BEFORE THE TARANAKI REGIONAL COUNCIL AND NEW PLYMOUTH DISTRICT COUNCIL

MT MESSENGER BYPASS PROJECT

In the matter	of the Resource Management Act 1991
and	
In the matter	of applications for resource consents, and a notice of requirement by the NZ Transport Agency for an alteration to the State Highway 3 designation in the New Plymouth District Plan, to carry out the Mt Messenger Bypass Project

---

STATEMENT OF EVIDENCE OF PETER ANTHONY ROAN (OVERALL PLANNING ASSESSMENT, CONDITIONS AND MANAGEMENT PLANS) ON BEHALF OF THE NZ TRANSPORT AGENCY

25 May 2018

BUDDLE FINDLAY
Barristers and Solicitors
Wellington

Solicitors Acting: **Paul Beverley** / **David Allen / Thaddeus Ryan**
Email: david.allen@buddlefindlay.com / thaddeus.ryan@buddlefindlay.com
Tel 64-4-499 4242 Fax 64-4-499 4141 PO Box 2694 DX SP20201 Wellington 6140

TABLE OF CONTENTS

QUALIFICATIONS AND EXPERIENCE

1. My full name is Peter Anthony Roan. I am a Principal of the firm Tonkin & Taylor Ltd, Environmental & Engineering Consultants, and hold the position of Discipline Director of Planning. I lead the Company's Resource Management Planning team and have been employed by Tonkin & Taylor for 25 years.

2. I hold the qualifications of BSc and MSc (1st Class Honours) from the University of Auckland. I am an Associate member of the New Zealand Planning Institute and a member of the Resource Management Law Association.

3. I have over 27 years' experience in resource management planning and environmental management and have worked on a wide range of resource management consenting projects. Much of my career has been spent managing the Assessment of Effects on the Environment ("**AEE**") process for development related projects and the associated designation and resource consent approvals process. I have been involved in leading and providing expert technical inputs on infrastructure related projects across a broad range of sectors, including the transportation, water and wastewater, energy, local government, defence and land development sectors.

4. My previous experience in major designation and resource consent projects includes:

   (a) Leading the approvals process for Watercare's $800M Central Interceptor project, a 13 km long tunnel under the Auckland Isthmus. My inputs on this project included leading the route selection process and assessment of alternatives, the preparation of the AEE, and the Notice of Requirement and resource consent process.

   (b) Leading the approvals process for KiwiRail and Auckland Transport's $600M programme of double tracking and the redevelopment of 12 stations across the Auckland Metro Rail network (Project DART), including undergrounding of the New Lynn Station and the major station developments at Newmarket, Parnell and Onehunga. My inputs on DART included the preparation of numerous AEEs, resource consents, Notices of Requirement and outline plans.

   (c) Leading the approvals process for Watercare's $120M Project Hobson, a 3 km long tunnel from Parnell to Orakei. My inputs on this project included leading the route selection process and assessment of alternatives, the preparation of the AEE, and the Notice of Requirement and resource consent process.

   (d) Leading the approvals process for the upgrade of Watercare's Huia Water Treatment Plant, to be located on a forested site in the lower Waitakere Ranges. My inputs on this project included leading the site

evaluation process and assessment of alternatives, and for earlier stages of the redevelopment, the preparation of the AEE and the Notice of Requirement and resource consents.

5. I have also been involved in the construction delivery stages of large infrastructure projects, including:

   (a) I was the Planning Interface Manager for the Joint Venture delivering Contract 1 of Auckland Transport's City Rail Link (CRL) project, which is the stage of CRL extending the rail tunnels out from Britomart Station under the heritage Central Post Office Building. I spent 2 years in this role which involved developing the series of extensive construction management plans required by the designation and resource consent conditions covering the management through construction of a broad range of environmental, social and cultural matters; preparing the outline plan; facilitating community engagement on these plans; managing the interface with regulatory planning and compliance officers and the process associated with gaining Council approval for the management plans. I provided advice in relation to the implementation of the management plans and on compliance management and was responsible for updating the plans to respond to changing designs and construction conditions and to stakeholder feedback.

   (b) As part of my role in the DART project outlined at para 4(b) above I was responsible for the preparation of construction management plans for track works and station upgrades across much of the West Auckland rail corridor. These plans were required by the designation and resource consent conditions and addressed the management through construction of a broad range of environmental and social matters. I provided compliance advice through the DART programme to KiwiRail, Auckland Transport and their contractors and led engagement on specific stakeholder matters.

   (c) I was the Environmental Manager for the construction team delivering the installation of a new 220 kV underground transmission cable link from Pakuranga to Penrose, part of Transpower's series of works associated with the NAaN transmission network upgrade programme. This project involved some 9km of trenching works, largely within the congested roading network through East Tamaki. My work on this project involved developing the suite of construction management plans required by the designation and resource consent conditions covering the management through construction of environmental and stakeholder matters, gaining Council approvals for the plans, and providing specialist compliance advice through the construction programme.

6. I confirm that I have read the 'Code of Conduct' for expert witnesses contained in the Environment Court Practice Note 2014. My evidence has been

prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

BACKGROUND AND ROLE

7. In March 2017, the New Zealand Transport Agency ("**Transport Agency**") appointed an Alliance to progress the design (including options assessment), consenting and construction of the Mt Messenger Bypass Project ("**Project**") to improve the section of State Highway 3 ("**SH3**") between Ahititi and Uruti, to the north of New Plymouth. The Alliance includes the Transport Agency, Downer Construction, Heb Construction, Opus International Consultants, and Tonkin and Taylor (my employer).

8. I have been involved in the Project since early 2017 and hold the role of Planning and Environment Manager in the Alliance. I co-ordinated and led the route selection / assessment of alternatives process, am the lead author of the Assessment of Effects on the Environment ("**AEE**") report and coordinated preparation of the supporting documentation, including the suite of environmental management plans, and have led the development of the proposed conditions lodged in support of the Project. In this role I have interacted extensively with other members of the Project team and with key stakeholders on the content and form of the proposed conditions. I have been based in the Alliance Project office in Wellington since March of 2017.

9. Since March 2017 I have travelled to Taranaki on roughly a fortnightly basis to meet with key stakeholders and with the Councils. I have been a lead member of the Alliance's stakeholder engagement team and since March 2017 have been involved in:

   (a) numerous hui with the Ngāti Tama Runanga;

   (b) regular meetings with the Department of Conservation ("**DOC**"), including facilitating discussions between DOC and Alliance experts;

   (c) attending public open days in held in New Plymouth, Urenui and Mokau in June 2017 and in February 2018;

   (d) presenting to local interest groups; and

   (e) attending meetings with most of the directly affected land owners.

10. I am very familiar with the area that the Project covers and the State Highway and local roading network in the vicinity of the Project. I have visited the site and the wider area around Mt Messenger on numerous occasions.

11. In preparing this evidence, I have read the submissions lodged in relation to the Project.

SCOPE OF EVIDENCE

12. The purpose of my evidence is to present an overall planning assessment of the effects of the Project on the environment. I also explain the designation and resource consent conditions proposed by the Transport Agency for the Project. In doing so, I explain the approach taken to the management of effects in the design and construction of the Project through conditions and otherwise.

13. Mr Sam Dixon has prepared the statutory planning analysis evidence, which responds to other statutory considerations relevant to the assessment of the Project under the Resource Management Act 1991 ("**RMA**").

14. I also respond to the s42A reports from the Taranaki Regional Council ("**TRC**") and the New Plymouth District Council ("**NPDC**") and submissions as they relate to the proposed conditions.

15. My evidence addresses:

    (a) My role in the Project;

    (b) An overview of the Project and the Application;

    (c) An overview of the existing environment;

    (d) An outline of the approach to managing the effects of the Project on the environment;

    (e) A summary of the actual and potential effects of the Project on the environment;

    (f) The proposed Designation and Resource Consent Conditions and Management Plans;

    (g) Response to the reports prepared under section 42A of the RMA ("Section 42A Reports") by New Plymouth District Council ("NPDC") and Taranaki Regional Council ("TRC") officers; and

    (h) Response to submissions.

16. **Annexure A** to my evidence contains the set of updated conditions incorporating changes I have recommended since lodgement of the applications, following review of submissions and further engagement with stakeholders and review of the 42A reports (in underline / strikeout text).

17. I have also prepared a separate statement of evidence that addresses the assessment of alternatives process and the selection of the preferred alignment for the Project.

EXECUTIVE SUMMARY

18. The Project is located in a rural environment with pastoral farming characterising much of the land use within the valley flats north and south of Mt Messenger. The lowland areas are separated by very steep, topographically complex hill country with areas of contiguous vegetation, adjoining the Mt Messenger Forest and Conservation Area (Parininihi). There are a number of cultural, ecological and landscape features of value within the wider Project and surrounding area.

19. I have considered the submissions and 42A reports and my assessment is based on the Technical Reports provided with the Application, the evidence of other Transport Agency witnesses and discussion with these experts throughout the Project, and my own planning analysis.

20. In my opinion, the Project will result in significant positive effects. The Project will provide significant transport and economic benefits for the Taranaki region, along with local community and social benefits through improved wellbeing and way of life. In addition, it will provide significant ecological and biodiversity benefits through the mitigation and offset package, which will enhance the ecology and cultural and values of the Project area and surrounding environment.

21. Construction and operation of the Project will result in adverse effects on the environment, some short term; others permanent and longer term. Adverse ecological effects will arise from the loss of habitat, and threatened ecosystems through vegetation clearance, creating subsequent effects on terrestrial fauna. Freshwater effects will arise from the discharge of sediment from earthworks. The Project will result in cultural effects, in particular on Ngāti Tama. Adverse landscape, visual and natural character effects can also be expected during construction and operation of the Project. In addition to the potential sediment generation effects relating to land clearance and earthworks, the physical construction works will also result in temporary disruption or localised effects to the small number of people living in proximity to the Project. These construction effects will relate primarily from construction related traffic and works on SH3 which may impact road users. The site is largely remote from neighbours and occupied dwellings, and other construction related effects such as construction noise or dust are expected to be minor.

22. The route selection process and consideration of alternatives, along with design development of the Project has been undertaken cognisant of the significant ecological, cultural and landscape features of the wider Project area, and has sought to avoid adverse effects on the environment to the extent practicable.

23. Where avoidance of adverse effects has not been practicable, a comprehensive package of measures has been developed to mitigate, remedy, offset or compensate both the short term and permanent long term potential adverse environmental, cultural and social effects of the Project. The package forms a key part of the Project with the measures are set out in proposed designation and resource consent conditions. Elements of this package have been developed in consultation with key stakeholders including Ngāti Tama and the Department of Conservation ("**DOC**"). I note that elements of this package have evolved since the Application was lodged in December 2017, which I address in my evidence.

24. The proposed conditions require the Project to be built in general accordance with the plans and documentation submitted as part of the Application, including a suite of comprehensive and fulsome management plans completed for the Project. The proposed conditions also set out various standards, controls, and requirements to manage actual or potential adverse effects during construction works.

25. The management plans and conditions have been developed by the Alliance, with extensive inputs from both the subject matter experts, designers and from the constructors. Development of the management plans has drawn on the extensive experience in construction and environmental management from within the Alliance. These inputs have enabled the development of full implementation and environmental management details, which are set out in the management plans. The fully developed management plans and the appointment of the Alliance to deliver the Project in accordance with the plans provides a high level of certainty that the Project can and will be constructed and operated to comply with the designation and resource consent conditions.

26. In particular, the Ecological Landscape Management Plan (ELMP) and the Pest Management Plan (PMP) provides certainty that the Project effects on ecosystems and biodiversity can be mitigated and offset, and that the Project will deliver important positive biodiversity outcomes. The Landscape and Environment Design Framework (LEDF) describes how landscape outcomes have been and will be incorporated into designs to mitigate landscape, natural character and visual effects. The Construction Environmental Management Plan (CEMP) and suite of associated sub plans (which include the ELMP and PMP), describe how effects will be managed through construction (and beyond).

27. The effects of the Project on the cultural values of Ngāti Tama have been acknowledge by the Transport Agency and an extensive process of engagement has occurred. This has included Ngāti Tama providing inputs through the assessment of alternatives process. Mitigation to address the effects of the Project on Ngāti Tama and their cultural values has been developed. An important part of this mitigation has been the establishment of a Kaitiaki process through which Ngāti Tama have provided and will continue

to provide input to the development of the Project design and construction method.

28. As part of my evidence, I have recommended amendments to the proposed conditions provided with the Application, to reflect further technical assessment and design development undertaken by the Alliance, feedback from key stakeholders (DOC, Ngāti Tama and the Royal Forest and Bird Protection Society of New Zealand) and to respond to matters raised in submissions and the 42A reports. I understand that the Transport Agency accept these recommendations.

29. Overall, I consider that a robust and comprehensive assessment of environmental effects has been prepared to identify the effects that may result from the construction and operation of the Project. It is my opinion that the Project will deliver positive effects for the local area and for the wider Taranaki Region. The potential adverse effects of the Project have been either avoided, and where this has not been possible, will be appropriately remedied, mitigated, offset or compensated.

OVERVIEW OF THE PROJECT AND APPLICATION

30. The Project involves the construction and ongoing operation of a new section of SH3, generally between Uruti and Ahititi to the north of New Plymouth. This new section of SH3 will bypass the existing steep, narrow and winding section of highway at Mt Messenger. Specifically, the Project comprises a new section of two lane highway, approximately 6km in length, located to the east of the existing SH3 alignment. A comprehensive description of the Project is contained in Section 4: *Project Description* of the AEE and the Project is shown in the plan sets contained in Volume 2 of the Application. The Project designs are described in the evidence of Mr Ken Boam and the construction methods by Mr Milliken.

31. The Transport Agency has lodged one Notice of Requirement ("**NOR**") with the NPDC to alter the existing SH3 designation within the Operative New Plymouth District Plan ("**District Plan**") in accordance with s181 of the Resource Management Act ("**RMA**"). The alteration is to add land to the existing SH3 designation, being the land required for the construction, operation and maintenance of the Project, including key associated mitigation and offsetting activities.

32. The resource consents sought by the Transport Agency for the Project cover the range of activities necessary to construct, operate and maintain the new section of State Highway as outlined in the Application. The Transport Agency has lodged an application for resource consents with the TRC and NPDC. The resource consents cover activities under sections 9 (land use and earthworks), 13 (works in watercourses), 14 (water) and 15 (discharges to air, land and/or water). The Project requires resource consents for a range of controlled and

discretionary activities under the rules of the Regional Fresh Water Plan for Taranaki, the Regional Soil Plan for Taranaki and the Regional Air Quality Plan for Taranaki. As noted also by Mr Dixon, these activities include:

(a) the take and use of surface water for construction related purposes (dust suppression);

(b) the damming of water from a stream or river associated with surface water takes;

(c) diversion of streams and rivers (temporary and permanent);

(d) use of a streambed for construction activities and permanent works (culverts);

(e) structures over a stream bed (bridge over Mimi swamp forest);

(f) streambed disturbance associated with construction activities;

(g) discharge of contaminants to land and water associated with land disturbance activities;

(h) groundwater take and diversion during cut excavations along the alignment;

(i) vegetation clearance associated with construction activities; and

(j) discharge of dust associated with land disturbance activities.

33. Resource consent is also required as a discretionary activity under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 ("**NES**").

THE EXISTING ENVIRONMENT

34. A description of the existing environment is set out in Section: 8 *Existing Environment* of the AEE.

35. The existing SH3 corridor north and south of Mt Messenger follows relatively open rural valleys: the Mangapepeke Valley in the north and the upper Mimi Valley in the south. Pastoral farming / grazing is the predominant land use along the valley flats. These lowland areas are separated by very steep, topographically complex hill country with contiguous areas of indigenous vegetation to the west and east of SH3.

36. The wider area includes the steep to very steep hill country from the coastal terraces south of the Tongaporutu River; south to the pastoral flats of the Mimi Valley; west to the coast and the Parininihi Cliffs; and east to the Mt

Messenger Forest. In general terms, the wider area is predominantly steep to very steep hill country.

37. Settlement patterns within the wider Project area are sparse and determined predominantly by the access afforded from SH3. A small number of dwellings are located at Ahititi (at the intersection of Mokau and Okau Roads) and occasional dwellings are present along the SH3 corridor itself.

