersections; lighting is not proposed along the remainder of the Expressway. Local road lighting will be reinstated where it currently exists and new lighting will be required at new intersections on the local road network, e.g. at the junction of Ōtaki Gorge Road and the new local arterial.”

[462] KCDC made submissions outlining concerns about potential effects arising from lighting. In particular the submission referred to the cumulative effects¹⁹⁸ on residential amenity arising from a number of factors acting together, including that due to lighting. By way of outcomes, KCDC sought further assessment to inform its consideration of these effects.

¹⁹⁷ Holmes, EIC, paragraphs 34–36.

¹⁹⁸ KCDC submission, paragraph 15.3.

- [463] Some submissions also expressed a concern in relation to the amenity effects of lighting.¹⁹⁹ Mr Coulman responded²⁰⁰ by describing the proposed containment of lighting at interchanges and ramps and reinstatement of existing local street lighting. He recommended that any potential for light spill effects be designed in accordance with the NZ Standard AS/NZ1158.0 Lighting for Roads and Public Spaces: 2005.
- [464] Conferencing between the expert witness planners resulted in amendments to Condition 42, Construction Lighting, to address more specifically matters related to shielding, lighting direction, light spill, glare, and sky glow effects. The revised Condition also requires lighting performance to be in accordance with the KCDP, and encapsulated lighting from sources including security, construction and internal offices. The District Plan includes specifications as to acceptable lux levels of light spill and the extent such effects may encroach on adjacent property.
- [465] Condition 79 has been proposed to address the Operational Lighting effects. The Condition as drafted seeks to minimise effects due to light spill. It sets a performance standard obligation on the design of lighting in operational circumstances. The relevant New Zealand standard or District Plan standard has been specified. The Board received no expert evidence to indicate the proposed performance standards were not appropriate.

Findings on Lighting

- [466] On the basis of the evidence before it, supported by the performance standard requirements, the Board is satisfied that the Project appropriately avoids lighting effects between interchanges on the Expressway. Where lighting is to be established, either for temporary construction or permanent operational requirements, the Board finds that the effects will be appropriately mitigated.
- [467] The Board notes that the revised proposed Condition 79 presented by Ms Beals²⁰¹ makes reference to “*Motorway*” lighting. The Board has replaced this with “*Project*”.

¹⁹⁹ Sutton submission, paragraph 11.

²⁰⁰ Coulman, EIC, paragraph 10(g).

²⁰¹ Exhibit 27, page 55.

4.15 OPERATIONAL NOISE AND VIBRATION

[468] Evidence on the subject of Operational Noise and Vibration was received from two expert witnesses:

Dr Stephen Chiles for the Applicants

Mr Malcolm Hunt for KCDC.

[469] Witnesses were:

Dr Marie O'Sullivan Alliance for a Sustainable Kāpiti

Mr Wayne Jarvis

Mr Greg Elliott from Lorax Partnership

Mr Bryce Holmes for Rahui Enterprises

Mrs Sharyn Sutton

Ms Josephine McLean

Mr James Cootes for Ōtaki Community Board.

[470] Related Conditions:

Designation Conditions: 60A, 61–73

[471] Sixteen submitters expressed concern at potential increases in noise and vibration from both road and rail. Submitters asked for low-noise roading surfaces, bunding, and where appropriate, planting to reduce impacts.

[472] The construction and operation of the Project will certainly bring noise effects, which need to be considered in terms of amenity effects of the Project under ss 7²⁰² and 16–17.²⁰³

[473] As a result of the expert conferencing, the Board was advised that most matters relating to noise and vibration were agreed, including the overall assessment methods,²⁰⁴ but there remained some residual matters of disagreement.

New Zealand Standard NZS 6806

[474] The experts agreed that the most appropriate standard is New Zealand Standard NZS 6806:2010 (NZS 6806), for the evaluation and mitigation of road traffic (operational) noise.

[475] This standard was used for the Waterview Connection, TG and M2PP. While it is accepted as the most appropriate standard, there has been recognition that some aspects are not entirely suited to those projects. Expert evidence to the PP2O Board recognised that broader aspects may

²⁰² Part 2 section 7(d) of the RMA.

²⁰³ Part 3 sections 16 and 17 of the RMA.

²⁰⁴ Chiles, Rebuttal, paragraph 10.

need to be considered in the environment of the Project and practical adaptations may be required for specific situations.²⁰⁵

- [476] The Board noted that NZS 6806 does not apply to rail noise. There is no New Zealand standard for rail noise. This resulted in some debate among experts on what standard to use. This will be discussed later.
- [477] NZS 6806 distinguishes noise levels expected from new roads and from altered roads. It was agreed the more conservative criterion, that for new roads, should be considered for assessment of the effects of this Project. Dr Chiles clarified this was used in TR14.²⁰⁶
- [478] Dr Chiles emphasised that the new standard and approach included the modelling and measurements for future noise and vibration levels and a multi-disciplinary evaluation to determine the “best practicable option” (BPO) for noise mitigation measures for optimal mitigation. BPO evaluation teams include experts in noise, landscape, urban design, ecology, engineering, social impact and cost, but not residents. He stressed this provided an integrated and open approach.
- [479] Typical mitigation measures include acoustic barriers of different heights, lengths, locations and construction (eg, timber or earth bunding) and low noise-generating road surface paving such as OGPA.
- [480] The modelling used future traffic volume predictions as at 2031. Dr Chiles stated the process and mitigation recommended was peer reviewed and involved public feedback.²⁰⁷

Operative District Plan

- [481] Mr Hunt contended that this Project should be reassessed in accordance with the KCDC Operative District Plan which is based on Transit’s internal guidelines for new roads as controlled activities in rural zones.²⁰⁸ Dr Chiles, on the other hand, maintained the Project should be assessed under the new standard NZS 6806, though he advised he had also considered the criteria under the Operative District Plan in his overall assessment of effects. The Board accepts the experts’ agreement that the appropriate measure for assessing road noise effects, both new and altered, is NZS 6806.

Rail Noise

- [482] As indicated above, there is no NZ Standard for rail noise. Dr Chiles used the KiwiRail reverse sensitivity policy and guidelines. This was developed by Marshall Day Acoustics in 2009 and has criteria for new houses near rail designations, aimed at reducing reverse sensitivity complaints against KiwiRail’s operations. They are not intended for new or altered rail lines, but Dr Chiles stated they provide a useful reference. He said they highlight areas where further assessment is required, through the use of 40m buffer and 80m effects zones.

²⁰⁵ Acoustics Joint Witness Statement paragraph 14.

²⁰⁶ Expert Conferencing Joint Witness Statement, Noise and Vibration, paragraph 16.

²⁰⁷ TR14, section 5.5.

²⁰⁸ TR14, Executive Summary.

[483] The following are the criteria guidelines applying at all times:²⁰⁹

Criteria for Rail Noise	Value
Outdoor Areas	60 dB LAeq(1hr)
Indoor Areas-bedrooms	35dB LAeq(1hr)
Indoor areas-other habitable spaces	40 dB LAeq(1hr)

Vibration

[484] Road traffic vibration has the potential to cause perceptible vibration inside buildings in close proximity to roads. This is predominantly from heavy vehicles. Vibration has not historically been assessed on road projects. However, for the Waterview Connection, TG and M2PP it was found assessment was not warranted. Dr Chiles pointed out that the way the PP2O Expressway will be built will make it inherently less prone to vibration than many existing roads. The nearest PPF is 18m away, with most homes at least 50m distant. He was confident that adverse road traffic vibration effects would not be present at these distances.

[485] The New Zealand rail vibration criterion is based on the Norwegian Standard NS8176. It contains classes of vibration based on annoyance or disturbance. Class C shown below corresponds with the recommended upper limit in residential buildings in connection with a new railway line.

Criteria for Rail Vibration	Value
Vibration	0.3mm/s $v_{w,95}$ Class C limits from NS8176E:2005

Operational Noise and Vibration Effects

[486] Dr Chiles stated:²¹⁰

“The Project has potential to cause adverse rail and road traffic noise and vibration effects. These potential effects have been investigated. Due to the proximity of the existing State Highway in many instances there will be a reduction in noise due to the project. Noise mitigation has been proposed where required and with these measures all noise and vibration should be restricted to within reasonable levels and considered acceptable.”

[487] Dr Chiles' investigation included measurements and modelling of the existing situation and predictions of future scenarios. Where mitigation

²⁰⁹ TR14, section 2.5, table 2–3.

²¹⁰ TR14, Executive Summary.

might be required according to this analysis, the BPO is evaluated by the multidisciplinary team.²¹¹

[488] Dr Chiles stated the majority of houses near the Project are already exposed to moderate levels of road noise and rail noise especially for the existing SH1 and NIMT alignments. Some will have increases and some decreases, but the changes will not be substantial in most locations. His opinion was that the resulting levels are reasonable without mitigation.²¹²

[489] In terms of numbers of properties potentially affected by increased road noise according to the NZS 6806 ascending scale, Dr Chiles indicated;²¹³

Category A = 132 PPFs

Category B = 15 PPFs

Category C = 1 PPF

[490] The Board considered the predicted future noise effects and mitigation as proposed in sections of the Project below.

Ōtaki Township

[491] The BPO for mitigation through Ōtaki Township, is agreed to be low-noise surface OGPA on the Expressway for approximately 1km. This surface offers significant reduction in noise from cars. However, it achieves minimal effect for heavy vehicles, where engine and exhaust noise is prominent.²¹⁴ The Board agrees that the effectiveness of this low-noise surface should be checked some time after it has been laid. This is provided for in conditions 72–73.

[492] After its installation, properties in Ōtaki with frontage on SH1 should experience noise reductions as this will become a local arterial road with less traffic.

[493] In North Ōtaki however, some properties will be subject to noise from both the Expressway and the local arterial. Houses are largely set above the Expressway, reducing the effectiveness of roadside or other noise barriers. The Board notes that Dr Chiles' particular assessment for the homes in this area which will receive a noise increase, is that they will still be within the criteria guidelines. Dr Chiles noted there were no submissions from this area, but it had been assessed and attention given to individual properties and possible options. The current road surface on SH1 in this vicinity is asphaltic concrete.

[494] The property at 230 Main Highway requires special attention. In terms of road noise, the house is set back from SH1 but this PPF is a large property and the house is only 60m from the NIMT. While it would not meet criteria under NZS 6806 for road noise as an isolated property, it will still benefit from the OGPA proposed through Ōtaki and, as Dr Chiles stated, is recommended for treatment to protect it from predicted rail noise of 60dB

²¹¹ EIC paragraph 15.

²¹² EIC Page 5 paragraph 17.

²¹³ TR14, section 5.5, table 5–3.

²¹⁴ TR14, section 5.2.

LAeq (1hr). Dr Chiles met the owners of 230 Main Highway and Ōtaki Motel in May 2012 to conduct preliminary site inspections. The requirement for mitigation work is set out in Condition 60A.

- [495] Similarly, Ōtaki Motel will have less noise from the existing SH1 but is predicted to have rail noise levels of 58 dB LAeq (1 hr) from the re-aligned NIMT. It will be 80m from the rail line. This property is to receive noise mitigation measures to meet internal noise standards, also provided for in Condition 60A.
- [496] Properties along County and Rahui Roads were assessed as a single area. Noise barriers immediately adjacent to the Expressway were considered along with low-noise road surfaces. Only road surface treatment is proposed because barriers will not effectively screen both carriageways. All PPFs are Category A and B.
- [497] The owners of the former Rahui Milk Treatment Station requested further consultation with them on operational noise, and suggested a physical noise barrier. Dr Chiles considered his proposed low-noise surface treatment is adequate mitigation in this location.
- [498] In relation to the Rahui Milk Treatment station, Dr Chiles advised:²¹⁵
- “The most exposed façade of the former Rahui Milk Treatment Station is currently the northern façade which fronts onto Rahui Road. The Western façade will be the most exposed to the Expressway. It is noted that the bedrooms on the western façade are shielded by a concrete parapet in the incident noise levels will be lower than predicted.”*

Ōtaki River to Te Horo

- [499] This area covers structures to the west of the existing SH1 which currently are subject to high levels of road traffic noise, and those to the east which have generally larger setbacks and lower existing levels but whose noise levels are likely to increase following construction of the Project.
- [500] Dr Chiles stated that most of the PPFs to the east are Category B assuming the new road criteria. Mitigation has been discussed with an advisory panel, and after feedback received from residents, 2m landscape bunds were modelled for Old Hautere Road, School Road and Gear Road. However, Dr Chiles cautioned that there will be no reduction in noise level predicted from these bunds due to the distance between them and the Expressway. He noted however, that the bunds do provide a form of mitigation, as people are often less sensitive to noise sources they cannot see.
- [501] Dr Chiles assessed that 14 Old Hautere Road is expected to be a Category C PPF. It will require building modification mitigation. This might include mechanical ventilation and upgrading existing windows. While NZS 6806 does not require consultation with property owners, all parties agree²¹⁶ the selected mitigation option should follow agreement with the owner. Discussions have already occurred with the owner as to the potential for

²¹⁵ TR14, section 5.2.

²¹⁶ See Designation Condition 64c).

modification, but the Board notes that there was no submission, either in opposition or support, from this property. Provision for mitigation is in Conditions 62–64.

- [502] Mrs Sutton requested an OGPA surface be used through the Te Horo to Ōtaki River section of the Expressway. Dr Chiles recognised that this certainly was the view of others on public open days. Dr Chiles advised in TR14 that this had been considered by NZTA but calculations indicated it was poor value for money.²¹⁷
- [503] Ms Williams queried whether the designation may be too narrow in parts to allow for adequate noise barrier mitigation. The experts agreed that other than specifically mentioned, most houses are a significant distance from the Expressway and any noise barriers constructed close to the Expressway would therefore be ineffective. It was not practical to consider extending the designation to allow construction of barriers near houses.²¹⁸
- [504] Counsel for KCDC identified properties in this area where expected noise levels would exceed the Transit Guidelines. Dr Chiles agreed, but only 14 Old Hautere Road would receive mitigation. Dr Chiles pointed to the agreed acceptance of NZS6806 and refuted that the assessment should be based on the most stringent criteria from every standard. He strongly favoured a BPO outcome as being wider and different from the Transit Guidelines. He assured the Board he had looked at effects on individual properties. He stated *“all of those effects actually result in reasonable levels at those properties, such that mitigation isn’t warranted”*.²¹⁹

South of Mary Crest

- [505] This area comprises scattered properties generally remote from the existing SH1, the future local arterial and from the Expressway. They are currently exposed to noise from SH1 and NIMT. Dr Chiles stated all PPFs are in Categories A and B. Potential barriers or low-noise surfaces would have limited effectiveness.

Positive Effects from Completion of the Project

- [506] Positive noise effects flowing from completion of the Project include:
- a) Significant reduction in noise from reduction of through traffic in Ōtaki township;
 - b) Reduced noise from heavy vehicles braking and accelerating through Ōtaki, rattling over joins and bumps;
 - c) OGPA surface of Expressway providing less noise through Ōtaki;
 - d) Reduction from 8 to 3 of the numbers of level crossings and the consequential reduction in noise from bells and warning horns;

²¹⁷ TR14, section 5.3.

²¹⁸ Expert Conferencing Joint Witness Statement, Noise and Vibration, paragraph 18.

²¹⁹ Hearing transcript, page 262.

- e) Significant number of properties West of SH1 near Te Horo experiencing significant reduction in noise.

Remaining Differences in Professional Opinions

- [507] Mr Hunt considered the visual effects for road users and others should not outweigh the potential benefits of noise barriers for those who lived alongside the Expressway. Both experts agreed visual effects were important. Dr Chiles considered he had provided an appropriate balance and that visual factors should be determined on a case by case basis within an integrated assessment of the site and the environment.²²⁰
- [508] The Board agrees that noise barriers or fences should not be ruled out as solutions within the designation or within a private property if that is what is preferred and agreed by owners and advisors. This is most sensibly done on a case by case basis. Mitigation, including noise barriers (or at least the possibility), is proposed on private property at 14 Old Hautere Road, 230 Main Highway and Ōtaki Motel, but such proposals need careful conditions and wording, as set out in Conditions 66, 70 and 71.
- [509] Mr Hunt disagreed on the methods of assessment in Ōtaki Township, where he considered combined noise should have been assessed, with a combined new road and rail noise assessment to determine sensitive receivers. Dr Chiles maintained the two noise sources were different in timing and character. Rail provides discrete but infrequent noise events. Mr Hunt pointed to international standards where combined noise is used for infrastructure and where a 24 hour measure is deemed appropriate.
- [510] The Board does not agree with Mr Hunt that the noise assessment should be remodelled for random but infrequent noise effects. It is acknowledged that the Noise Contour Maps and commentary were largely road focussed and the impact of rail, with no national standards or modelling, seemingly added on. However, this has more theoretical significance because the rail re-alignment covers a small area with only a few PPFs infrequently adversely affected. A combined measure may lift or reduce the noise expected in some receiver sites but again, it is a small area with few rail movements and does not justify remodelling and reassessment as proposed by KCDC. Dr Chiles stated he had “*considered the effects cumulatively, what he had not done is constructed an artificial number because he did not have an appropriate framework to do anything to that number*”.²²¹ Dr Chiles stated that people have different subjective reactions to road and rail noise, but he added:

*“And the crux of the question is, if when I was assessing people’s response to the average traffic noise level I’d bumped up the level a little bit because there was some train noise level would I have reached a different conclusion? And the answer is a resounding no.”*²²²

²²⁰ Expert Conferencing Joint Witness Statement, Noise and Vibration, paragraph 22.

²²¹ Hearing transcript, page 259.

²²² Hearing transcript, page 250.

- [511] He also noted: *"I haven't added levels of road and rail, I have assessed effects"*.²²³
- [512] No conditions have been included for rail vibration, as the new alignment will meet the criteria without mitigation.²²⁴
- [513] With respect to road vibration, Mr Hunt preferred a process for complaints to be spelt out in conditions, thus requiring a separate vibration complaints register. The Board considers NZTA complaints databases will suffice.
- [514] The Board notes that under Conditions 10 and 11, complaints during construction and for 12 months thereafter will be received by the Requiring Authority, and dealt with under a complaints response procedure. A copy of the complaints register will be available to the Manager every month.

Findings on Operational Noise and Vibration

- [515] The Board accepts Dr Chiles' summary as follows:

"For a number of PPF's close to the Expressway there are more significant increases in the predicted levels of road traffic noise and in some locations road-traffic and rail noise would be above recommended levels without mitigation. To mitigate road noise in these areas I recommend that a low noise road surface should be used for one kilometre of the Expressway through Ōtaki and that one PPF should be acoustically treated. I also recommend that two additional PPF's should be acoustically treated for rail noise ...

*I have found that vibration from the Expressway will be negligible and that vibration from the realigned railway will be at a reasonable level without mitigation."*²²⁵

- [516] It is the Board's view that Dr Chiles has undertaken a comprehensive modelling but practical assessment of the potential operational noise and vibration effects. With the mitigation imposed by conditions outlined above, the Board concurs with Dr Chiles that reasonable levels of amenity will be maintained. While the methodology and evidence of Dr Chiles is preferred, the Board recognises the input of KCDC in developing and assisting with conditions for this issue.

²²³ Hearing transcript, page 260.

²²⁴ TR14, p 60.

²²⁵ Chiles, EIC, paragraphs 18–19.

4.16 PUBLIC HEALTH

[517] Expert evidence relating to public health and associated matters was received from:

Dr David Black for the Applicants.

[518] Witnesses were:

Mrs Sharyn Sutton

Mr Lance Bills from Harrisons Country Gardenworld and Arthur Bills Resettlement Trust

Mr Patrick Morgan and Ms Ellen Brake for the Rational Transport Society

Dr Marie O'Sullivan for the Alliance for Sustainable Kāpiti

Ms Chris Christie for Ōtaki Motel.

[519] Related Conditions:

Designation Conditions: 10–11, 35–39, 55–60, & 61–73

[520] Dr Black advised the Board he had read the evidence of other experts for the Applicant such as Dr Chiles (noise and vibration), Mr Curtis (air quality, including dust emissions), Mr Haldane (contaminated sites) and Mr Dunlop (road and rail safety). He noted that his evidence relied on the findings of those experts.²²⁶

[521] As the only expert witness, he was not involved in conferencing and having regard to the fact that no substantive evidence, expert or otherwise, was provided by any other party directly related to public health and the clarity of his written evidence, the Board saw no reason to examine him and excused him from attendance at the Hearing.

[522] As each of these Topics are specifically dealt with elsewhere in this Report, the substance of the discussion on those Topics will not be repeated here.

[523] The submitters raised matters such as noise, road safety, the impact of the Expressway on emergency services' responses (including ambulances), the health aspects of cycling, the adverse health effects of too much reliance on driving rather than walking, air pollution matters as a result of construction and operation of the Expressway and the adverse impacts on health of the stress of the designation and consultation process.

Issues

[524] Dr Black summarised the potential adverse health effects from the construction and operation of the Project as those which may arise from the impact of other effects which are detailed separately in this Report. They include noise and vibration effects, air quality effects and contaminated land.

²²⁶ Black, EIC, paragraph 14.

- [525] He also identified that there were potential beneficial health effects in terms of the safer transport environment provided by the Expressway, the separation of local and through traffic, and the closure of five of the eight level rail crossings in the Project area.²²⁷

Construction and Operational Noise

- [526] Based on the evidence of Dr Chiles, Dr Black was satisfied that noise generated both during the construction and operational phases of the Project will largely comply with the provisions of NZS6803 for construction noise and NZS6806 for operational noise.
- [527] Noting the detailed proposals for mitigation outlined, including the preparation of general and site specific noise management plans, he advised the Board that any risks associated with health effects of construction noise would be avoided.²²⁸
- [528] He also noted that subject to the strategies and mitigation measures proposed to ensure compliance with NZS6806, including the provision of OGPA surfacing for 1km of the Expressway through Ōtaki, noise levels would be acceptable once operational, thus *“minimising any risk of adverse health effects arising from (operational) noise.”*²²⁹
- [529] The Board notes that both within the provisions of those Standards and as detailed in Conditions 61–73 of the designation conditions, special attention will be given to the few residences which require specific mitigation measures.
- [530] The Board also notes from Dr Chiles’ evidence that the proposed removal of five railway level crossings will also eliminate the noise from bells and train horns, and crashes at those crossings.²³⁰ The Board accepts the beneficial health effect which arises from this, particularly at night.
- [531] The Board is therefore satisfied that any adverse public health effects resulting from noise will be avoided, remedied or mitigated.

Air Quality Effects — Construction and Operational

- [532] Elsewhere in the Report the efficacy of the provision of the proposed CAQMP is discussed. Dr Black was satisfied that the provisions of the CAQMP will appropriately mitigate any effects of construction activities, including fumes and dust. Thus, he considered that any significant or even detectable effect on the health of adjacent communities will be avoided.²³¹
- [533] From an operational point of view, also as discussed in more detail elsewhere in the Report, Dr Black was satisfied that emissions generated from the Expressway when it is operational will comply with the relevant guidelines and standards and that further, the overall exposure of the

²²⁷ Black, EIC, paragraph 23.

²²⁸ Black, EIC, paragraph 18.

²²⁹ Black, EIC, paragraph 19.

²³⁰ Chiles, EIC, paragraph 20.

²³¹ Black, EIC, paragraphs 41–42.

community will be no greater than is currently produced as a result of traffic movement on the existing SH1 and on local arterial roads.²³²

[534] Indeed, he noted that:²³³

“Overall the Project is predicted to result in lower concentrations of air pollutants and exposure for residents within the Project area, particularly at Ōtaki and Te Horo.”

[535] The Board accepts Dr Black’s unchallenged contention that:²³⁴

“... the net result of this is an overall improvement in air quality in the living environment in and around the Project, and therefore a net public health benefit.”

Contaminated Land

[536] There is an identified potential for discovery and exposure of contaminated land during the course of the Project’s construction.

[537] The Board details its consideration of this risk elsewhere in the Report on the basis of the evidence of Mr Haldane.

[538] Dr Black’s position was that, provided the provisions set out in Condition E10 requiring the preparation and certification of a BECLMP are implemented, there will be no adverse effects on public health.²³⁵

[539] The Board accepts that view.

Road and Rail Safety

[540] The Board was advised that there is a poor safety record and high risk rating for the roading network in the Kāpiti District, and that the eight NIMT rail level crossings contribute to this.

[541] Following discussion elsewhere in this Decision on traffic issues, the Board accepts the implementation of the Project will improve the situation. That particularly applies to the 60% reduction in “crash costs” as assessed by Mr Dunlop.²³⁶

[542] The closure of five out of the existing eight rail level crossings with grade separated crossings will also reduce the current risk.²³⁷

[543] The Board accepts Dr Black’s contention that the road/rail safety improvements as a result of the Project are significant, and:²³⁸

“In terms of public health, in my view there will be a corresponding significant benefit.”

²³² Black, EIC, paragraph 47.

²³³ Black, EIC, paragraph 48.

²³⁴ Black, EIC, paragraph 49.

²³⁵ Black, EIC, paragraph 52.

²³⁶ Dunlop, EIC, paragraph 132.

²³⁷ Black, EIC, paragraph 56.

²³⁸ Black, EIC, paragraph 57.

Other Matters

- [544] Dr Black advised the Board that with regard to the NES for Sources of Human Drinking Water (NESSHDW) issue raised by GWRC that there is only one registered drinking water supply bore near the proposed Expressway alignment. That is at the Stresscrete plant on the Ōtaki River.
- [545] Agreed Condition 25A addresses this (and other matters).²³⁹
- [546] The claim made by the Alliance for a Sustainable Kāpiti that the facilitation of vehicular road transport resulting from the Project is likely to result in an increase in disorders such as diabetes and heart disease was strongly refuted by Dr Black.²⁴⁰
- [547] The Board noted that most of the other matters raised in submissions by others have been addressed elsewhere, with the exception of the issue of the stress experienced by some as a result of the process leading to the designation Application and indeed their hearing and/or pre-hearing involvement.
- [548] While the Board accepts that some in our communities have difficulty in accepting change, and especially change preceded by long and complex processes such as this, it does not accept that it is a public health matter.

Findings on Public Health

- [549] Dr Black's summary, with regard to the potential adverse effects on public health from the construction and operation of the Project, was:

"Measures are proposed through which such effects will be appropriately avoided, remedied or mitigated."

And that in his opinion:

"The proposed conditions include best practice management plans, particularly in relation to noise, air quality, and contaminated land."

With his overall conclusion being that:²⁴¹

"The potential adverse public health effects of the Project are therefore minor and acceptable, in my view."

- [550] The Board accepts and adopts that summary as its finding on the matter of public health impacts of the Project.

²³⁹ Black, EIC, paragraph 60.

²⁴⁰ Black, EIC, paragraph 65.

²⁴¹ Black, EIC, paragraph 16.

4.17 SOCIAL IMPACTS AND WELLBEING

[551] Expert evidence on the subject of Social Impacts and Wellbeing was received from two expert witnesses:

Ms Wendy Turvey for NZTA

Ms Mary-Jane Rivers for KCDC.

[552] Witnesses were:

Dr Marie O'Sullivan for the Alliance for a Sustainable Kāpiti

Mr Lance Bills from Harrisons Country Gardenworld and Arthur Bills Resettlement Trust

Mr Greg Elliott from Lorax Partnership

Ms Chris Christie for Ōtaki Motel

Ms Paula Warren for the Rational Transport Society

Dr Michael Pickford

Mrs Sharyn Sutton.

[553] Related Conditions are:

Designation Conditions: 6, 9–11

Resource consent Conditions: G8

[554] A Joint Conferencing Statement from the Social Impact Experts, Ms Turvey and Ms Rivers indicated there was agreement on all matters in contention. Those included a number of other matters discussed in more detail in other sections of this Report.

Effects of the Project on the Social Environment

[555] To assess the effects of the Project on the social environment, Ms Turvey employed four assessment criteria: Way of Life, Wellbeing, Environment and Amenity, and Community, which she applied to the geographical sectors: north Ōtaki, Ōtaki, south Ōtaki, Te Horo and Mary Crest. In her evidence Ms Turvey listed both positive and negative social effects of the Project.

[556] The positive aspects were:

- Reduction of traffic congestion and improved travel times resulting in improved regional traffic safety and amenity;
- Infrastructure that will result because of the Project's positive economic growth which is in line with local planning instruments;
- Improved safety and social amenity because of reduced traffic on the present SH1;
- The planned four bridges improve connectivity between the eastern and western sides of the Project, not only for vehicles but also for pedestrians and cyclists;

- Provision of new and enhanced walkways and cycleways, and possible bridleways, along with the reduction in traffic facilitates exercise opportunities which has positive health benefits;
- Reduction in traffic and the improved vehicle and pedestrian access, especially for the Ōtaki Retail area.

[557] The negative aspects were:

- The Project will have an adverse effect on those businesses in Te Horo and Ōtaki Retail area which rely on passing traffic;
- Where acquisition of land for the Project occurs, those landowners will be adversely affected;
- The area of the Pare-o-Matangi Reserve by the Project will until mitigated, substantially reduce the land available for open space and recreational activities. This Reserve is held in high regard by the community and tangata whenua;
- There will be temporary noise, commuter disruption, vibration and air discharges during the construction phase of the Project.

