Memorandum

To	Commissioner
From	Colin McLellan, Consents Manager, Taranaki Regional Council and Kathryn Hooper, Consultant Planner, Landpro Limited
Consent	**Application 17-0429.1.0(A)-(E)**
Document	**2045740**
Date	18 May 2018

For applications (17-0429.1.0(A)-(E)) to;

- **dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass**
- **divert, disturb, realign and modify 9 sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass**
- **install, use and remove 17 temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass**
- **install and use 21 permanent culverts in the Mangapepeke Stream, Mimi River and their tributaries (including the diversion of these streams for up to 30m upstream and downstream of the culverts inlet/outlet) and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass**
- **discharge to land, water and to air from soil disturbance and earthworks, to undertake vegetation clearance, and to undertake riverbed planting associated with constructing and operating the Mt Messenger Bypass.**

Applicant	New Zealand Transport Authority (NZTA)
Postal address	**Private Bag 6995**
	Wellington 6141
Site location	SH3, Uruti-Ahititi
Catchment	Mimi
	Tongaporutu
Tributary	Unnamed tributaries of Mimi River
	Mangapekeke Stream
	Unnamed tributaries of the Mangapepeke Stream

Glossary

NZTA	The New Zealand Transport Agency
TRC	Taranaki Regional Council
NPDC	New Plymouth District Council
NoR	Notice of Requirement
AEE	Assessment of Environmental Effects
ONRC	One Network Road Classification
LUC	Land Use Consent
RMA	Resource Management Act 1991
RPS	Regional Policy Statement for Taranaki
RFWP	Regional Freshwater Plan for Taranaki
RAQP	Regional Air Quality Plan for Taranaki
RSP	Regional Soil Plan for Taranaki
The Runanga	Te Runanga O Ngāti Tama
TTMoPT	Tiaki Te Mauri o Parininihi Trust
DoC	Director General of the Department of Conservation
Forest & Bird	Royal Forest and Bird Protection Society
Te Korowai	Te Koworai Tiaki o te Hauāuru Incorporated
MCA	Multi Criteria Analysis
NPS Freshwater	The National Policy Statement for Freshwater Management
PWA	Public Works Act
CWMP	Construction Water Management Plan
SCWMP	Specific Construction Water Management Plan

Executive Summary

- The New Zealand Transport Agency (NZTA) lodged applications with the Taranaki Regional Council ('TRC') for a total of 58 consents associated with the proposed Mt Messenger Bypass on 15 December 2017. Applications for Notice of Requirement ('NoR') and Land Use Consents were also lodged with the New Plymouth District Council (NPDC).

- The Mt Messenger Bypass project ('The Project') will involve approximately 36 ha of earthworks (comprising approximately 960,000 m^3 of cut and approximately 890,000 m^3 of fill), and approximately 44.4 ha of vegetation clearance over an expected four years of construction. There will be one bridge (120 m long), one tunnel (approximately 220 m long), 9 stream diversions ranging from 75-900 m in length, 17 temporary culverts and 21 permanent culverts associated with the project.

- Discharges include sediment and dust, and activities involve significant works in the beds of streams, and minor surface water and groundwater takes.

- Large portions of the project alignment will be in land areas with greater than 20% slope. The lower gradient sections at either end of the proposed alignment are located within flood plains.

- A number of significant issues are raised by the applications. These are predominantly associated with;
  - undertaking earthworks of this scale in the location proposed, the challenges presented by the topography and the climate of the area and the need to address these by way of clear and enforceable consent conditions that are consistent with other earthworks consents in the Taranaki Region;
  - clearing vegetation and diverting streams in the headwaters of two catchments, which relies significantly on offsetting to address adverse environmental effects. The offsetting works are proposed to occur on land that is not controlled by NZTA which makes conditioning these activities difficult to achieve in order for conditions to be valid and certain; and

- the need to formalise the agreements made with Te Runanga O Ngāti Tama, of which few details are known at the time of writing this report, but upon which the project is reliant in terms of mitigating the potential adverse cultural effects associated with the project.

- After undertaking an assessment of the effects of the activities for which consent is sought against the policies of the Taranaki Regional Policy Statement for Taranaki ('RPS'), the policies, objectives and rules of the relevant regional plans, and Part 2 of the Resource Management Act 1991 ('RMA'), we consider that the proposed activities can occur in a manner which is consistent with the purpose and principles of the RMA, providing certain standards and conditions are met. Our recommendation is therefore to grant the consents sought, subject to conditions which are intended to address the effects identified and formalise the mitigation measures (including offsetting) proposed by NZTA.