38. The wider Project area contains a number of important cultural, ecological, and landscape features relevant to the assessment of effects. These features have been detailed in the Technical Reports, the evidence of other witnesses and the cultural impact assessment report provided to the Transport Agency by Ngāti Tama, and include:

    (a) Cultural features: Ngāti Tama exercise mana whenua for the wider Project area and for the land associated with the Project. The Whitecliffs and Mt Messenger area is known to Ngāti Tama as Parininihi, and is referred to as 'Te Matua Kanohi o Ngāti Tama Whanui', 'The parent face of Ngāti Tama'. It is an area of great cultural, spiritual, historical, and traditional significance to Ngāti Tama. Part of the land subject to the proposed designation, and the wider Parininihi land west and east of SH3, is vested in Ngāti Tama through the Ngāti Tama Claims Settlement Act 2003 (Treaty Settlement Act). The Treaty Settlement provided for the redress of historic breaches of Te Tiriti o Waitangi. Parininihi provides the base for Ngāti Tama's sustenance and connection to the whenua, awa and moana.

    (b) Ecological features: The wider Project area includes the ecologically significant Parininihi land to the west of SH3, centred on the Waipingao Stream catchment. Ngāti Tama have led the protection and restoration of biodiversity values and the removal of pests from the Parininihi land to the west of SH3 since the late 1990's. These areas will not be affected by the Project. Within the immediate Project area, the Mimi Swamp Forest is of greatest ecological significance. Part of the land subject to the proposed designation traverses indigenous forested land, much of which is owned by Ngāti Tama. This forest has not had the benefit of intensive pest management, and is in a poor condition reflecting the effects of browsers and pests.

    (c) Landscape features: The Parininihi landscape, made up of the peak of Mt Messenger adjacent to SH3, with ridgelines running in a westward direction towards the coast, is scheduled in the District Plan as a regionally significant landscape. The Project alignment itself is contained within two valley systems, being the Mangapepeke Valley in the north, and the upper Mimi Valley in the south, the steeper upper slopes of which have higher naturalness characteristics, while the lower

parts of the valleys occupy a modified pastoral rural landscape. This land is not subject to a significant landscape notation in the District Plan.

39. As set out below, the route selection and design development processes have been undertaken cognisant of the above features and the opportunities to avoid, remedy, mitigate and offset adverse effects. I note that all of the route options assessed through the route selection process would have resulted in adverse ecological, landscape and cultural effects to varying extents as outlined in my evidence on alternatives.

40. The Project involves a number of activities specified as permitted activities under the relevant Taranaki Regional Plans and the New Plymouth District Plan, as outlined in Section 2.5 of the AEE. These activities form the permitted baseline for the Project's physical works, which, while of only limited assistance in relation to assessing the wider proposal, are particularly relevant to the proposed Preparatory Works[1] as set out in the AEE and the proposed conditions, and to the ongoing operational discharge of stormwater runoff from the completed highway.

41. Preparatory Works are proposed to be undertaken prior to the main Establishment / Construction Works, as outlined in Section 2.5 of the AEE. I consider there to be key differences between the purpose, nature, and scale of effects associated with Preparatory Works in comparison to Establishment or Construction Works, as acknowledged in the proposed conditions. The conditions provide for Preparatory Works to be undertaken, and if amendments are being made to the Management Plans, for these works to occur without the amendments having been certified. I consider this to be appropriate given that such activities could be undertaken without resource consent in accordance with the relevant provisions of the Regional and District Plans.

42. Operational stormwater runoff from the road will be treated in treatment wetlands and the discharge managed to ensure no significant erosion, scour or deposition will occur. These discharges will met the permitted activity standards in the Regional Fresh Water Plan for Taranaki.

APPROACH TO MANAGING ENVIRONMENTAL EFFECTS – KEY PRINCIPLES

43. The approach taken to development of the Project and the management of effects has been underpinned by the purpose and principles of the RMA. The sustainable management premise of the RMA involves the use, development and protection of resources, as set out in Mr Dixon's evidence. The nature and scale of the Project is such that it will inevitably result in some adverse effects on the environment during construction and operation, as would any major roading proposal. This is often reflective of the tensions between the use,

[1] Initial works to enable Establishment Works and Construction Works, such as site surveys, investigations, monitoring and some land disturbance activities.

development and protection of resources while providing for the wellbeing of people and communities. What is important, in my view, is that rigorous and robust consideration has been given to the approach and methods to appropriately avoid, remedy, or mitigate adverse effects, and to the offsetting of, or compensation for, any remaining significant residual effects, and that appropriate methods have been adopted by the Transport Agency to achieve these outcomes.

Avoiding and minimising adverse effects

44. As described in the evidence of other experts, the Project route selection and design development phases have focused on the active avoidance of significant environmental, cultural and social adverse effects where practicable, and responding to the sensitivities of the wider Project area.

45. A number of potential adverse effects of the Project have been avoided through a robust route selection process. This has process continued through the ongoing design development of the preferred route, and has involved a team of subject-matter experts (particularly ecology and landscape) working closely with the design and construction team members. A specific process of engagement on design development is also underway with the Ngāti Tama, which has been reference by way of proposed conditions in the designation and resource consents.

46. The alignment has avoided the high ecological, landscape and cultural values of the Parininihi land and Waipingao Valley to the west of SH3. As discussed in the evidence of Mr MacGibbon, this has avoided the loss of significant habitats, severance of a nationally important vegetation sequence and adverse effects on associated regionally and nationally significant flora and fauna.

47. The alignment design has been further refined and construction techniques developed to minimise adverse effects. By way of example, some of the principal measures that have been described in the evidence of the ecology and landscape experts are:

    (a) Inclusion of the tunnel passing through the ridgeline dividing the Mangapepeke and Mimi catchments to avoid impacts on the Mt Messenger peak and greatly reduce the extent of cut and fill that would otherwise have been required. This in turn, has preserved the important east – west connectivity of habitat (ridge to coast) and reduced effects on mobile animal movement, vegetation disturbance and the integrity of the landform.

    (b) Crossing the tributary valley of the Mimi River via a bridge, instead of an earthworks approach encroaching on the wetland, which has avoided effects on the Mimi swamp forest.

(c) Minimising landscape effects by providing an alignment that remains as low as practicable in the landscape.

(d) Aligning the highway along the edge of the Mangapepeke and Mimi valleys to follow the existing landscape patterns and minimising stream crossings in the Mangapepeke Valley.

(e) Using construction techniques to reduce adverse effects. For example, the Mimi swamp forest bridge design will enable a large portion of the structural works to be done off site and construction to be undertaken from each side of the valley, avoiding the valley floor, which will reduce the amount of ground and vegetation disturbance and reduce the risk of sediment entering the wetland.

(f) Location of construction yards, laydown areas, access tracks and haul roads away from significant ecological areas to minimise the extent of disturbance and vegetation clearance.

(g) Location of spoil fill areas in areas likely to cause the least ecological effect.

(h) Design of cuttings, embankments and landscape treatments to facilitate natural revegetation.

Integrating remediation and mitigation in Project design and construction

48. Where avoidance of adverse effects has not been possible through route selection, design or construction method development, a package of measures is proposed to remedy, mitigate or offset adverse effects, in particular ecology, cultural and landscape effects.

49. In his evidence, Mr MacGibbon describes how the Project will have adverse effects on the existing ecological values within the Project footprint, which is a consequence of the nature of the environment near the Mt Messenger section of SH3. A key part of the Project design is a comprehensive mitigation, biodiversity offset and compensation package (the **Restoration Package**). The Restoration Package has been expanded since lodgement of the applications, to reflect feedback from discussions with DOC and with Ngāti Tama. The Restoration Package is designed to address all residual ecological effects and achieve no net loss of biodiversity by year 10 (following construction) and net gain in biodiversity from year 15. The Restoration Package comprises:

(a) Intensive, multi-species pest management in perpetuity (or until such time as pest management in its current form is no longer necessary to sustain the levels of biodiversity created) over a 1,085 ha area of native forest, with a core area of 250 ha.

(b) Restoration planting of 6ha of kahikatea swamp forest.

(c) Planting of 200 seedlings of the same species for every significant tree felled during construction (a total of up to 3400 seedlings).

(d) Riparian planting, fencing and livestock exclusion of approximately 8.6km of existing stream.

(e) Mitigation planting of some 8.38ha of vegetation disturbed during construction

50. In addition, the Transport Agency will rehabilitate fill areas with early successional plant species, stream diversion channels with riparian species, and enhance steep cut faces to promote natural plant regeneration where this is feasible.

51. In his evidence, Mr Lister describes how the Project's design philosophy, principles and strategies, as outlined in the Landscape and Environmental Design Framework ("**LEDF**"), have minimised adverse landscape effects. A focus of the LEDF is connecting the landscape and ecology aspects of the Project area and responding to and reflecting natural elements, patterns and processes through design.

52. Measures to mitigate the adverse landscape, natural character and visual effects are set out in the LEDF. The LEDF will inform the development of detailed design and construction methods so that the Project's temporary and permanent works are integrated into the surrounding landscape and topography, having regard to the local landscape character and context.

53. An ongoing process of engagement has occurred with Ngāti Tama to first understand cultural values, and then address cultural effects. This process has been described by Mr Dreaver and Mr Napier. A number of measures have been proposed to address the effects of the Project on Ngāti Tama and their cultural and spiritual values, as Mr Dreaver outlines. Further, a specific process has been established and has been underway for some months now with Ngāti Tama to enable their kaitiaki inputs to be provided into the design development and construction of the Project, and conditions have been proposed in the draft designation and resource consents that formalise this.

54. The methods adopted to avoid, remedy and mitigate effects, and offset residual effects, have been described in detail in the suite of fulsome and complete (i.e. 'construction ready') construction management plans (Volume 5 of the Application). The final management plans are attached to my evidence (as **Annexure B**). The management plans have been developed to ensure and provide certainty that the potential effects arising from the Project can be appropriately managed.

SUMMARY OF ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT

55. The actual and potential effects on the environment have been assessed by suitably qualified experts and documented in the Technical Reports provided in Volume 3 of the Application and summarised in the AEE. A broad range of effects, both positive and adverse, have been identified in relation to the construction and operation of the Project. Some effects will be of a temporary nature and duration, occurring during construction of the Project, while others will be of a longer duration or permanent in nature.

56. The following sections set out my overall assessment of effects on the environment, focused on key positive and adverse effects from the Project. In drawing these conclusions I have relied on the Technical Reports and the evidence of the experts. Where adverse effects have been identified, I describe the measures that have been proposed to remedy, mitigate or offset the effects.

Positive effects of the Project

57. In my opinion, and drawing on the evidence of Mr McCombs, Mr Copeland, Ms Turvey, Mr MacGibbon and Mr Lister, the Project will result in significant positive effects, as outlined below.

58. The significant positive traffic and transport benefits arising from the Project are discussed by Mr McCombs in his evidence and include the following:

    (a) A modern, high-standard highway, with significantly improved geometry, forward visibility, and sight distances. This will be reflected in an increase in the safety rating from 2 Star to 3 Star. The end result will be reduced driver frustration and a significantly safer road compared to the existing section of SH3.

    (b) Improved resilience of the Mt Messenger section of SH3, and therefore the robustness of the broader regional transport network linking Taranaki to the north. This improvement will result from enhanced resilience to natural hazards, along with enhanced safety conditions resulting in fewer crashes and an improved ability to recover from incidents.

    (c) Significant improvements in the reliability of journey time to road users of SH3. While important for all road users, this is particularly vital for residents and businesses that need to have confidence in the network given that reliability of the transport network is an important factor underpinning economic performance.

    (d) Journey time savings for all vehicles of 4 to 5 minutes on average, and for trucks, an average saving of 6 minutes 40 seconds over the existing section of SH3.

59. The Project will also result in positive effects on alternative modes of transport. In particular:

    (a) The Project will result in improved conditions for cyclists (and any pedestrians), through increased lane and shoulder widths and improved grades. Safe passage through the tunnel will be possible either cycling in the shoulder or via the safety egress passage.

    (b) The Project will also provide safer conditions for users of the Mt Messenger and Kiwi Road walking tracks to pull over and park. This access will represent an improvement on the existing configuration where informal parking areas on the side of the road lack any safe connection to the start of the track and lack safe entry and exits.

60. SH3 is critical for supporting the Taranaki economy and its ongoing growth and development. The highway serves the key strategic purpose of connecting Taranaki's oil and gas, agricultural, forestry and engineering sectors to suppliers and markets in the north, and provides vital tourism linkages and access to health, cultural and other services.

61. Mr Copeland confirms in his evidence that the significant traffic and transport benefits from the Project will result in significant benefits to local residents, businesses, and visitors to Taranaki, and for the Taranaki economy from improved attractiveness of the region. For businesses, road user benefits result in increased productivity and improvements in business competitiveness. For residents, these benefits will produce cost savings, improve personal safety and enable the freeing up of time for other productive or leisure activities.

62. The Economics Assessment (Technical Report 4) concludes that during the three year construction programme, the Project will bring direct economic benefits, including construction related expenditure, employment and income for Taranaki businesses and residents. Construction is expected to provide 74 additional jobs, $5.5 million per annum in additional wages and salaries and $33.1 million per annum in additional expenditure on goods and services purchased from local Taranaki businesses. Overall, the direct economic effects to the Taranaki Region of the construction of the Project will be significant. In addition, there will be indirect benefits on local suppliers providing goods and services to the Project and Project employees.

63. Relying on the evidence of Mr McCombs and Mr Copeland, I consider that the Project will deliver significant positive transport benefits that will support opportunities for economic growth and business competitiveness. The new road will contribute to a long-term transport solution connecting the Taranaki Region to the north. The Project itself, and combined with other roading improvements in the region (some nearing completion, others being

consented), will significantly improve the connectivity of freight to and from the region.

64. Ms Turvey confirms that significant social benefits can be expected at a regional and local level as a result of transportation, connectivity, accessibility and economic benefits of the Project. Regional social benefits will include enhanced employment opportunities, retention of regional populations leading to further maintenance and upgrades of social infrastructure, and increased liveability in the region. Expenditure during construction will benefit local businesses through increased demand for goods and services.

65. Interviews conducted for the Social Impact Assessment (Technical Report 5) found that the local community and road users feel vulnerable and uncomfortable using the existing SH3 route over Mt Messenger. Improved road safety, resilience and journey time reliability resulting from the Project will improve the accessibility, connectivity, patterns of living and mobility of people, communities and businesses.

66. Based on the evidence of Ms Turvey I consider that by improving road safety, route resilience and travel reliability and reducing vehicle operating costs and travel times, the Project will directly contribute to the social and economic wellbeing of local residents and businesses. The Project will deliver significant positive social and community effects to Taranaki's way of life, growth and development, and wellbeing.

67. As discussed in the evidence of Mr MacGibbon, the Project will deliver significant ecological benefits through a substantial mitigation and biodiversity offset package that forms a core part of the Project. The pest management proposals will be undertaken by the Transport Agency in perpetuity. A broad range of the indigenous flora and fauna are present within the mitigation and offset area that will benefit from the mitigation and restoration planting, management of pest animals to permanently low densities and the establishment of new areas of swamp forest, and riparian habitat. The proposed mitigation will increase the area of healthy indigenous vegetation and improve the connectedness of the forested areas. The net result will be a significant increase in healthy available habitat, enhanced recruitment rates amongst a wide range of indigenous animals, improved condition of the remaining significant forest trees, especially totara and rata, and increased regeneration of many of the more palatable plant species. While these outcomes will come about as a consequence of mitigating or offsetting adverse effects, the benefits will be indeed be significant and ongoing, in perpetuity.

68. Mr Lister, in his evidence, discusses the landscape effects from the Project. While addressing the potential adverse landscape and natural character effects, Mr Lister identifies that there is considerable opportunity to enhance

the wider landscape and natural character values of the Mangapepeke Stream corridor and Valley as part of the wider mitigation package for the Project.

69. Mr Lister notes the alignment will have scenic qualities for travellers and provide an elevated outlook over the valley floor. The tunnel will become a waymark on the highway, echoing the existing Mount Messenger Tunnel on this section of SH3.