Traffic Flow

[558] Some residents in the Waitohu valley in north Ōtaki will have an increased distance of around 1.5km to access the northbound ramp onto the Expressway. The extra distance required to travel is counterbalanced by safer, less congested access to employment and community services.

[559] From north of Te Horo to south of Waikanae there is no direct access to the Expressway and residents will have to travel a distance of up to 9km to the nearest access. Travel time between Peka Peka and Te Horo and from Te Horo to Ōtaki along SH1 will remain much the same. However, there will be a much lower volume of traffic. The proposed Te Horo Overbridge links School Road and Te Horo Beach Road and while it marginally increases the distance between east and west, Te Horo accessibility remains much the same. However, the crossing is much safer.

Cycling and Walking

[560] According to Ms Turvey's evidence²⁴², currently the level of cycling and walking as a means to get to work are low. The high traffic density and lack of dedicated facilities on SH1 is not particularly conducive to these activities. The Project will provide a much improved environment for cycling and walking in Ōtaki and to a degree, in Te Horo. Although crossings for cyclists and pedestrians exist between Te Horo and south Ōtaki, the grade-separated cross-corridor connections that are proposed are much safer than the present level crossings over SH1 and the railway. Community feedback on the proposed cycleways and walkways has been positive, especially from the educational institutions. The lower volumes of traffic in Ōtaki will make cycling and walking access in the Ōtaki Retail area more user-friendly.

²⁴² Turvey, EIC, paragraph 38.

- [561] Being later in date than Ms Turvey's evidence and therefore not being commented on by her, the Board notes that the agreement relating to the revocation of the existing SH1 expressly includes provision for cyclists within the existing road carriageway, constructed to appropriate standards for cycleways and safety.

Pare-o-Matangi Reserve

- [562] The Pare-o-Matangi Reserve, although not Gazetted,²⁴³ is a highly visible landscape feature of north Ōtaki and is considered a major cultural and community facility.²⁴⁴ The Reserve was part of a larger land block of the same name and has special cultural significance to Ngāti Raukawa as it was claimed under the custom of "taunaha whenua"; that is, claimed by a chief by naming it after a part of his body or his possessions, in this case the Ngāti Maiōtaki rangatira, Matangi.²⁴⁵ Today it is a pleasant, well-maintained, community space that contains grassed areas and significant stands of native bush. The Reserve will be adversely affected by the loss of more than half its area of land. It was recommended in the SIA²⁴⁶ that further mitigation be considered with the incorporation into the Reserve of an L-shaped piece of land within the designation which is presently owned by Mr and Mrs Christie.²⁴⁷ The resultant Reserve will be larger than it is now.

Effects on Wellbeing

- [563] For those people whose property is required for the Project, there has been a lengthy degree of uncertainty, which has been stressful for them. Reaction from these owners to land acquisition has varied from total opposition to willingness to negotiate. Residents whose access to their properties will be changed because of the Project have also registered concerns.
- [564] While there is some residual uncertainty about land acquisition, with the confirmation of the designation boundaries much of the uncertainty over land acquisition has been resolved. It is understood NZTA have policies and practices to continue to consider a variety of arrangements with owners through direct negotiation.
- [565] There is the predictable potential for adverse effects on road safety during the construction phase, but the mitigation measures in the CTMP discussed elsewhere in this Report, address this.
- [566] Operation of the Expressway will bring significant increases in traffic safety. Any inconvenience stemming from changed property access because of the Expressway is balanced by increased safety, in that access will no longer be directly from a high speed, high traffic density road.

²⁴³ TR20, section 6.3.5.

²⁴⁴ TR20, section 8.3.

²⁴⁵ TR19, section 13.2.1.3.

²⁴⁶ TR20, section 8.4.

²⁴⁷ No. 47 on Land Information Plan Sheet 3.

- [567] Ms Turvey in her evidence considered that the lower volume of traffic on SH1 will lead to improved air quality and reduced noise levels, therefore having a positive effect on wellbeing.

Effects on Environment and Amenity

Air quality

- [568] During the construction phase there will be adverse effects from dust raised by construction. However standard dust control measures will be implemented. Details are discussed in the evidence of Mr Curtis reviewed elsewhere. Once construction is completed, air quality levels within the Project area generally will improve.

Noise and Vibration

- [569] Adverse effects from noise and vibration were forecast throughout the construction phase. Rahui Road area has the potential to be affected more severely and there may be interference with the activities at the former Rahui Milk Treatment Station as well as the potential for cosmetic damage caused through vibration. Construction work will be audible throughout the sector being worked on and there will be a requirement for night work that may interfere with people's sleep in those locations.
- [570] Mitigation measures for adverse effects of noise and vibration and for all of those situations are detailed in the management plan framework in the evidence of Dr Chiles and discussed in the appropriate section of this Report. Ms Turvey considered these measures appropriate to address these effects but she strongly recommended that NZTA communicates with the general public and key stakeholders regarding the timing and duration of activities.

Visual Changes

- [571] During the construction phase there will be negative visual effects, particularly at Ōtaki, the Pare-o-Matangi Reserve and Te Horo. Post-construction there is an extensive planting and landscaping plan discussed in other sections of this Report. These mitigation measures are considered by Ms Turvey to be appropriate.

Effects on Property and Neighbourhoods

- [572] The overall effect of the Project on property and neighbourhoods will, in Ms Turvey's opinion, be negative, but only to a minor extent. The loss of residences may have a negative effect on the residential and social cohesion of the Ōtaki communities. The Project has not sought more land than is reasonably necessary, and compensation will be paid to those whose land will be acquired through the Public Works Act 1981.

Effects on Educational Facilities

- [573] There are eight primary and secondary schools and one tertiary institute in and around the Project area, and there will be a requirement for changes to routes, as well as a potential for noise effects, on schools during the construction phase. Without mitigation, these could have a negative effect

on those facilities. On completion of the Project there will be safer and, in many cases, shorter travel times. The overall assessment by Ms Turvey of the effects of the Project on educational facilities was moderately positive.

Effects on Community Areas and Sites

- [574] Though many community facilities will not be affected by the Project, access to community facilities east of the Expressway in Ōtaki will be changed, and in a few cases will be longer. But the access will be safer and provide encouragement for pedestrian and cycle use.
- [575] As noted earlier, the Pare-o-Matangi Reserve will be severely affected but there is a full mitigation plan, which includes reconfiguration, the addition of extra land and extensive planting. The plan involves community and tangata whenua input to preserve the values associated with this Reserve.
- [576] The cultural and community values associated with the Ōtaki Railway Station will be preserved by the measures implemented through the CEMP. There will be some temporary disruption to rail passengers during the construction phase, but this will also be managed through the CEMP.

Effects on Community Plans and Aspirations

- [577] KCDC has published various planning instruments relevant to the Project area, including the Greater Ōtaki Vision (GOV) document. Ms Turvey said no mitigation relating to community plans and aspirations is required as the Project is generally consistent with those community plans.

Effects on Accessibility to Commercial Areas

- [578] Businesses in Te Horo may lose custom from the decreased volume of through traffic. However, this will be offset to some degree by safer access. The reconfigured roading will probably have more of a negative effect on businesses that rely on passing traffic rather than on destination-based businesses.
- [579] Businesses in Ōtaki Retail centre are unlikely to be affected as an outcome of the Project. In the Ōtaki Retail area businesses will be affected, but as with the businesses in Te Horo, destination-type businesses are likely to profit from safer and easier accessibility. However, businesses reliant primarily on passing traffic may well be adversely affected.
- [580] After construction of the Expressway, increases and decreases in the overall trade of the Ōtaki Retail area, and less probably the Te Horo retail area, are predicted. In the medium to long term, they are expected to roughly equate or the adverse effects on their trade will be minor.
- [581] Constraints and restrictions on development in the Te Horo retail area as part of longstanding KCDC planning objectives has meant, and will continue to mean, that further commercial development in that area is unlikely. Construction of the Expressway will not further impact on the commerciality of the Te Horo retail area (or that of Te Horo Beach). Indeed, it may even improve with construction of the Te Horo Overbridge enhancing connectivity between east and west. That could contribute to the profitability of businesses in that area which depend on destination shopping.

Mitigation Measures

- [582] As detailed elsewhere, as part of the mitigation of adverse effects, communities will have access and input into the Project through the appointment of a Community Liaison Person and the establishment of a complaints register to ensure complaints will be registered and acted upon.
- [583] There will also be established, prior to construction, a Stakeholder and Communications Management Plan (SCMP) and a CLG through which communities can engage with Project management.
- [584] Nga Hapū o Ōtaki have the MoP to empower their engagement with the Project.

Designation Conditions

- [585] Community communications and impact monitoring are covered in Conditions 6–11.

Findings on Social Impacts and Wellbeing

- [586] The Board accepts that there has been a full investigation into the social impacts of the Project on communities. It notes the agreement between the social impact experts and the low or mitigatable effects of construction and operation of the Project on the social aspects and wellbeing of the communities affected.

4.18 STORMWATER AND SEDIMENT

[587] Evidence on the subject of Stormwater and Sediment was received from a number of expert witnesses:

Mr Warren Bird for the Applicants

Dr Jack McConchie for the Applicants

Dr Scott Larned for the Applicants (sediment impact effects on aquatic ecology)

Mr Gregor McLean for GWRC

Mr Robert van Bentum for KCDC

Dr Ian Boothroyd for both KCDC and GWRC (sediment impact effects on aquatic ecology).

[588] Related Conditions:

Resource consent Conditions: E1–E9 & SW1–SW4

[589] Apart from the submissions from both GWRC and KCDC, a number of submitters also made general references to possible adverse impacts from stormwater and sediment transport. The more significant issues were possible Project generated flooding, particularly from the Mangaone Stream. Consideration of these matters is discussed under the Topic “Hydrology and Flooding (including Climate Change Effects)”. No lay witnesses appeared in support of these submissions.

Issues

[590] The potential stormwater related effects of the Project were identified as:

- a) Construction-related effects — including mitigation measures relating to erosion and sediment control;
- b) Expressway road surface effects relating to the discharge of contaminants, the effects of increased runoff, and the effects on waterway crossings;
- c) Potential flooding over the Project area.²⁴⁸

Sediment Discharge

[591] The construction of the Project will involve earthworks of approximately 800,000m³. Without adequate erosion and sediment control practices, these works could result in uncontrolled discharge of sediment, potentially leading to the discolouration of water bodies, watercourses, adverse effects on aquatic life, and impaired hydraulic function of drainage devices due to sediment accumulation or even blockage.

²⁴⁸ Section 42A Report, First Edition, September 2013, section 2.14.1.

- [592] Messrs Bird and McLean advised that potential construction-related sedimentation effects will be appropriately avoided or mitigated by the application of best practice sediment controls in accordance with GWRC and NZTA requirements.
- [593] Mr Bird pointed out that the following design and construction features are intended to be applied in accordance with the relevant SEMP. These features are:
- Minimising bare surfaces by progressive stabilisation;
 - Erosion control practices minimising mobilisation of sediment;
 - Sediment control practices such as decanting earth bunds, silt ponds and silt fences, to capture silt before it leaves the site;
 - Regular monitoring and maintenance of the effectiveness of silt control measures, including specific pre and post storm procedures;
 - Preparation and implementation of SEMPs to address specific actions to be taken in sensitive or high risk areas.²⁴⁹
- [594] Mr Bird advised that potential long-term hydrologic and hydraulic effects of the Project included increased volume and peak rate of runoff from the Expressway, loss of existing flood plain storage due to the footprint of the Expressway embankment, watercourse crossings potentially restraining the passage of flood flows and the discharge of contaminated stormwater from the Expressway adversely affecting biota.²⁵⁰
- [595] He said the Project had been designed as far as practicable to avoid these potential effects and to minimise any residual effects by:
- Adoption of design standards that were acceptable to the two councils and KiwiRail;
 - Use of vegetated swales for conveyance, treatment and attenuation of Expressway stormwater runoff;
 - Use of wetlands for treatment and attenuation where swales were not possible;
 - Design of culverts with inverts below the natural bed level to facilitate fish passage, sized to ensure minimum headloss in major floods and the provision of inlet and outlet erosion protection.²⁵¹
- [596] There were initially differences of opinion between the GWRC and KCDC experts and the Applicants' experts. Expert conferencing was directed to resolve these issues. The Board was advised that after three expert conferencing sessions, agreement was reached between all relevant experts on all issues relating to stormwater. Significant changes included:
- That chemical treatment should be applied to all sediment ponds unless demonstrated by testing to be unnecessary;

²⁴⁹ Bird, EIC, paragraph 15.

²⁵⁰ Bird, EIC, paragraph 16.

²⁵¹ Bird, EIC, paragraph 17.

- An alternative approach was required to be reflected in the proposed conditions for monitoring water turbidity in watercourses to determine the effectiveness of erosion and sediment control devices.²⁵²

- [597] The Board was advised that subsequent to the conferencing, Messrs Bird and McLean and Drs Larned and Boothroyd developed an altered regime for turbidity monitoring *“based on regular and rigorous inspection of ESC (erosion and sediment control) measures, in conjunction with a cascade of follow up measures in response to rainfall and turbidity triggers”*. This set of conditions sets objectives rather than specific limits and resulted from the experts considering, among other things, advice from comparable personnel involved in M2PP who had noted that the initially proposed regime, which is being used on that Project, was proving to be both costly and of limited effectiveness.²⁵³
- [598] As a result of this conferencing, and the resulting agreements reached between the experts on appropriate conditions, given effect to through Conditions G39 and G41, as well as all other relevant stormwater conditions, the Board is confident that the design standards for stormwater and sediment control from both the construction and operational phase of the Project will avoid potential adverse effects. These include increased flooding due to runoff and constraints on the passage of flood flows, as well as the discharges of sediment-laden or otherwise contaminated stormwater from the Project alignment into sensitive watercourses.
- [599] The Board accordingly endorses the experts’ conferencing reports and the conditions proposed (in their final form).

Flooding Aspects

- [600] Flooding aspects from the four main waterways along the Expressway alignment, the Ōtaki River, and the Waitohu, Mangapouri and Mangaone Streams are dealt with in a separate section under the heading of “Hydrology and Flooding”. That also deals with the determination of the design storm to be applied to all waterway structures and channel design associated with the Project.
- [601] Stormwater flooding issues as a result of the Expressway, apart from those relating to the four major catchments referred to above, are as a result of:
- Extra runoff from the impervious surfaces that form the roadways;
 - The Expressway alignment crossing many small streams and drains and also acting as a further barrier to overland flows;
 - The Expressway embankment’s footprint occupying existing flood ponding areas, thus either transferring the ponding further upstream or marginally increasing the depth in the remaining ponding areas.
- [602] Mr Bird’s evidence detailed the design of the swales to be provided to deal with runoff from over half the length of the Expressway and which, apart

²⁵² Expert Conferencing Joint Witness Statement, Hydrology and Stormwater, Annexure C.

²⁵³ Expert Conferencing Joint Witness Statement, Sediment Control and Aquatic Ecology, Annexure A.

from dealing with sediment and other pollutants from the roadway surface, will also attenuate the flow of stormwater therefrom.

- [603] Those swales will be capable of capturing all of the 1% AEP road runoff and releasing it slowly over a period of approximately 7 days. Mr Bird is confident that these swales:

“... will effectively prevent any increase in downstream flooding due to the Project in the catchments concerned.”²⁵⁴

- [604] The balance of the Expressway stormwater runoff from the road surface will either be discharged to proposed wetland attenuation basins, sized and configured in accordance with NZTA’s guideline, SWTS (Stormwater Treatment for State Highways), or discharged directly into major streams and rivers where their contribution to the flow and any impact on water quality will be negligible.²⁵⁵

- [605] Mr Bird advised the Board that the design standard used for the Expressway culverts was for the culvert to pass the 10% AEP storm flow with “no heading up” and to pass the 1% AEP, adjusted for climate change to 2130 (mid range prediction), stormflow “with heading up but not closer than 500mm from the road edge”.²⁵⁶ For the swales which will both attenuate and treat stormwater from the proposed Expressway, NZTA standard of the 1% AEP storm will apply.

- [606] He further advised that a design objective, facilitated by the hydraulic steepness of the catchment upstream of the culverts, was to ensure that the culverts conveyed the 1% AEP (adjusted for climate change to 2130, mid range prediction) flood without significant ponding outside the proposed designation. This had been achieved in all but two culverts, the Gear Road and Settlement Heights culverts, where increases in flood depth up to 300mm would occur in the 1% AEP event.²⁵⁷

- [607] He noted that at Gear Road the increased ponding area was all in pasture, apart from one farm shed which would be flooded as a result of the Project, but that as a result of his advice, NZTA and the owner have agreed that NZTA purchases the property.²⁵⁸

- [608] As for the other culvert, the extra ponding would only last “a few hours” and will not lead to stock or pasture losses.

- [609] The footprint of the proposed Expressway embankment, aligned for much of its length immediately to the east (upstream) of the NIMT, will occupy a significant volume of the existing flood ponding.

- [610] Analysis of the existing situation indicates that these existing flood ponding areas are a result of the characteristics of the present culverts under the NIMT and/or the existing SH1. Mr Bird advised the Board that:

²⁵⁴ Bird, EIC, paragraph 57.

²⁵⁵ Bird, EIC, paragraph 65.

²⁵⁶ Hearing transcript, page 378.

²⁵⁷ Bird, EIC, paragraph 72.

²⁵⁸ Bird, EIC, paragraph 73.

*“In these areas, we have sought to replicate the existing ponding/overflow regime as closely as possible by careful sizing of the Expressway culverts. Where an increased headwater pond depth is unavoidable, we have sought to contain it within the designation whenever possible”*²⁵⁹

- [611] The Board is satisfied that the mitigation measures proposed, in conjunction with the finally agreed Condition SW2c) will address these three stormwater quantity effects of the proposed Expressway.
- [612] Condition SW2c) clearly restricts the areal extent of the flood ponding to within the designated area, or restricts the level of any increases in flood storage to not more than 100mm beyond that (50mm in the case of the Mangapouri Stream), or imposes further requirements on the Applicant to consult and further mitigate or “use alternative mechanisms” to address the matter.

Findings on Stormwater and Sediment

- [613] The Board is satisfied that the net result of the agreement reached between the experts, including agreement on the conditions applicable to this activity, is that the design of the Project with regard to stormwater, sediment and erosion control will meet the standards of the two Councils as well as the standards of NZTA and KiwiRail.
- [614] Accordingly, the Board is satisfied that the potential adverse effects resulting from the stormwater, either managed through the Project or generated by it, will be either avoided or, as far as practicable remedied or mitigated so that all the effects will be less than minimum.

²⁵⁹ Bird, EIC, paragraph 88.

4.19 TERRESTRIAL ECOLOGY

[615] Evidence on the subject of Terrestrial Ecology was received from a number of expert witnesses:

Mr John Turner for the Applicants

Ms Shona Myers for KCDC

Ms Julia Williams for KCDC

Dr Philippa Crisp for GWRC

Ms Jennie Marks for GWRC

Ms Paula Warren for the Rational Transport Society.

[616] Witnesses were:

Mrs Sharyn Sutton.

[617] Related Conditions:

Designation Conditions: 78j)

Resource consent Conditions: G31–47

Introduction

[618] Terrestrial ecology is a naturally important aspect of a Project such as PP2O but does not require an especially extensive treatment in this Report because of the combination of three features:

- a) Prior to lodgement of the Applications, what would otherwise have been the necessity for mitigation in respect of one of the more sensitive ecological sites covered by the designation, the indigenous forest remnant and proposed wetland immediately to the south of Mary Crest was avoided. While the route of the proposed Expressway north from the Peka Peka interchange is proposed to largely follow the existing SH1, to avoid the proposed wetland to the south of Mary Crest, the decision was taken for the Expressway to shift from west of the NIMT over Bridge no. 9 to east of the NIMT to avoid the sensitive site at Mary Crest.
- b) The corridor designated for the Expressway and its environs is nowadays not an area rich in indigenous flora and fauna. The land has been so modified by farming and other human intervention that the indigenous flora and fauna which remain are largely forest remnants or individual species.
- c) The differences of view between the respective terrestrial ecologists were narrowed considerably by joint conferencing and narrowed further, to the point of unanimity, by further joint conferencing during the Hearing.

AEE Terrestrial Ecology Report

- [619] The Terrestrial Ecology Report (TR11)²⁶⁰ was prepared after vegetation, bird, bat, reptile and invertebrate surveys,²⁶¹ assessments of the existing wetlands and with reference to the operative and proposed KCDP and GWRC proposed Regional Policy Statement (RPS). TR11 notes that *“most of the Project footprint affects a highly modified landscape supporting little or no indigenous vegetation and no significant habitat of indigenous fauna”* apart from the 0.8ha Ōtaki Railway Wetland, more than 0.5ha of which will be lost to the Expressway, and the Mary Crest Bush and associated Wetland. The loss of part of the Railway Wetland will be offset by the creation of the 0.4ha Kennedy Wetland in proximity to the remnant of the Ōtaki Railway Wetland and the creation of a new, 0.7ha wetland to the south of Mary Crest. That was forecast to result in satisfying the criterion of *“no net loss”* in biodiversity in the relevant Policy Statements, with loss of indigenous species of forest remnants proposed to be mitigated by additional planting of similar species.

Ōtaki Railway Wetland

- [620] In its Key Issues Report GWRC noted that the Ōtaki Railway Wetland is listed as an ecological site in the Heritage Register in the operative KCDP and is a significant habitat in terms of s 6(c) and Policy 23 of the RPS.²⁶²
- [621] The vegetation in the Ōtaki Railway Wetland was mapped and classified, and the bird species surveyed. The variety of birds present was assessed as having been reduced with the Wetlands' proximity to human habitation with associated predators. Plant pests also threatened the Wetland. The Wetland as a whole is under pressure.
- [622] Realignment of the NIMT will approximately halve the area of the Ōtaki Railway Wetland. Mitigation proposed is both rehabilitation of the remnant and development of the Kennedy Wetland nearby.

Fauna

- [623] The bird survey found no threatened species, and given the nature and quality of the habitats along the route, none were expected to be significantly impacted by the Project.
- [624] The bat survey proved negative. The reptile survey found low numbers of the common skink.
- [625] Few invertebrates were found but two *Peripatus*²⁶³ were located in a rotting log within the fenced forest fragment at 48 Old Hautere Road.²⁶⁴

²⁶⁰ TR 11.

²⁶¹ Frogs were not surveyed as the Project area lies outside the known range of all native frog species.

²⁶² GWRC Key Issues Report, section 7.2, paragraph 172.

²⁶³ *Peripatus novaezelandiae* (velvet worms, an important link between the worms and the arthropods).

²⁶⁴ Owned by the W & M Stevens Family Trust.

Policy Statements

- [626] Though without statutory effect, Policies 2 and 5 of the proposed NPS on Indigenous Biodiversity deal with the management of New Zealand's natural and physical resources so as to maintain indigenous biodiversity. In particular, Policy 5 states that in addition to provisions relating to s 6(6)(c), local authorities are required to manage the effect of activities through their plans to ensure "*no net loss*" of biodiversity, defined as no overall reduction in the diversity, population sizes and long term viability of species' areas and range, and the range and ecological health of species and ecosystems.
- [627] Section 2.7 of NZTA's Environmental Plan also includes amongst its objectives promoting biodiversity on the State highway network, limiting the spread of plant pests and no net loss of native vegetation, wetlands, critical habitat or endangered species.
- [628] The Wildlife Act 1953 absolutely protects all non-excepted wildlife and a permit from the Director General of Conservation may be required for work within the Project.
- [629] Policy 22 of the proposed RPS lists criteria to be used in identifying indigenous ecosystems and habitats with significant biodiversity values, including representativeness, rarity, diversity, ecological context and tangata whenua values.
- [630] Those criteria are largely duplicated in the KCDC Heritage Register, in which a number of sites within or adjacent to the Project are listed.

Effects

- [631] TR 11²⁶⁵ lists the avoidance of the sensitive area south of Mary Crest as a positive effect of the Project and summarises the adverse effects as being habitat loss of most of the Ōtaki Railway Wetland and nominated trees and forest sites, habitat fragmentation, the possibility of wind throw as an edge effect resulting from tree removal at the circumference of bush habitats, and effects on individual plants and fauna from construction work.
- [632] Avoidance, remediation and mitigation of those adverse effects complies with the Standard on Biodiversity Offsets by realignment to avoid the Mary Crest Wetland, buffer planting at bush edges and the relocation of *Peripatus* habitat logs. Where adverse effects cannot be avoided, particularly in the loss of 0.5ha of native bush and 0.5ha of wetland, offsets are the rehabilitation of 0.38ha of the Ōtaki Railway Wetland creation of the Kennedy Wetland of 0.4ha, extension of the Mary Crest Wetland and the planting at, as initially proposed, a ratio of 2:1 as compensation for the loss of existing areas of native bush.

Evidence

- [633] The Applicants' principal terrestrial ecology evidence was given by Mr Turner. Describing the terrain in and around the Project as one highly

²⁶⁵ TR11, section 7.4.

modified by agriculture, horticulture and urbanisation, he made the point that the indigenous vegetation found along the Expressway corridor, mainly Totara, comprises either scattered mature trees, or is in pasture or forest, the sub-canopy of which has been largely removed by grazing. However, two sites, Cottle's Bush and the Hautere Forest, were now fenced with regeneration of the sub-canopy occurring. He said:

*"All flora and fauna found within the Project footprint were common and widely distributed species typical of highly modified landscape with very fragmented natural ecosystems. No species classified as threatened or at risk were recorded ..."*²⁶⁶

- [634] Mr Turner²⁶⁷ then dealt at some length with the potential adverse terrestrial ecology effects of the Project, including habitat loss, fragmentation, edge effects and the effects on individual flora and fauna but, in light of the later agreement between the terrestrial ecologists and the modification of the positions initially held by each, it is unnecessary to detail that material.
- [635] The Ōtaki Railway Wetland was, Mr Turner²⁶⁸ said, the product of colonisation of a wet depression by wetland plants as a result of impeded drainage due to the NIMT and SH1 over the last 70 to 80 years, rather than a remnant of an original wetland, with the ponds within the Wetland being excavations not natural features. Its location makes it vulnerable to external pressures, such as weed invasion, and access by mammalian predators, mainly cats.
- [636] The rehabilitated remnant of the Ōtaki Railway Wetland following construction of the Project will still receive rainwater and seepage from the surrounding area but following rehabilitation, overflow will exit via a culvert to the south and the area will be replanted and monitored.
- [637] Mitigation to avoid or remedy the effects on the environment was initially proposed for habitat loss at sites A, C, F and I, and edge effects at sites C, F and I, shown in plans forming part of the draft EMP attached to Mr Turner's evidence. Both these and the hydrological effects on the remaining Ōtaki Railway Wetland were given effect to in Conditions G33, 34, 43 and 46.
- [638] Initially the Project was estimated to result in the loss of 0.45ha of native bush and 0.5ha of wetland and mitigation, especially for wetlands was proposed. However, since the initial mitigation was modified by later agreement between the terrestrial ecology experts, it is unnecessary to detail the original proposal or the draft EMP which accompanied it.
- [639] The experts for KCDC and GWRC initially challenged the adequacy of NZTA's assessment of habitat loss, mitigation for the wetlands and the ratio of compensation for the effects of the Expressway. Omissions from the surveys were suggested. Dissonance between the proposal and various local regional and national statements was asserted. Proposals for landscape, visual and amenity effects of the Expressway to extend across a wider transport corridor including SH1, into the adjoining landscape outside

²⁶⁶ Turner, EIC, paragraph 38.

²⁶⁷ Turner, EIC, paragraph 40.

²⁶⁸ Turner, EIC, paragraph 34.

the Expressway designation were propounded. Ms Warren was critical of the lack of surveys of non-vascular plants. They omitted micro-invertebrates and fungi.

- [640] Relying on the Government statement of National Priorities for Protecting Rare and Threatened Biodiversity, Part B, on Private Land,²⁶⁹ Ms Warren made the point that as habitat reduces, susceptibility to species' loss increases exponentially. She pointed to the existing widespread habitat loss on the Hautere flood plain and its exacerbation through construction of the Expressway. That led her to the submission that the losses through PP20's construction were so considerable that only avoidance or remedying strategies, not mitigation, would be appropriate.
- [641] The ecologists' initial differences of view and approach substantially reduced during joint conferencing. Conferencing continued during the Hearing and, ultimately all outstanding differences were resolved.²⁷⁰ All gave evidence on agreeing to the mitigation measures set out in Conditions 78j), G33, G34, G43, G46 and G46A.²⁷¹
- [642] As with all others, those Conditions appear in Volume 2 but the Board, while not departing from the sensible accommodation reached by the ecologists, is doubtful that their agreement is fully achievable.
- [643] However, the Board accepts that NZTA's ecologist and the ecologists for the other parties would not have agreed to the proposed conditions unless they were satisfied they represented proper avoidance, remedying and mitigation for the effects on the terrestrial environment of the Expressway. The Board endorses their agreement.