- We emphasise upfront that the offset package proposed by NZTA is critical to the granting of the consent. There is a need for a very high degree of certainty around the proposed offsets to ensure sustainable management**.**

- The applications have a heavy reliance on the generation of plans to manage various aspects of the activities, and while considered important in achieving environmental performance, the level of environmental performance and standards that these plans are intending to achieve is important. The standards proposed in this report are therefore based on best practice on other similar projects in New Zealand and the standards typically imposed on earthworks consents in the Taranaki Region by the TRC.

- The conditions we propose include standards for receiving water quality associated with sediment discharges, controls on structures in the beds of streams (culverts and diversions), controls on water take volumes and rates, standards and controls on emissions of dust to air, and the offsetting work proposed by NZTA.

- The conditions we propose also detail specific outcomes sought where appropriate, for example that there shall be no restriction of fish passage.

- The project has significant biological diversity and ecological components, and it is acknowledged that there is significant overlap when the activity is considered as a whole. The roles of the NPDC and TRC in dealing with effects on indigenous biodiversity are set out in the RMA, and are therefore important to clarify. TRC will generally consider the effects of the activity on indigenous biodiversity in relation to effects of the activity on the coastal marine area, the beds of rivers, lakes and other water bodies, and effects on indigenous biodiversity that stem from activities other than use of land (for example discharges to the environment). NPDC will consider the effects of the activity associated with land use aspects of the proposed project.

1. Introduction

1. The New Zealand Transport Agency (NZTA) lodged applications with the Taranaki Regional Council ('TRC') for a total of 58 consents associated with the proposed Mt Messenger Bypass on 15 December 2017. A full list of consents sought is attached in Appendix I.

2. The bypass route is within the Mimi and Tongaporutu River Catchments.

3. There are no existing consents that will be relied upon for the activities proposed.

4. NZTA's application was comprehensive and presented simultaneously with the lodgement of a Notice of Requirement ('NoR') and Land Use Consent ('LUC') application with the New Plymouth District Council ('NPDC'). The application comprised the following:

   a) An Assessment of Environmental Effects (AEE)[1];

   b) a full set of drawings [TRC document #1983592];

   c) two Consideration of Alternatives reports detailing the NZTA's Long List Report [TRC document #1983700] and a Shortlist Report [TRC document #1983705];

   d) a set of application forms [TRC document #1983583];

   e) a Draft Construction Environmental Management Plan [TRC document #1983711], and;

   f) fourteen technical reports covering specific aspects as listed below;

   - *Strategic Transport Assessment, Technical Report 1,* Traffic Design Group. 2017, ('the STA ') [TRC document #1983599];

[1] *Mt Messenger Bypass, Assessment of Effects on the Environment.* Mt Messenger Alliance. 2017. ('the AEE') [Council document #1983589]

- *Traffic and Transport Assessment, Technical Report 2,* Mt Messenger Alliance. 2017. ('the TTA ') [TRC document #1983600];
- *Resilience Assessment, Technical Report 3,* Mt Messenger Alliance. 2017. ('the Resilience Assessment ') [TRC document #1983601];
- *Economics Assessment, Technical Report 4,* Brown, Copeland & Co. Ltd . 2017, ('the Economic Report') [TRC document #1983602];
- *Social Impact Assessment, Technical Report 5,* Mt Messenger Alliance. 2017, ('the SIA') [TRC document #1983604];
- *Recreation Assessment, Technical Report 6,* Rob Greenway & Associates. 2017, ('the Recreation Assessment') [TRC document #1983606];
- *Assessment of Ecological Effects – Vegetation, Technical Report 7a,* NSES Ltd. 2017, ('the Vegetation Report ') [TRC document #1983607];
- *Assessment of Ecological Effects – Freshwater Ecology, Technical Report 7b,* River Lake Ltd. 2017, ('the Freshwater Ecology Report ') [TRC document #1983609];
- *Assessment of Ecological Effects – Invertebrates, Technical Report 7c,* Landcare Research. 2017, ('the Terrestrial Ecology Report ') [TRC document #1983610];
- *Assessment of Ecological Effects - Herpetofauna, Technical Report 7d,* Ecology New Zealand Limited. 2017, ('the Herpetofauna Report ') [TRC document #1983611];
- *Assessment of Ecological Effects - Avifauna, Technical Report 7e,* Mt Messenger Alliance and Envirosciences Limited. 2017, ('the Avifauna Report ') [TRC document #1983613];
- *Assessment of Ecological Effects - Bats, Technical Report 7f,* Ecology New Zealand. 2017, ('the Bat Report ') [TRC document #1983614];
- *Assessment of Ecological Effects – Marine Ecology, Technical Report 7g,* Mt Messenger Alliance. 2017, ('the Marine Ecology Report ') [TRC document #1983616];
- *Assessment of Ecological Effects – Ecological Mitigation and Offset, Technical Report 7h,* Mt Messenger Alliance. 2017, ('the Marine Ecology Report ') [TRC document #1983618];
- *Landscape, natural character and visual assessment Technical Report 8a,* Isthmus Group. 2017, ('the LVA Report ') [TRC document #1983619 & #1983621];