70. The ongoing design of the Project provides opportunity for the incorporation of a cultural narrative and design expression into elements of the Project. A specific process has been established with Ngāti Tama in this regard and is already underway to enable their kaitiaki inputs to be provided into the design development.

71. The landscape, ecology and cultural features of the Project area have been holistically integrated into the Project design, which will be implemented in particular through the LEDF.

72. Overall, I consider that there are significant positive effects that will arise from the Project. The Project will provide significant transport, economic and social benefits. There will be significant ecological benefits, and an overall net positive result in terms of biodiversity values, and the Project will also enhance landscape and natural character values. These positive effects are an inherent part of the Project design and will be delivered through construction of the bypass and through the implementation of the proposed conditions.

Actual and potential adverse effects during construction and operation

73. In preparing the AEE I separated the actual and potential adverse effects into the construction and operation phases for the Project. In the sections below, I discuss effects by overall category (rather than specifically by construction vs operational effects).

Cultural matters

74. As outlined in the evidence of Mr Dreaver, part of the land subject to the proposed designation is land vested in Ngāti Tama through the Ngāti Tama Claims Settlement Act 2003 (Treaty Settlement Act). Ngāti Tama are the iwi for this part of Taranaki and exercise mana whenua over the land associated with the Project.

75. Engagement with Ngāti Tama is described in the evidence of Mr Dreaver and Mr Napier. As I note in paragraph 40 (a), through this engagement process the Transport Agency has gained an understanding of the cultural values that Ngāti Tama hold in relation to the wider Parininihi area and the land affected by the NOR. Ngāti Tama have described the effects of the Project on these values in a cultural impact assessment report (CIA) provided to the Transport Agency.

76. The CIA identifies that the area affected by the Project includes Treaty Settlement land and areas of major importance to Ngāti Tama. The Parininihi land was returned to Ngāti Tama through the Treaty Settlement process, and Ngāti Tama have highlighted that acquiring this land for the purpose of the Project would undermine the Treaty Settlement and undermine their mana and kaitiaki responsibilities. They highlight that the Project would therefore have major and ongoing cultural effects.

77. The Transport Agency has recognised the special relationship of Ngāti Tama with their lands, culture and traditions. Furthermore, the Agency recognises that the Treaty Settlement process provides important context to the Project. The Ngāti Tama settlement acknowledged the importance of the relationship of Ngāti Tama to Parininihi.

78. Ongoing engagement has occurred with Ngāti Tama since they provided their CIA to the Transport Agency. A package of measures have been proposed as part of this process to address the effects of the Project on Ngāti Tama, as described in the evidence of Mr Dreaver. Further, the Transport Agency have stated (in the AEE):

> "While the Transport Agency relies on the Public Works Act to acquire land, it also recognises the potential effects of the acquisition process on Ngāti Tama and it will not use the compulsory acquisition provisions of the Public Works Act to acquire Ngāti Tama's land. Mitigation for loss of control over land will be achieved through mutual agreement with Ngāti Tama on the land acquisition process."

79. I understand that the Transport Agency has also formally conveyed to Ngāti Tama that it will not request the use of the Public Works Act to acquire Ngāti Tama land for the Project. In this regard, the Transport Agency has acknowledged Ngāti Tama's cultural and spiritual values and its interest in the land affected by the NOR, and has made clear that unless land acquisition occurs by mutual agreement with Ngāti Tama, then the Project as it is currently proposed will not be progressed. To my knowledge this is a unique position.

80. A process for gaining Ngāti Tama's kaitiaki inputs to the development, implementation and operation of the Project has been developed with Ngāti Tama. This process provides opportunity for Ngāti Tama to participate in the Project development and has been in place now for some months, and to date has involved a series of design workshops with the Runang, along with input to and review of the ELMP. The current focus is on the incorporation of a cultural narrative and design expression into elements of the Project. Most recently, Ngāti Tama Runanga member, Mr Larry Crow, has started spending a day a week in the Alliance office to participate in workshops and bring Ngāti

Tama's kaitiaki 'voice' into the design process. It is expected that over coming months, this process will address other aspects of the Project, including drainage and water management and treatment, landscaping, construction earthworks, and any other matters that Ngāti Tama may be interested in.

81. I have developed a proposed Designation and Resource Consent Condition, which would 'formalise' the process that is in place. The Condition envisages the establishment of a Kaitiaki Forum Group ("**KFG**"), through which Ngāti Tama and the Transport Agency (through the Mt Messenger Alliance) would continue to work together collaboratively on kaitiaki matters. This process is setout in proposed consent and designation Conditions 4 and 4(a).

82. The KFG provides opportunity for Ngāti Tama's kaitiaki aspirations to be addressed through:

    (a) The development of the Project designs to incorporate cultural values into elements such as (but not limited to):

        (i) Cultural expression in artwork on road corridor features such as the tunnel, bridge and in landscape works and plantings.

        (ii) Water management principles.

        (iii) The ELMP.

        (iv) Signage of local features.

        (v) Naming of the new highway.

    (b) Input to ecological mitigation proposals, including the ELMP.

    (c) The development and implementation of cultural indicators and cultural monitoring.

    (d) Tikanga and cultural practice in relation to Project activities.

83. I consider that the engagement process with Ngāti Tama to date has assisted the Project team to gain a great appreciation of the issues that are important to Ngāti Tama. This has enabled the development of a series of measures that respond to the effects of the Project on Ngāti Tama's cultural values. Further, the proposed KFG conditions enables Ngāti Tama to express their kaitakitanga through the Project.

84. As state above, should Ngāti Tama and the Transport Agency not agree on the land acquisition process, then the Project will not proceed. While that process is not a matter for this hearing, the Transport Agency's position on the land acquisition process does ultimately provide for Ngāti Tama to have the final say on whether they consider the Project has provided for their cultural and spiritual values. In my view, that is an appropriate outcome.

Ecology (vegetation, terrestrial invertebrates, herpetofauna, avifauna, bats, freshwater ecology)

85. The ecological effects of the Project have been assessed by a team of ecologists addressing vegetation, terrestrial invertebrates, herpetofauna, avifauna, bats, freshwater and marine ecology.

86. The key adverse ecological effects from construction of the Project result primarily from the removal of a corridor of vegetation and effects on associated habitats and flora and fauna, and the discharge of sediment from earthworks. Operation of the Project will result in permanent ecological effects from habitat loss and modification. These effects are discussed in further detail below.

Vegetation

87. The effects of the Project on vegetation are set out in Technical Report 7a and Supplementary Report *Assessment of Ecological Effects – Vegetation* and the evidence of Mr Nick Singers.

88. Mr Singers identifies that there will be adverse effects from the removal of, or damage to some 31.2 ha of indigenous vegetation, along with the removal of up to 17 large emergent old podocarp trees. In addition to being old significant trees, these trees provide habitat for epiphytes, and habitat and food for a range of potential bird, lizard and invertebrate species. Vegetation disturbance may also result in the removal of threatened species (the epiphytic shrub, kohurangi) or regionally distinctive swamp maire and *Pittosporum cornifolium*. Mr Singers considers that the effects on vegetation are significant due to the scale of vegetation loss, its composition, structure (being older complex forest ecosystems), and the permanent nature of effects.

89. The areas of highest ecological value is forest dominated by kahikatea in the Mimi and Mangapepeke catchments and tawa, rewarewa and kamahi forest in the Mimi catchment. Of greatest botanical significance in the Project area is the hydrologically intact swamp forest and non-forest wetland areas in the valley floor of the northern Mimi River catchment. I agree with Mr Singers that direct adverse effects on the Mimi Swamp Forest, have been avoided by locating the road on a bridge to cross a tributary to this swamp forest.

90. Areas of significant and high value vegetation have been mapped by the Project team under the guidance of Mr Singers and this has been used to inform the route selection, the design process and the construction method.

91. As discussed, in the evidence of Mr Singers and Mr MacGibbon, a comprehensive programme has been developed to mitigate and offset adverse vegetation effects. This includes restoration and rehabilitation planting, including substantial areas of swamp forest, shrubland and riparian planting. The ELMP contains a Vegetation Management Plan chapter with

specific protocols to minimise adverse effects on vegetation and associated habitat effects during construction of the Project.

92. Based on Mr Singers' evidence, I consider that the proposed Restoration Package will appropriately mitigate, offset and compensate for the adverse effects of the Project on vegetation and will provide significant benefits over time. Importantly I note that the ELMP provides a methodology for confirming that the biodiversity targets proposed in the Restoration Package have been achieved, and a management response in the event that it is determined that they have not.

Freshwater ecology

93. The effects of the Project on freshwater ecology are set out in Technical Report 7b and Supplementary Report *Assessment of Ecological Effects – Freshwater Ecology* and the evidence of Mr Keith Hamill. The potential effects of the Project will include both long-term effects over the operational life of the Project and short-term effects during construction. The Project will result in the loss or alteration of some 3,822m of stream length.

94. In his evidence, Mr Hamill identifies that short term freshwater ecology effects include direct effects on fish during construction as a result of stream works (culvert installation and stream diversion), potential sedimentation of waterbodies and water quality changes as a result of vegetation clearance, earthworks and temporary construction related discharges, short term restrictions on fish passage during stream works, short term reductions in stream habitat during water take from the Mimi River and Mangapepeke Stream for dust suppression.

95. Long term freshwater ecology effects from the Project include long-term effects on fish passage and loss of stream habitat and functions due to the installation or extension of culverts and stream diversion, along with potential effects associated with stormwater discharges from operation of the highway.

96. As outlined by Mr Hamill, the Project will minimise and mitigate the adverse effects on fish, kōura and kākahi during construction by implementing the Fish Recovery and Rescue Protocols set out in the ELMP prior to draining, diverting or excavating streams. These works will also be undertaken in accordance with the relevant Specific Construction Water Management Plans ("**SCWMPs**") to minimise construction water discharges. A description of the measures to minimise construction water discharges to waterbodies is set out in the evidence of Mr Ridley. Water take inlets will be appropriately designed as per the proposed consent conditions and the Freshwater Management Plan chapter of the ELMP.

97. Long term fish passage through culverts will be provided in the permanent culvert design as outlined in the stream design principles contained in the Freshwater Management Plan chapter of the ELMP. Stormwater runoff from

the highway will be mitigated through treatment in swales and wetlands prior to discharge to the receiving environment. As described by Mr Hamill, the Project may result in improved water quality due to the stormwater treatment system not present on the current section of SH3. The permanent loss of stream habitat will be addressed through the Project Restoration Package, which includes riparian and swamp forest planting, as described by Mr MacGibbon.

98. Based on Mr Hamill's evidence I consider that the effects of the Project on freshwater ecology can be appropriately managed and mitigated, and the residual loss of habitat can be adequately offset to result in 'no net loss' of stream ecological values.

Invertebrates

99. The effects of the Project on terrestrial invertebrates are set out in Technical Report 7c Assessment of Ecological Effects – Terrestrial Invertebrates and in the evidence of Ms Watts. The assessment confirms that two species of peripatus, *P. suteri* and *P. novaezealandiae,* have been found within the Project footprint. The record of *Peripatoides suteri,* classified as 'Vulnerable' on the IUCN Red List of Threatened Species (IUCN 2012).

100. The potential effects of the Project on peripatus are identified by Ms Watts as direct mortality of peripatus during vegetation clearance and earthworks, habitat loss, and habitat modification and disturbance.

101. The ELMP includes a Peripatus Management Plan chapter, which outlines pre-construction habitat assessment requirements, translocation of peripatus and the relocation of habitat elements, and possibly the monitoring of success post-translocation. The ELMP also contains a Biosecurity Management Plan chapter, which addresses the risk of pest invertebrates being introduced to the site.

102. Ms Watts identifies that a range of ecological mitigation, offset and compensation measures are proposed for the Project, including pest control, habitat enhancement and restoration planting, as outlined in the evidence of Mr MacGibbon.

103. Based on Ms Watts' evidence I consider that the proposed mitigation measures outlined in the ELMP, coupled with the Restoration Package is an appropriate response to the effects of vegetation removal potentially affecting the terrestrial invertebrate communities during construction activities.

Herpetofauna

104. The adverse effects of the Project on herpetofauna are outlined in Technical Report 7d Assessment of Ecological Effects – Herpetofauna and the evidence of Mr Simon Chapman. I note that surveys in the summer of 2017/18 identified

a population of copper skink approximately 600m from the Project footprint. While no further species were detected across surveyed areas, in his evidence Mr Chapman identifies the Project area is of 'Moderate' ecological value for herpetofauna and several species, including At Risk and Threatened species, could be present.

105. The potential effects of the Project on herpetofauna relate primarily to habitat loss and fragmentation resulting from vegetation removal. Vehicle strike is also possible during operation of the Project, although this risk already exists on the existing SH3.

106. Based on Mr Chapman's evidence I consider that the potential adverse effects of the Project on herpetofauna have been minimised through route selection and design development and that the measures outlined in the ELMP are an appropriate response to mitigate and offset potential adverse effects on herpetofauna. Targeted herpetofauna management measures will be undertaken to reduce the potential for effects during construction of the Project. These measures are set out in the Lizard Management chapter of the ELMP. Mr Chapman considers that if lizards are present, effects can be appropriately avoided, remedied, mitigated, offset or compensated for through the proposed mitigation measures outlined in the ELMP, coupled with the Restoration Package.

Avifauna

107. The adverse effects of the Project on avifauna are outlined in Technical Report 7e Assessment of Ecological Effects – Avifauna and the evidence of Mr John McLennan. Adverse avifauna effects will likely include habitat loss and fragmentation resulting from vegetation removal during construction. Vehicle strike is also possible during operation of the Project, although this risk already exists on the existing SH3.

108. Mr McLennan identifies that the Project area is considered to be moderately rich by regional and national standards, in terms of the number of threatened and non-threatened species known to be present. North Island brown kiwi and the North Island robin are identified as the most significant bird species in the Project area.

109. Based on the evidence of Mr McLennan I consider that adverse effects have been avoided and mitigated through route selection (avoiding the high value western Parininihi area) and also through design development and the inclusion of tunnel and bridge structures to reduce adverse effects.

110. A number of measures are proposed to further mitigate potential effects on avifauna from the construction and operation of the Project. In particular, a kiwi management and monitoring programme is outlined in the Avifauna Management Plan chapter of the ELMP. This involves locating, relocating and protecting individuals living near or alongside the footprint area during

construction. The risks of vehicle strike on kiwi on the completed road will be reduced by erecting low fences in some places to prevent kiwi accessing the road, or to guide them to culverts which will allow safe passage underneath it. Signage will also be erected along the road alignment alerting motorists of the possible presence of kiwi.

111. The Restoration Package has been developed to address the ecological effects of the Project, including on avifauna, and will over time create significant ecological benefits. Avifauna will benefit from the proposed pest control and restoration planting and habitat enhancement. Mr McLennan indicates that the kiwi population in the pest management area is likely to increase from approximately 80 to 400 over the first 30 years of the pest control programme. I agree with Mr McLennan that this gain will far outweigh any effects of the Project on kiwi.

112. I note that post construction monitoring of kiwi and forest birds will be undertaken to detect changes in the abundance of key species as outlined in Mr McLennan's evidence.

113. Overall, taking into account the proposed management measures and the Restoration Package, and based on the evidence of Mr McLennan I consider that the overall effects of the Project on avifauna will be beneficial and positive.

Bats

114. The adverse effects on bats are outlined in Technical Report 7f Assessment of Ecological Effects – Bats and the evidence of Mr Chapman. Adverse effects on bats will likely include habitat loss (including loss of roosts and foraging habitat) and fragmentation resulting from vegetation removal. Disturbance from noise and lighting during construction and operation of the Project may also affect bats. Vehicle strike is also possible during operation of the Project, although this risk already exists on the existing SH3.

115. As outlined by Mr Chapman in his evidence, survey results confirm that long-tailed bats are widely active within and adjacent to the Project footprint, and that this species is likely to intermittently roost in trees within and adjacent to the Project footprint. Short-tailed bats have not yet been detected within or adjacent to the Project footprint in any survey.

116. Based on Mr Chapman's evidence I consider that the potential adverse effects of the Project on bats have been minimised through route selection and design development.