²⁶⁹ http://www.biodiversity.govt.nz/pdfs/protecting_our_places_detail.pdf.

²⁷⁰ Other than that Ms Warren continued to express doubts on some aspects.

²⁷¹ The plan of the Hautere Plains identifying the remnant sites was produced by Mr Turner as Exhibit 10 but the Conditions are entire without the exhibit being attached.

4.20 TRAFFIC AND TRANSPORT

[644] Evidence on Traffic and Transport was received from a number of expert witnesses:

Mr David Dunlop for the Applicants

Mr Tony Coulman for the Applicants

Mr Don Wignall for KCDC

Mr Tim Kelly for R and S Caughley

Mr Michael Mellor for the Rational Transport Society.

[645] Witnesses were:

Mr Richard and Mrs Sarah Caughley

Mr Ian Cassels for Monarch Wines, Far Fetched Ltd and others

Mrs Sharyn Sutton

Mr Michael Gross for the Automobile Association

Mr Greg Elliott for Lorax Partnership

Dr Marie O'Sullivan for the Alliance for Sustainable Kāpiti

Mr Don Christie and Mrs Chris Christie for Ōtaki Motel

Mr Bryce Holmes for Rahui Enterprises Ltd

Mr John Camm and Mrs Christine Stone

Mr Lance Bills for Harrisons Country Gardenworld and Arthur Bills Resettlement Trust

Mrs Ellen Blake, Living Streets Aotearoa and Mr Patrick Morgan, Cycling Advocates Network for Rational Transport Society

Mr John Baldwin and Ms Janet McDonald for Kāpiti Cycling Inc.

Mr James Cootes from the Ōtaki Community Board

Mrs Gyllian and Mr Barry Hart.

[646] Related Conditions:

Designation Conditions: 28–34, 80 & 81

[647] In addition to the expert evidence, there were wide ranging personal submissions in relation to this subject. The particular matters of concern to submitters are described in the following.

Issues

[648] The overall transport issues were centred on the following broad subject areas:

- a) Type and Design of Road;
- b) Route Security and Resilience;

- c) Travel Time and Distance Changes;
- d) Transportation Modelling and Network Capacity;
- e) Peka Peka and Te Horo Interchange Ramps;
- f) Road Safety;
- g) Access and Service Lane Provisions;
- h) Pedestrians, Cyclists and Equestrians;
- i) Public Transport;
- j) Construction Traffic Effects;
- k) Adequacy of Policy Assessment.

Expert Witness Conferencing

[649] Initial expert witness conferencing on traffic and transportation was attended by Mr Wignall, Mr Mellor, Mr Dunlop and Mr Coulman. The range of issues where they initially differed was significantly reduced. A joint statement of traffic and transportation experts resulted. The outstanding issues at that time were essentially threefold:

- a) A question of the appropriate level of service (LOS) being maintained on the existing roads during and post construction;
- b) A certification requirement in relation to the proposed Network Integration Plan (NIP);
- c) Visibility at the rail crossing south of Mary Crest.

[650] The matter of LOS was agreed by further conferencing during the Hearing (by way of the inclusion of designation Condition 80c). Similarly, Condition 80d) has been proposed to provide for a certification process, and this Condition is also agreed by the experts. The third issue is addressed in passages that follow.

Type and Design of Road

[651] Mr Coulman described the basis of the Project design as:²⁷²

“A robust approach has been adopted to develop and assess the Project for consistency with the Project objectives of the NZTA and KiwiRail, and to respond appropriately to environmental factors. The Design Philosophy Statement (DPS) and the Rail Basis of Design have been developed to guide development of the Project in line with these objectives.”

[652] Further detail and description of the design process, and standards adopted are set out in Mr Coulman’s evidence, in the AEE and associated and referenced Technical Reports.

²⁷² Coulman, EIC, paragraph 213.

[653] Submissions from KCDC and Ōtaki Community Board highlighted the issue of design consistency, and in particular, a desire for consistency with the M2PP section of the Expressway to the south.

[654] Mr Coulman said:²⁷³

“In respect of the design standard applied to the Project, I can confirm that the guidelines and standards adopted for the Expressway are consistent with best practice, and with those applied to the MacKays to Peka Peka project to the south.”

[655] On the matter of the type and design of the road, the primary concern of the Board under s 171(1)(b) is to consider whether the designation sought is reasonably necessary to achieve the objectives of the requiring authority. It is for the requiring authority to determine the objectives for which it seeks the designation. The Project’s objectives were in the AEE.²⁷⁴ Mr Coulman described the design and roading standards, making reference to the Design Philosophy Statement.²⁷⁵

“As outlined in the DPS, the geometric design of the Project is to be consistent with the standards in Austroads’ Guide to Road Design, which is accepted as best practice.”

[656] Mr Cootes made representations on behalf of the Ōtaki Community Board. Following consultation with KCDC and NZTA, the Community Board was satisfied on points 7c, e, f, g, i, j, k, and l of its submission. Submission point 7a essentially dealt with the matter of design standard. Mr Cootes said the Community Board felt that the design proposed was in effect an “expressway lite”²⁷⁶ version when compared with M2PP in particular.

[657] The Community Board raised a number of other matters of concern that remained outstanding. These are considered separately within the relevant effects section of the Decision.

[658] On the basis of the evidence before it on this matter, the Board is satisfied that the design standards proposed are appropriate and will suitably integrate with adjacent sections of the Expressway and SH1. The Board is specifically satisfied that the design standards proposed are consistent with the stated Project objectives.

Route Security and Resilience

[659] Route security was described²⁷⁷ as one of the benefits to be derived from the Project. The AEE outlined that the objective of route security aligns with the New Zealand Transport Strategy objectives.²⁷⁸ The AEE also described²⁷⁹ that the Project is designed to be resilient to natural hazards so it can be readily reopened in the event of an earthquake. It is also able to provide resilience to the road network in the event of an accident and the

²⁷³ Coulman, EIC, paragraph 10.

²⁷⁴ AEE, Vol 2, chapter 2, section 2.6, p 20.

²⁷⁵ Coulman, EIC, paragraph 26.

²⁷⁶ Hearing transcript, page 689.

²⁷⁷ AEE, Vol 2, chapter, 11, section 11.2.1, pp 162–163.

²⁷⁸ AEE, Vol 2, chapter 2, section 2.3.2, pp 14–15.

²⁷⁹ AEE, Vol 2, Executive Summary, p i.

consequent need for an alternate traffic route. The AEE noted²⁸⁰ that currently there is only one public route across the Ōtaki River.

[660] Section 13.3.8 of the AEE proceeds:

“The Expressway will have good resilience against earthquakes and other natural hazards. The expressway is likely to remain open for access in the event of a large magnitude 7.5 local earthquake in the Region, perhaps at some reduced level of service due to damage to the road associated with localised liquefaction and subsidence. These areas are generally likely to be reinstated quickly (eg, within 3 days to 2 weeks).”

An objective of the Project has been to avoid crossing the Northern Ohariu Fault with structures which may be severely damaged and will take a long time to reinstate. The Project does cross the fault, namely where an earth ramp leads to the Te Horo overbridge, a location where the topography enables quick restoration of access.”

[661] There were submissions presenting an opposing view on the degree of route security and resilience asserted by NZTA/KiwiRail. Mrs Sutton made the point, as others did, that the potential for benefit was limited, in that:²⁸¹

“It is my belief that if the only access north from Wellington is on state highway 1, the proposed expressway and the railway line and all three of these transport links run practically side by side then in the event of an earthquake it will be more likely that all three will be disrupted at the same time, leaving no access north of Wellington.”

[662] The Board was clear in its understanding of the two principal elements of security and resilience: to provide a publicly accessible alternative in the event of an accident or obstruction to the Expressway, and quick repair and reinstatement of access in the event of a natural disaster. The Board was advised of other resilience considerations, such as those described by Mr Dunlop in relation to travel time reliability.²⁸² The Board understands the Project is to be constructed to a more resilient standard, particularly in the case of structures and their location remote from earthquake fault lines and to a much higher standard of structural and flood design. Insofar as operational resilience against accidents or obstructions is concerned, the Board is satisfied that the current SH1 and the proposed Expressway are located so they provide convenient, appropriate and mutual resilience and reliability, each in respect of the other.

Travel Time and Distance Changes

[663] Mr Dunlop said there will be some properties where the time and length of travel to access them will increase in comparison with that which exists at present.²⁸³ Properties that are expected to be affected are located primarily to the east of the proposed Expressway, particularly on the Hautere Plain.

²⁸⁰ AEE, Vol 2, chapter 2, section 2.5.1, pp19–20.

²⁸¹ Hearing transcript, page 551.

²⁸² Dunlop, EIC, paragraphs 109–119.

²⁸³ Dunlop, EIC, paragraphs 141–148 and TR6, section 11.

Additional travel distances of between 1.5km and 2.8km were described by Mr Dunlop.

- [664] Mr Dunlop described the planned construction of lengths of local road adjacent to the Expressway as being to provide for continued property access and connectivity with the existing road network. He also described the provision of a special access link to the Expressway to minimise the potential for delay for the Te Horo Rural Fire Service.²⁸⁴ Mr Turver of the Te Horo Rural Fire Service made a submission seeking the access now proposed. The Board was advised of the Fire Service's consequent decision not to be heard in relation to its submission.
- [665] The Board also heard from submitters²⁸⁵ that properties located to the west of the Expressway would be affected. These properties are principally located between Te Horo and Peka Peka. For these properties, the Board understands access will not be facilitated from the proposed Expressway as no public connections to it are proposed for this section. The principal cause of changes in travel distance and time for these properties is due to the Expressway connectivity arrangements proposed within M2PP to the south. Consideration of the direct effects arising from that proposal are outside the scope of consideration for this Board.
- [666] The Board also heard evidence related to the planned revocation of the current SH1 and of the possibility of future reduced speed limits on that road network. While it accepts that such a change if it occurs may adversely impact on the travel times related to these residences, the revocation of SH1 is not a component of the NoRs and is therefore a matter of peripheral relevance for the Board.
- [667] By way of a summary of NZTA case on travel time and distance changes, it was submitted that in the context of travel along the length of the proposed RoNS there may be additional travel times and distances for travellers, but that these could be expected to be more than offset by the savings to be gained overall for the vast majority by travel along the RoNS, for example from Ōtaki into Wellington Central. Mr Dunlop also explained²⁸⁶ that travel would be less congested and safer on the current SH1 following revocation, and that access to the current road network would result in reduced delay and be safer than it is at present.
- [668] Mr Elliott expressed concern in relation to the travel time savings calculated by NZTA,²⁸⁷ in particular for local trips. Travel times and distances for some local and Expressway trips, and comparative changes to these are described at Table 6.6 in the Integrated Traffic Assessment.
- [669] It is evident to the Board that there will be some trips where travel time and distance will be longer. These changes affect significantly fewer traffic movements than those which derive time and distance benefits from the

²⁸⁴ Dunlop, EIC, paragraphs 149–150.

²⁸⁵ Harrison's Gardenworld and Arthur Bills Resettlement Trust submission.

²⁸⁶ Dunlop, EIC, paragraphs 142–147.

²⁸⁷ Hearing transcript, page 661.

Project. On this aspect, the Board was satisfied the overall effects would be less than minor.

Transportation Modelling and Network Capacity

[670] NZTA's transport modelling and network capacity assessments were principally set out in:

- a) AEE, Section 14 Traffic and Transport;
- b) TR6: Integrated Transport Assessment;
- c) Mr Dunlop's evidence.

[671] By way of an overall summary, the Board understands the transportation modelling methodology as it is summarised in the evidence of Mr Dunlop.²⁸⁸ In essence, a hierarchy of models has been used to assess increasing levels of detail of effect on the road network. At the highest level, the Wellington Regional Transport model was used to determine from its outputs, the transport inputs for the Kāpiti District Transport Model. The Board understands the Regional model uses land use data and trip behaviour models to estimate the number of trips made by different travel modes, including private vehicles, public transport and cycling/walking.

[672] The transport modelling scenarios were tested both with and without the Project, the latter representing what was described as the "do-minimum" network. Modelling undertaken represented the current (in effect the 2011 model year) and a future 2031 scenario. Mr Dunlop acknowledged elements of uncertainty in the process of forecasting traffic, especially in the area of growth predictions and future network changes. He undertook testing to assess the sensitivity of the model to its inputs and assumptions. He described testing in relation to possible changes in the speed limit on SH1 and also in relation to high growth scenarios.²⁸⁹

[673] Mr Duston accepted that regional transport modelling on the basis of land use was a legitimate approach, but in his view it rested on faulty assumptions in this case.²⁹⁰ His principal concern in this area (amongst other things) related to how the assumptions made within the modelling process adequately accounted for climate change outcomes, and hence the related potential for effect on traffic forecasting.

[674] Counsel for Generation Zero put a range of related questions to Mr Dunlop on this subject.²⁹¹ Mr Dunlop accepted in response to a question that there could be potential effects from temperature change which could affect the number of vehicles on the road. He also acknowledged he had undertaken no analysis of this.²⁹² Mr Dunlop pointed to his evidence for a description of

²⁸⁸ Dunlop, EIC, paragraphs 75–94.

²⁸⁹ Dunlop, EIC, paragraphs 93–94, and Appendix C.

²⁹⁰ Hearing transcript, page 359.

²⁹¹ Hearing transcript, page 345–350.

²⁹² Hearing transcript, page 348.

the factors which he stated included changes in emissions and efficiency of vehicles. He said:²⁹³

“... the WTSM model uses land use data, calibrated trip behaviour models predicted future year land use patterns, economic variables, and assumptions about future improvements to the transport system. In the 2011 revalidation of the model, significant work was undertaken to look at fuel pricing and vehicle efficiency. This work utilised information from the Ministry of Economic Development and concluded that although significant fuel price rises are forecast, they will be offset by improvements in efficiency of vehicles. These inputs have been used for the transport modelling and future forecasting.”

- [675] Ms Warren had²⁹⁴ concerns as to the adequacy of the assessment of induced traffic effects and planning for mitigation of these effects. In particular, this went to the extent to which it might affect forecasting for both general traffic and public transport. Mr Dunlop assessed induced traffic as accounting for only about 1% of total traffic movement.²⁹⁵
- [676] Matters of network capacity were the subject of submissions by KCDC. The key performance considerations were described in general terms in the joint statement of the traffic and transport experts and the further conferencing on conditions as they related both to construction and operational performance of the network. The Board noted the agreement between the experts on these matters.
- [677] In making its assessment, the Board is to have regard to NZTA's Project and other objectives. In particular these refer, amongst other things, to appropriately balancing the competing functional performance requirements of inter-regional and local traffic movements, and to facilitate others to provide modal choice opportunities. Overall, the Board's conclusion is that the transport modelling and forecasting is subject to a degree of variability, depending upon the assumptions made. There has been an appropriate effort to examine the degree that the forecasting might produce alternate outcomes. Even at the high growth sensitivity testing, the conclusion was that the network proposed would readily cope.
- [678] The transportation modelling presented, while not capturing every potential variable in its assumptions, is sufficiently robust, in the Board's view. It has been subject to independent peer review. It draws on substantive land use predictions and other strategic attributes that are established regionally, and in some instances nationally. The modelling analyses demonstrate that the design proposed is capable of accommodating the traffic reasonably expected, accepting the potential for variability. The Board was not presented with any substantive evidence that, based on any alternate assumption, a significantly different outcome may result. For these reasons, the Board prefers the evidence of Mr Dunlop and concludes that

²⁹³ Dunlop, EIC, paragraph 239.

²⁹⁴ Warren, EIC, paragraphs 19–24.

²⁹⁵ Dunlop, Rebuttal, paragraph 50.

transportation modelling and network capacity has been appropriately considered and determined.

Peka Peka Road and Te Horo Interchange Ramps

- [679] The southern limit of the designation sought by NZTA for road based access starts from a point north of the Peka Peka interchange and immediately north of Te Kowhai Road. The extent of the designation boundary was indicated on both the Road Layout and the Land Information plans contained in Volume 5 of the AEE as they were updated during the course of the Hearing.
- [680] At Te Horo, NZTA proposed an overbridge whereby the Expressway passes under a newly constructed local road bridge connecting communities on both the west and east sides of the Expressway. The form of this connection can be seen on the Road Layout Plans, Sheet 5 of 8.
- [681] NZTA has not proposed any Expressway connection to either Peka Peka or to Te Horo as part of this Application. Other designation processes sought to provide only for north facing ramps at Peka Peka, meaning that local traffic approaching from the south would be required to exit the Expressway at the next connection to the south, located at Te Moana Road, Waikanae. They could also utilise the local road network to make an alternate route selection.
- [682] Mr James summarised NZTA Proposal with regard to connectivity in relation to the Peka Peka and Te Horo interchange options.²⁹⁶ Mr Coop summarised the rationale for the lack of access at Te Horo in the following way:

“No access to and from the Expressway is proposed at Te Horo (apart from for emergency vehicles), and Mr Copeland's evidence explains that this will have adverse business redistribution effects on businesses in Te Horo. Mr Copeland's evidence, however, is that Te Horo is not a significant business centre, in terms of the hierarchy evident in the District Plans.”⁽²⁹⁷⁾ I set out below further (related) observations about the planning framework, as it relates to Te Horo.

It will be at least 5 or more years before the Expressway is operational. This is a significant duration in the life of any business and enables anticipation, reorientation and adaption to occur.

The planning rationale for the lack of direct Expressway [access] to Te Horo is as follows:

- (a) *The whole of the Te Horo area is zoned Rural under the Operative District Plan² and Proposed District Plan.³ The Rural zone includes all the land occupied by existing businesses with frontage to and/or near the existing SH1.⁴ Expansion of these existing non-*

²⁹⁶ James, EIC, paragraphs 110–117.

²⁹⁷ B.8.2 of the Kāpiti Coast District Plan (Operative), Annexure A, and Objective 2.17 and Policy 6.3 of the Kāpiti Coast District Plan (Proposed), Annexure B. Te Horo is not listed as part of that hierarchy.

rural activities is therefore not anticipated or provided for by the Rural zone under both District Plans.⁵

- (b) *Residential subdivision and development is not anticipated or provided for under the Operative District Plan⁶ and Proposed District Plan at Te Horo.*
- (c) *The Council's non-statutory plan "Choosing Futures" (first developed in 2003/04, reviewed in 2008/09 and reaffirmed by Council in 2012) advocates cohesive urban development and intensification in specifically identified areas including Ōtaki but not including Te Horo or Te Horo Beach.*
- (d) *The Council's more detailed non-statutory "Greater Ōtaki Vision" is that there is to be no new urban development at either Te Horo Beach or Te Horo in preference to a focus on Ōtaki.*
- (e) *I consider that providing a connection at Te Horo to the Expressway would be inconsistent with the above Council statutory and non-statutory planning and policy context and could lead to development pressures and inappropriate subdivision, use and development.*
- (f) *Existing accessibility to and from Te Horo will be enhanced by the RoNS package, as discussed in the evidence of Mr Dunlop. Travel times for example from Wellington to Te Horo will be reduced (by the RoNS as a whole, rather than the Project) and travel reliability increased. Local travel to Ōtaki and Waikanae will be retained via the existing SH1 but with reduced traffic.*
- (g) *In the longer term, the design of the half-interchange provided at Peka Peka as part of the MacKays expressway is future-proofed so that southbound on- and northbound off-ramps could be added (as discussed in Mr Coulman's evidence). However, I consider this to be currently undesirable and unnecessary, when assessed against the Council's statutory and non-statutory planning and policy documents, as discussed above."*

[683] In support of that evidence and in response to a Board Minute issued on 23 October 2013 seeking the base documents on which his views were based, Mr Coop filed supplementary evidence on 30 October 2013 exhibiting the Kāpiti Coast District Plans, both operative and proposed (with specific reference to the relevant portions), the document "Choosing Futures – the Community's Vision for the Kāpiti Coast District" (developed in 2003–04, reviewed in 2008–09 and reaffirmed by KCDC in 2012) and the publication "Kāpiti Coast – Choosing Futures – Greater Ōtaki Vision" (2007).

[684] Mr Bills' submission initially sought a full interchange at Peka Peka, but in evidence modified that to request a northbound slip road at that location. In his view, the decision of the M2PP Board on this matter made the need for connectivity even greater. In particular, Mr Bills referred to the social, economic, cultural wellbeing and health and safety of the Waikanae North,

Peka Peka, Te Hapua, Te Horo and Te Horo Beach communities who would be served by such a connection.

[685] Mr Cassels provided the Board with a survey he had commissioned by an independent agency (Horizon Research).²⁹⁸ The survey canvassed 230 residents and posed a range of questions related to consultation, understanding of the Project and local preferences as to Expressway connectivity at Te Horo. On the matter of preference for ramps or not, *“Half of those who currently exit SH1 in the Peka Peka to Ōtaki area have a preference for access to and from the expressway at Te Horo”*.²⁹⁹ The report also identified that support was higher among those who currently exit SH1 between Peka Peka and Ōtaki.

[686] The AEE and TR3 set out the assessment of alternatives that was undertaken and the methodology adopted. AEE section 9.6 describes the assessment, and range of alternative interchange options considered, including cross-corridor connectivity. A sensitivity-based assessment of options was undertaken. Table 9.6 shows the option of full interchange connectivity at Te Horo and Peka Peka was considered, but not included. Section 9.6.1 states:³⁰⁰

“As an outcome of the scoping phase process the scenarios depicted in Figure 9-4 were recommended and adopted to be taken forward to public consultation and the scheme assessment addendum phase.”

[687] Urban form and function related to Expressway connectivity was summarised at Chapter 15 of the AEE. Section 15.4.2 described factors considered in respect of connectivity at Te Horo. It states:³⁰¹

“There was a strong desire by KCDC to restrict urban growth pressures at Te Horo to maintain both a rural character and viable agricultural land use practices in this fertile area. An Expressway interchange was therefore discounted at this location.”

[688] NZTA stated in closing submissions:

*“Mr Bills seeks the addition of south-facing ramps at the Peka Peka interchange, part of the expressway to the south. While such a change is outside the scope of this Project, and is not supported by the rural status of land within Peka Peka and Te Horo, the interchange designation and design is future-proofed to allow construction of those ramps if and when necessary.”*³⁰²

[689] The Board is satisfied that the proposed Expressway connectivity is consistent with the Project objectives established by NZTA. In particular, it is evident to the Board that the protection of land use patterns established for a significant period within the KCDP, including the retention of rural

²⁹⁸ Exhibit 30.

²⁹⁹ Exhibit 30, page 1.

³⁰⁰ AEE, Vol 2, chapter 9, section 9.6.1, pp 120–122.

³⁰¹ AEE, Vol 2, chapter 15, section 15.4.2, pp 205–206.

³⁰² NZTA Closing Submissions, paragraph 119.

character and protection of fertile land, were key factors that influenced the selection of connections.

- [690] It was also evident that an extensive evaluation system had been undertaken including consideration of an appropriately wide range of options. These were the subject of considerable community consultation and in some cases the Project was altered to reflect the responses. In the case of Te Horo, no connectivity has been proposed at this time, although the Board heard that the M2PP Project provides for future connectivity at Peka Peka if warranted.
- [691] The Board notes that although there was modest support for the construction of further Expressway connectivity at Peka Peka and for a form of Expressway connectivity at Te Horo, the former is outside the jurisdiction of this Board. As far as the latter is concerned, the Board noted the level of support expressed by residents for connectivity at Te Horo was low, considering the size of the local area population. It also had regard to the long-standing opposition to development at Te Horo and Te Horo Beach in various KCDC planning documents which have been current for a number of years.
- [692] Any adverse effects from the lack of Expressway connectivity at Te Horo needs to be weighed against the connectivity resulting from the proposed interchanges, admittedly some distance away. In terms of the overall broad judgment, including other positive and negative effects of the Project, overall, the Board accepts the Proposal is consistent with NZTA's stated objectives.

Road Safety

- [693] The road safety effects were described in the evidence of Mr Dunlop.³⁰³ He stated:³⁰⁴
- "The high traffic flows on the existing SH1 make it difficult and unsafe for all road users including pedestrians, cyclists, equestrians and motorists to join or cross the SH1. This is highlighted by the high proportion (40%) of crashes in the last five years that occurred at SH1 intersections or private access points within the Project area."*
- [694] Section 2.10 of TR6 notes the current SH1 has a KiwiRap³⁰⁵ rating of 2 to 3 stars, with 5 star roads the safest. When measured in terms of the rating's "Collective Risk" factors, which evaluate annual average fatal and serious crashes per kilometre of highway, the Project section of SH1 scores in the high band, indicating an adverse road safety rating.

³⁰³ TR6, sections 2.10, 10.1 and 10.2.

³⁰⁴ Dunlop, EIC, paragraph 23.

³⁰⁵ KiwiRap is a national star rating programme that enables sections of road with a relatively high level of risk to be identified.

- [695] Section 10.1 of TR6 also notes that the Project will bring about significant change, in that five of the eight existing level crossings in the area will be closed, including all public access level crossings. It states:³⁰⁶
- “The remaining level crossings are private access and therefore carry lower traffic flows. The changes will therefore significantly reduce the risk of crashes occurring between trains and road traffic, pedestrians or cyclists.”*
- [696] Mr James described the objectives of the Project as including to “*enhance safety of travel on SH1*”.³⁰⁷ Overall, NZTA forecast is for the proposal to result in a 60% reduction in crash costs within the Project area.³⁰⁸
- [697] KiwiRail specified its objectives in terms of safety outcomes from the establishment, maintenance and operation of its services.³⁰⁹ It identified positive effects including the public safety outcomes arising from the closure of five of the eight existing rail level crossings.³¹⁰ In KiwiRail’s view, the Project objectives set in relation to safety (and other matters) are met.³¹¹
- [698] Mr Elliott of Lorax Partnership and other submitters expressed doubt whether the safety benefits claimed by Mr Dunlop would eventuate. Mr Elliott (and Mr Baldwin and Ms McDonald of Kāpiti Cycling Inc) recounted a fatal crash involving a cyclist on SH1. Mr Elliott expressed some concern as to the merits of a median barrier in that particular instance. Ms Warren expressed a concern in health and safety terms for road safety implications in and outside the Project area, particularly as they related to health impacts.
- [699] Mr Gross submitted that the Expressway should not be capable of use by non-motorised traffic. He was given a copy of the SH1 revocation agreement and was referred to the paragraphs dealing with the proposal to provide specifically for cyclists on the existing State Highway. In response, Mr Gross said that provision would not guarantee that cyclists would not use the Expressway. He emphasised the significant potential impact from cyclists’ use of the Expressway.³¹²
- [700] The submissions received by the Board were primarily anecdotal, and none were supported with evidential analysis. The Board acknowledges the sincerity of the views expressed in relation to road safety considerations, however, it prefers the evidential analysis of NZTA. In doing so, the Board recognises NZTA forecast road safety savings are subject to a degree of estimation. Nonetheless, it is evident to the Board that the Project will contribute in a positive way to improved road safety outcomes for travel on both the Expressway and the current SH1. To this end, it is accepted that the road safety improvements expected will align with the Project objectives of both NZTA and KiwiRail.

³⁰⁶ TR6, section 10.1.

³⁰⁷ James, EIC, paragraph 58.

³⁰⁸ TR6, section 10.1.

³⁰⁹ KiwiRail Opening submissions, paragraph 2.7.

³¹⁰ KiwiRail Opening submissions, paragraph 3.3(a).

³¹¹ KiwiRail Opening submissions, paragraph 3.17 (a), (c), (d).

³¹² Hearing transcript, page 656.

Access and Service Lane Provisions

[701] A range of property access and service lane issues were described to the Board. These fall into two broad categories, one relating to private property access and the other where public access considerations are paramount, such as the proposed service lane to 230 Main Highway in Ōtaki. Each of these groupings is considered separately in the following sub-sections of this Decision.

Private Property Access

[702] The principal private access matters addressed to the Board were as follows:

- Winstones Aggregates and Stresscrete;
- Caughley access, SH1 South Ōtaki;
- Mr Camm and Ms Stone, Te Horo Beach Road;
- Ms McLean, 50 Rahui Road;
- Mrs Christie;
- Ōtaki Motel;
- 230 Main Highway and Hema Te Ao Lane;
- The private rail level crossing south of Mary Crest.

[703] Each of these needs only to be briefly addressed.

Winstone Aggregates, Stresscrete

[704] Winstone Aggregates and Stresscrete made submissions about continued access arrangements for their sites and temporary traffic management during the construction period. NZTA said in closing that:³¹³

“Issues between the parties coming into the hearing have been resolved through enhancements to the proposed conditions; KCDC no longer seek a minimum Level of Service for local roads and intersections during construction, and regard will be had to night-time issues around the entrance to the Winstone Aggregates site.”

Caughley Access

[705] Separate expert witness conferencing occurred between Mr Coulman for NZTA and Mr Kelly representing Mr and Mrs Caughley. The matters at issue were essentially the form of access to the Caughley property from the proposed south Ōtaki roundabout, the purpose and form of the fourth leg of the roundabout and the potential for alternate river access for GWRC.