117. As set out in the Bat Management chapter of the ELMP, implementation of Vegetation Removal Protocols ("VRP") will be a key mitigation measure when clearing vegetation that could potentially support bat roosts so as to ensure that no occupied bat roost trees are removed (recognising that Mr Chapman's

evidence identifies the potential for other beneficial outcomes and ongoing discussions with DOC). The VRP details the techniques to be used to detect roosting activity (including the use of Automatic Bat Monitors, visual and roost emergence surveys) prior to clearance of vegetation, and procedures to guide the clearance process. The ELMP also addresses construction works undertaken at night and operational highway lighting to reduce effects on bats.

118. The Restoration Package has been developed to address the ecological effects of the Project, including on bats, and will over time create ecological benefits that extend on into the future. As described by Mr Chapman, the proposed pest management will more than make up for any residual effects the Project will have on bats. Mr Chapman also notes that the proposed pest control, when combined with the existing area of pest control on the western Parininihi land, will be of a scale sufficient to significantly slow and possibly reverse, the current likely long-tailed bat population decline in the wider Project area.

119. Overall, taking into account these measures, based on Mr Chapman's evidence I consider that the proposed mitigation and offset measures address the effects of the Project on bats, and will likely provide positive outcomes in the longer term.

Marine Ecology

120. The Project is well removed from the coastal environment, however the site is effectively connected to the marine environment via the Tongaporutu and Mimi Rivers. Construction or operational related discharges from the Project could be conveyed to the marine environment.

121. The erosion and sedimentation controls proposed during construction as part of the Construction Water Management Plan ("**CWMP**"), along with the stormwater treatment measures developed for the operational highway, are designed to protect the downstream freshwater receiving environments and as a consequence, also provide protection to the marine environment. Mr Ridley has described the erosion and sediment control measures. His assessment indicated that relative increase in sediment yields at the coastal margin associated with construction of the Project will be insignificant. Accordingly, effects in the marine environment are not anticipated. I note that the 42A report draws the same conclusion.

Mitigation and Biodiversity Offset Mitigation

122. As Mr MacGibbon identifies in his evidence, it is not possible to avoid remedy or fully mitigate the residual ecological effects within the Project footprint. Accordingly, an integrated approach has been adopted around an ecological Restoration Package for the Project. The proposed Restoration Package is set out in the ELMP and I have summarised the package earlier.

123. In his evidence, Mr MacGibbon notes the importance of the proposed pest management in addition to mitigation and offset planting noting that *"pest management can be expected to result in considerably more rapid and more ecologically diverse recovery of forest biodiversity than could be achieved by planting alone."* The pest management programme is proposed to continue in perpetuity, which Mr MacGibbon identifies will offer substantially greater ecological benefits than pest management for a fixed duration, as introduced pests can rapidly reinvade forest areas when pest control ceases eliminating any biodiversity gains.

124. Relying on the evidence of the ecological experts, I consider that the Restoration Package for the Project will appropriately address the residual ecological effects of the Project, and over time, create ecological effects that are beneficial and positive. The ELMP provides for these outcomes and conditions are proposed that will require the Transport Agency to implement the ELMP and associated provisions.

Landscape and visual

125. In his evidence, Mr Lister notes that the Project is located within a remote and generally undeveloped landscape setting with a number of natural valley landforms, including the well-defined Mangapepeke Valley in the north, and the broader upper Mimi Valley in the south. At the northern and southern ends of the Project alignment, the landscape comprises pastoral flats with a gentle topography, and modified landscape character. As the Project alignment progresses up each valley the slopes become steeper and covered in indigenous forest, and the environment takes on higher naturalness characteristics.

126. As I have outlined, the route selection process has avoided potential adverse effects on areas of highest landscape quality, namely the on the Waipingao Valley and the regionally significant landscape to the west of SH3, along with the landmark peak of Mt Messenger. The alignment also achieves the best 'fit' with the natural and human landscape patterns. However, given the linear nature of the Project, Mr Lister identifies that any highway is likely to have adverse landscape, natural character and visual effects, which I turn to now.

Mangapepeke Valley

127. Within the Mangapepeke Valley, Mr Lister identifies that the introduction of the highway into the current landscape will represent a change in existing landscape character and quiet rural nature. Adverse effects will arise from the loss of natural landscape features (bush and streams), and the visual impact of the highway within the valley.

128. The Project has been designed to minimise major landform modification and preserve the integrity of the key landscape and natural character aspects of the lower Mangapepeke Valley, following the toe of the hillside along the

eastern valley edge, before climbing a tributary valley to the tunnel. Mr Lister identifies that changes in landscape and natural character will be more pronounced in the upper Mangapepeke Valley due to the large embankment fill at the head of the valley.

129. The change in landscape character within the upper Mangapepeke Valley will be moderated through the Project design, in particular:

    (a) Integration of the fill into the existing pattern of steep surrounding hill slopes and natural drainage patterns;

    (b) Inclusion of the tunnel, which keeps the alignment lower in the landscape;

    (c) Restoration planting to integrate the highway with the bush character of the surrounding landscape; and

    (d) Reinstatement of the streams along the fill margins.

130. The majority of the planting is intended to be within the lower Mangapepeke valley and will integrate the Project landscape and ecology outcomes. Based on Mr Lister's evidence I consider that the mitigation planting proposed for the Project will have significant long term positive landscape effects on the enhancement of the natural landscape characteristics of the Mangapepeke Valley and will assist with integration of the highway into the surrounding landscape.

131. The Project has been designed to minimise impacts on natural streams and wetlands through the Mangapepeke Valley. The alignment avoids the main stem of the Mangapepeke Stream for much of its length, with modification limited to the streams draining the side gullies to the east. As noted above, the tunnel embankment will have a greater effect on the natural character values of the upper Mangapepeke Stream system. Riparian restoration within the Mangapepeke Valley will enhance the natural character values of these watercourses and mitigate for the effects of construction works.

Mimi Valley

132. As with the Mangapepeke Valley, adverse effects within the Mimi Valley will arise from loss of natural landscape features (bush and streams), and the visual impact of the highway. The most substantial changes to the existing landscape will be a large fill embankment on the approach to the southern portal of the tunnel.

133. In his evidence, Mr Lister notes that the Project will have little adverse effect on the main Mimi River and its margins, which have relatively low natural character, flowing through a farmed and settled landscape, and will not be directly impacted by the alignment.

134. The most significant natural area within the Project area is the Mimi Swamp Forest. Mr Lister identifies that the alignment will avoid physical effects on the Mimi Swamp Forest by crossing the gully on a clear span bridge. While there will be some adverse visual and natural character effects from the bridge, these have been minimised by the form and proportion of this bridge, which has been considered as part of the integrated design development process. Views from the bridge will be of scenic amenity value providing a strong visual connection and journey experience with the wider landscape.

135. The inter-valley ridge between the Mangapepeke and Mimi catchments is a defining landform in the local context. This feature has been preserved by the tunnel that conveys the alignment between the two catchments and remains intact as a connected ridgeline spur as part of the wider Mt Messenger topographical pattern. The tunnel not only maintains the integrity of natural landform but also echoes the existing SH3 Mt Messenger tunnel as a transitional 'journey feature' or waypoint reference for road users.

Visual effects

136. Given the remote landscape of the Project area, the private viewing audience for the alignment and construction activities is very small, comprising three occupied properties (3072, 2750 and 2528 Mokau Road). I understand that the Transport Agency is in the process of acquiring land associated with the Project at 3072 Mokau Road, and that this dwelling will not be occupied during construction.

137. Mr Lister has identified that during construction, there will be a 'moderate low' level of visual effects on 2528 Mokau Road. Construction works will also be visible from the dwelling at 2750 Mokau Road, but such works will be relatively distant, at lower elevation, and only parts will be visible.

Landscape and Environmental Design Framework

138. Measures to mitigate adverse landscape, natural character and visual effects are set out in the LEDF. The LEDF describes the existing landscape characteristics and qualities, the 'Design Approach' (principles, strategies and required outcomes), and specific design measures to achieve such outcomes.

139. As Mr Lister describes, a number of measures that mitigate landscape, natural character and visual effects have been introduced through the design process. Ongoing design development through the LEDF, including collaboration with Ngāti Tama (as I describe above), will continue to mitigate effects.

140. I agree with Mr Lister that the approach to mitigating landscape, natural character and visual effects, along with integrating landscape and ecology outcomes, will achieve a close fit between highway and landscape. The landscape and ecology outcomes set out in the LEDF will be carried through into the detailed design and construction phases of the Project through

implementation of the ELMP, as formalised in the proposed conditions. In my opinion, this provides certainty that the outcomes sought by way of the LEDF can be achieved during the Project delivery phase.

141. Overall, I consider that through these measures, the adverse landscape and visual effects of the Project will be appropriately mitigated. Once the mitigation measures have been given time to establish, the Project will also result in positive landscape effects, along with a positive user experience along the new section of highway.

Construction Water

142. Earthworks and vegetation clearance activities have the potential to cause erosion of the land surface and sediment generation, as identified in the Construction Water Technical Report 13 and described in the evidence of Mr Ridley. The discharge of sediment laden runoff from disturbed land to aquatic environments has the potential to result in adverse effects on associated flora and fauna through reduced water quality conditions and smothering of habitats.

143. The focus of construction water management for this Project is erosion and sediment control, involving the interception and treatment of sediment-laden runoff from the various construction areas along the Project. The controls will be carried out in accordance with the Transport Agency Erosion and Sediment Control Guidelines for State Highway Infrastructure, as required by the proposed consent conditions.

144. A Construction Water Management Plan is provided in Volume 5 of the Application and the final plan attached to my evidence. The Plan provides the overall approach and guidance for construction water management during construction of the Project. The CWMP details the specific methodologies to be utilised and also provides details of the erosion and sediment control measures themselves, as per the proposed conditions. Maintenance and monitoring of the erosion and sediment control measures is also specified in the CWMP.

145. For each area of work, prior to construction activity, detailed location and/or activity specific management plans (SCWMPs) will be prepared, as required by the proposed consent conditions. The SCWMPs will take into account the environmental and ecological values of the specific work areas and determine the most effective and appropriate form of erosion and sediment control devices and management practices for the discrete location or activity.

146. In my opinion, based on the Construction Water Assessment Report, and the evidence of Mr Ridley, the management of sediment generation from construction areas is critical to ensuring that the potential effects on the environment are avoided to the greatest extent possible. Based on Mr Ridley's evidence I consider that the risk of erosion and sediment generation during

land disturbance activities can be minimised through implementation of the CWMP and SCWMPs and the measures captured in the proposed consent conditions. The measures outlined in these Plans represent best practice and offer the most practicable and effective means to ensure adverse effects associated with construction water discharges are minimised.

Heritage

147. In his evidence, Dr Rod Clough considers that based on the field surveys and assessments undertaken for the Project, there should be no major archaeological or other historic heritage constraints.

148. Dr Clough has identified remnants of an historic pack track on the ridgeline above the Mangapepeke and Mimi Valleys, and two small sections of an earlier Mt Messenger Road alignment on corner of the current SH3 within the Project footprint. Mr Clough confirms that these potential archaeological sites are of limited to moderate archaeological value and historic heritage significance.

149. Dr Clough confirms that there are no known archaeological sites relating to Māori settlement within the Project footprint. However, given the large scale earthworks required, and the nature of Māori settlement patterns, there is a low potential to encounter remains relating to Māori occupation during construction.

150. Designation conditions are proposed to address any accidental discovery of heritage remains, and also any accidental discovery of koiwi tangata, in accordance with the Transport Agency's Accidental Archaeological Discovery Specification (P45), which is to be reviewed by Ngāti Tama.

151. Additionally, the Transport Agency has applied for a Project-wide Authority under Section 44(a) of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) as a precautionary measure should unidentified subsurface features be exposed during construction.

152. Overall, based on the evidence of Dr Clough, I consider that taking the above into account, any potential effects of the Project on historic heritage values are expected to be no more than minor and any adverse effects will be appropriately managed.

Social impacts during construction and operation

153. In her evidence, Ms Turvey discusses the adverse social effects of the Project, many of which will occur during construction of the Project and are associated with traffic disruption, noise, dust and change in property access.

154. I agree with Ms Turvey that communication with, and the provision of accurate information to affected landowners, the local community and users of this section of SH3 during construction will be important. This will enable people to

understand the Project, what construction activities are occurring, when and the duration, so there are "no surprises" during the Project.

155. The tools to assist with communication are outlined in Ms Turvey's evidence and Technical Report 5. These include a Project Community Liaison Person, stakeholder engagement strategy (outlined in the Construction Environmental Management Plan ("**CEMP**") and involving local schools and the community in the construction process. In my experience, such methods and tools are an effective way to generate engagement in the Project and inform landowners, road users and the community about the Project, key milestones and key construction activities that may impact them.

156. The proposed conditions set out the stakeholder engagement matters to be addressed in the CEMP and outline the key aspects of the Project complaints procedure, which is important in enabling concerns related to the Project to be raised and addressed by the Alliance, in order to minimise social effects. The conditions also require the Transport Agency to appoint a Community Liaison Person for the duration of the construction phase of the Project to be the main point of contact for stakeholders and persons affected by the Project.

Construction Traffic

157. As described by Mr McCombs in his evidence, most of the construction will take place away from the existing state highway so that it is able to be built with a minimum of disturbance to other traffic.

158. Construction of the Project will result in temporary adverse effects on users of SH3 arising from increased construction vehicles using the state highway, site access points ("**SAPs**") on SH3 required to provide access to the construction area and works on SH3 (mainly the tie-in points to connect the alignment with the existing state highway).

159. The Traffic Assessment and evidence of Mr McCombs identifies the likely number of construction traffic movements per day over the duration of construction, location of SAPs and works on the SH3 network. Based on Mr McCombs' evidence I consider that construction traffic effects on the state highway network can be appropriately managed through implementation of the Construction Traffic Management Plan ("**CTMP**") provided in Volume 5 of the Application and the final plan attached to my evidence.

Construction Noise and Vibration

160. In his evidence, Mr Damian Ellerton identifies that given the relatively remote location of the site, there are few sensitive construction noise or vibration receptors in the vicinity of the alignment. Mr Ellerton considers that vibration effects will be acceptable due to the setback distances of buildings to the construction area.

161. An updated Construction Noise Management Plan ("**CNMP**") is attached to my evidence. It outlines the procedures and practices that will be implemented during construction to minimise noise effects at sensitive receivers .[2] The CNMP has been prepared in accordance with the requirements of NZS 6803:1999 and the proposed construction noise conditions.

162. In my opinion a CNMP is an appropriate means to identify potential (mostly site specific) issues and the means by which they will be mitigated, and how sensitive receptors will be informed in relation to predicted exceedances of the construction noise limits. Based on the evidence of Mr Allerton and the recommended designation conditions of designation, I consider that construction noise effects associated with the Project will be appropriately mitigated.

Air Quality – Dust

163. Dust from large scale earthworks can cause amenity and nuisance effects on sensitive receptors, along with potential health effects. As has been noted by a number of the experts, the Project site is remote and has relatively few sensitive receptors.

164. A Construction Dust Management Plan ("**CDMP**") is provided in Volume 5 of the Application the final plan attached to my evidence. The Plan outlines how dust will be managed during construction to minimise adverse effects on residential receptors in proximity to the Project as required by the proposed conditions. The Plan includes specific measures to mitigate adverse dust effects associated with operation of the southern spoil disposal site.

165. Given the implementation of the CDMP during construction as required by the proposed conditions, I consider that any temporary construction related dust effects at the three sensitive residential dwellings will be appropriately mitigated.

166. Overall, and relying on the evidence presented by the experts, it is my view that the Project will result in a wide range of positive effects. There will also be adverse effects, however, it is my view, informed by the experts, that the range of measures proposed by the Transport Agency and required through conditions on the designation and resource consents, appropriately avoid, remedy, mitigate or offset these effects.

CONDITIONS AND MANAGEMENT PLAN FRAMEWORK

167. I have described the various methods undertaken to avoid, remedy, or mitigate adverse effects on the environment, including:

    (a) A design development approach through which:

[2] Particularly at 2397 Mokau Road, which is the closest occupied dwelling to the Project, approximately 35m from the edge of the designation boundary at the southern spoil disposal area.