[706] Mr Caughley expressed at the Hearing, an element of uncertainty with the safety audit procedures and the potential for the design to materially alter what had been proposed.³¹⁴ In response to questions, Mr Caughley advised

³¹³ NZTA Closing submission, paragraph 24.

³¹⁴ Hearing transcript, page 305.

that the outcome set out in the joint witness statement was acceptable (including two attached plans and those produced by Mr McKenzie³¹⁵).³¹⁶

[707] NZTA advised in its closing submissions:³¹⁷

“Mr Coulman and Mr Kelly reached agreement on the general form of the accessway to the riverbank, which minimises effects on the Caughley property, and the conditions provide for the ongoing engagement with the Caughley’s about the form of the Ōtaki ‘gateway’ zone.”

[708] During the course of the Hearing NZTA tabled a revised plan of the access.³¹⁸ NZTA also referred to proposed designation Condition 75(a) to address these concerns.³¹⁹ The Board notes the inclusion of a specific reference at Condition 75(a)(vi).

[709] The matter of alternate river access via Te Waka Road was described by Mr Caughley and was discussed with NZTA.³²⁰ It is however, outside the Board’s consideration, as it is outside the designation sought. Similarly, in the matter of a potential footpath under the existing SH1 bridge, while the Board accepts it would be an enhancement to the proposal and amenity provisions in the area, it is not in the Board’s view, necessary for achieving the objectives of the designation and therefore is not a matter the Board can require.

Mr Camm and Ms Stone Access

[710] Mr Camm and Mrs Stone had concerns relating to ownership and maintenance of a bridge providing access to and from their site at 46 Te Horo Beach Road. They also referred to two gates on the road, one a Regional Council access to the stream. Mr Coulman stated that NZTA’s representatives had recently met Mr Camm and Ms Stone and confirmed that the location of the access to their property would remain unchanged.³²¹ He further stated that ongoing consultation with GWRC and the land owners would be required, particularly through acquisitions or easements and as part of the development of the Project detailed design.³²²

Ms McLean Access

[711] Ms McLean made a submission that included some questions related to the continuance of her access to 50 Rahui Road in relation to the eastern bridge approach. To the Board, Ms McLean spoke of a meeting she had with NZTA, as to the availability of access from Rahui Road. She also advised she was open to alternative arrangements should they be required.³²³ NZTA affirmed its intention to continue to work with Ms McLean on access as well

³¹⁵ Exhibits 2 and 3.

³¹⁶ Hearing transcript, pages 306–307.

³¹⁷ NZTA Closing submissions, paragraph 100.

³¹⁸ Exhibit 3.

³¹⁹ NZTA Closing submissions, paragraph 100, and associated footnote 77.

³²⁰ Hearing transcript, page 307.

³²¹ Coulman, EIC, paragraph 227.

³²² Coulman, Rebuttal, paragraphs 36–38.

³²³ Hearing transcript, page 629.

as other matters it has in progress with her, in particular those relating to the relocation of her house within the site and flooding risk matters.³²⁴

Mrs Christie, Ōtaki Motel and Rahui Road Access

- [712] Mrs Christie advised she has strong family connections with the Arlington property at 42 Rahui Road. The Proposal results in a significant reduction in site size and the removal of the house and other structures. She expressed concern as to how access to the residual part of the property would be achieved. NZTA acknowledged that these particular matters of access have yet to be resolved for the site. It is clear, however, that access will no longer be available to Rahui Road as a consequence of the bridge embankments proposed. It is evident to the Board that the residual land will therefore only have remaining frontage onto County Road, at a point possibly outside the designation.
- [713] Mr and Mrs Christie made a joint submission which said they have *“right of way access to Rahui Road and this is very important for the motel business”*. NZTA seeks a designation across their site frontage to Rahui Road, to form the western approach embankments to the Rahui Road bridge. The Christies were uncertain as to the possibility of continued access for that site from Rahui Road, but Mr Coulman said the abutments for the Rahui Road bridge will mean the road will be approximately 2m higher at the current point of access to Ōtaki Motel. Mr Coulman said access solutions will need to be explored with the owners and a potential solution sought relating to a turning area, on adjoining land fronting Rahui Road, for vehicles accessing Ōtaki Motel. The implication from NZTA was that this site may form part of the Ōtaki Motel land acquisition discussions or processes.
- [714] Mr Christie gave evidence in relation to the Ōtaki Motel site at 260 Main Highway (SH1). The principal issues parallel those for the adjoining Rahui Road site we have just discussed. Mr Christie said:³²⁵
- “That accessway to Rahui Road is important to the motel business because it is frequently used by guests and by management. In particular it is regularly used by the drivers of large vehicles to enter the motel parking area by either the main highway entrance or by the Rahui Road entrance, park overnight pointing towards the other entrance and leave by that other entrance the next day. For this reason Ōtaki Motel is registered in the website of National Road Carriers as a truck friendly motel.”*
- [715] Mr Christie later estimated Ōtaki Motel’s truck and trailer business at *“up to 15-20%”* of its custom.
- [716] Mr Blackmore said³²⁶ that NZTA had engaged with Mrs Christie about acquiring all or part of the properties she owns, including parts of the Ōtaki Motel site. The site at 262 Main Highway, to the immediate north of the

³²⁴ NZTA Closing submissions, paragraph 110–111.

³²⁵ Hearing transcript, page 794.

³²⁶ Blackmore, EIC, paragraph 87.

Ōtaki Motel, is a site that is included and is an area that sits within the designation proposed.

- [717] It is clear to the Board, and not disputed by NZTA, that there will be significant impact on practical site accessibility for the Ōtaki Motel, especially for large vehicles such as trucks and trailers. This is a significant adverse effect on a property outside the designation. The totality of NZTA's response is that matters relating to Ōtaki Motel will continue to be addressed, possibly through the land acquisition process under the Public Works Act 1981, s60. That is not a matter for the Board to determine but, given that NZTA is not currently acquiring any of the Ōtaki Motel land under the Public Works Act, it would appear the Christies' claim may be for full compensation from the Crown for the injurious affection or damage for Ōtaki Motel's loss of custom, as long as the land remains in its present use.
- [718] The Board is of the view that there has been inadequate consideration by NZTA of the potential removal of Ōtaki Motel's access to Rahui Road. The Board accepts the views expressed by the owners that this process has caused them significant distress.
- [719] The Board considers that because practical access to Rahui Road for Ōtaki Motel is to be lost through the Rahui Bridge earthworks, the Board should impose a condition which requires a commitment to consultation and best endeavours to resolve accessibility issues between the parties prior to commencement of works on the western approaches to the Rahui Road Overbridge. Conditions 7b)iii) and b)iv) are designed to address this situation. If resolution proves impossible the parties will be left to their legal rights.

230 Main Highway and Hema Te Ao Lane

- [720] Mr Coulman noted³²⁷ that part of the Project involves a proposal to stop an existing public service lane (Hema Te Ao Lane) onto Rahui Road, and to establish a new access through 230 Main Highway to the current SH1. He also described a proposal to include a turning area to accommodate the necessary turning manoeuvres for trucks.³²⁸ It is unclear to the Board whether the provision for turning referred to is able to be achieved within the indicative areas shown, or whether additional area may be required to achieve this. The Board's view tends toward the latter. The Board received no submissions from the owners of the property at 230 Main Highway or from the commercial properties whose rear is serviced by Hema Te Ao Lane. NZTA summarised the position in their closing submissions as:³²⁹

"A related issue is that of the service lane immediately to the south of the bridge abutment, which will also be blocked at one end. At present the other access to or from the lane is over land associated with 230 Main Highway, and therefore it is not a properly legalised access. The lane is outside the proposed designation but has been the subject of discussions between the NZTA and KDCD (which owns part of the lane), and will need to

³²⁷ Coulman, EIC, paragraphs 93–95.

³²⁸ Hearing transcript, page 133.

³²⁹ NZTA Closing submissions, page 23, footnote 97.

be discussed further with the owners of 230 Main Highway as part of the land acquisition process.”

- [721] NZTA said it would be within the scope of the Board to specify an ongoing consultation obligation.³³⁰ However, it submitted it would not be appropriate to specify a particular outcome. In closing submissions, the Board³³¹ was asked to rely on an assurance that:³³²

“... those discussions between all those parties, the District Council, the owners of that 230 Main Highway, the businesses on the frontage there, are progressing well and a solution is envisaged.”

- [722] Currently it appears to the Board that NZTA accepts that the earthworks to the western Rahui Road Overbridge approaches will eliminate the practical access from Rahui Road to Hema Te Ao Lane. It will also eliminate vehicular access the rear of the properties adjoining the service lane but fronting SH1. NZTA's approach is that because it cannot currently give effect to its suggested mitigation, the parties should be left to their rights under the PWA.
- [723] There was no submission by the owner of 230 Main Highway, nor indeed from the owners of the other properties potentially affected by the proposal. Nevertheless the Board cannot assume their silence amounts to support for the work and is not prepared for the purposes of this Decision to accept NZTA's suggested approach to leave the parties to negotiation. On the contrary, the Board's view is that there has been insufficient consideration of the potential effects of the Rahui Road Overbridge embankment aspect of the Project in relation to these properties, and inadequate evidence on the Topic. The Board's finding on this matter is that there are potentially significant adverse effects for these properties. The Board has no confidence at this time that appropriate avoidance, remedy or mitigation has been achieved.
- [724] Accordingly, and as is the case for the Ōtaki Motel matter, the Board imposes a condition which requires a commitment to consultation and best endeavours to resolve accessibility issues between the parties prior to commencement of works on the western approaches to the Rahui Road Overbridge. If resolution proves impossible the parties will be left to their legal rights. The Board imposes the same Condition as appears in paragraph [719].

Rail Level Crossing South of Mary Crest

- [725] The private rail level crossing south of Mary Crest was a matter raised during the Hearing. The crossing is not a currently legally established crossing point. Mr Coulman summarised the effects-based issues and considerations

³³⁰ Hearing transcript, page 939.

³³¹ Hearing transcript, page 939–940.

³³² Hearing transcript, page 940.

in his rebuttal evidence.³³³ Essentially, the existing visibility situation for the crossing will remain or slightly deteriorate.

- [726] The joint expert witness conferencing statement on traffic and transport recorded agreement between all witnesses to a commitment to addressing the existing safety issue.³³⁴
- [727] Notwithstanding the effects-based assessments described by the expert witnesses, KiwiRail submitted that the matter was outside the scope of the Project and jurisdiction of the Board.³³⁵ The Board accepts that the matter of the legality of the crossing is outside its jurisdiction to determine. However, it forms part of the existing environment and because it is partly within the designation the Board is concerned with the potential change in effects. The Board's view is that the designation and Project will not result in more than minor adverse effects at the crossing, and that having regard to the parties commitment in joint conferencing, it will improve local access.

Pedestrians, Cyclists and Equestrians

- [728] The AEE summarised the assessments and comparative "with and without" scheme effects for walking and cycling.³³⁶ It described an improvement in bicycle levels of service (BLOS) from BLOS D/E on the current SH1, to BLOS B/A in that same environment post implementation of the Project. In pedestrian terms, the potential effects of severance are described in Table 14.4 of the AEE, with an overall finding of either a neutral, moderately positive or substantial positive outcome as a result of the Project.
- [729] The potential for effects on pedestrians, cyclists and equestrians is more particularly described in TR6. These will not be encouraged to travel on the Expressway, although they will legally be permitted to do so. The Project objectives establish as an outcome the facilitation of others to provide mode choice opportunities. The Project proposes walking and cycling facilities that are grade-separated across the Expressway. Mr Dunlop also concluded that cycle and pedestrian facilities will be enhanced on the existing SH1 through revocation.³³⁷
- [730] The Board heard a number of submissions relating to mode choice and facility provision. These primarily related to the provision of walking and cycling facilities in accordance with established standards and the appropriateness or not, of permitting cycling on the proposed Expressway.
- [731] NZTA proposed adoption of the recognised Austroads standards. This accorded with the form of standard described by Mr Morgan in his evidence for the Rational Transport Society.³³⁸ The Automobile Association of NZ submitted that in order to meet international safety standards, pedestrians, cyclists, horses, motorcycles and scooters with 50cc or less capacity and

³³³ Coulman, Rebuttal, paragraphs 52–57.

³³⁴ Coulmand, Rebuttal, paragraph 57.

³³⁵ KiwiRail Opening submissions, paragraph 1.3(d).

³³⁶ AEE, chapter 14, section 14.9.3, pp 195–196.

³³⁷ Dunlop, EIC, paragraph 139.

³³⁸ Morgan, EIC, paragraph 4.

other motor vehicles incapable of travelling at 70km per hour should not be permitted on the same carriageway as other vehicles on the Expressway. In contrast, Kāpiti Cycling Inc. sought a range of improvements to the SH1 corridor and made representations to the Board that cyclists should be free to choose to ride on the Expressway.³³⁹

[732] The Board again notes the agreement as to the revocation of the State Highway which includes provision for cyclists within the State Highway corridor/carriageway.

[733] Overall, the Board is satisfied that appropriate design standards will be applied to the design of cycling, pedestrian and equestrian facilities and that the Project design is consistent with those stated objectives.

Public Transport

[734] Section 8 of TR6 sets out the assessment of effects on passenger transport users. It considered both bus (public and school routes) and rail modes. Section 8.1 described the methodology by which the transportation modelling processes assessed the effects of mode choice. As described above, the objectives established for the Project are based on facilitation of others to provide mode choice opportunities.³⁴⁰

[735] Ms Butler's conclusion in relation to the rail network was that:³⁴¹

"The Project as proposed will achieve KiwiRail's general objectives in terms of operating, maintaining, renewing and upgrading the rail network, while improving safety on the network and contributing to sustainability through providing an alternate to road transport"

[736] The principal concerns described by Ms Butler in relation to passenger transport primarily related to the need to maintain the Ōtaki Railway Station, safeguard the front of station parking area and protection of the potential to provide for future capacity in the form of a second rail platform and double tracking.

[737] The submission from the ASK sought a more strongly focussed multi-modal approach to transport planning than proposed. It stated:³⁴²

"A shift in focus is needed to a multi-modal context with consideration of efficiency and alternative modes. Currently there is no evaluation within a multi-modal context, with improvements in the roading network compared to a do-nothing scenario."

[738] Mr Dunlop described his findings separately for public transport and rail.³⁴³ He identified expected improvements for local access to Ōtaki Railway Station and efficiencies in respect of travel times for passenger rail travel due to alignment easing. He noted also that longer travel time and distance

³³⁹ Hearing transcript, page 845.

³⁴⁰ James, EIC, paragraph 58.

³⁴¹ Butler, EIC, paragraph 13.1.

³⁴² ASK Submission, section 2.

³⁴³ Dunlop, EIC, paragraphs 135, 136, and 151–153.

is expected for some school bus routes. However, his conclusion was that use of the existing SH1 will become much safer. He also identified the need to plan for the continuance of public and school bus services during construction.³⁴⁴ The proposal by NZTA, set out at Condition 34b)vi) is that SSTMPs are to include *“Measures to maintain passenger transport services and facilities, including school bus routes”*.

- [739] The Board finds that the Project as proposed is consistent with the objectives that have been established, both those of NZTA and KiwiRail. In relation to NZTA’s objectives, the facilitation of others to provide for public transport services is adequately met. In terms of KiwiRail, continuation of possible improvement in efficient and safe passenger rail transport services is provided for by the Project. Overall, the Board also concludes that appropriate measures will be established to ensure the continuance and efficiency of public transport services.

Construction Traffic Effects

- [740] The comprehensive construction methodology and programme is described in TR5, discussed elsewhere. The assessment details the objectives and philosophy for construction, including site establishment, site access and security planning, contractors’ yard space, night works, haul roads, bridge and pavement construction, amongst other matters. The construction programme and how stages and sub-stages fit together is also detailed elsewhere.
- [741] Section 12 of TR6 describes the transport effects to be expected during construction. The assessment evaluates the network performance changes to be expected at site access and key construction access points on the road network. It considers the network efficiency effects arising for both light and heavy contractor vehicles and also evaluates the potential road safety effects. Construction traffic effects are mainly the potential to delay right-turning movements onto the existing SH1 for all users. The extent of delay also has the potential to contribute to increased road safety risks. The recommendation of the assessment is to implement traffic management controls to keep these potential effects within acceptable limits. The assessment evaluates a range of measures for avoiding, mitigating or minimising the potential construction traffic effects.³⁴⁵
- [742] The Project is expected to involve a construction period of about 3.5–4 years. A staged construction methodology and programme is proposed. The methodology describes four potential stages for construction, commencing in the north and progressing toward the south. A principal recommendation of the methodology involves the early construction of the river bridges so the construction corridor can be used as a haul route, minimising the potential for effects on the road network. Temporary speed

³⁴⁴ Dunlop, EIC, paragraphs 180–181.

³⁴⁵ TR6, section 12.14.

restrictions and other temporary traffic management controls are necessary elements.³⁴⁶

- [743] Mr Dunlop said the draft CTMP was prepared³⁴⁷ to identify the traffic control activities and typical mitigation measures required in each construction sector.³⁴⁸ He recommended that all construction traffic effects be managed by conditions on the designation, the CTMP, SSTMPs and through NZTA's Code of Practice for Temporary Traffic Management (COPTTM). The last is the recognised standard for temporary traffic measures on New Zealand roads.³⁴⁹
- [744] KCDC sought further clarity and control around approval processes and performance during construction. Joint conferencing of the traffic and transport experts considered construction traffic management processes. There was agreement between the experts on certification of the CTMP by KCDC, and on the performance levels of the road network to be achieved during construction. It was also agreed that all site access would be required to provide SSTMPs.
- [745] Designation Conditions 28 to 34 describe the range of measures and controls agreed in expert witness conferencing. They require the management plans to be submitted to KCDC for certification, disruption to traffic to be minimised, and safe traffic movement. Local traffic shall not be delayed for periods of longer than 2 minutes, emergency service access must be provided, and the standard for temporary traffic management is to be COPTTM. Performance auditing is required for road closures, and inspections and road condition rating evaluations are proposed in relation to maintenance and repair provisions on the existing road network.
- [746] It is evident that construction traffic management effects warrant particular and careful consideration through the stages of the implementation phase. The need for management plans and measures to respond to local situations has been recognised and provided for. Overall, the Board is satisfied with the mechanisms and thresholds proposed, and the extent that potential adverse effects from construction traffic activity will be minimised.

Policy Assessment

- [747] A comprehensive summary and assessment of the Project in terms of the relevant national, regional and district plans, strategies and guiding documents is set out in the AEE at Chapter 33, Part 1, Volume 2: Statutory Assessment. This included an extensive array of statutory land transport documentation.
- [748] Mr Mellor described concerns as to the adequacy of assessment in terms of the Wellington Regional Land Transport Strategy (WRLTS). In particular, he asserted there was no assessment evident in TR6. Mr Dunlop described the

³⁴⁶ TR6, section 12.14.

³⁴⁷ Vol 4: Management Plans, Appendix G Construction Traffic Management Plan

³⁴⁸ Dunlop, EIC, paragraph 156.

³⁴⁹ Dunlop, EIC, paragraph 161.

assessments he made, both in terms of road and rail land transport aspects of the Project.

- [749] Further in relation to the evidence of Mr Mellor, joint expert witness conferencing occurred on this subject. The result was the inclusion of a specific transport evaluation (Table 1) against the WRLTS stated outcomes and the corresponding outcomes in terms of the Western Corridor Plan (2012). In addition, the joint witness statement records that the assessment was agreed.
- [750] The Board accepts the evaluations and observations in the joint conferencing statement. It demonstrates that the Project does not contribute to all of the WRLTS outcomes but substantially accords with the Western Corridor Plan, which has been developed to support and contribute to the WRLTS.³⁵⁰

Findings on Traffic and Transport

- [751] The traffic and transportation planning and engineering design matters had the collective accord of the experts, subject to the form of conditions proposed. In general, the Board is satisfied with the traffic and transportation assessments, effects evaluation and the recommendations. This relates to both the construction and operational phases of the Project and across both NZTA and KiwiRail designations. In particular the Board is of the view in this area that there was sound accord between the designation sought, the assessments made and the Project objectives established by the respective requiring authorities.
- [752] Despite that, the Board considers there are matters that relate to the Ōtaki Motel and 230 Main Highway/Hema Te Ao Lane that have lacked adequate consideration by NZTA. The Board has imposed specific conditions to deal with those matters.

³⁵⁰ AEE, Appendix A, section 1.8.13, p 16.

4.21 URBAN DESIGN

[753] Evidence on the subject of Urban Design was received from two expert witnesses:

Mr Bruce Curtain for the Applicants

Ms Julia Williams for KCDC.

[754] Witnesses were:

Mr Greg Elliott for Lorax Partnership

Mr James Cootes from the Ōtaki Community Board

Ms Josephine McLean

W & M Stevens Family Trust

Mrs Sharyn Sutton

Mr Bryce Holmes for Rahui Enterprises Ltd

Dr Marie O'Sullivan for Alliance for a Sustainable Kāpiti

Rational Transport Society

Mrs Chris Christie, Ōtaki Motel.

[755] Mr Curtain, expert witness for NZTA, was the urban designer for the Project. He wrote TR 7 and was co-author of TR 23.

[756] As a result of expert conferencing, many of the urban design issues were agreed. That included certification of the LUDP by KCDC, now provided for in the conditions.

[757] Related Conditions:

Designation Conditions: 74–79

Introduction and General

[758] Good urban design the Board was advised, requires the integration of information across a range of design and technical disciplines to deliver successful urban outcomes. The Project urban design assessment involved analysis of the existing natural and built environment and landscape patterns to form an urban design strategy which successfully incorporates this large-scale transport infrastructure.³⁵¹

[759] The current urban form and landuse patterns along the Project route were analysed. The details are included in the ULDF. The key issues focused on were: urban form and landuse patterns, amenity, community severance, and connectivity with and across the Expressway. The design team used a Multi-Criteria Assessment Tool (MCAT) to establish connectivity options between SH1, the Expressway and Ōtaki.

³⁵¹ Curtain, EIC, paragraph 15.

ULDF

- [760] Mr Curtain said the purpose of the ULDF was to describe and set out urban and landscape design principles, objectives and concepts. It will be an evolving document that will be relevant to the detailed design of the Project and will guide the consultants and engineers involved in the Project. The document outlines the design intention for the various built structures such as bridge design, road furniture elements, and will include landscape matters.
- [761] Mr Curtain summarised his view as being:³⁵²
- “From an urban design perspective the key issues for the Project relate to underlying urban form and land use patterns, amenity, community severance, connectivity (with and across Expressway) and effects on the existing SH1.”*
- [762] He advised the Project had been designed to respond to those issues, which were reflected in the ULDF. He stated the overall design effects were positive. In his view, separation of the Expressway corridor from Ōtaki and other settlements improved the underlying urban environment.
- [763] Mr Curtain opined that potential negative effects in an urban design context had been largely avoided, remedied or mitigated. Any residual effects were acceptable and would be further mitigated in the detailed design stage.
- [764] Importantly for submitters, Mr Curtain signalled opportunities for them to provide additional urban design through the separate SH1 revocation process and community consultation, with particular reference to the Ōtaki Retail area.
- [765] Submitters’ concerns were usually expressed in terms of landscape, visual and amenity impact. They can be summarised as:
- a) Adverse effects on the landscape’s natural character and visual amenity;
 - b) Concerns with proposed mitigation;
 - c) Visual concerns with earthworks, lighting and elevated roadways, bridges and interchanges;
 - d) The visual impact and loss of privacy from tree removal.³⁵³
 - e) Key elements of the urban design, accepted by the Board, are:
 - f) The Expressway is closely aligned with the current transport corridors, and provides a simplified and integrated transport approach to design form across a predominantly rural environment;
 - g) Following completion, the Ōtaki Retail area will have improved pedestrian amenity with less traffic and fewer

³⁵² Curtain, EIC, paragraph 16–17.

³⁵³ Summary of Submissions.

heavy vehicles. The Board concurs with Mr Curtain when he wrote:

“The biggest positive effect of the Expressway on amenity values in this area will thus be the removal of through traffic from existing SH1; the de-powering of the traffic volume will have a positive effect on the quality and amenity of the public realm environment. While the existing environment functions in its current state and supports high volumes of vehicles and pedestrians, this area would clearly benefit from lower traffic volumes, creating opportunities for a high quality, well designed public space to support the attraction of a proportion of passing trade for the outlet shops in the Ōtaki Railway Retail area.”;

- h) The Project design allows for re-alignment of the NIMT through Ōtaki. This provides track capacity for freight and passenger services and allows for anticipated urban development in the future. The design also specifically allows for separate and future restoration of Ōtaki's historic Rail Station and precinct;
- i) The future enhancement of Pare-o-Matangi Reserve following mitigation will emphasise its historical and cultural significance and enhance the use and enjoyment of this important asset by the community;
- j) Opportunities for bridges and signage to detail and accentuate local character, history and culture;
- k) The pedestrian and cycleways on local roads, reserves and bridges will enhance recreational linkages and access opportunities in the Ōtaki River area;
- l) The east-west connection bridges improve critical connectivity and add to the sense of community within the Ōtaki area signalled as a future urban growth node for the Kāpiti district. This reinforces KCDC planning and the Greater Ōtaki Vision (GOV) statement which encourages growth within the existing urban structure;
- m) Reducing the number of rail level crossings through the Project area is important for safety, noise reduction, amenity and wellbeing;
- n) The ULDF outlines the principles of the Project, with design details to be worked out with the Project team and KCDC and, where appropriate, with community input.

Assessment of Effects of the Project

- [766] For the urban design assessment, the area of the Project was divided into Te Horo, Mary Crest to Peka Peka and Ōtaki township, with the last subdivided into North Ōtaki, Ōtaki Retail area and South Ōtaki.
- [767] The effects of the Project on each sector was assessed under the following headings:

- *Urban form and land use*
effects on the efficient use and development of land;
- *Amenity values*
effects on the qualities and characteristics of an area that contributes to people's appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributed;
- *Connectivity*
effects on pedestrian, cycle and vehicle movement as well as the perceived severance effects associated with loss of connections to community facilities, neighbouring areas or the wider landscape.

Ōtaki Township, North Ōtaki and Ōtaki Retail area

- [768] Mr Curtain's³⁵⁴ assessment was that the overall effect of the Project on the urban form and land use in this sector is low, and the overall effect on amenity values was moderate, the former in that the ultimate form of the Project is well designed and the latter because the Project will improve local amenity and recreational access. The Pare-o-Matangi Reserve will be significantly affected, but substantial mitigation measures are in the ULDF, including the potential for connection to the walking and cycling facilities to be installed.
- [769] While a high-density traffic flow is now a characteristic of the Ōtaki Retail area, Mr Curtain³⁵⁵ believes the reduced flow of traffic following completion of the Expressway will increase the amenity value of this area. The Rahui Road Overbridge will change the amenity of the properties currently fronting Rahui Road, but this will be offset to a degree by the conditions proposed for this area and the landscaping of the reconfigured Pare-o-Matangi Reserve.
- [770] The combined width of the Expressway and re-aligned NIMT creates visual and functional severance effects, which impact on public use and enjoyment. Physical severance will be offset by cross-connections and the Overbridge will include provision for walking and cycling specific facilities which are currently absent. These will be important for local journeys within the township. The ULDF provides for future design criteria for the network of walkways that are key to pedestrian connectivity. On completion of construction, access to and from Rahui Road will improve because of reduced roundabout usage on SH1. Accessibility of, and signage at, the interchanges will promote business viability in the Ōtaki Retail area.
- [771] The Board has concerns stemming from public submissions on localised impacts on both sides of the Rahui Road Overbridge. The Board heard from Mr and Mrs Christie of Ōtaki Motel on the impact on their business in terms of access and the area's history, and from Mr Holmes, for the owners of the former Milk Treatment Station. The Board recognises the importance of the

³⁵⁴ Curtain, EIC, paragraph 52.

³⁵⁵ Curtain, EIC, paragraph 69.

Pare-o-Matangi Reserve, its history and the contribution of the community to its current form and development.

- [772] The Board agrees with the urban design elements proposed, with conditions, for the Ōtaki area. On balance, there will be long-term connectivity benefits from the Rahui Road Overbridge. The safety it provides and the extensive landscaping proposed can be expected to link the public recreation area of Pare-o-Matangi with the adjacent railway and retail precincts. This is likely to confer benefits on Ōtaki generally, with the long-term benefits outweighing the loss from the Project and its construction.
- [773] The Board agrees with the urban design elements (as proposed, with conditions) for the Ōtaki area.

South Ōtaki

- [774] Apart from the existing industrial uses, this sector is rural and used for recreational purposes relating to the Ōtaki River. Overall, Mr Curtain³⁵⁶ assessed the impact on urban form and land use in this sector as low. The dual Ōtaki River bridges are the major structures in this sector. Details of their design will be in the ULDF. Retaining or improving the walkways, underpasses and reconfigured carparks on both sides of the river ensure the area's recreational amenity will be enhanced, and east-west connectivity will be improved by the grade-separated bridge at the Ōtaki South interchange.