(i) where possible, adverse effects have been avoided, through the selection of an appropriate alignment and the ongoing design development process;

(ii) other design measures have been adopted to remedy, mitigate or offset adverse effects;

(iii) a package of mitigation and biodiversity offsets has been developed and incorporated as a fundamental part of the overall Project; and

(iv) the cultural values of Ngāti Tama have been, and continue to be, taken into account and incorporated into design outcomes.

(b) Proposed designations and resource consent conditions which require the Transport Agency to undertake and implement the measures described above, and which provide for monitoring the success of the measures.

(c) As part of those conditions, a suite of management plans, which are already complete and construction ready, that describe in detail the methods that will be implemented to address the effects of the Project, including site specific plans (construction water) to provide further detail for specific activities or areas, and a PMP that sets out how pest management will be undertaken across the proposed 1085ha pest management area.

(d) Locking in key outcomes assessed as particularly critical to managing effects, particularly biodiversity outcomes, through the use of specific conditions covering those matters.

(e) Undertaking mitigation measures outside the RMA (e.g. matters required under other legislation including the Wildlife Act, Heritage New Zealand Pouhere Taonga Act, Freshwater Fisheries Regulations).

168. The proposed conditions and management plan framework is discussed further below.

Conditions

169. The RMA allows for conditions to be imposed on designations (section 171) and resource consents (section 108). In my experience, conditions play an important role in defining the scope of the authorised activities, and in appropriately managing the adverse effects of those activities. They are also important in providing certainty to Council, stakeholders and affected landowners (and the applicant) about the authorised activities, the effects that they will generate and how these will be avoided, remedied, mitigated, offset or compensated.

170. Recognising the importance of a robust framework of conditions in managing potential adverse effects, I have worked with the Transport Agency and the Alliance to develop a suite of proposed designation and resource consent conditions to manage the adverse environmental, cultural and social effects associated with the Project.

171. As is usual, the conditions have evolved from those submitted in support of the Application. This reflects the evolution of the Transport Agency's assessment of environmental effects and design development, matters raised in submissions and feedback from key stakeholders, along with review of the 42A reports. This evolution further strengthens the framework for managing adverse effects from the Project. I attach a set of updated conditions as **Annexure A**, which show the proposed amendments that I have recommended as underlined or struck through. Substantive changes proposed to the Conditions are noted the section addressing my response to the 42A report.

Development of proposed conditions

172. I led the development of the proposed designation and resource consent conditions lodged in support of the Project (contained in Appendix D, Volume 1 of the Application). In doing so, I worked closely and extensively with members of the Project team (including the subject matter experts) and key stakeholders on the content and form of the proposed conditions.

173. The proposed conditions reflect the assessment of the Project's environmental effects and the relevant consent requirements. The original version of the proposed conditions were developed and included in the AEE report to assist TRC and NPDC, stakeholders and potential submitters to understand how the actual and potential adverse effects of the Project are proposed to be avoided, remedied, mitigated or offset.

174. The development of the conditions was informed by:

    (a) the technical assessments undertaken by subject matter experts in respect of the Project, and their recommendations to avoid, remedy, mitigate or offset adverse effects (and discussions with the report authors);

    (b) discussions between key Project stakeholders, including Ngāti Tama, DOC and the Royal Forest and Bird Protection Society of New Zealand Inc. Feedback received from these stakeholders was incorporated into the conditions as appropriate; and

    (c) discussions with the Councils and a review of the 42A reports.

Structure of proposed conditions

175. In this section of my evidence I explain the structure of the proposed conditions and the general development approach.

176. Many of the conditions relate to the management plans for the Project, setting out the purpose, content, review and implementation during construction. Other conditions set out performance standards and monitoring requirements to manage the actual and potential adverse effects of the Project.

177. The designation conditions will apply primarily during the construction of the Project, and will fall away once the Project is operational. The key exception to this is in respect of the ongoing pest management programmes (set out in the PMP) that will endure once the highway is operational.

178. The designation conditions begin with a number of general conditions (Conditions 1 to 3), including the requirement for the Project to be built in general accordance with certain plans and other information submitted with the NOR. That requirement achieves the avoidance, remediation, and mitigation measures incorporated into the Project design and shown on the various plans. Condition 2 requires the Transport Agency to review the extent of the designation and identify any areas no longer required for the on-going operation of maintenance of SH3 or the mitigation or offsetting of effects of the Project.

179. Condition 4 relates to the establishment of a Kaitiaki Forum Group (KFG). The KFG will comprise representatives of Ngāti Tama, and other iwi as appropriate, the purpose of which is to facilitate engagement with the Alliance, acknowledge the cultural values of Ngāti Tama and provide opportunities for kaitiaki inputs during the design and construction of the Project. The condition has been developed in collaboration with Ngāti Tama.

180. Condition 5 sets out the requirement for a Community Liaison Person to be the main point of contact for stakeholders during construction of the Project. Condition 6 sets out a process for the recoding of and responding to complaints.

181. Condition 7 addresses Outline Plan requirements, in accordance with the provisions of s176A of the RMA.

182. Conditions 8 to 33 address the requirements for management plans (namely the CNMP, CTMP, LEDF and the ELMP and PMP), which provide the overarching principles, methodologies and controls for managing the construction effects of the Project to achieve the environmental outcomes set out in the conditions. The conditions require the CEMP and all management to be reviewed annually during construction, and list matters to be taken into account as part of the review. The conditions also set out the processes for updating the CEMP and other management plans during construction.

183. The conditions envisage that through the NOR process and this hearing, the management plans, which are all now complete, will be approved, enabling construction to proceed without further management plan review. If amendment to the plans is required, the conditions allow for this, with a process for certification by the Council where the amendment is of substance.

184. The remaining designation conditions address the management of specific construction aspects, such as peer review, heritage, access, lighting and network utilities.

185. The proposed resource consent conditions are structured in a similar manner to the designation conditions. They begin with a series of "General" conditions (Resource Consent Conditions 1-17 in **Annexure A**) and management plan conditions (Conditions 18 - 36) that are applicable to all the consents. I note that the structure set out in **Annexure A** differs from the structure in the draft TRC conditions.

186. As for the proposed designation conditions, the resource consent conditions envisage that the management plans, which are all complete, will become authorised, enabling construction to proceed without further review. The same amendment process is provided for.

187. The exception to this is the series of specific construction water management plans (SCWMP), which will be developed as construction progresses. To provide an understanding as to content three SCWMPs have been completed and are attached to my evidence but for the remaining SWMPs a process for certification is proposed in the conditions.

188. In my opinion, the proposed conditions will ensure that the inherent benefits of the Project will be realised and the actual and potential adverse effects appropriately managed during construction and operation of the Project. The evolution of the conditions lodged in support of the Application has further strengthened the framework for managing adverse effects from the Project. I understand that the Transport Agency accepts the recommendations that I have made on the conditions.

Management plans

189. As mentioned above, a suite of fulsome and complete (i.e. 'construction ready') management plans have been prepared for the Project (Volume 5 of the Application and updates provided in **Annexure B**[3]). The management plans have been developed to ensure that the potential effects arising from the construction of the Project are appropriately managed.

190. In my experience, it is not common practice for a complete set of near final and construction ready management plans to be provided as part of the

[3] Excluding the suite of SCWMPs to be prepared for the Project, which will be drafted prior to the commencement of the construction activity to which they relate.

application for projects of this nature and scale. While most of the Transport Agency's major projects will include draft plan at application and hearing stage, for most, the construction contractor has not been appointed and critical inputs from the contractor are typically required to reflect the construction methodology in the management plans.

191. It is my experience that often, management plan conditions result in uncertainty for all parties through the later certification process (unless the conditions are very specifically drafted). Most often, the plans are prepared sometime after the consent process has been concluded (often years), often by others who were not involved in the AEE or consent process, and the opportunity for public participation is limited (if not non-existent). That is not the case for this Project.

192. As outlined by Mr Rob Napier, the Alliance has been engaged by the Transport Agency to deliver the detailed design, consenting and construction of the Project. Mr Boam notes that a high level of design development has been undertaken for the Project and Mr Symanns' evidence details the extensive geotechnical investigations and design already undertaken. Similarly, comprehensive construction and environmental management methodologies have been developed by the Alliance as outlined by Mr Milliken. This also reflects that construction of the Project is planned to follow on closely from the consenting process. Accordingly, this has enabled comprehensive design, construction and environmental management details, which will avoid, remedy, mitigate or offset adverse effects to be described in the Application and inform development of the Project environmental management plans.

193. The management plans set out the overall environmental management approach to be adopted for the Project. They provide the overarching principles, methodologies and procedures for managing the effects of constructing the Project to achieve the environmental outcomes and performance standards required by the proposed conditions.

194. In my view, the provision of draft management plans to support the Application[4], is of benefit to TRC, NPDC, key stakeholders and submitters, enabling them to understand with greater certainty, how the Transport Agency will appropriately avoid, remedy, mitigate, offset or compensate the adverse effects associated with construction of the Project in accordance with the management plans and proposed conditions.

195. I consider that updates made to the management plans following lodgement of the Application, have served to strengthen the overall methodology to manage the adverse effects associated with construction of the Project. The

[4] I note that the draft ELMP was not included in the Application as lodged in December 2017 but provided to Council in March 2018.

management plans are now complete and final, construction ready plans (with the exception of the SCWMP).

196. In terms of their detail and structure, the management plans and other relevant documents that form part of the environmental management framework for the Project are as follows (refer also to **Figure 1**):

(a) An overarching CEMP;

(b) A suite of specific management plans, which form appendices to the CEMP, for example construction water management, ecology and landscape management, construction noise and dust management;

(c) Site or activity specific management plans for construction water management;

(d) An accidental discovery protocol to address the management of any unexpected discovery of archaeological sites;

(e) Stakeholder communication protocols (included in the CEMP), to engage and communicate with the local community and stakeholders for the duration of construction; and

(f) The LEDF, which underpins the design outcomes for the Project and informs the ELMP and wider management framework.

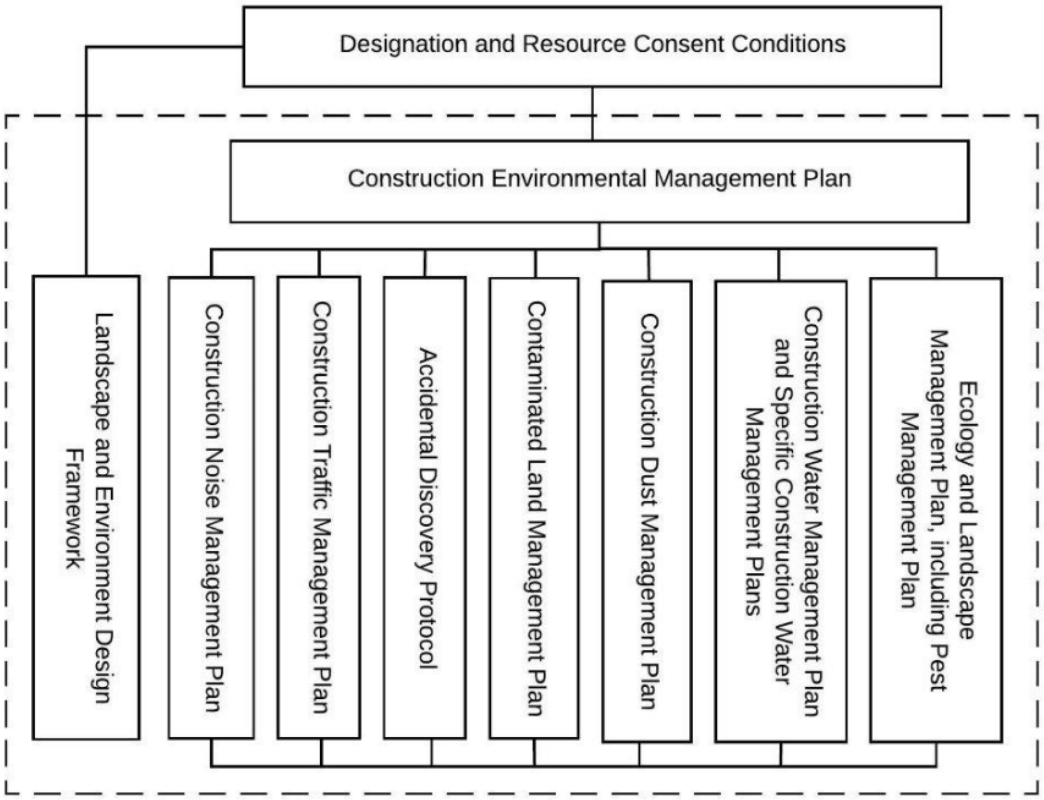

Figure 1: Management plan framework

197. As mentioned earlier in my evidence, the proposed conditions prescribe the purpose of the management plans and specify the matters to be addressed in the respective plans. These matters will be used by Council to confirm compliance and ensuring consistency with the applicable requirements during construction. The conditions also formalise the mechanism for implementation of the management plans.

Construction Environmental Management Plan

198. As noted above, the CEMP provides the overarching framework for the management of construction effects associated with the Project, including environmental, social and cultural effects. The objective of the CEMP is to avoid, remedy, mitigate or offset any adverse environmental, cultural and social effects (including cumulative effects) associated with construction of the Project.

199. The principles and general approach to managing the effects are set out in the CEMP, with detailed mitigation methods described in the management plans appended to the CEMP. Where specific requirements are not addressed by the management plans, the CEMP includes measures to these aspects (e.g. construction lighting, waste management, energy use). The CEMP provides detail on the methods and systems to be applied to implement good environmental management, including monitoring and review requirements, auditing procedures, and corrective actions.

200. The CEMP also outlines methods to engage with stakeholders during the construction phase and the complaints protocol for the Project.

201. All works must be carried out in accordance with the CEMP or any changes to it authorised under the conditions of the designation and resource consents.

202. Implementation of the CEMP will ensure:

    (a) appropriate management of adverse environmental, cultural and social effects associated with construction of the Project;

    (b) compliance with the conditions of the designation and resource consents and that the Project remains within the limits and standards required by these conditions; and

    (c) the effects on the environment arising from the Project are appropriately avoided, remedied, mitigated, offset or compensated.

Ecology and Landscape Management Plan

203. The ELMP has been prepared to identify how the Project will avoid, remedy, mitigate, offset and compensate potential adverse effects on the ecological, biodiversity and landscape values of the land within the Project area and its

surrounds. It comprises a series of specific management plan chapters that address the management of:

(a) vegetation / habitat (including wetlands);

(b) herpetofauna (lizards);

(c) bats;

(d) avifauna;

(e) invertebrates (peripatus species);

(f) fish, kōura and kākahi;

(g) streams; and

(h) rehabilitation and restoration planting.

204. The ELMP also provides detail on the following ecological mitigation, offset and compensation measures to be implemented as part of the Restoration Package for the Project, which is focused on achieving a net gain in biodiversity in the medium term following the completion of construction:

(a) management measures and protocols to avoid, remedy or mitigate the impact of construction on flora and fauna within the Project area (such as vegetation clearance protocols, lizard salvage and relocation protocols, bat roost surveys etc.) as outlined in the respective management plan chapters of this ELMP;

(b) pest management measures, particularly the control of introduced animals;

(c) restoration planting, and replacement planting for significant tree species removed;

(d) riparian planting and exclusion of livestock from existing streams;

(e) relocation or cultivation of threatened plants found within the Project Area;

(f) provision of fish passage;

(g) the physical mechanisms (e.g. fences) to protect the restoration and riparian planting from clearance and / or livestock on an ongoing basis; and

(h) landscaping design and treatments (landform and planting), including rehabilitation of all areas used for temporary work and construction yards.

205. The ELMP also sets of relevant standards and targets for the various provisions of the plan, describes the monitoring that will be undertaken to confirm compliance, and addresses the measures that will be implemented if the targets are not me, including an adaptive management approach to ensure that the pest management plan outcomes are achieved.

206. The ELMP has been informed by discussions with Ngāti Tama, DOC and the Councils.

Construction Water Management Plan

207. The CWMP sets out the approach to erosion and sediment control and site management practices during construction of the Project.

208. The CWMP provides a framework for the following:

    (a) erosion and sediment control approach, principles and management practises to be implemented during construction of the Project so that potential or actual discharges of sediment from the site are minimised;

    (b) site monitoring and auditing functions, including the monitoring programme to be implemented during construction; and

    (c) management of other contaminants, which may directly or indirectly discharge into receiving environments from site activity, such as concrete and fuel use.

209. The approach for construction water management during construction of the Project as outlined in the evidence of Mr Ridley, is to:

    (a) develop an overall framework to assist with medium to long term construction decision making (the CWMP);

    (b) develop detailed plans for area and activity based planning (the SCWMPs);

    (c) implement the CWDMP to assess on-site performance and assist with all construction decision making and continual improvement in minimising the potential for construction water discharges; and

    (d) have an experienced and involved team to ensure that all relevant aspects of the Project are taken into consideration as part of planning and decision making.

Contaminated Land Management Plan

210. The CLMP has been prepared to manage the potential for adverse effects relating to the disturbance of potentially contaminated land during the construction of the Project. I comment further on the CLMP below in my response to the NPDC 42A report.

211. The purpose of the plan is to:

    (a) ensure that the earthworks required as part of the Project are appropriately managed and that contaminated or potentially contaminated soils are identified, handled and disposed of in an appropriate manner;

    (b) provide procedures to manage potential ground contamination effects on human health and the environment during ground disturbance activities associated with proposed earthworks; and

    (c) support the resource consent application for ground disturbance works under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES Soil).

Construction Dust Management Plan

212. The CDMP has been prepared to manage, mitigate, and monitor dust emissions during construction of the Project. The objective of the CDMP is to detail the best practicable option to avoid dust nuisance being caused by construction works and to mitigate any such effects should they occur.

213. The overall approach to dust management for the construction works is primarily based on visual monitoring, combined with good management of the construction areas and a rapid response to any trigger events or complaints received. Taking a proactive approach to dust management will help avoid significant dust emissions or, if dust emissions occur, mitigate any adverse effects.

214. The CDMP contains specific measures to manage any potential effects on the dwelling at 2397 Mokau Road, located in proximity to the southern spoil disposal site. These include site layout controls, stabilisation of site access, restrictions on vehicles speeds and monitoring.

Construction Noise Management Plan

215. A CNMP has been prepared to manage and mitigate the adverse effects relating to construction noise during construction of the Project. It identifies the performance standards for the Project and sets out best practicable options ("**BPO**") for construction noise management.

216. The CNMP outlines management procedures that shall be implemented to reduce construction noise effects at sensitive receptor locations, including for noise associated with operation of the southern spoil disposal site on the dwelling at 2397 Mokau Road. These include limits on hours of operation, selection of equipment, maximising set back distances and the construction of bunds and/or temporary noise barriers to reduce noise levels, if required.

217. In my experience, one of the most important and effective measures to manage construction noise during construction is through good site management and communication with receivers that may be exposed to noise above the Project limits. The CMP (reinforced through the CEMP) sets out the recommended communication for both day time and night time works, along with consultation where noise limits will be exceeded.

Construction Traffic Management Plan

218. The CTMP has been prepared to manage, mitigate and monitor the effects of construction activities and construction traffic on other road users and the State highway network. The objective of the CTMP is to detail the best practicable option to avoid adverse safety and efficiency effects caused by construction and to mitigate any such effects should they occur.

219. The CTMP identifies how construction traffic will be managed to:

    (a) protect public safety;

    (b) minimise delays to road users;

    (c) minimise disruption to property access; and

    (d) inform the public about any potential impacts on the road network.

220. Specific traffic management plans ("**TMPs**") will be in place during construction of the Project for discrete stages of work within the SH3 corridor. Draft TMPs for key works on the SH3 network, being the northern and southern tie-ins, are included in the CTMP. The TMPs will be provided to the SH3 Road Maintenance Contractor for their consideration prior to these works being undertaken. The TMPs describe the measures to be implemented to manage traffic effects associated with specific temporary road layouts or traffic management measures during construction.

Accidental Discovery Protocol

221. Works will be undertaken in accordance with the Project Accidental Discovery Protocol ("**ADP**"). The Transport Agency's standard ADP is included in in Volume 5 of the Application and has been provided to Ngāti Tama.

222. The ADP will be further updated upon granting of the Project archaeological authority issued Heritage New Zealand under the Heritage New Zealand Pouhere Taonga Act 2014, so as to be consistent with the authority.

223. Pre-construction briefings and a cultural induction will be given to Project staff to inform them of Ngāti Tama's cultural values and their importance, and to inform them on archaeological material and how it is to be managed if discovered during construction.

224. While not specifically an element of the ADP, it is anticipated the Ngāti Tama will develop and implement a cultural monitoring plan and cultural indicators, and will appoint advisors to undertake cultural monitoring. Opportunity will also be provided for Ngāti Tama to undertake project blessings and to establish and implement protocols / tikanga to address cultural requirements. These provisions are made in the proposed designation and resource consent conditions.

Stakeholder Engagement

225. The CEMP outlines the methods to engage with stakeholders during construction of the Project. The purpose of stakeholder engagement and communications is to inform stakeholders and the wider community of the Project, the construction works, progress and timing so there is a 'no surprises' approach during works. The Alliance will provide all stakeholders with easy and timely access to Project communications. The Alliance stakeholder and communications team will be responsive to stakeholder needs, in order to minimise disruption to the community and road users and minimise the potential for stakeholder issues during works. Provision is made in the proposed designation and resource consent conditions to appoint a Community Liaison Person who will be the main point of contact with the community through the Project construction.

Landscape and Environment Design Framework

226. As outlined above, the LEDF sets out the landscape and environmental design outcomes and approach for the Project and a process for achieving these through design development. The LEDF details the landscape design and treatments of engineered landscape forms and structural elements, and how these new features integrate with the existing landscape and vegetation (i.e. cut and fill slopes, the tunnel and bridge, stormwater management system).

Review of the management plans

227. In my experience from construction projects, management plans are living documents that will change over the course of construction to respond to changes to the natural, physical and social environment, construction activities, environmental effects, risks and monitoring results. As such, it is important that the plans enable flexibility to respond to changing conditions, while still providing for certainty as to the management of actual or potential adverse effects. As noted, the proposed conditions allow for minor amendments to be made to the finalised management plans at any time during the construction period and for substantive amendments to be certified by the relevant council.

228. The management plans will also be subject to an annual review during construction as required by the proposed conditions. This review will, as appropriate, address changes to activities, any unanticipated environmental

effects, Project risks, mitigation measures, the results of monitoring and the need to amend management processes. The proposed conditions list matters to be taken into account in the reviews.

Other environmental management concepts applied through conditions and incorporated into management plans

Responsive management

229. The draft CWMP and ELMP incorporate a responsive management approach in respect of the erosion and sediment control methods and implementation of ecological mitigation and offset measures during construction. For the ELMP, this approach extends to the post construction period.

230. The Project's responsive management approach involves allowing for changes to be made in the methods for managing environmental effects in response to measured changes or responses of the natural and physical environment.

231. This approach is inherent in a number of the proposed conditions and the relevant management plan provisions.

232. Proposed Resource Consent Condition 42 requires the preparation and implementation of a construction water related discharges monitoring programme. The purpose of this programme is to manage and reduce sediment generation from the works, which in turn will enable risks to freshwater ecology. The programme focuses on the successful implementation of erosion and sediment controls and regular monitoring to check if the controls are performing as intended, or if they need to be modified to respond to the site and proposed activities. This will enable any unforeseen adverse effects to be identified and an effective response devised and adverse effects on the receiving environment minimised.

233. The ELMP sets out a process where post construction ecological monitoring will be undertaken, as outlined by Mr MacGibbon to measure the success of the Project Restoration Package. In particular, pest density performance will be monitoring to verify that pests are being successfully managed at or below target levels. In the event that pest density targets are not achieved and/or more than one of the biodiversity outcome monitoring targets are not met, for reasons associated with the impact of pests or the effects of the road, the pest management programme will be reappraised and the intensity or methods used changed to be more effective at addressing the pests or aspects of biodiversity that have not reached the outcome targets. Thus the techniques proposed to manage the adverse ecological effects of the Project are able to be altered over time, to respond to new information or changing circumstances. These measures are captured through performance conditions, monitoring and reporting (Designation Conditions 29a, 30 and 31 and also in the Resource Consent conditions).

234. This responsive management approach is also inherent in other aspects of the Project, including the management of construction noise and dust.

235. I am of the opinion that this is an appropriate approach, and provides certainty that the proposed management measures will deliver the outcomes proposed, noting that some of these outcomes occur in the future and that a responsive approach may be required to achieve them.

Offsetting and compensation

236. Offsetting is a form of mitigation offered in circumstances where an adverse effect cannot be practicably remedied or mitigated and significant residual effects remain. Offsetting is explained in Mr MacGibbon's evidence takes a broader perspective on the resource and the value that is being adversely affected, and provides for new like-for-like positive effects to those being lost at a nearby site with similar ecological conditions whose outcomes can be scientifically measured. Compensation, in an ecological manner, as explained in Mr MacGibbon's evidence relates to non like-for-like measures or measures that cannot be scientifically measured.

237. Offsetting and compensation is proposed to address the Project's residual adverse ecological effects, and this has been addressed in detail in the evidence of Mr MacGibbon. I am of the opinion that offsetting and ecological compensation provides an important part of the suite of measures required to appropriately respond to the residual adverse effects of the Project.

Monitoring

238. Monitoring will be important to ensure that the measures proposed to address the Project's adverse effects are properly implemented as reflected in the proposed conditions. As noted above, monitoring is fundamental to enabling a responsive management, should this be required. Monitoring is incorporated into the management plans and required in proposed conditions.

Overall

239. In my opinion, the suite of proposed conditions will serve to ensure that the actual and potential adverse environmental effects of the Project will be appropriately managed.

240. In addition, I consider that the evolution of the proposed conditions from those provided with the Application as lodged in December 2017, will further strengthen the package of measures proposed to avoid, remedy, mitigate, offset and compensate the adverse environmental effects associated with the Project.

RESPONSE TO SECTION 42A REPORTS

241. The Section 42A Reports from the New Plymouth District Council and the Taranaki Regional Council raise a number of matters that I wish to respond to, including changes to conditions.

NPDC s42A report

Easement over Ngāti Tama land

242. Paragraph 278 of the NPDC report requests information on the location of the easement over the Ngāti Tama land. The easement in question is over the area shown as H on DP 316324. I have included an image from the Council's GIS viewer showing the location of this easement as **Attachment 1** to my evidence.

243. This easement provides for public access over the Ngāti Tama land onto the Mt Messenger Conservation Area land and that a formed track exists generally in this location, joining to the DOC Kiwi Road track. The easement crosses part of the land within the proposed designation boundary, and would be affected by the new highway alignment. As noted in the AEE, and by Mr Milliken, during construction, management measures will be in place at this location to manage public safety while gaining access to the Kiwi Road track. Once construction is complete, a new access track and associated easement will be established, located to provide safe access under the active road corridor (due to the bridge at this location).

244. The Transport Agency is liaising with DOC and with the Walking and Access Commission in relation to requirements for establishing a new access track at this location. These matters will be finalised through the process of land transfers when the land required for the designation is acquired by the Transport Agency.

Management plans and certification

245. As I describe above, a fulsome suite of management plans has been provided as part of the Application. The plans, with the exception of the SCWMPs, are now finalised and are attached to my evidence. The management plans, and updates to them (the ELMP in particular), have been provided to the Councils and their advisors for their review. The intention is that the management plans become the approved plans through the process of this hearing, if the Designation is confirmed and the Resource Consents granted. As stated above, conditions have been proposed that provide for the plans to be amended, if changes are required, with a process for Council certification of the changes, where the change is material (Condition 11).

246. The 42A report, through paragraphs 318 to 323, seeks to retain the Council's role as the certifier of the final management plans, presumably in a process

that would occur subsequent to the approval of the RMA applications. As I understand it, this is on the basis that the plans (or at least some of the plans) have not been reviewed by their experts. Paragraph 320 refers specifically to the ELMP in this context.

247. A fulsome draft of the ELMP was provided to the Council on 16 of March 2018 and that this document has been available on the Council's website since that time. Detailed discussions have occurred with Wildlands, Council's ecology advisors, over the last few weeks. As described by Mr MacGibbon in his evidence, these discussions have included detailed discussions on the ELMP. Discussions on the ELMP have also occurred with DOC's experts. While areas of disagreement still exist with Council's advisors (and with DOC's experts), the ELMP has now been finalised based on the points of agreement and on the advice and evidence of the Transport Agency's ecology experts. In this regard, I understand that considerable review of the ELMP has occurred through this process by the Councils advisors.

248. Should a decision to confirm and grant the applications be made, it is reasonable and appropriate that the management plans also become the approved.

249. As I have noted above, it is unusual in my experience that final construction ready management plans are available for scrutiny through a NOR or Consent approval process. For the example projects that are noted in the 42A report at paragraph 322, it is my understanding that appointment of the constructor team responsible for delivery of those projects occurred after granting of the RMA approvals, and as such the conditions envisage a different process to that proposed here. The management plans presented at the hearing stage for those projects were in draft form and needed construction method details to enable them to be completed.

250. A deliberate decision has been made for this Project to prepare and complete the plans as part of the approvals process. This enables quicker commencement of construction should the notice of requirement and consents be granted, while also providing additional certainty that the measures proposed can and will avoid, remedy, mitigate, offset and compensate effects. While the 42A report contends that it would be good RMA process for the Council to retain a certification role for the finalised management plans, in my view, it is better RMA practice for the plans, if they can be, to be approved through the hearing process by the decision-maker.

251. In terms of the timeframes proposed for certifying any amendments to the management plans, the updated conditions now refer to an alternative process which reflects the change sought by the Council (refer Condition 11).

Outline Plan waiver

252. The Transport Agency has sought waiver of the requirement to provide an Outline Plan in accordance with the provisions of s176A(2). This was on the basis that a high level of design development and construction planning has been undertaken informing the Application, and given that construction of the Project will follow closely on from the consenting process. Having considered this matter further, it is my view that an Outline Plan (or Plans) is required for some elements of the project, where decisions on final design details are yet to be made. These include in relation to:

    (a) The tunnel control building, where additional designs are to be completed to confirm the building details and landscaping;

    (b) The tunnel emergency water supply tanks, where additional designs are to be completed to confirm the tank details, location and landscaping;

    (c) The bridge over the Mimi swamp forest, where additional designs are to be completed to confirm the visual appearance and architectural form of the bridge deck.

    (d) The location and details of car parking provided for access to the Kiwi Road and Mt Messenger Walking tracks.

253. A new condition has been proposed to this effect (refer Condition 7).

10 year lapse on designation

254. The NoR was lodged as an alteration to the existing SH3 designation within the Operative New Plymouth District Plan, in accordance with s181of the RMA. The NoR sought a lapse period on the Designation of 10 years, in accordance with the provisions of s184. Paragraph 355 of the 42A report confirms that an extended lapse period of 10 years is reasonable. While I can confirm also, that in my view, this is a reasonable provision, accepting that the Project is large and complex, I note that the Transport Agency's legal submissions will address this matter further.

Ecology conditions / outcomes specified in the conditions

255. Paragraphs 315 and 325 of the 42A report propose the addition of performance measure in the condition set to provide more certainty that the management plans deliver what they are intended to deliver. In this regard, a number of amendments have been made to the conditions that are designed to provide more certainty on performance and monitoring.

Communications management / Community Liaison

256. Paragraph 324 of the 42A report addresses the need for more specificity in the Conditions on stakeholder engagement through the construction process. While the CEMP does address this matter in detail (Section 6), I agree that

this is an important matter for any significant construction project, which is highlighted also in the evidence of Ms Turvey. In this regard, an additional condition has been proposed (Condition 5), regarding the appointment of a Community Liaison Person.

Earthworks management

257. Paragraphs 163 to 182 address earthworks matters as they relate to the District Plan, including visual and amenity effects. A final CWMP and Dust Management Plan (DMP) have been completed. These plans have been provided in response to matters under the Regional Plans. I acknowledge, that it would also be appropriate for these management plans to be included in the list of management plans required by the Designation Conditions. However, in my view these plans should be the plans authorised by the relevant regional resource consents, with any amendments certified by the Regional Council.

258. This raises a more general matter, being that while the intent is that there is a single CEMP and a single set of management plans required for the Project, the Designation conditions and resource consent conditions proposed by the Transport Agency present a sense that there are separate sets of documents for each. I suggest that this matter be addressed by way of an advice note and have proposed such in Condition 8 in **Annexure A**.