Te Horo

- [775] Mr Curtain's assessment is that in terms of urban design, the effect of the Project on the Te Horo sector will be neutral. The area is zoned rural in the KCDP and associated documents. The predominant use is rural, with small settlements either side of the Project, and although some rural land will be lost, the urban land will be relatively unchanged by the Project.
- [776] The visual severance of the Expressway will be mitigated to a degree by landscape planting. Though most community facilities are to the east of the Project and the main residential areas to the west, the resultant physical severance will be mitigated by the grade-separated Overbridge, improving connectivity, lessening severance and thereby improving community amenity. The Overbridge was included in the Project after the MCAT evaluation and feedback from the community and key stakeholders.
- [777] Despite that, the future functionality of the Te Horo area was a matter of concern for the Board. There is no nearby access to the Expressway for trips to or from the area. Access to Te Horo for Expressway users necessitates entry or exit at Waikanae or south Ōtaki. Though east-west access will now be provided by the Overbridge, with footpaths and cycleways included, the evidence on the expected use and linkage was not convincing. Improved safety will however result.
- [778] Submissions expressed concern with the visual impact on the community and landscape from what will become three corridors. Bol site visits

³⁵⁶ Curtain, EIC, paragraph 88.

demonstrated the high traffic levels and dangers inherent in crossing SH1. They currently divide the Te Horo communities and may well have influenced development in the area over time.

- [779] The Board accepts that the construction of the Overbridge and site-specific landscaping in the environs of Te Horo – though much is outside the designation – will mitigate the visual impacts of the Project and significantly improve safety and connectivity of their lifestyles for the Te Horo communities.

Mary Crest to Peka Peka

- [780] Mr Curtain's³⁵⁷ view was that the impact of the Project on the urban form and land use in this rural sector would be neutral, with amenity values not adversely affected by the construction of the Mary Crest Expressway Overbridge. That, together with the new local arterial road, including a connection at Te Hapua Road, plus continued use of the present SH1, will enhance connectivity.

Findings on Urban Design

- [781] Mr Curtain³⁵⁸ was satisfied that the urban design effects were positive and the existing urban form and land uses were not significantly disrupted by the Project. Potentially negative effects had been adequately avoided, mitigated or remedied. He was confident that adherence to the evolving ULDF by consultation throughout construction and implementation will ensure that effects on urban form and land use will continue to be positive.
- [782] The Board agrees with that comment.

³⁵⁷ Curtain, EIC, paragraph 111.

³⁵⁸ Curtain, EIC, paragraph 140–142.

5. MINISTER'S REASONS FOR DIRECTION OF PP20 TO BOARD

[783] The Minister's reasons, dated 3 April 2013, for making her direction that the PP20 Proposal was one of National Significance included the fact that it involved two NoRs and 49 resource consent Applications. She said:

"The matters proposed by NZTA and KiwiRail are a proposal of national significance having given regard to the following relevant factors in section 142(3) of the RMA:

- *The proposal 'results or is likely to result in or contribute to significant or irreversible changes to the environment (including the global environment)' (section 142(3)(a)(v)), through the addition of an expressway to the largely rural environment with large structural and elevated components including a new bridge over the Ōtaki River.*
- *The proposal has a construction footprint of 152 hectares and is likely to result in the significant use of natural and physical resources (section 142(3)(a)(ii)). Associated earthworks will require approximately 800,000m³ of imported fill. The estimated cost of construction is \$252 million and the proposal requires the acquisition of 122 land interests and the potential removal of 30 houses.*
- *Based on the many attendees at public meetings, culminating in submissions received during consultation (mostly in support of an expressway), the variety of concerns raised and media coverage on the Wellington Northern Corridor generally, the proposal has aroused widespread public interest regarding its actual or likely effect on the environment (section 142(3)(a)(i)).*
- *The proposal 'affects or is likely to affect more than 1 region or district' and 'relates to a network utility operation that extends or is proposed to extend to more than 1 district or region' (sections 142(3)(a)(ix) and 142(3)(a)(x)) as it is a network utility operation that whilst physically contained within the boundaries of the Kāpiti Coast District also falls within the jurisdiction of the Greater Wellington Regional Council. The proposal is also a key section of the wider Wellington Northern Corridor Road of National Significance, which will affect six districts and two regions in its entirety. The proposal also affects the North Island Main Trunk railway line, linking Auckland and Wellington, a critical part of KiwiRail's key freight route from Auckland to Christchurch.*
- *The Wellington Northern Corridor is identified in the Government Policy Statement on Land Transport Funding 2012 as one of seven Roads of National Significance requiring significant development to reduce congestion, improve safety and support economic growth. The proposal, as part of the wider Wellington Northern Corridor Road of National*

Significance, will assist the Crown in fulfilling its public health, welfare, security, or safety obligations or functions (section 142(3)(a)(viii)) by providing a safe, reliable, secure and resilient road, as an alternative route into and out of Wellington, with the ability to withstand natural hazards.

- *Greater Wellington Regional Council is of the view that the proposal is of national significance.*

Direction to a Board of Inquiry

Before reaching my decision to direct the Peka Peka to North Ōtaki Expressway proposal to be referred to a board of inquiry for decision I considered the following relevant factors:

- *The Environmental Protection Authority recommendation that I refer the matter to a board of inquiry.*
- *The Government has indicated, through the National Infrastructure Plan and the GPS, the continued funding of the seven Roads of National Significance that are critical to support New Zealand's economic growth aspirations. The Wellington Northern Corridor, of which the Peka Peka to North Ōtaki Expressway proposal is part, is one of these Roads of National Significance. Directing this proposal to a board of inquiry will provide a decision-making body consistent with that used for the Transmission Gully and MacKays to Peka Peka proposals (as previous sections of the Wellington Northern Corridor).*
- *The board of inquiry process will provide for a comprehensive assessment of the Notices of Requirement and resource consent applications within a streamlined process.*
- *The board of inquiry process allows the public the opportunity to have their views considered in front of a panel of skilled decision makers.*
- *The board of inquiry process will provide greater certainty for all parties to the application as a decision is required within nine months. The Environment Court or the relevant local authorities are not subject to this timeframe.*
- *The views of the applicant and the relevant local authorities that would have processed and decided the matters if I had not directed the matters to be referred to a board of inquiry for decision; and*
- *The capacity of those relevant local authorities."*

[784] The Board has paid the required regard to the terms of the Minister's Direction.

6. INFORMATION PROVIDED TO BOI BY EPA UNDER S 149G

- [785] The information provided to the PP2O Board by the EPA under s 149G, apart from the Applications, included all relevant material received by the EPA, all submissions and the Key Issue Statements, both dated 17 May 2013, from the relevant local authorities, KCDC and GWRC furnished under s 149G(3). The non-statutory completeness reports from both Councils were also provided.
- [786] The Board has read all that material and has, where germane to its Decision, taken it into account.

7. ALTERNATIVE SITES, ROUTES OR METHODS

[787] The Board is required to consider the issue of alternative sites, routes or methods for two reasons:

- a) First, s 88(2)(b) requires that applications for resource consent include an AEE in accordance with Schedule 4. Clause 1(d) Schedule 4 requires that where it is likely that an activity will result in any significant effect on the environment (as it is conceded the Project will), an AEE should include “*a description of any possible alternative locations or methods for undertaking the activity*”.
- b) Secondly, s 171(1)(b) requires, subject to two qualifications which do not arise in relation to the Project, the Board to have particular regard to “*whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work*”.

[788] The Board notes that, if the requiring authority has made sufficient investigations of alternative routes, sites, overflows, the Board is not required to consider whether the best has been chosen, and that it is not for the Board, or any other decision-maker, to substitute its own choice for that of the requiring authority.

[789] Further, in *Waimairi District Council v Christchurch City Council*,³⁵⁹ the Court, considering s 118(8) of the Town and Country Planning Act 1977 – the precursor to s 171(1)(b) – held:

“Finally under this head, we wish to say something more about the provisions of s 118(8). In some respects they are overlapping. For example, economic, social and environmental effects of a proposal may be considered along with site suitability. Alternative sites, routes and methods may be considered along with site suitability and the economic, social and environmental effects. We think it is wrong to be too rigid in examining the matters set out in this subsection. What is important is that each of them is given consideration. Then too, so far as the matters in s 118(8)(d) are concerned, we do not consider that Parliament intended that alternatives should necessarily be excluded before the Tribunal can be satisfied that the matters set out in that part of the subsection have been given adequate consideration. We think the purpose of that part of the subsection is to enable the Tribunal to be satisfied that a requiring authority has not acted arbitrarily in selecting its site, its route or its method of achieving its objective. Assuming that there are alternatives, the decision as to which one is selected involves a consideration of matters of policy which are outside the Tribunal’s ability to adjudicate upon. That is not to say that the Tribunal should not give close attention

³⁵⁹ C30/82, 13 July 1982, pp 24–25, applied in *Quay Property Management Limited v Transit New Zealand*, W28/2000, 29 May 2000 (EnvC) at [148] and adopted by M2PP, para [1422] p 260.

to these matters where they are relevant. But Parliament has stopped short of giving this Tribunal the jurisdiction to direct that any other alternative must be selected. In the absence of that power, we think, in the end, it would become an exercise in futility if the Tribunal were required to examine, in detail, and adjudicate upon, in detail, the merits of various alternatives. In satisfying itself that adequate consideration is being given to alternatives, inevitably the Tribunal will find itself considering various land use planning merit aspects. But we repeat and stress that the wording of this part of the subsection requires us to have regard to the extent to which adequate consideration has been given. It does not require us to be satisfied that there are no alternative sites, routes or methods.”

- [790] This Board³⁶⁰ repeats its endorsement of the view expressed in *Auckland Volcanic Cones Society Inc. v Transit New Zealand Ltd*,³⁶¹ *Re Queenstown Airport Corporation Limited*³⁶² and the full Bench of the High Court in *Meridian Energy Limited v Central Otago District Council*³⁶³ that s 171(1)(b) does not entitle a decision-maker to substitute its own choice of alternative for those considered by the requiring authority and that not all alternatives need be excluded.

NZTA Assessment of Alternatives

- [791] Part E, Section 9, Volume 2 of the AEE sets out a summary of NZTA and KiwiRail’s consideration of alternatives, which it described as leading to its decision preferring the Expressway corridor now proposed. It stated:³⁶⁴

“The NZTA’s conclusion (in late 2011) was that the central route, which had previously been presented to and discussed with the local communities as the NZTA’s preferred option, was confirmed to achieve best fit with the NZTA’s Project objectives and statutory obligations.”

- [792] Part E contains a comprehensive description of the option evaluation, design development phases, and the methodology adopted in refining the options to NZTA’s preferred route. It makes reference to TR3: Route Options Review which is detailed in its screening, assessment, and evaluation of historical route alignment alternatives, project route alternatives and also alternative arrangements for the preferred alignment. The AEE summarises the assessment of alternatives as follows:³⁶⁵

“The NZTA and its predecessors carried out (or commissioned) numerous historical assessments of alternative State highway routes through the Kāpiti district, including between Peka Peka and Ōtaki.

In developing the Project, that historical work was examined and brought up to date. The updated assessment involved detailed

³⁶⁰ MacKays to Peka Peka Report and Decision, section 13.2.1, paragraphs 1424–1427.

³⁶¹ *Auckland Volcanic Cones Society Incorporated v Transit New Zealand* [2003] NZRMA 54 (EC), [2003] NZRMA 316 (HC).

³⁶² *Re Queenstown Airport Corporation Ltd* [2012] NZEnvC 206 at [50].

³⁶³ *Meridian Energy Ltd v Central Otago District Council* [2011] 1 NZLR 482 at 507, at [81].

³⁶⁴ AEE, chapter 9, Overview, p 104.

³⁶⁵ AEE, chapter 9, Overview, p 104.

multi-criteria analysis of four alternative routes, a western route, a central route closely following the existing SH1 (which was ultimately preferred for the Expressway), and two routes to the east, the 'eastern plains' and 'eastern foothills' routes ...

Parallel processes for defining the Expressway route were conducted during 2010 and 2011. These processes focused on the location of interchanges and cross-corridor local connections, and specific Expressway route choices. The processes were informed by specialist inputs from a multi-disciplinary expert team. Public consultation and meetings with key stakeholders provided valuable feedback that was factored into the NZTA's decisions on options.

As a result of these processes, the Project design incorporates:

- *Half-interchanges to the north and south of Ōtaki, providing full access from the Expressway to the Ōtaki Railway Retail area and vice versa;*
- *The following cross-corridor local connections:*
 - *At Te Horo, a local road bridge over the Expressway, NIMT, and the existing SH1, connecting residences and businesses to the east and west of the transport corridor – a more northerly location was chosen because of preferences expressed by Te Horo residents during consultation;*
 - *Just south of Ōtaki River, new local roads and bridges across the Expressway and NIMT, connecting Ōtaki Gorge Road and Old Hautere Road with the existing SH1 to provide access to and from Ōtaki, and linking to the Expressway (heading south); and*
 - *At Rahui Road in Ōtaki, a local road bridge across the Expressway and realigned NIMT, linking the Ōtaki Railway Retail area with residential areas to the east;*
- *Specific provision for cyclists and pedestrians on all cross-corridor local connections;*
- *An alignment at Mary Crest that avoids significant indigenous vegetation remnants and sites/areas of cultural significance; and*
- *An alignment at Te Horo that facilitates the benefits of the Mary Crest alignment, and enhances safety and urban design outcomes.”*

[793] The Board considers this to be an accurate, albeit summarised, description of the process undertaken by NZTA. That was in conformity with the nine stage alternatives methodology³⁶⁶ in TR3. The particular assessments made

³⁶⁶ TR3, section 1.7.

are set out at sections 2–4. They include a comprehensive multi-criteria analysis and a subsequent sensitivity assessment of the evaluation criteria.

KiwiRail Assessment of Alternatives

[794] KiwiRail said it worked collaboratively with NZTA throughout the development of the Project. For that reason:³⁶⁷

“... the notices of requirement and resource consents have been jointly pursued, consistent designation conditions sought, and expert witnesses shared.”

[795] Ms Butler for KiwiRail described that prior to the assessment of the rail alternatives it developed a Rail Basis of Design³⁶⁸ document in conjunction with NZTA. She outlined the purpose of this as to:³⁶⁹

“... ensure that the design of any realigned NIMT was acceptable to KiwiRail in terms of its operational requirements and objectives.”

[796] Mr Coulman described the assessment of alternatives undertaken in relation to rail. He summarised the assessments undertaken as follows:³⁷⁰

“As discussed above, the Expressway route chosen by the NZTA necessitates realignment of a section of the NIMT. In terms of the alternative sites, routes, and methods considered for that realignment, the short length of the realigned NIMT, the required curve radii, the double track future-proofing, and the significant environmental and technical constraints through Ōtaki meant that a limited range of alternatives were able to be assessed. However, design variants were considered and included those set out below.

The original 2002 scheme design included an Expressway alignment that required a significant relocation of the historically significant Ōtaki Railway Station and platform. This would have significantly altered the relationship of the historic building with its surroundings and would have required a large part of the existing station car park, significantly affecting its parking capacity.

The current design has sought to retain the Ōtaki Railway Station at its existing location and has achieved this with a re-orientation and slight shift to the east, away from the car park, thus improving the outcome over the earlier scheme. To achieve this the Expressway and NIMT alignment were pulled closer together, which also then aided improvements to the grades and height of the Rahui Road local road bridge.

Alternative options for the Ōtaki Railway Station were considered and included retaining the building in its current location while building out the platform, or retaining the station and canopy context to the railway by re-orientating

³⁶⁷ KiwiRail Opening Submissions, paragraph 2.4.

³⁶⁸ TR2.

³⁶⁹ Butler, EIC, paragraph 7.2.

³⁷⁰ Coulman, EIC, paragraphs 206–210.

the building. Given the former option left a significant space between the canopy and platform edge (circa 9 to 10m minimum), the latter option was adopted following consultation and heritage assessment feedback.

The current design, by keeping the Expressway and the realigned NIMT close together, has also reduced residual land parcels sitting between the 2 transport corridors."

- [797] Again, and while summarised, the Board finds this to be an accurate account of the assessment of the rail alternatives. It is clear that the rail realignment options were an integral part of the Project based assessments, on which KiwiRail adopted, subject to its Basis of Design.

Findings on Alternative Sites, Routes or Methods

- [798] It is evident to the Board that the assessment process involved a lengthy period of public consultation led by NZTA.³⁷¹ TR22A describes in the Executive Summary earlier community engagements that occurred between 2001 and 2009. Once the current alignment was chosen more focused consultation in relation to this Project commenced in February 2011.

- [799] Some submitters, such as Mrs Sutton and Mrs Christie, raised concerns in relation to the adequacy of consultation. The initial focus of these concerns appeared to be, as Mrs Christie put it, that "...NZTA telling us this is the route".³⁷² However, Mrs Christie, in cross examination, in relation to her specific circumstances, accepted that:³⁷³

"... there's been a lot of consultation that's true, so I acknowledge that."

- [800] The proposition that the consideration of alternatives and consultation was inadequate was refuted by Mr Coop, who stated:³⁷⁴

"And the consideration of alternatives has assessed both alternative corridors in a strategic sense and then alternatives within the project, and by that I mean alternatives, connections, alignments and so forth. I record my opinion that there's been extensive processes of project shaping and that's been informed by the public consultation that has occurred through the project."

- [801] The Board noted that some submitters^{375 376} indicated that consultative opportunities were known to them; however, and for varying reasons, they had elected not to participate as fully as they could.

- [802] Overall, the Board is satisfied that public consultation was adequate and suitably informed those potentially affected of the consideration of alternatives especially of routes. In some instances, NZTA might have improved on the way it communicated with submitters, but the Board's view is that submitters' concerns related to consultation do not undermine the

³⁷¹ AEE, section 10 and TR22A and 22B, and see [44]-[61] above.

³⁷² Hearing Transcript, page 777.

³⁷³ Hearing Transcript, page 785.

³⁷⁴ Hearing Transcript, page 874.

³⁷⁵ Hearing Transcript, page 769.

³⁷⁶ Hearing Transcript, page 796.

conclusion there was no material failure to adequately consider alternative sites, routes or methods.

- [803] A range of further and alternate options and methods were described to the Board by submitters. Many related to hydrology, ecology and transport access. There was in general, a geographic similarity to many of these submissions. They were largely focussed in and around Te Horo and Rahui Road.
- [804] The specific range of alternatives is considered in greater detail in the effects sections of this Report. The evidence was clear to the Board that the alternative outcomes sought in submissions had been adequately considered, adopted or discounted. This was, for example, the case in relation to the proposed Rahui Road Overbridge. The evidence was that, while not initially proposed, its provision and location had emerged from the result of public consultation and accessibility outcomes in Ōtaki.³⁷⁷ Similar outcomes were the change in route south of Mary Crest and the proposed Te Horo Overbridge both the result of consultation.
- [805] The Board received evidence on the subject of alternative route assessments from Ms Allan, an independent planning consultant for NZTA. Ms Allan was the author of TR3. Her evidence was principally focussed on the Expressway route assessment methodology, the evaluation process and assessment of alternatives for the route.³⁷⁸ Ms Allan relied on the evidence of Mr Coulman in relation to the detailed elements of the local road network and cross-corridor connections, and the evidence of Ms Butler insofar as the KiwiRail alternatives are concerned. She concluded that:³⁷⁹
- “... an appropriate range of feasible route options was robustly considered before the NZTA Board made its final decision on the route of the Expressway.”*
- [806] Further to this, the Board commissioned an independent s42A assessment, from Mr Kyle and Mr Turner of Mitchell Partnerships Limited. The First Edition of that report found that:³⁸⁰
- “... it is not incumbent upon a Requiring Authority to demonstrate that it has considered all possible alternatives or that it has selected the ‘best’ of all available alternatives.”*
- [807] That comment echoes the authorities mentioned earlier. Section 171(1)(b) does not require applicants to demonstrate consideration of all possible alternatives, or even a selection of the best. *Meridian Energy* makes clear the Board’s obligation under s171(1)(b) is to assess whether alternatives have been properly considered, not whether all those other than the one selected have been excluded, and *Re Queenstown Airport Corporation* emphasises that is not for a Board to substitute its own choice for that put forward.

³⁷⁷ Coop, EIC, paragraph 143.

³⁷⁸ Allan, EIC, paragraph 17.

³⁷⁹ Butler, EIC, paragraph 26.

³⁸⁰ Section 42A Report, First Edition, September 2013, section 4.5.3.

[808] Mr Kyle's report went on to conclude:³⁸¹

"... NZTA/KiwiRail went through a fulsome [sic] and systematic selection basis before finally coming to a conclusion about the preferred alignment."

[809] The evidence the Board has heard leads it to conclude that the consideration of alternatives has been sufficiently broad and varied to meet the test for adequate consideration. Indeed, the Board is satisfied the range of alternatives, sub-options and the methodology (including sensitivity analyses) adopted goes some way beyond the s171(1)(b) threshold for consideration of alternative sites, routes or methods.

[810] In this case, the Board is satisfied that NZTA gave adequate consideration to alternative sites, routes or methods of undertaking this work before deciding on that in the Applications. As detailed earlier, three routes were considered. Extensive consultation was undertaken. The "sand hills" route originally favoured was rejected for valid reasons, as was the more inland route. That the route ultimately chosen was favoured was again the subject of extensive consultation and consideration. The route was altered as a result of that further consideration and consultation. Against the pressing need for the Wellington RoNS construction, the Board's view is that NZTA has given adequate consideration to the alternatives and accordingly that these Applications comply with s 171(1)(b).

[811] The Board reaches the same conclusion for KiwiRail's consultation of the matter.

³⁸¹ Section 42A Report, First Edition, September 2013, section 4.5.4.

8. OBJECTIVES OF REQUIRING AUTHORITIES: IS PP20 “REASONABLY NECESSARY”?

- [812] The next statutory requirement is that of s 171(1)(c), namely whether the Applications are “*reasonably necessary for achieving the objectives of the requiring authorities*”, that is to say whether they fall within their statutory mandate.
- [813] NZTA’s statutory objectives are laid down in the Land Transport Management Act 2003. As amended in 2013, s 95(1) now sets out NZTA’s statutory objectives as being to “*undertake its functions in a way that contributes to an effective, efficient and safe land transport system in the public interest*”, while s 95(1)(a) has also been recently amended to require NZTA to “promote” such a system. The new wording replaces NZTA’s former statutory objectives and functions as being to undertake or promote the functions in a way that “*contributes to an affordable, integrated, safe, responsible and sustainable land transport system*”.
- [814] However, ss 95(1)(c) and (e) have not been amended. They require NZTA to manage the State Highway system, including planning, funding, designing, supervising construction and maintenance in accordance with the Government Roding Powers Act 1989. That objective meshes with the Land Transport Management Act 2003 Statement of Purpose in s 3 and the Government Roding Powers Act 1989, which provides the statutory framework for the management of New Zealand’s land transport system and sets NZTA’s roading responsibility for roads, State Highways and Motorways, amongst others. Section 61 of that Act gives NZTA in effect “*sole powers of control for all purposes, including construction and maintenance of all State Highways*”.
- [815] Whichever definition of NZTA’s objectives is considered, the Board’s view is that its Application falls within its statutory objectives.
- [816] KiwiRail’s objectives are set out in the New Zealand Railways Corporation Act 1981, s 12 of which prescribes the then Corporation’s functions as including “to establish, maintain and operate or otherwise arrange for safe and efficient rail freight and passenger transport services within New Zealand”, with safety factors being prominent in the Railways Act 2005. The National Rail Strategy 2005-2015 sets the key results as being increasing freight, passengers, and improving rail safety. KiwiRail also operates under the National Infrastructure Plan 2010, requiring KiwiRail to move towards commercial independence and long term financial viability over time.
- [817] The Board is of the view that KiwiRail’s NoR also falls within its statutory objectives.

- [818] The construction of what amounts to whether a designation is “reasonably necessary” has been addressed in a number of cases. As with TG and M2PP,³⁸² this Board is content to follow the decision in *Countdown Properties (Northland) Limited v Dunedin City Council*³⁸³ that the phrase should be interpreted in relation to achieving the purpose of the Act and the functions of territorial authorities and that “necessary” indicates that “something less than absolute necessity or essentiality is contemplated”. The phrase is similar to “expedient” or “desirable”.
- [819] The Board takes the view that the Applications satisfy the test that they are “*reasonably necessary*” to achieve the objectives of the requiring authorities.”

³⁸² Transmission Gully Reprt and Decision, section 11.1, paragraph 103; MacKays to Peka Peka Report and Decision, section 13.2.2, paragraph 1432.

³⁸³ *Countdown Properties (Northlands) Ltd v Dunedin City Council* [1994] NZRMA 145 (HC) at [185].

9. POLICY STATEMENTS, PLANS AND STANDARDS

National Policy Statements

- [820] Of the three NPS potentially relevant to PP2O, two, the NPS on Electricity Transmission 2008 and the NZ Coastal Policy Statement 2010 are of limited relevance: the NPS on Electricity Transmission is almost certainly inapplicable but, if the contrary is thought to be the case, the NPS is appropriately dealt with by the condition on Network Utility, and the NZ Coastal Policy Statement is of relevance to PP2O only in the sense that sediment-laden water may reach the coast, but again, that aspect of the Project is appropriately dealt with by the measures discussed and adopted in that section of this Report.
- [821] The NPS for Freshwater Management 2011 deals with water quality and quantity, management, tangata whenua interests and implementation programmes. All those aspects have been appropriately detailed and will be dealt with by the imposition of the conditions proposed in the relevant sections of this Report.
- [822] For completeness, the Board notes there is a proposed NPS on Indigenous Biodiversity which Ms Myers put in evidence, together with a number of other policies. Being currently inoperative, it cannot affect the Board's findings but it would appear that Ms Myers' agreement to the terrestrial ecology conditions can be taken as her acceptance that they conform with the proposed NPS.

National Environmental Standards

- [823] Four NES, regulations made under s 43, are relevant or potentially so. They are the NES for Air Quality, for Sources of Human Drinking Water, for Electricity Transmission Activities and for Assessing and Managing Contaminants in Soil to Protect Human Health.³⁸⁴
- [824] The NES for Air Quality (NESAQ) sets standards to protect public health and the environment amongst other things, setting concentration limits for air pollutants, particularly CO, NO₂, SO₂, O₃ and fine particulate matter.
- [825] No consent relating to the standard is sought but the requirements for the management of air quality within airsheds are in the AEE, and are appropriately dealt with by the conditions proposed.

³⁸⁴ Resource Management (National Environmental Standards for Air Quality) Regulations 2004; Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007; Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009; Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

- [826] The NES for Sources of Human Drinking Water (NESSHDW) aims to reduce contamination risk by requiring Councils to consider the effects of activities on drinking water sources when granting permits.
- [827] No consents under this NES are sought as none of the water-takes relating to construction of the Project are for drinking water.
- [828] Potential effects on groundwater resources are discussed and mitigation measures adopted in the relevant section of this Report.
- [829] The NES for Electricity Transmission (NESET) has earlier been dealt with. It is inapplicable to PP2O or, if marginally applicable, has been dealt with in relation to the condition concerning network utilities.
- [830] The NES for Assessing and Managing Contaminants in Soil to Protect Human Health sets standards for land use activities in relation to contaminated or potentially contaminated land and requirements for the protection of human health.
- [831] Sites with potential for ground contamination have been identified and an appropriate protocol put in place for management of contaminated land, should it be discovered. The details are in the relevant section of this Report. If resource consents prove necessary, they will be sought when required.

Operative or Proposed Regional Policy Statements

- [832] Both an operative (1995) and a proposed (2009) RPS for the Wellington region exist. They set the GWRC's objectives, policies and methods for the management of the region's natural and physical resources.
- [833] The proposed RPS is considered by the Applicants to be of greater weight than the operative RPS because the former has been through the public notification, submission, hearing and decision-making process and is currently, subject to appeals, in its final stages of adoption. Its objectives and policies essentially duplicate those in the operative RPS, and are accordingly more relevant to the Project.
- [834] The proposed GWRPS contains chapters which marginally reflect the resource management issues discussed, section by section, earlier in this Report, such as air quality, fresh water, historic heritage, indigenous ecosystems, landscape, form and design and function, relationships with tangata whenua and soils. It would be repetitious to repeat the Board's earlier discussion and findings on these Topics. The Board merely reiterates that all have been appropriately addressed by the Applicants and the management plans and other conditions proposed in relation to the various Topics appropriately mitigate, avoid or remedy any negative effects on the environment.
- [835] One area deserving of separate mention is that objective 10 of the proposed GWRPS defines regionally significant infrastructure, including State highways, and says the "*social, economic, cultural and environmental benefits*" of regionally significant infrastructure should be recognised and protected. That proposed policy ties in with the earlier discussion on the Wellington Northern Corridor RoNS.

- [836] The objectives for the Expressway and the NIMT realignment as set out in the earlier assessments in the TRs and in this Report conform with the GPS on Land Transport Funding

Regional Plans

- [837] GWRC has five Regional Plans (RP) providing guidance for the implementation of its functions under the RMA. These are the RP for Fresh Water for the Wellington region (1999); the Air Quality Management Plan for the region (2000); the Coastal Plan for the region (2000); the RP for Discharges to Land for the region (1999); and the Wellington Regional Soil Plan (2000).
- [838] The RP for Fresh Water applies to all fresh water in the region, including rivers, lakes, streams, aquifers and artificial watercourses, but excludes water in the coastal marine area. It also applies to river and lake beds and to all activities that use fresh water in those areas.
- [839] Relevant policies and objectives include dealing with the relationship of tangata whenua with fresh water, natural values, amenity values and access, flooding, flood mitigation and use. Again, it would be repetitious to note the Board's adoption of the relevant TRs, the Board's earlier findings and the conditions to be imposed. In particular, the Board again notes:
- a) The execution of NZTA-Ngā Hapū o Ōtaki MoP, a positive agreement in relation to cultural issues, especially fresh water, which meets the concerns of the Hapū, as reflected in its submission;
 - b) The RP for Fresh Water's objectives concerning the natural value of waters, their amenity values and access, their use and development and discharges are also discussed and assessed elsewhere in this Report. The Proposal conforms with the Plan;
 - c) In particular, flood mitigation and the use of river beds have been discussed in detail. The mitigation measures proposed and the conditions relating to all hydrological matters are stringent and meet the RP for Fresh Water's objectives;
 - d) The RP for Air Quality Management also deals with issues elsewhere discussed. Detailed conditions are proposed to ensure that air quality degradation during construction is mitigated and air quality in the Project area once the Expressway is operational will be improved;
 - e) The Regional Coastal Plan is, like the NZ Coastal Policy statement, largely irrelevant except in relation to the containment and mitigation of the effects of sediment-laden water. The conditions imposed meet the Plan's objectives;
 - f) The RP for Discharges to Land is similarly met by the matters discussed in the relevant section and the

conditions imposed, particularly in relation to contaminated land, if found;

- g) The Wellington Regional Soil Plan is relevant to the Project, given the significant volume of earthworks involved in construction. However, the relevant TRs, the Board's discussion and the conditions imposed appropriately mitigate or avoid negative effects on the environment from the construction and such matters as riparian revegetation and measures to combat erosion and sediment control.

Kāpiti Coast District Plan 1999

- [840] As might be expected, numerous provisions of the Kāpiti Coast District Plan (KCDP) are potentially affected by the Project.
- [841] There are, first, a number of relevant designations (requiring authority shown in brackets):
- D010 for the existing SH1 (NZTA);
 - D0301 for the NIMT (KiwiRail);
 - D0404 Chrystall's extended stopbank (GWRC);
 - D0901 for telecommunication, radio communication and ancillary purposes on SH1 and at Te Horo (Telecom NZ Ltd);
 - D1135 for local roads (KCDC);
 - D1120 for water supply for Hautere and Te Horo bores and treatment plant (KCDC);
 - D1121 for three Ōtaki water bores (KCDC).
- [842] The Project footprint spans a number of zones within the KCDP. These include rural, residential and river corridor zones. The footprint covers or is adjacent to a number of sites with special characteristics, such as the natural landscape of the Ōtaki River, the existing and former railway stations, bush remnants and the Ōtaki Railway Wetland.
- [843] The KCDP also contains a number of relevant objectives and policies for the residential and rural zones, tangata whenua, earthworks, heritage, landscape, ecology, noise, natural hazards and transport. Again, these have been extensively discussed elsewhere and the Board repeats its findings and notes the mitigation measures proposed and enshrined in the conditions. The MoP is again relevant to this aspect of the matter, as are alterations in the Project consequent on consultation, such as the profile of the Expressway and bridges being lowered to reduce the Expressway's visual effects.

Proposed Kāpiti Coast District Plan

- [844] The Board notes that counsel for KCDC advised that the proposed KCDP has been notified, but that hearings have not yet commenced. Because Mr van Bentum relied on the proposed Plan's policy for hydraulic neutrality for

developments, it has been considered in the hydrology section, but apart from that, the Plan has little weight in relation to this matter.

Key Issues and s42A Reports

- [845] As an additional check on the Applications' compliance with the various Plans discussed, the Board notes that a number of those issues were raised in the Key Issues Reports; and were commented on in the first s 42A Report from Mr Kyle, and again in the second edition of his Report.
- [846] In the second edition, Mr Kyle commented³⁸⁵ that, with the alterations in stance following receipt of the opposing evidence and the amendments agreed at the joint conferencing of the experts on fresh water, the Project was then, generally consistent with the relevant provisions of the NPS on Fresh Water Management.
- [847] Mr Kyle considered the Project to be generally consistent with the objectives and policies in the GWRPS concerning fresh water and urban design but continued to express dubiety concerning the proposal for terrestrial ecology and biodiversity. That was however, before further joint conferencing produced agreement between the experts. Mr Kyle's view was that, provided the conditions proposed were imposed in relation to residential amenity, dust, noise, visual effects and the effects on the natural and physical environment, the Project was broadly consistent with the KCDP.

Findings on Policy Statements, Plans and Standards

- [848] Having had the required "*particular regard*" to all the issues in the various Policy Statements and Plans discussed, the Board repeats its conclusions and findings from other portions of the Report, that the Applicants have adopted appropriate means to mitigate, avoid or remedy the negative effects on the environment of the Expressway. Those mitigation measures are in the Board's findings and conditions. Those matters conform with all the Policy Statements and Plans discussed.

³⁸⁵ Section 42A Report, Second Edition, September 2013, section 4.1.1.

10. OTHER MATTERS

[849] Though “*relevance*” is an additional criterion only in s 104(1)(c), that section and s 171(1)(d) require the Board to have particular regard to “*any other matter*” if “*considers reasonably necessary*” to determine the Applications or make a recommendation on the NoRS.

[850] These subsections are not limited by or to the RMA. The Applications confine themselves to documents and listed no fewer than 31 said to be of relevance to the Project. They were:³⁸⁶

- National State Highway Strategy;
- Government Policy Statement on Land Transport Funding prepared under the LTMA;
- New Zealand Transport Strategy 2008;
- National Infrastructure Plan 2011;
- National Land Transport Programme (2009–2012) prepared under the LTMA;
- State Highway Asset Management Plan (2012–2015);
- The 2012/13 State Highway Plan;
- NZTA Environmental Plan (2008);
- Getting There – On Foot by Cycle Strategic Implementation Plan 2006–2009, Ministry of Transport;
- New Zealand Urban Design Protocol (2005);
- Wellington Regional Strategy (2007);
- Wellington Regional Land Transport Strategy 2010–2040, prepared under the LTMA;
- Wellington Corridor Plan 2006 (updated 2012);
- Wellington Regional Land Transport Programme 2009–2012;
- Regional Freight Plan, Greater Wellington Regional Council (2011);
- Kāpiti Coast: Choosing Futures, Community Outcomes (2009);
- KCDC Development Management Strategy (2007);
- KCDC Sustainable Transport Strategy (2008);
- KCDC Cycleways, Walkways and Bridleways Strategy (2009);
- KCDC Subdivisions and Development Principles and Requirements (2005); and Kāpiti Coast Streetscape Strategy and Guideline (2008);
- Local Outcomes Statements
 - Draft Te Horo (2012)

³⁸⁶ AEE Appendix A, paragraph 1.8, pp 9–10 (amended) and AEE chapter 2, pp 11–22.

- Peka Peka (2011);
- Kāpiti Coast: Choosing Futures. Community Outcomes, Ōtaki Local Outcomes, Greater Ōtaki Vision (2007);
- Open Space Strategy (2012);
- Positive Aging on the Kāpiti Coast (2011);
- Youth2U Action Plan (2011);
- Kāpiti Coast: Choosing Futures, Stormwater Management Strategy (2008);
- Kāpiti Coast: Choosing Futures, Coastal Strategy (2006);
- Kāpiti Coast District Council Monitoring Strategy. Capturing our Environment (2002).

[851] Few of those documents were before the Board in evidence but the AEE summarised each and directed attention to the assessment of the Project in relation to each document. Many have been referenced and discussed elsewhere in this Report. The Board notes that Mr Kyle's first s 42A Report³⁸⁷ raised no issues with the relevance of the listed documents, nor suggested the Applications did not generally conform with them.

[852] The Board therefore concludes under ss 104(1)(c) and 171(1)(d) that relevant parts of the listed documents are "*reasonably necessary*" to assist the Board in deciding the Applications and determining the NoRs, but that they conform with other documents elsewhere discussed and their achievement is assisted by the conditions imposed.

³⁸⁷ Section 42A Report, First Edition, September 2013, section 4.4.

11. PART 2

[853] Both ss 104 and 171 are expressly subject to Part 2, which in effect, makes the previous discussion of the criteria under those sections subject to ss 5–8, which read:

5 Purpose

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, **sustainable management** means 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 well-being and for their health and safety while—*
 - (a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - (b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
 - (c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) *the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

- (f) *the protection of historic heritage from inappropriate subdivision, use, and development:*
- (g) *the protection of protected customary rights.*

7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) *kaitiakitanga:*
 - (aa) *the ethic of stewardship:*
- (b) *the efficient use and development of natural and physical resources:*
- (ba) *the efficiency of the end use of energy:*
- (c) *the maintenance and enhancement of amenity values:*
- (d) *intrinsic values of ecosystems:*
- (e) *[Repealed]*
- (f) *maintenance and enhancement of the quality of the environment:*
- (g) *any finite characteristics of natural and physical resources:*
- (h) *the protection of the habitat of trout and salmon:*
- (i) *the effects of climate change:*
- (j) *the benefits to be derived from the use and development of renewable energy.*

8 Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

[854] This Board is content to adopt what the M2PP Board said at the commencement of its discussion of Part 2 matters. It held:³⁸⁸

“[1458] The Part 2 considerations involve a balancing between considerations. Often these are competing considerations. There can be, and indeed in this case there are, tensions between cultural, social and economic wellbeing. Economic and social benefit may be achieved, but at a cultural cost. Of course, the reverse can also apply. There is also obviously competition between the various matters set out in ss6 and 7.

[1459] The balancing act required has been considered in a number of decisions. First, in New Zealand Rail Ltd v Marlborough District Council, Greig J stated:³⁸⁹

³⁸⁸ MacKays to Peka Peka Report and Decision, chapter 13, section 13.5, paragraph 1458–1461.

'Inappropriate' has a wider connotation in the sense that in the overall scale there is likely to be a broader range of things, including developments which can be said to be inappropriate, compared to those which are said to be reasonably necessary. It is, however, a question of inappropriateness to be decided on a case by case basis in the circumstances of the particular case. It is "inappropriate" from the point of view of the preservation of natural character in order to achieve the promotion of sustainable management as a matter of national importance. It is, however, only one of the matters of national importance, and indeed other matters have to be taken into account. It is certainly not the case that the preservation of the natural character is to be achieved at all costs. The achievement which is to be promoted is sustainable management and questions of national importance, national value and benefit, and national needs, must all play their part in the overall consideration and decision.

This Part of the Act expresses in ordinary words of wide meaning the overall purpose and principles of the Act. It is not, I think, a part of the Act which should be subjected to strict rules and principles of statutory construction which aim to extract a precise and unique meaning from the words used. There is a deliberate openness about the language, its meanings and its connotations which I think is intended to allow the application of policy in a general and broad way. Indeed, it is for that purpose that the Planning Tribunal, with special expertise and skills, is established and appointed to oversee and to promote the objectives and the policies and the principles under the Act.'

[1460] *In Ngati Ruahine v Bay of Plenty Regional Council*, Priestley J stated:³⁹⁰

'Turning to Part 2 of the Act, Mr McCarthy submitted that although the Environment Court was obliged to weigh the relevant factors to which that Part applied, the tangata whenua did not have a veto right. Sections 6, 7, and 8 of the Act were all prefaced with the words "in achieving the

³⁸⁹ *New Zealand Rail Ltd v Marlborough District Council* [1994] NZRMA 70 (HC), paragraphs 85–86.

³⁹⁰ *Ngati Ruahine v Bay of Plenty Regional Council* [2012] NZHC 2407, paragraph 55.

*purpose of this Act". That purpose is found in s 5. In carrying out the purpose of the Act to promote sustainable management of natural and physical resources, a Court had to reach a balanced result, having considered and weighed relevant Part 2 factors. I accept this submission. **The job of the Environment Court involves exercising a broad evaluative judgment on whether a proposal promotes sustainable management of natural and physical resources. The judgment involves weighing competing considerations.** (our emphasis)'*

[1461] So in this report, we have considered the obligatory matters in ss104 and 171 and ... have made factual findings that will allow us to carry out the weighing of competing considerations."

[855] In *North Shore City Council v Auckland City Council*³⁹¹ the Environment Court, relying on precedent, held:

"The method of applying s 5 then involves an overall broad judgment of whether a proposal would promote the sustainable management of natural and physical resources. That recognises that the Act has a single purpose. Such a judgment allows for comparison of conflicting considerations and the scale or degree of them, and their relative significance or proportion in the final outcome."

[856] As the Environment Court held in *Genesis Power Ltd v Franklin District Council*.³⁹²

"The remaining sections in Part 2, subsequent to s 5, inform and assist the purpose of the Act. We may accord such weight as we think fit to any competing consideration under Part 2, bearing in mind the purpose of the Act. The subsequent sections must not be allowed to obscure the sustainable management purpose of the Act. Rather, they should be approached as factors in the overall balancing exercise to be conducted by the Court."

[857] In the present context that comment also extends to ss 14–17. The Board has taken these into its consideration.

[858] Not all facets of ss 5–8 apply to the Project but it is convenient to begin this section of the Report with a discussion of s 6.

[859] The fact that the promotion of sustainable management of natural and physical resources involves a balancing and weighing of the matters of national importance listed in ss 6 and 7 is evident from the introductory

³⁹¹ *North Shore City Council v Auckland City Council* (1996) 2 ELRNZ 305, 347.

³⁹² *Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541, 544 at [53].

words of the sections themselves. Both speak of the exercising of functions and powers in relation to “*managing the use, development and protection of natural and physical resources*”. Those terms can be mutually contradictory, at least in relation to a major infrastructure project such as this. An example is that use of the land on which the Expressway is to be constructed as a traffic corridor debars protecting that land for its current rural or urban uses. So, though the list differs the matters, of national importance which all persons are to take into account in exercising their RMA functions and powers are matters to which they are to pay particular regard and all require balancing and weighing, one against the other.

- [860] Section 6(a) first requires recognition of the desirability of preserving the natural character of the coastal environment, including the coastal marine area. Other than in the attenuated case of sediment-laden water (which is effectively mitigated by conditions) this factor passes from consideration.
- [861] Section 6(a) next requires recognition and provision for wetlands, lakes, rivers, margins, and their protection from inappropriate use and development. The construction of the dual new bridges, the near-abolition of the Ōtaki Railway Wetland and flooding in the permanent or intermittent waterways attributable to construction and operation of the Expressway are adverse effects, temporary or permanent, but those adverse effects are not inappropriate given the detail, and are mitigated by the stringent conditions that are to apply to the construction of the Expressway and thereafter. The adverse effect of the construction of the bridges will be temporary and adequately mitigated on a permanent basis. The total area of wetlands within the Project area will be increased and the current wetlands improved. Flood protection, stormwater and sediment will all be appropriately contained by measures extending out well over a century.
- [862] Though, inevitably, public access to the watercourses may be restricted slightly during construction, implementation of the conditions will enhance and improve it once construction is complete, thus satisfying s 6(d).
- [863] The footprint of the Project designation contains no outstanding natural features or landscapes, so no separate consideration of s 6(b) is required.
- [864] In relation to ss 6(c) and 7(d), rigorous conditions have been imposed in relation to planting to replace the indigenous flora and fauna inevitably lost, wetlands are to be extended, the visual impact of the Expressway is to be softened by appropriate planting, there will be significant riparian planting along the watercourses, the landscape of areas such as Mary Crest and the Pare-o-Matangi Reserve is to be protected or preserved to the extent possible and strict measures will be in place to protect the area’s indigenous fauna and flora.
- [865] In relation to ss 6(c), 7(a)(aa) and 8 ,extensive consultation and discussion has taken place with tangata whenua through Ngā Hapū o Ōtaki. The MoP mutually acknowledges the Hapū’s cultural traditions as to their ancestral lands, water and other sites, and the Hapū in the MoP and in their submissions expressly acknowledged their kaitiakitanga and their stewardship in relation to the Project area and the waters within it. There

can be no doubt, in light of the MoP, the subsections and the s 8 obligations are satisfied.

- [866] With specific reference to the economic aspects of the efficient use or development of natural and physical resources, the evidence showed short-term economic benefits for the region and its peoples through the Project's construction phase. While some activities and businesses are likely to be detrimentally affected during construction, those effects are to be appropriately mitigated. Post construction, the overall economic impact on the region is expected to be positive, with road users and the people of the region benefitting from utilisation of the resources expended in the Project resulting in a more resilient roading network which enhances their safety and travel times, reduces or lessens longer term pollution, and generally contributes to their wellbeing.
- [867] Matters of historic heritage have similarly been appropriately mitigated. Clifden Cottage is to be suitably relocated, as are the late Merik Smíšek's beehive kilns and other artefacts relating to his pottery. The historic Te Horo Railway Station is to be preserved and the Ōtaki Railway Station relocated. The former Rahui Milk Treatment Station and Rahui Factory Social Hall will be reinstated in the event of damage through construction. All these are or will be covered by heritage conservation, archaeological and other management plans. There is therefore no reason to conclude that s 6(f) has not been appropriately addressed.
- [868] Section 7(c) requires particular regard to be had to the maintenance and enhancement of amenity values. The sections of the Report discussing noise, air quality, social effects and wellbeing and public health demonstrate that appropriate action will be taken to mitigate those factors, including for noise, PPFs, and all these matters of amenity will either be appropriately avoided, remedied, or mitigated. Section 7(c) is therefore satisfied.
- [869] The final relevant aspect of ss 5–8 to be considered is the effects of climate change.³⁹³ In this regard it is sufficient to note that the hydrology issues arising from the Project, particularly flooding, have been modelled and mitigated well beyond the time horizon to which current climate change modelling extends. It could not therefore be said that the Project's conditions have not had particular regard to that aspect.

Findings under Part 2

- [870] For all the reasons, both throughout this Report and in the preceding section, the Board considers the Project, as bounded by the comprehensive conditions to be imposed, manages the use, development and protection of natural and physical resources in a way which enables the people and the communities affected to provide for or improve their social, economic and cultural wellbeing and their health and safety. Any adverse effects on the environment both short and long term, will be appropriately avoided, remedied or mitigated. The Project therefore accords with the sustainable management purpose of the RMA as defined in s 5.

³⁹³ Section 7(i) of the RMA.

12. APPRAISAL, ASSESSMENT AND DECISION

Introduction

- [871] Having discussed and made wide ranging findings on the effects on the environment of the construction and operation of the Expressway, and having paid particular regard to the multitude of other considerations required to be taken into account the Board turns to its overall appraisal of those factors and the balancing exercise required to lead to its Decision on the Applications.
- [872] That exercise requires brief recapitulation of the matters and findings in the preceding sections reviewing the effects of the Project on the environment set against the required additional statutory and legal material. Recapitulation of the detail of the evidence and the discussions on the various effects on the environment and other matters would be repetitious. However, although reference to those matters may, in this appraisal, assessment and decision section, be relatively brief, it incorporates all the earlier discussions, in fact the whole of the Report to this point, and findings, including the earlier discussion on legal topics.
- [873] In embarking on this section of its summary assessment of relevant matters, the Board notes two salient features: consultation with the relevant communities and the agreement which emerged as part of the BoI process.
- [874] The Applications were lodged following an extensive period of consultation with residents of the Peka Peka to North Ōtaki region and those who will be affected by the Project. That consultation was undertaken by a wide range of methods over a lengthy period and its effectiveness can be gauged by the number of alterations made to the additional proposal before it crystallised in the form in the Applications. There remained opposition, mostly on matters of detail, but the implication from the lack of widespread opposition to the Project is that most of those who will be affected by the construction and operation of the Project generally support it. The Board notes that for a period of 12 months after the completion of the Project, the community will continue to have opportunities for input.
- [875] The agreements which were reached in the run up to the Hearing and in the Hearing itself were those ancillary to the Board's processes and those which are integral to the Board's decision.
- [876] The Board notes that these agreements include the MoP between NZTA and Ngā Hapū o Ōtaki and the agreement between NZTA and KCDC concerning revocation of the current SH1's status as such following construction of the Expressway.
- [877] The former followed extensive consultation with Ngā Hapū o Ōtaki, guarantees its important and ongoing role concerning cultural matters, and confirms the Hapū's continuing kaitiakitanga and stewardship.
- [878] The SH1 revocation agreement ensures the valuable resource it represents will pass to KCDC to administer and develop for its residents and all those who use the road. Importantly, specific facilities for cyclists and improved

facilities for pedestrians and equestrians will result, together with a predicted major reduction in vehicular usage.

- [879] The agreements are integral to the Board's processes which were reached prior to the end of the Hearing represented what was ultimately the common approach of all the experts for the Applicants KCDC and GWRC on the numerous effects of the Project and the agreement between the respective planners on the conditions which will bound construction and, to an extent, operation of the Project. The level of agreement ultimately reached was of material assistance to the Board in its consideration of and decision on the Project and the Board has elsewhere commended the experts in that regard. The level of agreement meant, by the end of the Hearing, that there was little left in contention concerning the Project between the Applicants, KCDC and GWRC.

The Problem

- [880] The problem which the Project is designed to address is that the existing SH1 from Peka Peka to North Ōtaki is increasingly unable to provide efficiency for the needs of travellers' or, in many ways, the needs of those residing in the area through which it passes. Its deficiencies hamper development, productivity and economic progress not just in its area but also in the region and with a flow on effect nationally. The reasons for its inefficiency include:
- It is a two lane high volume artery which passes through built up areas.
 - It is congested and there are consequent delays in travel times, particularly during holidays, and particularly through the built up areas.
 - That applies not just to cars undertaking local and longer trips but, importantly, to freight travelling to and from Wellington and its South Island links and airport.
 - Accidents have become more frequent and fatalities have occurred.
 - Travel times have become longer than is optimum and unreliable, a problem for road users travelling to schedules.
 - There are more intersections and level crossings than is desirable, thus jeopardising both speed and safety for those using the built up areas but particularly for cyclists and pedestrians.
 - Pollution and adverse noise result from the alignment of the present SH1.
 - The existing SH1, especially the single existing crossing of the Ōtaki River is likely to be disrupted, even severed, in the event of a major earthquake or other natural disaster. If such an event made the existing SH1 impassable, the only roading alternative, if still available, is the lengthy detour via the Wairarapa.
- [881] All this occurs in the context that the Kāpiti Coast is a high growth district and one where continued growth is expected, particularly in Ōtaki. Both local and through traffic is increasing and that too, is likely to continue. There is, and will continue to be, a need to improve traffic flows in and

through the region, especially for through traffic to and from the Wellington and Hutt conurbations and the South Island link.

The Solution

[882] The staged construction of the 13km Expressway costing in excess of \$250m will have the following positive effects:

- a) The existing two lanes will be replaced by two double lanes with median separation. This will greatly increase safety and capacity to accommodate the growing traffic volume.
- b) The Expressway avoids built up areas, thus reducing congestion, noise and pollution in those areas and improving safety for pedestrians and all other road users.
- c) The number of accidents should decrease with the reduction in intersections and level crossings.
- d) Travel times and schedules will become more predictable, bringing economic and other benefits, not just to the area of the Project but to the region and areas beyond.
- e) The new road and bridges will be built to a much more resilient standard, thus minimising the levels of damage to be expected from an earthquake or other natural disaster.
- f) Though a few local journey travel times will increase, most will be unaffected or may reduce, particularly with the connectivity between communities which will result from the cross-Expressway bridges and improved interchanges.
- g) A significant reduction in traffic on the existing SH1.

[883] Importantly, the Expressway, once constructed, will be a continuation of the Wellington Northern Corridor RoNS extending a considerably improved road, a further 13km north, to the advantage of road users. After construction, users will see the Project as a seamless extension of the Wellington Corridor RoNS built to the same high standards as TG and M2PP and consistent with both. PP2O will, like them, contribute to the safety and travel certainty of users of the whole of the RoNS Corridor.

[884] Although it would not have occurred without the PP2O proposal, it is a positive effect of the Project's construction that KiwiRail will be able to improve its services to customers, freight and passengers alike, through increased speeds enabled by the realignment of the NIMT and by future-proofing measures. Removal of five of eight level crossings, all the public crossings, will improve safety and the consequent reduction in warning bells and locomotive horns will reduce ambient noise.

Positive and Negative Effects of the PP2O Expressway

[885] Any project of the length, size and magnitude of PP2O inevitably affects its environment, both positively and negatively and both during construction and afterwards. The many positive effects stemming from construction and operation of the Expressway, could be said to be partially offset by negative effects, but the Board is satisfied that this Project has been thoroughly

investigated and the design avoids, remedies or mitigates those negative effects in virtually every case.

- [886] In relation to the Expressway's construction itself, the programme's methodology is designed to ensure that any detrimental effects such as, lighting, air quality, noise and vibration, will all be minimised and appropriately mitigated. Once construction is complete, all ongoing effects on such matters as air quality, noise and vibration have been identified and will be appropriately mitigated within the relevant standards and guidelines.
- [887] Effects which might arise, such as the impact of construction on aquatic ecology and dealing with contaminated land, if found, are again to be mitigated and, long term, appropriately safeguarded against. An example is the extensive riparian planting to mitigate any effects in relation to aquatic ecology.
- [888] One of the principal effects of construction and operation of the Expressway is its effect on the permanent and intermittent water resources of the area, groundwater, stormwater, sediment, hydrology and flooding. But with all these it is to be recalled that the Expressway essentially creates a third barrier across the watercourses of the Hautere plain additional to the two existing transverse barriers which have been in existence for many decades and the flood control systems which have been in place throughout that time. The Project has resulted in a detailed set of conditions agreed by highly skilled experts after appropriate consultation. They will mitigate the effects of the Project on hydrological matters, including making allowance for climate change to a horizon beyond that for which MfE guidelines currently exist. The result is achievement either of hydraulic neutrality or improvements in this area, especially through monitoring and the management plans proposed. Effects which might possibly arise, such as settlement and groundwater problems, are again planned to be suitably mitigated.
- [889] From a broader standpoint, both construction and operation of the Expressway are expected to be neutral in relation to matters such as built heritage, public health and urban design. Conditions are proposed to deal with the appearance of the unexpected in areas such as archaeology, with appropriate relocation or mitigation to be put in place for significant structures such as Clifden Cottage, the Ōtaki Railway Station and Mirek Smíšek's artefacts.
- [890] Construction of the Expressway will have detrimental effects on aspects of terrestrial ecology and on community assets such as the Pare-o-Matangi Reserve. However, in both cases the agreed detailed conditions, will result in the net effect either being neutral or noticeably improved.
- [891] The approximately four year construction programme will provide economic benefits for local and regional businesses and residents through employment opportunities and supply contracts. Those benefits will not ensue were the Project not to proceed. Following construction there will be economic benefits for the area, the region and nationally through factors such as certain travel times, reduced accidents and enhanced reliability.

Travel on the former SH1 will also bring economic benefits to users through reduced congestion.

[892] All in all, construction and operation of the Expressway will, on balance, be positive socially and assist people in the region to improve their wellbeing through the factors just discussed.

[893] Some arguably detrimental effects will, however, persist. These include:

- a) Increased noise for certain properties, but overall while noise for those on one side of the Expressway may increase, but most will still be within the accepted noise levels set by the national standards. Noise for those on the other side of the existing SH1 will decrease. Specific mitigation conforming with national guidelines will be put in place for the few properties adversely affected.
- b) NZTA will install facilities relating to the Manganui Stream and Overflow which will assist with persistent flooding in that area, but most of the area affected is outside the designation and is therefore a GWRC responsibility beyond the powers of the Board to influence.
- c) There will be detrimental effects, especially in terms of access, for Ōtaki Motel and 230 Main Highway/Hema Te Ao Lane, but almost all this land is outside the designation and although the Board's conditions may assist to resolve the difficulties in these areas, ultimately the parties may be left to their legal remedies.
- d) Access to Te Horo township (and Te Horo beach) will not be improved by construction of the Expressway, given the nearest entry and exit points are some distance from the township. However, connectivity between east and west will be improved by construction of the Overbridge and access to Te Horo will be no worse than at present, in the sense it will principally continue to be via the existing SH1.
- e) Businesses in Te Horo and, to a lesser extent, in the Ōtaki Retail area are likely to be detrimentally affected, but that will only be for the relatively small sector dependent on passing SH1 traffic and those businesses will have several years to adjust to the Expressway's construction.
- f) The outcomes for Te Horo are not wholly the result of the Project but are consistent with longstanding KCDC planning objectives. They have discouraged development of Te Horo and its environs for a lengthy period

[894] When all the aspects of the Project discussed in the Report and summarised above are balanced, one against the other, the Board's conclusion is that:

- the Project is compatible with the sustainable management purpose of the RMA;
- it satisfies the statutory criteria for consideration of such projects;

- it accords with the Requiring Authorities' objectives;
- its temporary and any enduring detrimental effects will be appropriately avoided, remedied or mitigated;
- it will overall have positive effects on the area from Peka Peka in the south to North Ōtaki;

and it should accordingly be approved.