Comment on specific amended conditions in NPDC 42A report

259. I note that I have provided comment against the amended conditions proposed in the 42A report in **Annexure A**. I make additional comments on specific matters as follows.

260. Paragraph 188 seeks additional detail on noise management at 2397 Mokau Road. I note that currently the Transport Agency are in discussions with the landowner regarding rental of this dwelling through construction. A condition has been proposed (Condition 19(a)) that identifies additional construction noise management measures should the Transport Agency not rent this dwelling.

261. Paragraph 204 seeks the addition of a peer review process for geotechnical design. Mr Symmans has addressed this matter in his evidence. Peer review of geotechnical design a standard engineering design process required under the Building Act and associated Building Code. I understand from Mr Symmans that the Building Code process requires peer review also for structural design matters (for example, on this project, that will include the bridge over the Mimi Swamp Forest) and drainage design matters. In my view it would be better practice that the RMA and Building Act processes remain separate. In this regard, I consider that the Council's new proposed Condition 37 be struck out. As an alternative, an amendment to the Condition to make clear that confirmation of peer review would be for those matters where peer

review is required under the Building Code. Alternate wording has been proposed (Condition 41).

262. Paragraph 221 seeks amendments to the Conditions on the NES Soil resource consent relating to the CLMP. Since the Application was lodged and Detailed Site Investigation (DSI) has been completed by the Alliance's contaminated land specialist (Ms Lean Phuah & Ms Elyse Laface). The DSI report is attached to my evidence (**Annexure C**). The CLMP has been updated and finalised based on the completion now of the DSI (and the updated and finalised CLMP is also attached to my evidence as part of the suite of management plans).

263. Ms Phuah has reviewed the Conditions proposed by the Council in the 42A report and has developed amendments to the Conditions proposed by the Transport Agency. She has prepared a brief memo outlining her conclusions (this memo is attached to my evidence as **Attachment 2**). In summary, Ms Phuah considers that the updated and finalised CLMP addresses the findings of the DSI and that as a consequence, some of the conditions proposed by the Council are not required. Amended Conditions (Condition 21 and 22.in the resource consent conditions[5]) have been proposed in **Annexure A**.

264. Paragraph 231 relates to emergency egress from the tunnel. The 42A report proposes a Condition (NPDC Condition 24) that the shoulder width of the tunnel should be minimum of 1.5m. In my view, this condition is totally inappropriate. This is a Building Code matter. Egress provisions for the tunnel are not an appropriate consideration under the RMA; it is appropriate to simply to rely on the Building Code process to address this provision. Irrespective, the evidence (Mr Boam, Mr McCombs) is that the proposed egress is safe and will comply with all requirements. I have recommended that this Condition not be accepted.

265. Paragraphs 248 and 249 address lighting. Lighting requirements for the State Highway are addressed in the Transport Agency's engineering standards. Lighting provisions at intersections are a safety consideration and the Transport Agency must address these considerations as part of its normal safety assessment processes. A condition (NPDC Condition 20), as has been proposed by the Council that would override the Agency's normal safety considerations is not accepted. The Council has proposed alternate wording in their Condition 20 that is appropriate and I recommend that this be adopted (refer Designation Condition 40 in **Annexure A**).

266. Paragraphs 266 to 269 address the LEDF. Mr Lister has responded on these matters separately. I note that changes have been made to the Transport Agency's proposed conditions to reflect Mr Lister's comments (refer Condition

[5] Noting that the way I have structured the consent conditions in **Annexure A** does not match the structure of the NPDC NES Soil consent

25 in **Annexure A**). Mr Lister has also proposed a peer review condition for the landscape design, which set out as Condition 26 in **Annexure A**.

267. Paragraph 275 addresses parking requirements at the carpark providing access to the Kiwi Road and Mt Messenger walking tracks. I note that details on this carpark, including its location, are yet to be determined (see the evidence of Mr Boam). I have proposed that this matter be dealt with through submission of an Outline Plan (refer Condition 7 in **Annexure A**).

268. Paragraph 279 seeks the addition of a rest area on the new highway. Mr Napier addresses this matter specifically. I note that there are rest areas on SH3 both north and south of the new section of highway and the 42A report concludes similarly. As Mr Napier concludes, this matter will be considered further by the Transport Agency. The process set out in the LEDF allows for this consideration.

269. Paragraph 296 of the 42A report addresses whether compensation is provided for residual effects on bats and lizards, noting that the provision of 171 (1B) of RMA requires the Requiring Authority to agree to the proposed measures. In this regard I would note that Mr Chapman's evidence is that effects on bats and lizards are appropriately mitigated, offset or compensated through the provisions of the ELMP. In this regard also, the Requiring Authority has proposed substantive measures in the ELMP to mitigate, offset or compensate effects. The conclusion in the 42A report in this paragraph is incorrect.

270. Paragraph 302 addresses significant trees and proposes the addition of a Condition that specifies planting survival. While this matter is addressed by Mr MacGibbon, I note that I have recommended a Condition on planting survival which has been included in the proposed conditions (refer Condition 29(a) in **Annexure A**).

271. Paragraph 296 and 314 & 315 of the 42A report seeks specific performance measure for the ELMP. Mr MacGibbon addresses this matter in detail. I have also addressed this matter above and note that additional measures have been proposed in the conditions (refer Condition 29(a) in **Annexure A**).

272. Paragraph 326 addresses the reference to "more than minor" adverse effects in the context of the CEMP. I agree with the comment made in this paragraph and note that in my view, the CEMP is a practical document, developed as the basis for managing construction effects, and that it addresses the management of adverse effects in an integrated fashion. This condition has been amended to remove the "more than minor" reference.

273. NPDC's proposed Condition 26 a) in the 42A report seeks the addition of "<u>restoration</u> of wetlands <u>affected by the failure of sediment or erosion controls</u>". In this regard I note that the ELMP addresses the proposal for wetland restoration planting. Mr Singers and Mr MacGibbon describe how this provision has been developed. The additional wording however would require

the ELMP also address restoration plant for wetlands affected by failure of sediment or erosion controls. Mr Ridley describes the provisions for erosion and sediment controls. The approach proposed by Mr Ridley represents best practice and draws on the Transport Agency's guidelines. The approach allows for adaptive management to ensure that performance targets and expectations are met. The approach does not assume that devices will fail or that increased sediment from the Project will be released into wetland areas resulting in a need for restoration or rehabilitation. Rather the reverse is true, that particular regard will be had in locations of risk (including the Mimi swamp forest wetland), to the performance of the proposed measures. In my view, the addition to this Condition is inappropriate as it assumes that failure will occur. It is not accepted that failure will occur, and if it did, it is not possible to predict what restoration might be required. Rather, the CWMP and the CEMP already include provisions for incident response, including failure of a control measure, and provide in that situation, for the need for remediation or rehabilitation to be assessed if that is required. Paragraph 177 of the 42A report acknowledges these provisions. The Transport Agency is obliged to undertake the Project in general accordance with the provisions of the CEMP and CWMP. In any regard, if the Councils determined that an incident had occurred, that had not been appropriately remedied by the Transport Agency, then the Councils have enforcement powers available under the RMA. It is my view that the additions to this Condition are not required.

274. NPDC's proposed Condition 29 a) has sought to replace "Completion of Construction Works" with "commencement of operation of the new road". The definitions section in the Transport Agency's draft conditions provides a definition for "Completion of Construction Works". This is an important matter as Completion of Construction is a term used in places through the conditions. In my view, the proposed definition appropriately reflects the point at which the work will be complete. No change to the Conditions in **Annexure A** has been recommended in relation to this matter.

TRC 42A report

275. I note that I have provided comment against the amended conditions proposed in the 42A report in **Annexure A**. I make additional comments on specific matters as follows.

Offset land

276. Paragraph 163 of the TRC 42A report (and other places) notes that offsetting will occur on land not owned by the Transport Agency (I note this matter is also raised in the NPDC 42A report). This will include land for pest management and for restoration plantings, including riparian planting. In my experience, it is common that, at the time of a hearing, land required for mitigation or offsetting/compensation (and normally the land itself required for a designation) has not been secured. While the Transport Agency is

progressing discussions with land owners relating to mitigation and offset areas (for pest management, restoration plantings, and riparian planting), these discussions have not yet been concluded and formal agreements are not yet in place (though they are progressing). Mr MacGibbon has outlined these matters in his evidence and Mr Napier also responds to it.

277. Regardless, the designation and resource consent conditions require that the Transport Agency shall undertake mitigation, offsetting and compensation for pest management, restoration plantings and riparian plantings, with the specific provisions recorded in proposed Resource Consent Conditions 23 to 37 (and in the Designation Conditions also). Based on progress made to this point, there is no reason to believe that the Transport Agency will not be able to secure the required land areas. There is suitable and sufficient land available locally, including land owned by Ngāti Tama and public conservation land, and land owners have acknowledged an interest in the proposals.

278. Once formal property agreements will be entered into and, for private land, registered as an encumbrance (or similar type arrangement) on the title. If public conservation estate land is involved, as is possible, then agreement with DOC is necessary and discussions to that end are underway but not yet concluded.

Water takes

279. Paragraphs 174 and 175 address provisions for water takes. I am generally in agreement with these provisions, however note that alternate wording has been proposed in relation to the intakes (refer proposed Resource Consent Condition 45 & 46 in **Annexure A**). I note also that the proposed rate of take has been reduced to less than 5L/s. In this regard, the metering provisions proposed in the draft Conditions are no longer relevant.

Erosion & Sediment controls

280. Paragraphs 195 to 204 address matters relating to erosion and sediment controls. These matters and the relevant TRC recommended conditions have been addressed by Mr Ridley, who has recommended changes to the conditions. The alternative wording proposed for the relevant conditions is provided in **Annexure A** (proposed Resource Consent Conditions 39 to 43.

Management plans and 'general' conditions

281. The TRC recommended conditions do not, by large, make reference to the various management plan that have been proposed by the Transport Agency as the basis for managing the effects of the Project. As noted above, the intent is that there is a single CEMP and a single set of management plans required for the Project. Some of the management plans address District matters and some Regional matters. From an effects management perspective however, the overall approach is integrated. I have commented

on this above in relation to the designation conditions. The same comment applies here and an Advice Note has been proposed to note that the CEMP also include the plans required under the designation conditions.

282. In my view, as an overall comment, the TRC conditions would benefit from the addition of a set of 'General Conditions', effectively capturing the provisions that have been proposed in the Transport Agency's originally proposed resource consent conditions, Conditions 1 to 19. If accepted, this may require some structural change to the TRC recommended conditions. The proposed Resource Consent Conditions I include as **Annexure A** suggest the addition of conditions that largely mirror the revised Designation conditions (now draft Resource Consent Conditions 1 to 17 in **Annexure A**).

283. I note also that Paragraph 320 of the 42A report sets out a list of 'reports, plans, protocols, and programme', all of which I consider are addressed by the completed and finalised management plans attached to my evidence (and required by proposed Conditions 18 to 36).

S128 & 129 review condition

284. The TRC consents attach provision for a s128 review of conditions. It is my view that this is an appropriate provision. If TRC decide to restructure the conditions as I have suggested, it might be more appropriate to apply a single condition in the General Conditions on s128 (and s129) provisions that could apply across all consents.

Lapse date on resource consents

285. Paragraph 316 notes that the default position in RMA on lapse has been adopted by TRC in their recommendations. The Transport Agency sought, out of caution, a lapse date of 10 years given the complexity and scale of the Project. I agree with Mr Dixon's reasons as to why a 10 year lapse period is appropriate.

Comment on specific recommended conditions in TRC 42A report

286. Proposed changes to the draft TRC resource consent conditions are presented in **Annexure A**.

RESPONSE TO SUBMISSIONS

287. The Application was publically notified on 27 January 2018 at the request of the Application, with submissions closing on 28 February 2018. A total of 1177 submissions were received with 1154 of these in support, 20 in opposition and three neutral. I note that 17 late submissions (not included in the above numbers) were received.

288. I have read the submissions received in relation to the Project, and I comment on those submissions relevant to my area of expertise and to the designations

sought to the extent that the issues and/or concerns raised have not already been addressed in the AEE or elsewhere in my evidence. Where relevant, I also refer to the responses to these submissions where they are addressed in the evidence of the technical experts.

289. I firstly address specific submissions before identifying and responding to a number of general themes arising from a number of individual submissions that raise the same, or very similar, issues.

290. I note that Mr Dixon, in his evidence, responds to submissions that are concerned with statutory matters arising from the Application.

Department of Conservation (Submission 7655658)

291. The DOC submission raises a number of issues, many of which have been addressed by other experts. I will address those relevant to planning issues, which request a number of changes to conditions to address matters of concern. The majority of the requests in the submission do not seek specific wording sought, therefore I have focussed on identifying the intent of the requested relief in my response.

292. The DOC submission states that the Project will have significant adverse effects on the environment and that appropriate consent conditions must be imposed to provide a comprehensive management approach commensurate to the level of the adverse effects should be taken, prioritising measures to avoid, remedy, mitigate or offset effects.

293. In response to DOC's submission, and in particular, to the specialist ecological matters raised, a series of meetings were held through late March - mid April 2018 to enable one-on-one discussions between by the Transport Agency's experts and the DOC experts. An earlier date for this hearing had been established (mid May) and the Transport Agency sought to postpone commencement of the hearing to enable these discussions to occur. Along with DOC's consultant planner Mr Inger, I sat through these discussions to help facilitate the conversations.

294. These discussions helped to resolve some of the matters of concern raised in DOC's submission. On a number of matters, the Transport Agency's experts have recommended changes to the Project, and in particular to the measures set out in, and that will be implemented through, the ELMP. These various changes are discussed in the evidence of the Transport Agency's ecology experts. Changes have also been made to the proposed designation and consent conditions to bring more specificity to the outcomes anticipated by the ELMP (refer **Annexure A**). The ELMP and conditions, including these various changes, do in my opinion, provide an appropriate and comprehensive management approach commensurate to the level of the adverse effects, prioritising measures to avoid, remedy, mitigate, offset or compensate effects.

295. In their submission, DOC has also sought a number of changes to the proposed conditions, which I address below.

296. Under item 13 a) and b), the DOC submission seeks that all management plans, including the Construction Water Management Plan and Specific Construction Water Management Plans should be provided to DOC for review and comment prior to certification by the consent authority, and that sufficient time should be available for such review. On this point I note that DOC has already had opportunity to review and comment on the management plans. The draft plans formed part of the Application material and updates have been provided to them for review and comment in the course of discussions since lodgement. As I note above, many of the DOC experts provided comment on the ELMP and on the CWMP through the one-on-one discussions and changes have been made to those plans to reflect points of agreement. DOC will also be able to comment on the conditions as attached to my evidence.

297. Submission point 13 c) contends that the provision in the conditions to amend the management plans are inappropriate and fail to provide safeguards. I do not agree with this point. The ability to update the suite of management plans during the construction of a Project over several years, as provided for by the proposed conditions is appropriate environmental management practice. Based on my involvement in other similar projects, such conditions are standard for projects of this nature and scale. The proposed consent and designation condition reflects that construction activities, methods or mitigation measures may change over the course of construction, similarly, the results of inspections and monitoring will assist with identifying opportunities for continual improvement of environmental practices during works. I consider that amendments to the management plans, in accordance with the proposed conditions (noting that any substantive changes to the plans will require certification), provide appropriate environmental safeguards during construction. I do not consider that changes to the proposed conditions are required.

298. Submission point 13 d) requests that extensive preparatory works should not commence prior to finalisation of management plans. Preparatory works are defined in the conditions as works that meet the permitted activity standards in the Taranaki Freshwater Plan and/or the New Plymouth District Plan, and as such could be undertaken as of right. The types of activities to be undertaken as preparatory works are outlined in the consent definitions and do not include vegetation clearance. In my opinion, no changes are required to the proposed condition.

299. Submission point 13 e) contends that Condition 18 (proposed resource consent condition) should provide for urgency for the consent holder to respond to non-compliance, disputes, disagreements or inaction arising. In my opinion, the process outlined in this particular Condition already sets out appropriate timeframes and provides for a prompt and binding resolution

process. Where urgent action is required, this may be taken by the Council regardless.