[895] PP2O, as part of the Wider Wellington Northern Corridor RoNS will, as the Minister said in her reasons for directing the Project to the Board:

“...assist the Crown [ie, NZTA and KiwiRail] in fulfilling its public health, welfare, security, or safety obligations or functions ... by providing a safe, reliable, secure and resilient road, as an alternative route into and out of Wellington, with the ability to withstand natural hazards.”

[896] Formally, the Board's decision is to confirm the requirements and grant the designation and resource consents, in both cases on the conditions set out in Volume 2.

[897] To implement that, the Board directs the EPA to circulate the draft Report to those listed in s 149Q(3) and invite those persons to send comments on minor or technical aspects no later than 20 working days after the invitation.

[898] As the comments on minor or technical aspects of the Report must conform with s 149Q(5), the Board reserves the right to vary the wording of this Report, rectify omissions and amend the conditions, but subject to that reservation, the conclusions in the Board's final Report will not change.

APPENDIX 1: GLOSSARY OF TERMS

Glossary of terms

Abbreviation	Meaning
AEE	Assessment of Environmental Effects
AEP	Annual Exceedence Probability
BPO	Best Practicable Option
BCR	Benefit Cost Ratio
BLDS	Bicycle Level of Service
BOI or Board	Board of Inquiry
BECLMP	Bulk Earthworks Contaminated Land management Plan
CAQMP	Construction Air Quality Management Plan
CEMP	Construction Environmental Management Plan
CIA	Cultural Impact Assessment
CLG	Community Liaison Group
CNVMP	Construction Noise and Vibration Management Plan
CO	Carbon monoxide
COPTTM	Code of Practice for Temporary Traffic Management
CTMP	Construction Traffic Management Plan
EEM	Economic Evaluation Manual
EiC	Evidence in Chief
EMP	Ecological Management Plan
EPA	Environmental Protection Authority
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
GMP	Groundwater Management Plan
GOV	Greater Ōtaki Vision
GPS	Government Policy Statement on Land Transport Funding
GWRC	Greater Wellington Regional Council
GWRPS	Greater Wellington Regional Policy Statement
ICOMOS	The International Council on Monuments and Sites
KCDC	Kāpiti Coast District Council
KCDP	Kāpiti Coast District Plan
LUDP	Landscape and Urban Design Plan
M2PP	MacKays to Peka Peka Expressway
MoP	Memorandum of Partnership
MoU	Memorandum of Understanding
NESSHDW	National Environmental Standard for Sources of Human Drinking Water
NIMT / NIMTR	North Island Main Trunk Railway

NIP	Network Integration Plan
NLTF	National Land Transport Fund
NLTP	National Land Transport Programme
NO ₂	Nitrogen dioxide
NoR	Notice of Requirement
NUMP	Network Utilities Management Plan
NZTA	New Zealand Transport Agency
O ₃	Ozone
OGPA	Open-Graded Porous Asphalt
PPF	Protected Premises and Facilities
the Project / PP2O	NZTA and KiwiRail's proposal to designate land and obtain resource consents to construct, operate and maintain a section of road between Peka Peka and North Ōtaki, on the Kāpiti Coast.
PWA	Public Works Act
RMA	Resource Management Act
RoNS	Roads of National Significance
RP	Regional Policy
RPS	Regional Policy Statement
s and ss	Section and Sections
SAR	Scheme Assessment Report
SCMP	Stakeholder and Communications Management Plan
SH1	State Highway One
SIA	Social Impact Assessment
SO ₂	Sulphur dioxide
SSTMP	Site Specific Traffic Management Plan
SWTS	Stormwater Treatment for State Highways
TG	Transmission Gully
TR	Technical Report
ULDF	Urban and Landscape Design Framework
VOC	Volatile Organic Compounds
WEB	Wider Economic Benefits
WRLTS	Wellington Regional Land Transport Strategy

APPENDIX 2: LIST OF ACTIVITIES SOUGHT

Notices of requirement applied for under Kāpiti Coast District Council jurisdiction

- NSP 13/01.001:** Notice of requirement for a new designation for the construction, operation and maintenance of a state highway (Peka Peka to North Ōtaki Expressway) from Te Kowhai Road Peka Peka, to Taylors Road Ōtaki.
- NSP 13/01.002:** Notice of requirement for a new designation for the construction, operation and maintenance of a section of North Island Main Trunk through Ōtaki.

Resource Consents applied for under Greater Wellington Regional Council jurisdiction

Group A: Bulk earthworks and construction erosion and sediment control

- NSP 13/01.003:** Land use consent for bulk earthworks for the construction of roading and tracking for the Peka Peka to North Ōtaki Expressway and the NIMT realignment through North Ōtaki. (NZTA 1)
- NSP 13/01.004:** Land use consent for vegetation clearance and disturbing of soil identified as being erosion prone for the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 2)
- NSP 13/01.005:** Land use consent for the construction of a bore in the form of earthworks that may encounter groundwater and for the holes for bridge piles, for the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 3(a))
- NSP 13/01.006:** Water permit to dam and divert surface water as a result of the embankments and containment bunds along the Peka Peka to North Ōtaki Expressway. (NZTA 4)
- NSP 13/01.007:** Water permit to dam and divert groundwater as a result of earthworks and from de-watering during earthworks as part of the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 5)
- NSP 13/01.008:** Discharge permit to discharge sediment and chemical flocculant in treated stormwater from erosion and sediment control devices, and for the discharge of sediment from de-watering where earthworks may encounter groundwater, to water for the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 6(a))
- NSP 13/01.009:** Discharge permit to discharge sediment and chemical flocculant in treated stormwater from erosion and sediment control devices, and for the discharge of sediment from de-watering where earthworks may encounter groundwater, to land where it may enter water for the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 6(b))

Group B: Crossing, occupation and realignment of streams

Ōtaki River

- NSP 13/01.010:** Land use consent for the construction of bores for bridge piles for the foundations of the bridges over the Ōtaki River for the Peka Peka to North Ōtaki Expressway, where the earthworks may encounter groundwater. (NZTA 3(b))
- NSP 13/01.011:** Land use consent, within the Ōtaki River, to use, place and erect structures (bridge and stormwater outlets) and for the placement of rip rap, and the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 7)
- NSP 13/01.012:** Land use consent for the reclamation of a section of the bed of the Ōtaki River for the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 8(a))
- NSP 13/01.013:** Land use consent for the removal of vegetation in the bed of watercourses, including associated disturbance of the bed. (NZTA 9(a))
- NSP 13/01.014:** Water permit to temporarily divert the flow of the Ōtaki River during construction of the bridges and associated structures in the bed of the waterway in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 10(a))
- NSP 13/01.015:** Water permit for permanent diversion of the Ōtaki River associated with the area of the bed occupied by the bridge piles for the Peka Peka to North Ōtaki Expressway. (NZTA 11(a))
- NSP 13/01.016:** Water permit for the damming and diversion of surface water by the Expressway embankment and a new containment bund to the north of the Ōtaki River in the event of flooding. (NZTA 12)
- NSP 13/01.017:** Discharge permit to discharge cement contaminated water from bridge pile construction to water in association with the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 13(a))
- NSP 13/01.018:** Discharge permit to discharge cement contaminated water from bridge pile construction to land in such a way that it may enter water, in association with the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 14(a))

Waitohu Stream

- NSP 13/01.019:** Land use consent for the construction of bores for bridge piles for the foundations of the bridge over the Waitohu Stream for the Peka Peka to North

Ōtaki Expressway, where the earthworks may encounter groundwater. (NZTA 3(c))

NSP 13/01.020: Land use consent, within the Waitohu Stream, to use, place and erect structures (bridge and stormwater outlets) and for the placement of rip rap, and the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 15)

NSP 13/01.021: Land use consent for the reclamation of a section of the bed in the Waitohu Stream for the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 8(b))

NSP 13/01.022: Land use consent for the removal of vegetation in the bed of watercourses, associated with the disturbance of the bed for the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 9(b))

NSP 13/01.023: Water permit to temporarily divert the flow of the Waitohu Stream during construction of the bridges and associated structures in the bed of the waterway in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 10(b))

NSP 13/01.024: Water permit for permanent diversion of the Waitohu Stream associated with the area of the bed occupied by the bridge piles for the Peka Peka to North Ōtaki Expressway. (NZTA 11(b))

NSP 13/01.025: Discharge permit to discharge cement contaminated water from bridge pile construction to water, in association with construction of the Peka Peka to North Ōtaki Expressway. (NZTA 13(b))

NSP 13/01.026: Discharge permit to discharge cement contaminated water from bridge pile construction to land that may enter water, in association with the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 14(b))

Mangapouri Stream

NSP 13/01.027: Land use consent, within the Mangapouri Stream, to use, place and erect structures (culverts, inlet and outlet structures and stormwater outlets) and for the placement of rip rap, and the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 16)

NSP 13/01.028: Land use consent for the reclamation of a section of the bed in the Mangapouri Stream for the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 8(c))

NSP 13/01.029: Land use consent for the removal of vegetation in the bed of the stream, associated with the disturbance of the bed in the vicinity of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 9(c))

NSP 13/01.030: Water permit to temporarily divert the flow of the Mangapouri Stream during construction of the culverts and associated structures in the bed of the waterway in the vicinity of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 10(c))

NSP 13/01.031: Water permit to permanently divert the full flow of the Mangapouri Stream through a culvert in the vicinity of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 11(c))

Mangaone Stream

NSP 13/01.032: Land use consent, within the Mangaone Stream, to use, place and erect structures (bridge, culverts, inlet and outlet structures and stormwater outlets), and for the placement of rip rap, and the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 17)

NSP 13/01.033: Land use consent for the reclamation of a section of the bed in the Mangaone Stream for the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 8(d))

NSP 13/01.034: Land use consent for the removal of vegetation in the bed of the stream, associated with the disturbance of the bed in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 9(d))

NSP 13/01.035: Water permit to temporarily divert the flow of the Mangaone Stream during construction of the culverts and associated structures in the bed of the waterway in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 10(d))

NSP 13/01.036: Water permit to permanently divert the full flow of the Mangaone Stream through a culvert in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 11(d))

NSP 13/01.037: Water permit to dam and divert the Mangaone Stream during flood events in proximity to the Peka Peka to North Ōtaki Expressway by way of a bund. (NZTA 18)

Greenwood, School, Gear, Settlement Heights, Avatar, Jewell, Cavallo, Awatea, Kumototo and Racecourse Catchments

NSP 13/01.038: Land use consent, within the watercourses in these catchments, to use, place and erect structures (culverts, inlet and outlet structures and stormwater outlets) and for the removal of an existing culvert, the placement of rip rap,

and the associated disturbance of, and deposition of material on, the bed of the watercourse, in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 19)

NSP 13/01.039: Land use consent for the reclamation of a section of the bed in the streams within these catchments for the construction of the Peka Peka to North Ōtaki Expressway. (NZTA 8(e))

NSP 13/01.040: Land use consent for the removal of vegetation in the bed of watercourses, associated with the disturbance of the bed in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 9(e))

NSP 13/01.041: Water permit to temporarily divert the flow of the watercourses within these catchments during construction of the culverts and associated structures in the bed of the waterway, in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 10(e))

NSP 13/01.042: Water permit to permanently divert the full flow of the watercourses within these catchments through culverts in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 11(e))

NSP 13/01.043: Water permit to divert watercourses into newly formed channels in the Racecourse, School, Gear and Settlement Heights catchments, in the vicinity of the Peka Peka to North Ōtaki Expressway. (NZTA 20)

NSP 13/01.044: Water permit for the damming and diversion of Racecourse Stream through the installation of an undersized culvert that will dam and divert surface water in times of flood. (NZTA 21)

Group C: Borehole construction and the taking and diversion of groundwater

NSP 13/01.045: Land use consent for the construction of bores for the construction of the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 22)

NSP 13/01.046: Water permit to divert, take and use groundwater for bore testing, dust suppression and construction purposes (including for site office purposes) for the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 23)

Group D: Reclamation and diversion of wetlands

NSP 13/01.047: Land use consent for the construction of a bore in the form of earthworks that may encounter groundwater for the creation of new wetland areas at Ōtaki and Mary Crest, in association with the Peka Peka to North Ōtaki Expressway and the NIMT realignment. (NZTA 3(d))

NSP 13/01.048: Land use consent for the disturbance and reclamation of existing wetlands through the construction of the Peka Peka to North Ōtaki Expressway and the

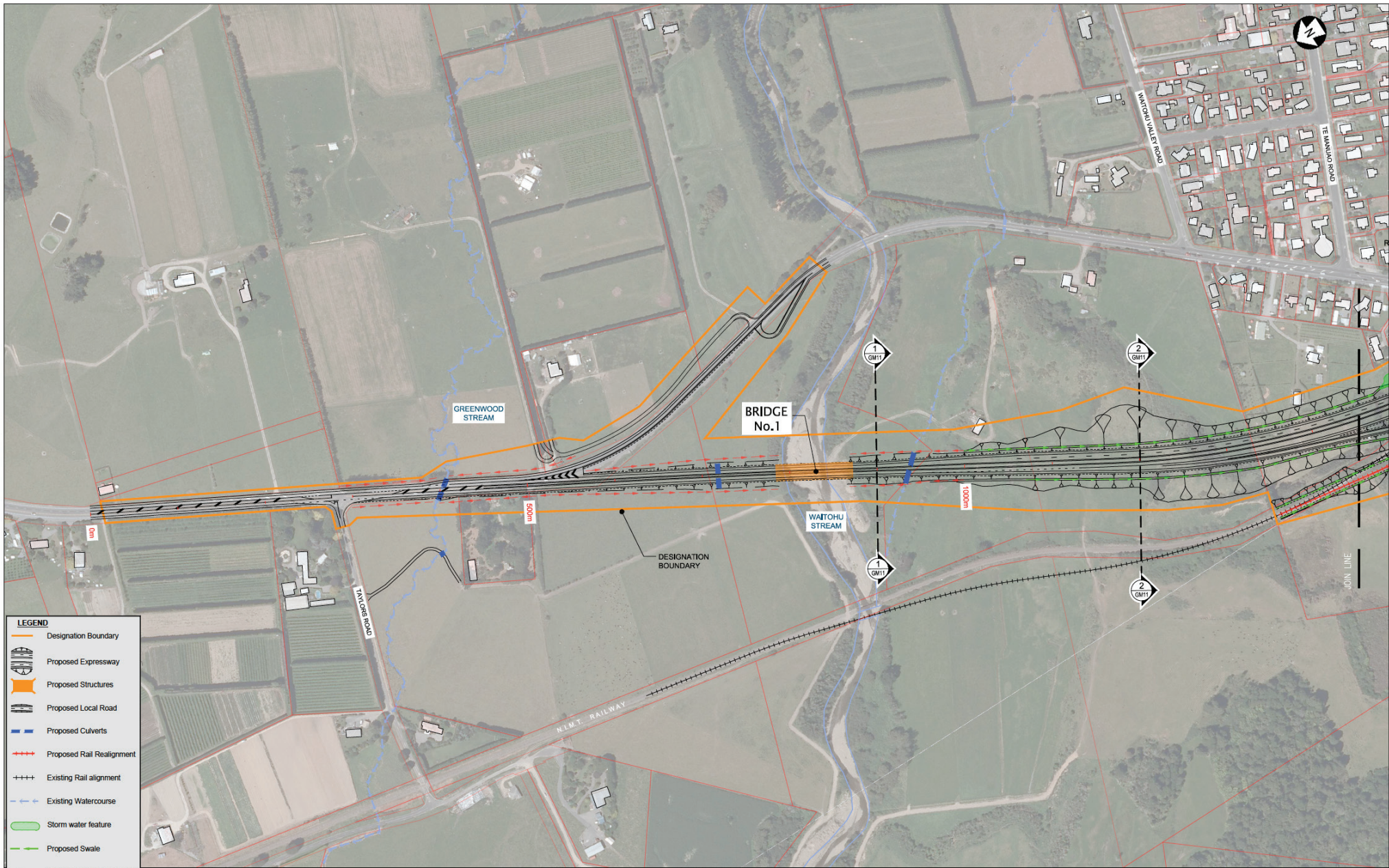
NIMT realignment, including the associated disturbance of the beds. (NZTA 24)

NSP 13/01.049: Land use consent for the removal of vegetation in the bed of a wetland, associated with the disturbance of the bed. (NZTA 25)

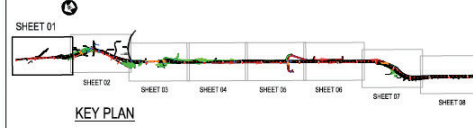
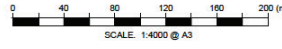
NSP 13/01.050: Water permit to dam groundwater and surface water via new wetlands in Ōtaki and Mary Crest adjacent to the Peka Peka to North Ōtaki Expressway. (NZTA 26)

NSP 13/01.051: Water permit to divert groundwater and surface water into and from wetlands in Ōtaki and Mary Crest adjacent to the Peka Peka to North Ōtaki Expressway. (NZTA 27)

APPENDIX 3: ROAD LAYOUT PLANS



- LEGEND**
- Designation Boundary
 - Proposed Expressway
 - Proposed Structures
 - Proposed Local Road
 - Proposed Culverts
 - Proposed Rail Realignment
 - Existing Rail alignment
 - Existing Watercourse
 - Storm water feature
 - Proposed Swale
 - Proposed Attenuation swale



Revision	Screenprint	Approval	Revision Date
R1	ISSUED FOR CONSENT	A.N.	MAR 2013

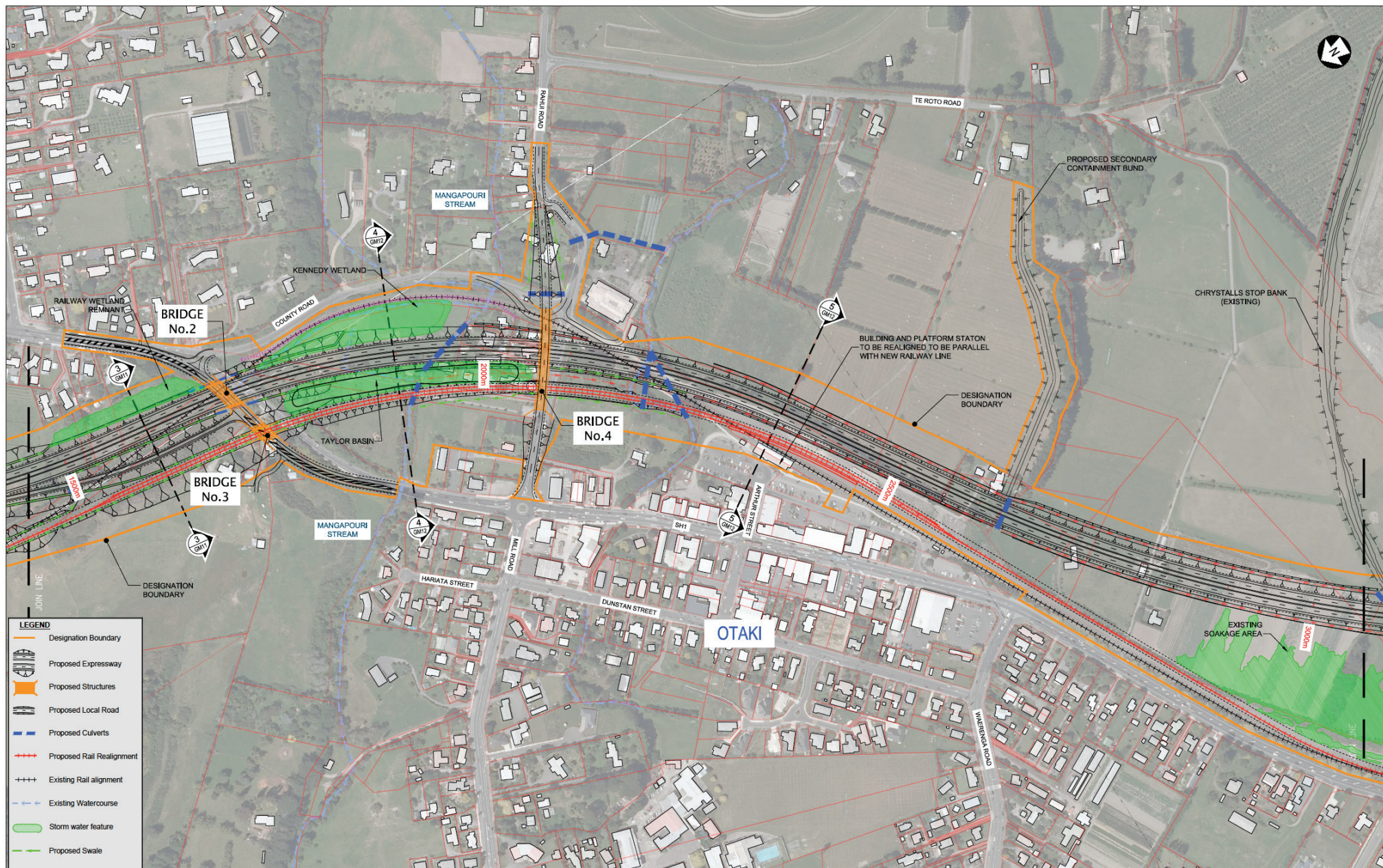


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CAD	MAE	T. COULMAN	08/2012
Project No.	Scale	Drawing No.	Sheet No.
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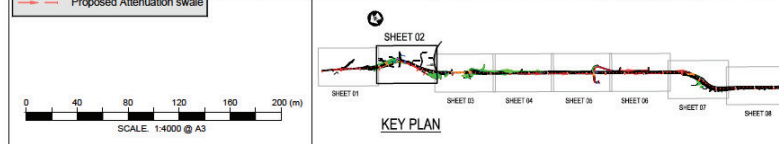
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

ROAD LAYOUT PLAN
SHEET 1 OF 8

Revision	






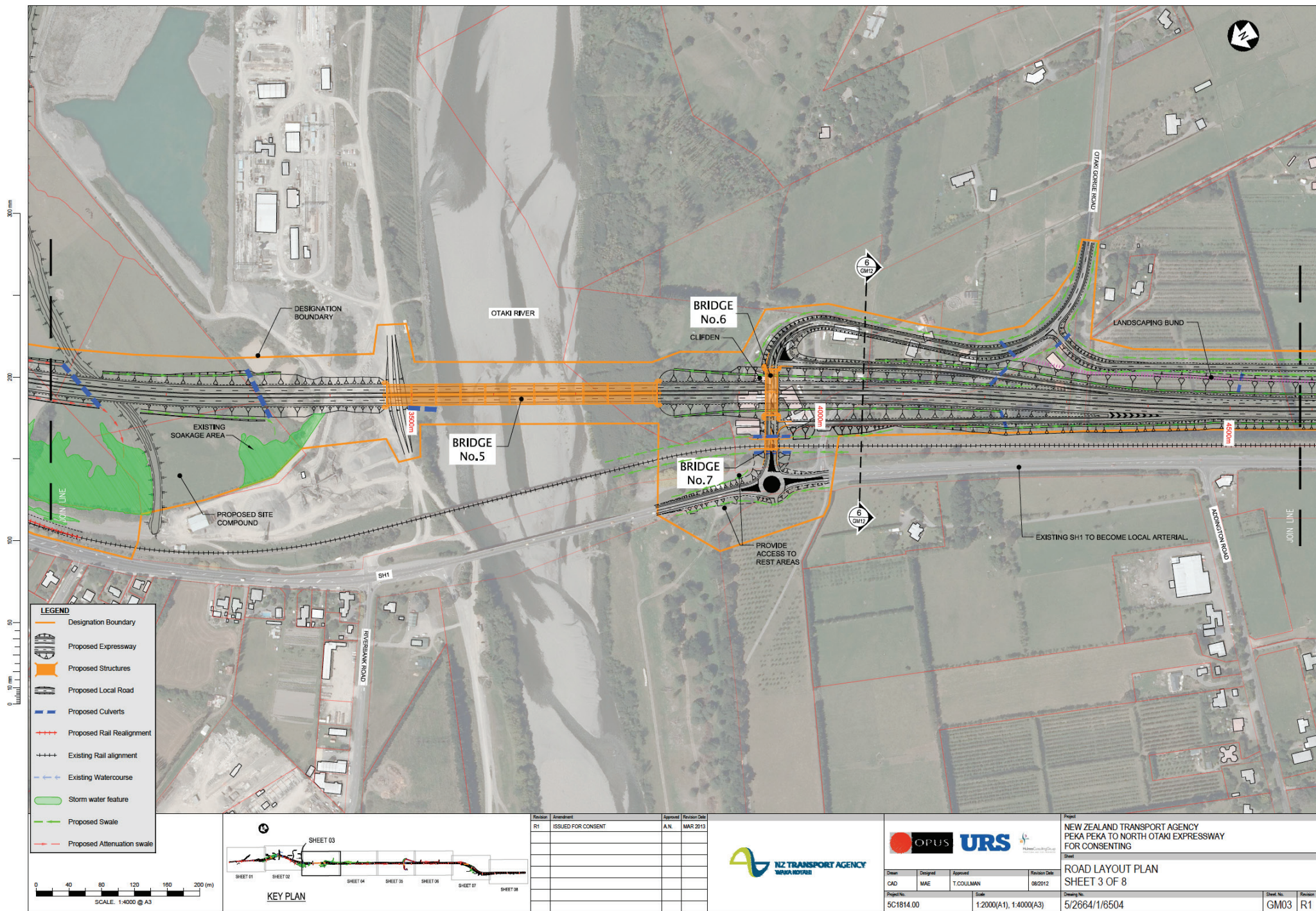
- LEGEND**
- Designation Boundary
 - Proposed Expressway
 - Proposed Structures
 - Proposed Local Road
 - Proposed Culverts
 - Proposed Rail Realignment
 - Existing Rail alignment
 - Existing Watercourse
 - Storm water feature
 - Proposed Swale
 - Proposed Attenuation swale



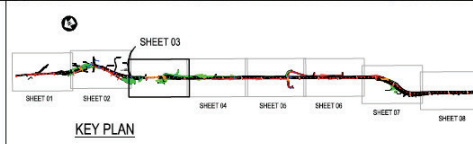
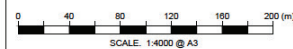
Revision	Amendment	Approved	Revision Date
R1	ISSUED FOR CONSENT	A.N.	MAR 2013



  			
Drawn	Designed	Approved	Revision D
CAD	MAE	T.COULMAN	08/2012
Project No.		Scale	
5C1814.00		1:2000(A1), 1:4000(A3)	



- LEGEND**
- Designation Boundary
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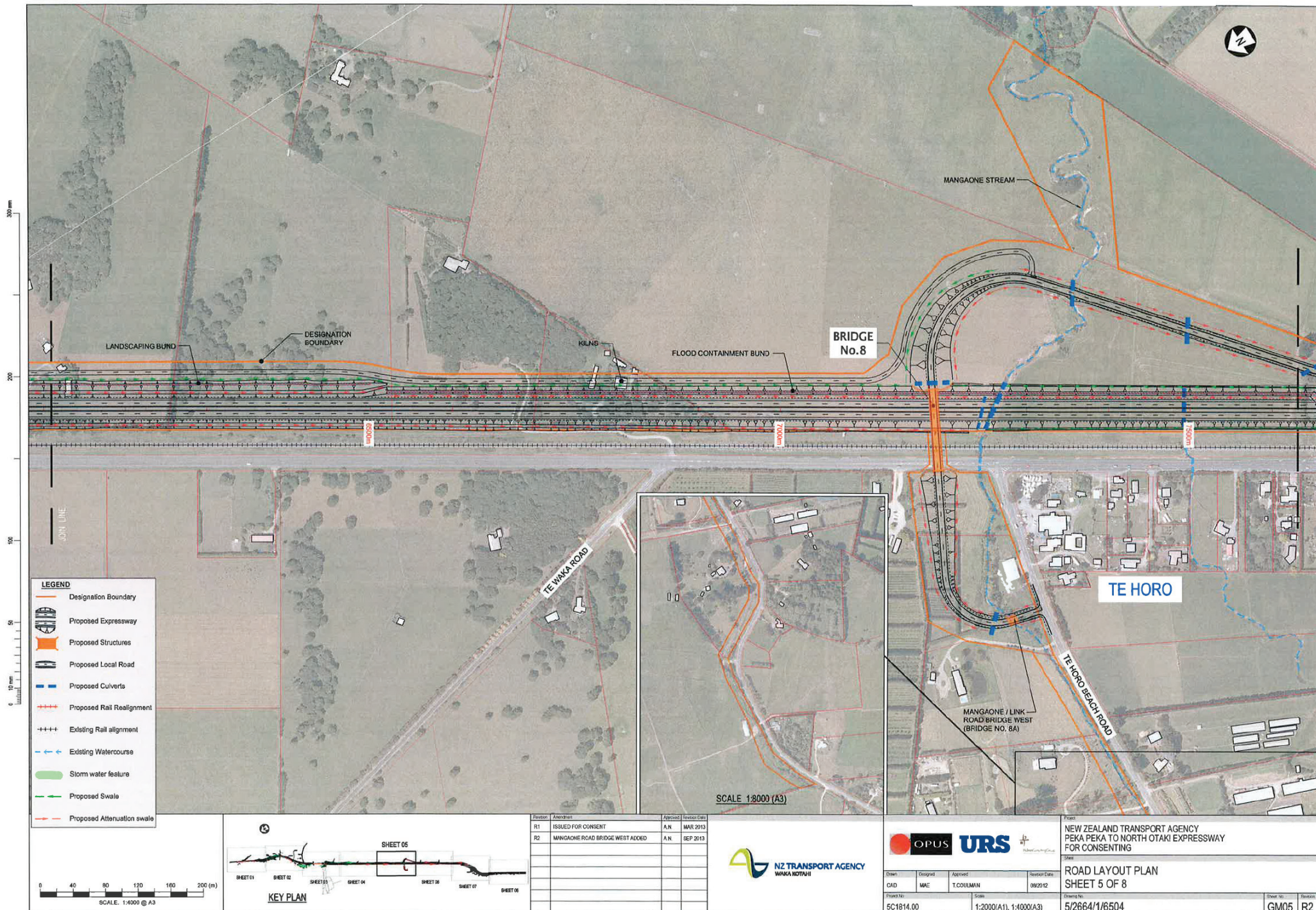


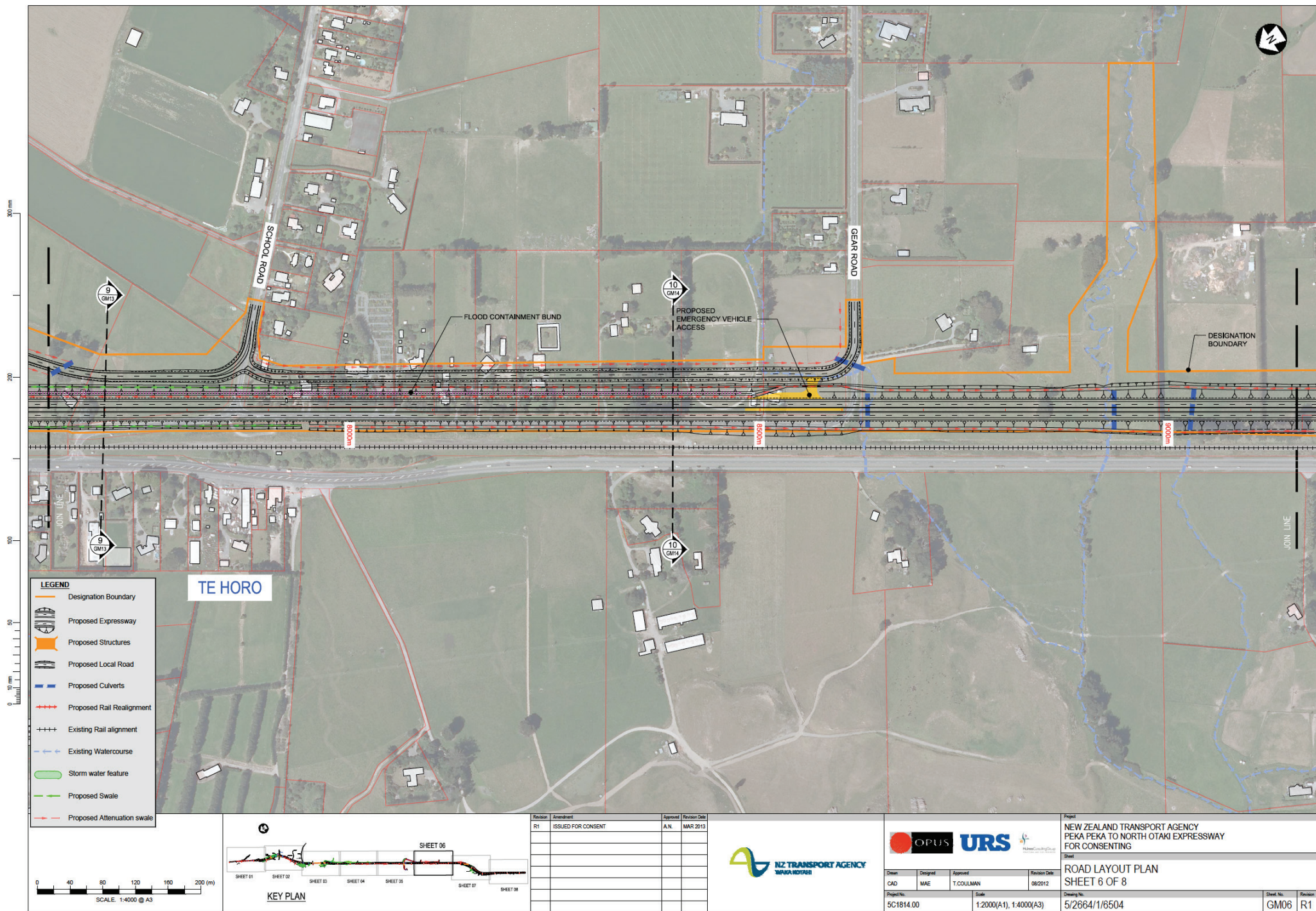
Revision	Description	Approved	Revision Date
R1	ISSUED FOR CONSENT	A.N.	MAR 2013

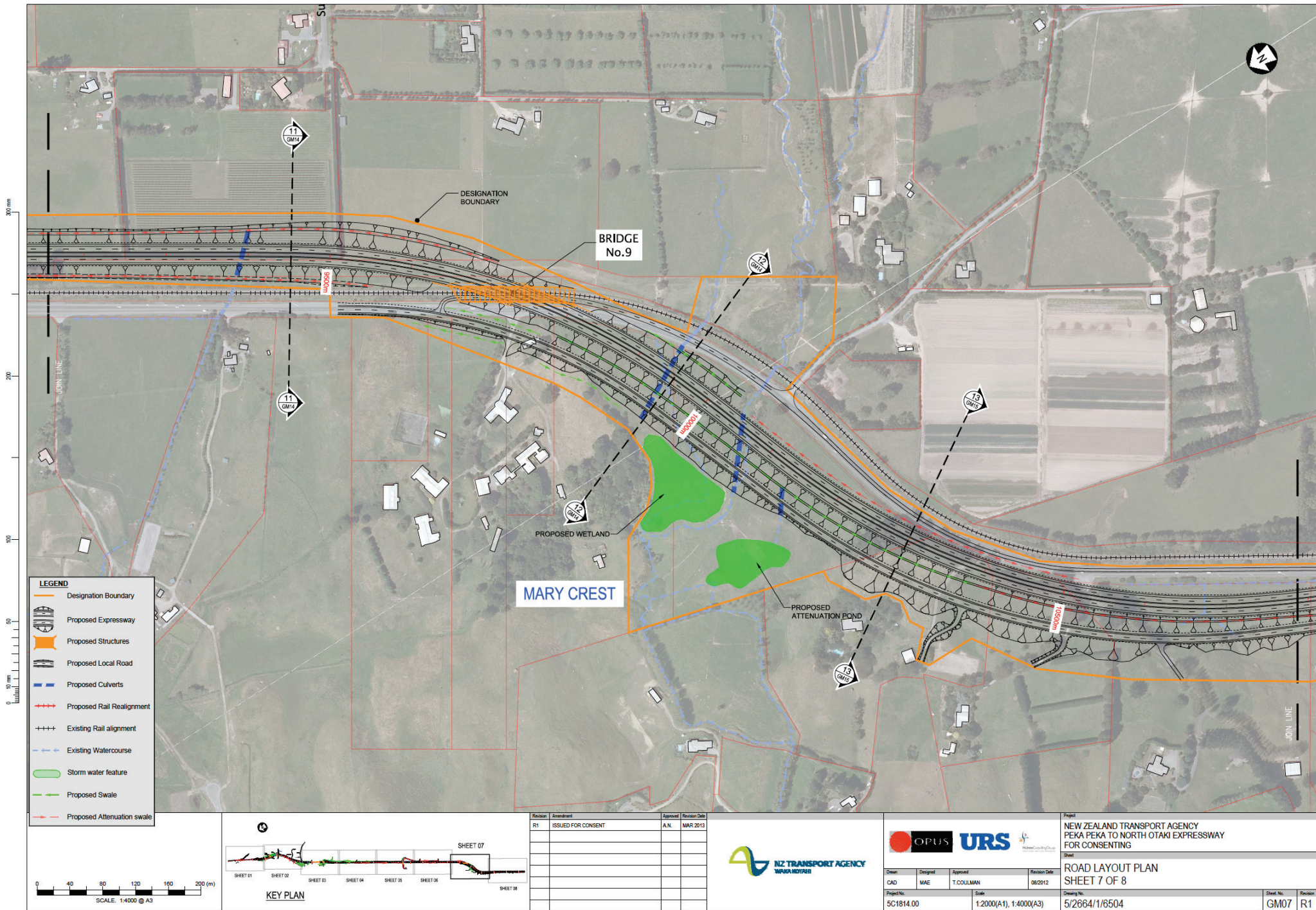


Drawn	Designed	Approved	Revision Date
CAD	MAE	T COULMAN	08/2012
Project No.	Scale		
5C1814.00	1:2000(A1), 1:4000(A3)		

Project NEW ZEALAND TRANSPORT AGENCY PEKA PEKA TO NORTH OTAKI EXPRESSWAY FOR CONSENTING			
Road Layout Plan SHEET 3 OF 8			
Sheet No.	Revision		
GM03	R1		

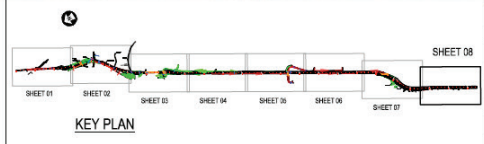








- LEGEND**
- Designation Boundary
 - Proposed Expressway
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Revision	Amendment	Approved	Revision Date
R1	ISSUED FOR CONSENT	A.N.	MAR 2013



Drawn	Designed	Approved	Revision Date
CAD	MAE	T.COULMAN	08/2012
Project No.	Scale	Sheet No.	Sheet No.
5C1814.00	1:2000(A1), 1:4000(A3)	5/2664/1/6504	GM08

Project	NEW ZEALAND TRANSPORT AGENCY PEKA PEKA TO NORTH OTAKI EXPRESSWAY FOR CONSENTING
Sheet	ROAD LAYOUT PLAN SHEET 8 OF 8
Sheet No.	Revision
GM08	R1

APPENDIX 4: PROCEDURAL HISTORY

PROCEDURAL HISTORY

18 March 2013 - Application Lodged

- [1] On 18 March 2013, the NZ Transport Agency (NZTA) and KiwiRail Holdings Ltd (KiwiRail) lodged two notices of requirements (NoR) and 49 resource consent applications with the Environmental Protection Authority (EPA) for the Peka Peka to North Ōtaki Expressway proposal (the Proposal).
- [2] Following lodgement, the EPA coordinated several concurrent processes:
 - a. Technical reports TR1-TR23 were reviewed for completeness and adequacy by independent technical experts contracted by the EPA. A number of the relevant Management Plans were also reviewed. The experts provided advice to the EPA regarding any information gaps in the technical reports.
 - b. The local authorities, GWRC and KCDC, reviewed the AEE for completeness against the requirements of their respective plans. Again, any information gaps were provided to the EPA.
 - c. The EPA prepared documentation regarding the recommendation to the Minister for the Environment, potential board of inquiry members, public notification, and submission forms.

19 March 2013 - Key Issues Reports

- [3] On 19 March 2013, acting as required by s149(G) the EPA commissioned GWRC and KCDC to prepare reports on the key issues in relation to the proposal. Both reports were provided to EPA on 17 May 2013.

22 March 2013 - Greater Wellington Regional Council Completeness Report

- [4] The Greater Wellington Regional Council provided an assessment of completeness to the EPA on 22 March 2013, to assist it, in making its decision under s88.

25 March 2013 - Kapiti Coast District Council Completeness Report

- [5] The Kapiti Coast District Council provided an assessment of completeness to the EPA on 25 March 2013, to assist it, in making its decision under s88.

2 April 2013 - EPA Recommendation to the Minister for the Environment

- [6] On 2 April 2013 the EPA recommended, under s146, that the Minister for the Environment (Minister) made the following direction on the matters lodged with the EPA by NZTA and KiwiRail:
 - a. the matters are a proposal of national significance; and
 - b. that the matters should be directed to a board of inquiry; and
 - c. Agree that the matters are a proposal of national significance; and
 - d. Direct that the matters be referred to a board of inquiry for decision, under s147(1)(a), for the reasons set out in the recommendation.

3 April 2013 - Minister's Direction

- [7] On 3 April 2013 the Minister considered the matters in s142(3) and, under s147, directed that the applications lodged by NZTA and KiwiRail, being a proposal of national significance, be referred to a board of inquiry for decision.

5 May 2013 – Friend of the Submitter appointed

- [8] Brett Osborne from Sinclair Knight Mertz was appointed as “Friend of the Submitter” to hold drop in sessions within the community and to assist potential submitters in understanding the process.

7 May 2013 - Board of Inquiry Appointed

- [9] On 7 May 2013 the Minister appointed the members of the Board and the appointments were publicly announced on 14 May 2013.

18 May 2013 - Public Notification

- [10] The application was notified in the four major daily newspapers on 18 May 2013. It was also notified in the Kāpiti Observer, a local newspaper, on 20 May 2013.

17 June 2013 - Submission period closed

- [11] The submission period closed at 5pm on 17 June 2013. The EPA received 55 complete submissions before the close of the submission period. The EPA also received two late submissions and one incomplete submission where further information was not received until after the close of submissions. The Board of Inquiry accepted all three of these submissions.
- [12] A wide range of concerns were raised in submissions and many submitters chose to propose specific conditions. Of the 58 submissions received:
- a. 21 submitters (36.2%) oppose the Proposal in full or in part
 - b. 25 submitters (43.1%) support the Proposal in full or in part
 - c. 8 submitters (13.8%) are neutral
 - d. 4 submitters (6.9%) have mixed positions
 - e. The majority of submitters were from the Ōtaki and Te Horo areas (36% and 33% respectively).

8 July 2013 – Board Planning Advisor and Legal Advisor appointed

- [13] Mr John Kyle from Mitchell Partnerships Limited was appointed to provide resource management planning advice to the Board and to prepare a planning report.
- [14] Ms Janette Campbell from Cowper Cambell was appointed as legal advisor to the Board.

12 July 2013 - Applicants' Evidence

- [15] The applicants' evidence-in-chief was received on 12 July 2013.

9 August 2013 - Submitters' Evidence

- [16] The EPA received evidence from 12 submitters' by 9 August 2013.

19 August 2013 – Expert Conferencing begins

- [17] Further to the Board Direction dated 19 August 2013 most experts undertook joint conferencing and produced Joint Witness Statements outlining the matters agreed and disagreed and the reasons.
- [18] Prior to the Hearing joint conferencing Witness Statements were produced for the following subjects – Traffic and Transport (20 August 2013), Landscape and Urban Design (23 August 2013), Economics (26 August 2013), Noise and Vibration (26 August 2013), Social Effects (26 August 2013), Groundwater, Hydrology and Stormwater (27 August 2013 and updated 17 September 2013), Ecology (28 August 2013) Otaki Interchange (29 August 2013), Planning (30 August 2013) and Sediment Control and Aquatic Ecology (19 September 2013).
- [19] Conferencing also continued into the Hearing as required or as directed by the Board.

29 August 2013 - Pre-Hearing Conference

- [20] A Pre-hearing Conference was held at the Southward Car Museum on 29 August 2013. The pre-hearing conference canvassed a number of topics of a procedural nature.

30 August 2013 - Site Visits

- [21] Two site visits were undertaken by the Board. The first was comprehensive and numerous sites were visited within and adjacent to the Project alignment.
- [22] At the request of a submitter, Mrs Sharyn Sutton, a second site visit was undertaken during the hearing on 30 September 2013. This site visit took in the area surrounding her property, Old Hautere Road and Otaki Gorge Road.

6 September 2013 - Applicants' rebuttal evidence

- [23] The applicants' rebuttal evidence was received on 12 July 2013.

23 September – 2 October 2013 - Hearing

- [24] A hearing was held at Southward Car Museum, commencing on 23 September 2013 and closing on 2 October 2013.
- [25] As required under s149L(3) a hearing must be held at a place near the area to which the matter relates. Southward Car Museum was considered the closest available venue with appropriate facilities. A concern was raised by Lorax Partnership prior to the hearing and by Rational Transport Society during the hearing regarding accessibility of the venue by public transport. A free shuttle service was provided from both Otaki and Te Horo to transport people to and from the hearing venue on a twice daily basis.
- [26] The applicants presented their cases and in addition 23 submitters gave evidence at the hearing. A full list of submitters can be found in Appendix 6. It identifies those who gave evidence.

29 November 2013 – Draft Report and Decision

- [27] The Board issued its Draft Report and Decision on 29 November 2013.

- [28] Those to whom the Draft Report and Decision has been supplied have 20 working days (2 December 2013 to 21 January 2013)³⁹⁴ to provide comments on minor and technical aspects of the Report.

18 February 2014 – Final Report and Decision

- [29] As required under s149R the Board must produce its Final Report and Decision within 9 months of the date of public notification, being 18 February 2014.

www.epa.govt.nz/Resource-management/pp2o

- [30] With the exception of the completeness reports, all the above documents, the Board's minutes and directions and a full copy of the transcript of the Hearing were publicly available on the Board's website: <http://www.epa.govt.nz/Resource-management/pp2o/Pages/default.aspx>.

³⁹⁴ RMA non-working days are 20 December to 10 January inclusive, resulting in a due date of 20 January 2013 (Wellington Anniversary Day). While regional anniversary days are a working day under the RMA the Board have extended the timeframe for comments to 5pm 21 January 2013.

APPENDIX 5: LIST OF SUBMITTERS AND EVIDENCE PROVIDED

Submissions

A full list of all submissions received is provided below -

102853	Abigail, Jill and Anderton, Joy
102868	Adams, Rosemary
102898	Alliance for a Sustainable Kāpiti Inc.
102872	Arcus Road Water Scheme Ltd
102847	Camm, John and Stone, Christine
102895	Caughley, Richard & Sarah
102887	Donovan, Kelly and Lill, Jarrod
102902	Driving Forces
102844	Field, Shane
102852	Flanagan, Brett
102899	Generation Zero
102856	Gibson, Peter
102862	Graham, Lorraine
102880	Greater Wellington Regional Council
102851	Harper, John
102870	Harrisons Country Gardenworld Ltd. and Arthur Bills Resettlement Trust
102865	Hart, Gyllian & Barry
102878	Howard, Paul
102871	Ineson, Sue
102869	Jarvis, Wayne
102892	Kāpiti Coast District Council
102873	Kāpiti Cycling Incorporated
102859	Keep Ōtaki Beautiful
102875	KiwiRail Holdings Ltd
102867	Lonsdale, Simon
102896	Lorax Partnership
102849	Lucinsky, Barry
102886	McLean, Josephine
102890	Monarch Wines, Far Fetched Ltd, Cassels Taylor Family Trust, Wellington Works Ltd, nominees and others
102874	Morris, Wendy
102884	New Zealand Automobile Association Inc.
102893	New Zealand Historic Places Trust
102883	Ngā Hapū o Ōtaki (Caleb Royal)
102888	Ngā Hapū o Ōtaki (Pātaka Moore)
102897	Ngā Hapū o Ōtaki (Rupene Waaka)
102850	NZ Transport Agency
102894	Ōtaki Community Board
102877	Ōtaki Motel - CE Christie
102876	Ōtaki Motel - DA and CE Christie
102901	Parkinson, Chris

102845	Perry, Heather
102861	Pickford, Michael
102889	Rahui Enterprises Ltd
102857	Rational Transport Society
102823	Robertson, Craig
102891	Ruth Pretty Catering Ltd
102864	Sharpe, Don & Juliet
102885	Stresscrete
102842	Strong, Catherine
102855	Sutton, Sharyn
102854	Sygrove, Christopher & Robyn
102879	Taylor, Caitlin
102841	Te Horo Rural Fire Force
102866	W & M Stevens Family Trust
102838	Wheeler, Brian
102839	Wheeler, Judith
102881	Winstone Aggregates
102846	Wood, David

Submitter Evidence

The following 23 submitters provided evidence and attended the hearing (submitter number shown in brackets). These submitters have been categorised into the following groups -

1. Local Authorities;
2. Businesses and Business Groups;
3. Community and interest groups;
4. Individual submitters;

Local Authorities:

1. Kāpiti Coast District Council (KCDC) (102892)

Evidence received from -

- Mr Ian Boothroyd on Ecology
- Ms Shona Myers on Ecology
- Mr Robert van Bentum on Hydrology, Groundwater and Stormwater Management
- Mr Brydon Hughes on Hydrology, Groundwater and Stormwater Management
- Ms Julia Williams on Landscape and Visual Effects
- Mr Malcolm Hunt on Noise and Vibration
- Ms Mary-Jane Rivers on Social Effects
- Mr Don Wignall on Traffic and Transport
- Mr Robert Schofield on Planning

2. Greater Wellington Regional Council (GWRC) (102880)

Evidence received from -

- Ms Jennie Marks on Ecology
- Ms Philippa Crisp on Ecology
- Mr Ian Boothroyd on Ecology
- Ms Sharyn Westlake on Hydrology, Groundwater and Stormwater Management
- Mr Gregor McLean Hydrology, Groundwater and Stormwater Management
- Mr Brydon Hughes Hydrology, Groundwater and Stormwater Management
- Mr Richard Percy on Planning

Businesses and Business Groups:

1. Harrisons Country Gardenworld Limited and Arthur Bills Resettlement Trust, Mr Lance Bills (102870)
2. New Zealand Automobile Association Inc, Mr Michael Gross (102884)
3. Lorax Partnership, Mr Greg Elliot (102896)

4. Ōtaki Motel, Mr D and Mrs Chris Christie (102877) and (102876)
5. Monarch Wines, Far Fetched Ltd, Cassels Taylor Family Trust, Wellington Works Ltd, nominees and others, Mr Ian Cassels (102890)

Community and interest groups:

1. Alliance for a Sustainable Kāpiti Inc, Ms Marie O'Sullivan (102898)
 2. Generation Zero, Mr Paul Young (102899)
 3. Kāpiti Cycling Incorporated, Mr John Baldwin and Ms Janet MacDonald (102873)
 4. Rational Transport Society, Mr Kent Duston (102857)
- Evidence received from -
- Ms Paula Warren on Ecology and Planning
 - Mr Michael Mellor on Traffic and Transport
 - Mr Patrick Morgan;
 - Mr Paul Bruce; and
5. Rahui Enterprises Ltd, Mr Bryce Holmes (102889)
 - Evidence received from Mr Bryce Holmes on Planning
 6. Ōtaki Community Board, Mr James Cootes (102894)

Individuals:

1. Mr John Camm and Ms Christine Stone (102847)
2. Mr Barry Lucinsky (102849)
3. Ms Sharyn Sutton (102855)
4. W & M Stevens Family Trust (102866)
5. Dr Michael Pickford (102861)
6. Mr Barry and Mrs Gyllian Hart (102865)
7. Mr Wayne Jarvis (102869)
8. Mr Paul Howard (102878)
9. Ms Josephine McLean (102886)
10. Mr Richard and Sarah Caughley (102895)
 - Evidence from Mr Tim Kelly on Traffic and Transport

NZTA provided evidence from the following:

- Mr Rod James, State Highways Manager, NZTA
- Mr Selwyn Blackmore, Project Manager, NZTA
- Mr Tony Coulman on Project Design and Consultation, NZTA
- Ms Syliva Allan on Alternative Route Assessment
- Mr Derek Holmes on Project Construction
- Mr David Dunlop on Transportation
- Mr Pathmanathan Brabhakaran on Geotechnical Engineering
- Dr Grant Webby on Flood Hydrology and Hydraulics Engineering
- Mr Warren Bird on Stormwater Management
- Mr Greg Haldane on Contaminated Land
- Dr Stephen Chiles on Construction and Operational Noise and Vibration
- Mr David McKenzie on Landscape
- Mr Bruce Curtain on Urban Design
- Ms Cathryn Barr on Archaeology
- Mr Ian Bowman on Built Heritage
- Mr Niketi Toataua on Cultural
- Mr Andrew Curtis on Air Quality
- Dr David Black on Public Health
- Mr John Turner on Terrestrial Ecology
- Dr Scott Larned on Aquatic Ecology
- Ms Wendy Turvey on Social Effects
- Mr Mike Copeland on Economics
- Ms Rebecca Beals on Proposed Conditions
- Mr Peter Coop on Planning
- Dr John (Jack) McConchie (rebuttal only)

KiwiRail provided evidence from:

- Ms Pam Butler, Senior RMA Advisor, KiwiRail

Board – Expert witnesses who appeared for the Board:

Mr John Kyle, Mitchell Partnerships appeared as writer of the s42A independent planning report.

APPENDIX 6: SECTION 108 OF THE RMA

Section 108 of the Resource Management Act

Conditions of resource consents

- (1) Except as expressly provided in this section and subject to any regulations, a resource consent may be granted on any condition that the consent authority considers appropriate, including any condition of a kind referred to in subsection (2).
- (2) A resource consent may include any 1 or more of the following conditions:
 - (a) subject to subsection (10), a condition requiring that a financial contribution be made:
 - (b) a condition requiring provision of a bond (and describing the terms of that bond) in accordance with section 108A:
 - (c) a condition requiring that services or works, including (but without limitation) the protection, planting, or replanting of any tree or other vegetation or the protection, restoration, or enhancement of any natural or physical resource, be provided:
 - (d) in respect of any resource consent (other than a subdivision consent), a condition requiring that a covenant be entered into, in favour of the consent authority, in respect of the performance of any condition of the resource consent (being a condition which relates to the use of land to which the consent relates):
 - (e) subject to subsection (8), in respect of a discharge permit or a coastal permit to do something that would otherwise contravene section 15 (relating to the discharge of contaminants) or section 15B, a condition requiring the holder to adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of the discharge and other discharges (if any) made by the person from the same site or source:
 - (f) in respect of a subdivision consent, any condition described in section 220 (notwithstanding any limitation on the imposition of conditions provided for by section 87A(2)(b) or (3)(a)):
 - (g) in respect of any resource consent for reclamation granted by the relevant consent authority, a condition requiring an esplanade reserve or esplanade strip of any specified width to be set aside or created under Part 10:
 - (h) in respect of any coastal permit to occupy any part of the common marine and coastal area, a condition—
 - (i) detailing the extent of the exclusion of other persons:
 - (ii) specifying any coastal occupation charge.
- (3) A consent authority may include as a condition of a resource consent a requirement that the holder of a resource consent supply to the consent authority information relating to the exercise of the resource consent.
- (4) Without limiting subsection (3), a condition made under that subsection may require the holder of the resource consent to do 1 or more of the following:
 - (a) to make and record measurements:
 - (b) to take and supply samples:

- (c) to carry out analyses, surveys, investigations, inspections, or other specified tests:
 - (d) to carry out measurements, samples, analyses, surveys, investigations, inspections, or other specified tests in a specified manner:
 - (e) to provide information to the consent authority at a specified time or times:
 - (f) to provide information to the consent authority in a specified manner:
 - (g) to comply with the condition at the holder of the resource consent's expense.
- (5) Any conditions of a kind referred to in subsection (3) that were made before the commencement of this subsection, and any action taken or decision made as a result of such a condition, are hereby declared to be, and to have always been, as valid as they would have been if subsections (3) and (4) had been included in this Act when the conditions were made, or the action was taken, or the decision was made.
- (6) *[Repealed]*
- (7) Any condition under subsection (2)(d) may, among other things, provide that the covenant may be varied or cancelled or renewed at any time by agreement between the consent holder and the consent authority.
- (8) Before deciding to grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 (relating to the discharge of contaminants) or 15B subject to a condition described in subsection (2)(e), the consent authority shall be satisfied that, in the particular circumstances and having regard to—
 - (a) the nature of the discharge and the receiving environment; and
 - (b) other alternatives, including any condition requiring the observance of minimum standards of quality of the receiving environment—
 the inclusion of that condition is the most efficient and effective means of preventing or minimising any actual or likely adverse effect on the environment.
- (9) In this section, **financial contribution** means a contribution of—
 - (a) money; or
 - (b) land, including an esplanade reserve or esplanade strip (other than in relation to a subdivision consent), but excluding Maori land within the meaning of Te Ture Whenua Maori Act 1993 unless that Act provides otherwise; or
 - (c) a combination of money and land.
- (10) A consent authority must not include a condition in a resource consent requiring a financial contribution unless—
 - (a) the condition is imposed in accordance with the purposes specified in the plan or proposed plan (including the purpose of ensuring positive effects on the environment to offset any adverse effect); and
 - (b) the level of contribution is determined in the manner described in the plan or proposed plan