300. Submission point 13 f) suggests that the annual review process established by Condition 19 is inadequate to deal with changes to construction activities. As I note above, proposed Condition 19 reflects appropriate environmental management practice for a Project that is constructed over several years. The condition provides for annual review of the management plans, which is standard practice on Projects of a similar nature and scale. However, and as I have noted above, the management plans are living documents that over the course of the Project will need to be reviewed and updated to reflect changes to the construction method, monitoring results or changes to the local environment. The proposed conditions provide for the management plans to be reviewed and amendments made in accordance with the conditions, at any time during construction. Accordingly, I have not recommended any changes to the proposed conditions to respond to this matter.

301. Submission points 13 g, h and i) address matters relating to the quantum of mitigation for riparian planting and exclusion of livestock, plantings, and the PMP. These matters are discussed in the evidence of Mr MacGibbon. I have recommended changes to the conditions to address these matters, where they are agreed (refer Conditions 29 to 32 in **Annexure A**).

Royal Forest and Bird Protection Society of NZ (Submission 7655466)

302. Royal Forest and Bird Protection Society of NZ (Forest & Bird) is concerned that the project will have particularly significant adverse effects on indigenous vegetation, freshwater values, and indigenous bat habitat, as well as a number of other adverse effects on indigenous biodiversity. Despite the mitigations and offset measures proposed, Forest & Bird consider the impacts of the Project will remain significant.

303. Forest and Bird seeks the recommendations of ecologists in Technical Reports 7a – 7h are implemented in full through clear, directive and enforceable conditions to ensure adequate avoidance, remediation, mitigation, or offsetting of the adverse effects of the Project.

304. I have met with representatives of Forest & Bird both prior to lodgement of the Applications and since receipt of their submission. Forest & Bird have also been provided with copies of the ELMP, which was drafted post lodgement of the Applications. Through this process I have been able to discuss possible changes to conditions with Forest & Bird. A number of proposed changes to Conditions responding to the Forest & Bird submission are set out in **Annexure A**.

Te Runanga o Ngāti Tama (Submission 7657278)

305. The submission from Te Runanga o Ngāti Tama (Ngāti Tama) identifies that the cultural issues arising from the Project are significant and raise concerns in relation to the tino rangatiratanga, mana and kaitiaki responsibilities of Ngāti Tama. Ngāti Tama seek that the cultural effects on Ngāti Tama are avoided, remedied or mitigated (including by offsets) in a manner that meets the requirements of the RMA and achieves a standard that accords with the Treaty of Waitangi.

306. The Transport Agency has acknowledged and takes very seriously the concerns that Ngāti Tama have raised through their submission. Mr Dreaver has described the process of engagement that has occurred and continues with Ngāti Tama, and through which the Transport Agency has been able to gain an understanding of Ngāti Tama's cultural values and the effects of the Project on these values. This process has also enabled the Transport Agency and Ngāti Tama to work together to explore methods to avoid, remedy, mitigate and offset these effects. Mr Dreaver has broadly described the measures that have been proposed that will enable cultural effects to be addressed. I have also described proposed conditions that will provide Ngāti Tama opportunity to express its kaitiaki responsibilities in relation to the Project.

307. In terms of the Transport Agency's obligations under s8 of the RMA in relation to the Treaty of Waitangi, it is my view that the Transport Agency has engaged with Ngāti Tama throughout the process to address the Project's effects on cultural values. In particular the Transport Agency has actively worked with Ngāti Tama in good faith throughout the Project's development so as to enable it to make fully informed decisions. The Transport Agency has recognised the cultural significance and importance of the Ngāti Tama land affected by the Project, including that it was returned to Ngāti Tama under its Treaty of Waitangi Settlement. The Transport Agency has also recognised the spiritual relationship that tangata whenua have with the environment and acknowledges Ngāti Tama's rangatiratanga and kaitiaki responsibilities in relation to the Project area. Further, the Transport Agency has confirmed with Ngāti Tama that it will not seek to use the compulsory acquisition provisions of the Public Works Act to acquire Ngāti Tama's land. The Transport Agency's engagement with Ngāti Tama is ongoing and, in my view, is consistent with the principles of the Treaty.

308. Based on my understanding of the agreements being discussed with with Ngāti Tama, and on the kaitiaki provisions set out in Conditions 4 and 4(a), I am of the view that the Transport Agency has established a strong basis for resolving, or appropriately responding to, the concerns of Ngāti Tama.

309. The relationship with Ngāti Tama is vitally important to the Transport Agency. Ongoing discussions will continue through until a final agreement on land

acquisition is in place, providing further opportunity for the Transport Agency and Ngāti Tama to work together to confirm and address any other matters that might need to be resolved. As I noted earlier, the Transport Agency's position on the land acquisition process does ultimately provide for Ngāti Tama to have the final say on whether they consider the Project has provided for their cultural and spiritual values and should cross its land. In my view, that is an appropriate outcome.

Te Korowai Tiako o Hauāuru Incorporated (Submission 7655965)

310. Te Korowai Tiako o Hauāuru (Te Korowai) is an incorporated society comprised of members that whakapapa to Ngāti Tama. Te Korowai opposes the Application on the basis that they are directly affected by the significant adverse cultural, landscape and biodiversity effects arising from the proposal.

311. In relation to the Te Korowai submission I note that since commencement of the Project, the Transport Agency has engaged in detail with Te Runanga o Ngāti Tama, as the mandated representative body for Ngāti Tama. This engagement process is described by Mr Dreaver. The process has enabled the Transport Agency to gain an understanding of Ngāti Tama's cultural values and the effects of the Project on these values, and in particular the significance of the whenua to Ngāti Tama, and the effects of the Project on Ngāti Tama's kaitiaki responsibilities and mana. This process has also enabled the Transport Agency and Ngāti Tama to work together to explore methods to avoid, remedy, mitigate, offset and compensate these effects. This has involved Ngāti Tama Runanga members participating in a robust and transparent alternatives assessment process, including providing cultural effects scoring of options, and which resulted in the avoidance of the western Parininihi land. The mitigation measures proposed by the Transport Agency to address the cultural effects of the Project have been outlined by Mr Dreaver.

312. Representatives from the Project Team, including myself, attended a hui a iwi held on the Pukearuhi Marae on Saturday 28 April 2018. I understand that an invitation to that hui was extended to the members of the Te Korowai group. While I estimate some 30 – 40 people attended the hui, and received a presentation on the Project and were able to freely ask question and voice concerns, I was advised that no one from the Te Korowai group attended. After the hui, a copy of the presentation delivered on the Marae was also forwarded on to a representative from Te Korowai.

Poutama Kaitiaki Charitable Trust (Submission 7655988)

313. The submission from the Poutama Kaitiaki Charitable Trust (Poutama) identifies that the Project's Restoration Package does not provide for outcomes to the Trust. In addition, Poutama are seeking to complete a cultural

assessment specific to the alignment and construction area outlined in the consent application documents.

314. The engagement process with Poutama has been outlined in the evidence of Mr Dreaver and Mr Napier. The Transport Agency has engaged with Poutama as they have identified that they have a cultural interest in the Project area. I was present at meetings with Poutama representatives in June 2017, February 2018 and attended a site visit conducted on 24 April 2018. At the February meeting a presentation on the Project was shared with Poutama, including a discussion on the alternatives assessment process and the details of the Project and associated assessments. Poutama representatives have been provided with copies of all of the Application material and were invited at the February 2018 meeting, to provide the Transport Agency with a cultural values assessment in relation to the Project. I understand that to date, an assessment of cultural values has not been completed. Further, the Poutama submission does not expand on their cultural values or effects.

315. While consultation with Poutama has been entered into in good faith by the Transport Agency, at this point, I am unable to comment on the effects of the Project on Poutama and their cultural values.

Emily Bailey (Ngāti Mutunga) (Submission 7655183)

316. Emily Bailey (a member of Ngāti Mutunga) raises concerns that Ngāti Mutanga (and Poutama) have not been fully consulted not given their consent, and that *"the Transport Agency are rushing ahead with mitigation for serious affects to Ngāti Tama without having agreed on what this will entail and when"*. Ms Bailey raises specific concerns in relation to the appropriateness of the proposed mitigation and biodiversity offset package to mitigate the loss of indigenous vegetation communities, including complex forest and wetland systems. Ms Bailey seeks that the existing SH3 corridor is improved to avoid destruction of land to the east or west.

317. In relation to Ms Bailey's submission I note that the Transport Agency has completed a detailed and robust assessment of alternatives and selected a preferred option, drawing on the findings of that assessment. The Project has been developed and robustly assessment by a team of experienced practitioners with expertise across the required range of engineering, construction and environmental disciplines. These assessments are presented in a comprehensive AEE report, which includes a suite of technical reports and a fulsome set of management plans, including the ELMP, describing how the effects of the Project will be avoided, remedied, mitigated or offset. Engagement has been undertaken with iwi, as described by Mr Dreaver, including with Ngāti Tama and with Ngāti Mutanga and Ngāti Maniapoto. I attended a hui with Ngāti Mutanga representatives in Urenui in June 2017, prior to confirmation of the preferred option and at which the alternatives assessment process was discussed. I also attended a meeting

with Mr Jamie Tuuta, chair of the Ngāti Mutanga Runanga in February 2018, at which a presentation on the Project was made. There is no submission received from Ngāti Mutanga.

318. It is my view that appropriate consultation has been held with iwi, including Ngāti Mutanga, and that the Project has been appropriately developed and assessed, and based on the evidence of Mr MacGibbon in particular, that an appropriate package of mitigation and offset measures have been provided.

Tony Pascoe (Submission 7656995) and Debbie Pascoe (Submission 7657014)

319. Mr and Mrs Pascoe are landowners in the Mangapepeke Valley and directly affected by the Project. Their submission raises concerns around the location of the road and the adverse ecological and environmental effects that will result from the Project, including the loss of native bush, birds, lizards, fish and bats.

320. I acknowledge that the Project will result in adverse ecological effects as outlined in the AEE and the evidence of Mr MacGibbon and the ecology subject-matter experts. However, I consider that the proposed Restoration Package, as detailed in the ELMP and by Mr MacGibbon, will appropriately address the ecological effects of the Project, and over time, lead to beneficial and positive effects. The alignment location has been subject to a robust and comprehensive assessment of alternatives (MCA) process involving the Project design and construction team, subject-matter experts and Ngāti Tama. The Transport Agency has selected the Project alignment drawing on the alternative assessment process and other considerations.

321. In addition, the submission by Mr & Mrs Pascoe notes that consultation from the Transport Agency in relation to the Project has been poor. Mr Napier explains how the Transport Agency has worked with landowners directly affected by the Project to date, and will continue to engage as the Project progresses. Based on my experience and on my involvement in this engagement process, it is my view that the Transport Agency has entered into discussions with all affected (and potentially affected) landowners, including Mr & Mrs Pascoe, in good faith. As Mr Napier describes, consultation with these landowners has occurred over many months, commencing in advance of the Alliance being engaged by the Transport Agency, and has continued through the various project stages, with all landowners being provided updates and information on the Project prior to public announcements occurring.

322. Since selection of the preferred alignment, regular contact with Mr & Mrs Pascoe has occurred. I agree with Ms Turvey, that the process of land acquisition for Public Works can result in uncertainty for affected landowners. It is my view that the Transport Agency has attempted to reduce this uncertainty through engaging with the Pascoes early in the process, and continuing to engage in a regular and timely manner.

323. Mr & Mrs Pascoe also raise concerns around unsafe conditions along the alignment associated with a lack of sun, black ice and fog, along with the risk of flooding in the valley areas during heavy rainfall. Other submitters have also raised similar concerns. These matters are discussed in the evidence of Mr Boam.

Powerco Limited (Submission 7654486)

324. The Project will impact on Powerco assets, including the relocation of assets within the Project footprint and power supply for the proposed tunnel. Liaison with Powerco has occurred since their submission was lodged. A designation condition which records that works within the designation shall be undertaken in accordance with the National Code of Practice for Utility Operators' Access to Transport Corridors has been included (Condition 38 in **Annexure A**). Powerco have confirmed that they are satisfied with the proposed Condition and have withdrawn their submission.

Peter Roan

25 May 2018

ATTACHMENT 1

Location of easement over DP 316324 (dotted in orange)

ATTACHMENT 2

MEMO FROM CONTAMINATED LAND SPECIALIST, MS LEAN PHUAH

Tonkin+Taylor

Memo

To:	**Peter Roan**	**Job No:**	**1001181.1000**
From:	**Elyse Laface, Lean Phuah**	**Date:**	**23 May 2018**
Subject:	**Mt Messenger Bypass - Contaminated Land Inputs**		

Preliminary Site Investigation and Draft Contaminated Land Management Plan

A Ground Contamination - Preliminary Site Investigation (PSI) and a Draft Contaminated Land Management Plan (Draft CLMP) were prepared to support the applications for resource consents and a Notice of Requirement to alter the existing SH3 designation, for the Mt Messenger Bypass project (the Project). The PSI and Draft CLMP provide specialist input relating to the potential for, and the management of adverse effects associated with the disturbance of potentially contaminated land along the Project alignment.

The PSI and Draft CLMP detailed the requirement for soil sampling and testing, commensurate with the requirements of a Detailed Site Investigations (DSI), to be undertaken prior to the commencement of any ground disturbance.

Detailed Site Investigation and Updated Contaminated Land Management Plan

Property access to enable this investigation was permitted in late December 2017, after the application were lodged, and the investigation undertaken in late 2017/early 2018. The information from the soil sampling and testing undertaken has been summarised in the Mt Messenger Alliance Ground Contamination – Detailed Site Investigation (DSI), dated March 2018. The results of this sampling indicate that the soils do not contain contaminants at a level that would present a risk to human .health or the environment during or at the completion of works. The Draft CLMP has been updated and finalised to reflect the findings of the DSI and is considered to be construction ready for use by the Mt Messenger Alliance

We understand that the DSI and updated CLMP will be attached to the planning evidence prepared by Mr Peter Roan.

Proposed Consent Conditions

The Transport Agency proposed a draft set of consent conditions to support the application for the Project lodged in December 2017. These included conditions to attach to the resource consent sought under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES Soil). The conditions required the Transport Agency to finalise the CLMP prior to the commencement of construction and set out the matters to be included in the CLMP to appropriately manage the disturbance of any contaminated material during construction, including further testing of potentially contaminated material prior to the commencement of works to determine the presence of contamination.

The proposed conditions have been updated by the Transport Agency to reflect the results of the DSI and updates made to the CLMP. Specifically, the updates acknowledge that the CLMP has been prepared, and shall be in place until the Completion of Construction Works, along with an updated

list of procedures to be included in the CLMP to reflect the DSI findings, noting that the soils do not contain contaminants at a level that would present a risk to human .health or the environment.

We have reviewed the proposed contaminated land conditions recommend by New Plymouth District Council (NPDC) in their s42A report in relation to the resource consent sought under the NES Soil. We consider that several of the conditions proposed by the NPDC have been superseded as a consequence of the additional work undertaken by the Transport Agency (namely the DSI and updated CLMP).

Accordingly, we are satisfied that the updated consent conditions proposed by the Transport Agency appropriately reflect the results of the DSI and updated CLMP.

Contaminated Land Professionals

This contaminated land input and associated reports (as described above) have been prepared by Elyse LaFace and reviewed by Lean Phuah.

Elyse is an Environmental Scientist at T+T. Elyse has a Master of Environmental Management, Bachelor of Science with Honours in Biology and Geology and a Diploma in Engineering (Civil). She has more than 10 years' professional experience in the environmental practice area.

Lean Phuah is a Principal Environmental Engineer at T+T. Lean has Bachelor of Civil Engineering from the University of Canterbury. She has more than 20 years' experience in investigations, assessment, management and reporting of contaminated sites. Lean is a chartered professional engineer (CPEng) working in the environmental practice area and a Certified Environmental Practitioner Site Contamination Specialist (CEnvP SC).

24-May-18
t:\wellington\tt projects\1001181\1001181.1000\sourcematerial\eal\reports\memo - contaminated land inputs.docx

ANNEXURE A

DESIGNATION & RESOURCE CONSENT CONDITIONS

ANNEXURE B

FINAL MANAGEMENT PLANS

ANNEXURE C

DSI REPORT