- *Landscape and Environmental Design Framework Technical Report 8b,* Mt Messenger Alliance. 2017, ('the LEDF Report ') [TRC document #1983622];
- *Historic Heritage Assessment, Technical Report 9,* Clough & Associates. 2017, ('the Heritage Report') [TRC document #1983627];
- *Environmental Noise and Vibration, Technical Report 10,* Marshall Day Acoustics. 2017, ('the Noise & Vibration Report ') [TRC document #1983629];
- *Air Quality Assessment, Technical Report 11,* Mt Messenger Alliance. 2017, ('the Air Quality Report') [TRC document #1983631];
- *Ground Contamination – Preliminary Site Investigation, Technical Report 12,* Mt Messenger Alliance. 2017, ('the PSI) [TRC document #1983632];
- *Construction Water Assessment Report*, *Technical Report 13,* Ridley Dunphy Environmental Ltd and Mt Messenger Alliance. 2017 ('the Construction Water Report") [TRC document #1983633];
- *Geotechnical Appraisal Report, Technical Report 14,* Mt Messenger Alliance 2017, ('the Geotechnical Report') [TRC document #1983634];

5. Some of the ecological reports above identified that further field work was required, and the following supplementary reports were also provided by NZTA in February 2018 and form part of the application received;

- *Ecology Supplementary Report – Freshwater Ecology*, River Lake Ltd, February 2018
- *Ecology Supplementary Report – Vegetation,* Nicholas Singers Ecological Solutions Ltd, February 2018
- *Ecology Supplementary Report – Avifauna,* Environmental Services Ltd, February 2018
- *Ecology Supplementary Report* – Ecological Mitigation and Offset, February 2018
- *Ecology Supplementary Report – Herpetofauna*, Ecology New Zealand Ltd, February 2018
- *Ecology Supplementary Report – Terrestrial Invertebrates*, Corinne Watts, February 2018

- *Ecology Supplementary Report* – Bats, Ecology New Zealand Ltd, February 2018

6. A draft Ecology and Landscape management Plan was also provided by NZTA in March 2018

7. A Maori values assessment was also provided. This was prepared by Te Runanga o Ngāti Tama (the Runanga), and titled Maori Values Assessment in Relation to the Parininihi Te Ara o Te Ata Project, December 2017. ('the Maori Values Assessment") [TRC document #1989705].

8. The NPDC and TRC have commissioned experts to review the following specific aspects of the application;

   a) Campbell Stewart (Southern Skies Ltd) to review the aspects of the application relating the discharge and associated management of stormwater and sediment from construction activities; and

   b) Wildlands to review the ecological components of the applications.

   Where this information is relied on in our report, we have stated this.

9. This report includes our assessment of the applications made by the NZTA under the Resource Management Act 1991 (the 'RMA'). It also includes our recommendations regarding conditions on consents, and the durations of the consents that we consider appropriate and consistent with other similar activities in the Taranaki Region.

Figure 1: General location map

2. Background

10. In early 2016, the Minister of Transport announced that the Crown would fund improvements to the Mt Messenger and Awakino Gorge corridor of SH3 as part of the NZ Governments Accelerated Regional Roading Package (ARRP).

11. In March 2017 the Mt Messenger Alliance was assembled, and detailed assessment of initially 19 options was progressed, building on earlier (2002) work by Transit New Zealand (the pre-cursor to NZTA). In 2002, an alignment

to the west of the current SH3 route was being considered. The 2017 work however also included options to the east of the current alignment.

12. Initially the list of options was reduced to a 'long-list' of 12, which was further reduced through a two-staged Multi Criteria Analysis (MCA) process to a short-list of five route options.

13. After consultation, and further MCA analysis and cost estimates, the route ('Option E') which is the subject of this application was chosen. This route lies to the east of the current SH3 alignment.

14. State Highway 3 ('SH3') at Mt Messenger is located approximately 57 km north of New Plymouth, and 184 km south of Hamilton. The nearest towns are Te Kuiti to the North and Waitara to the South. The small township of Urenui also lies to the south, with Tongaporutu and Mokau located to the north.

15. Present traffic volume is around 2300 vehicles per day, 20% of which is heavy commercial vehicles. The current route is winding and steep, and at the summit, traffic passes through the Mt Messenger tunnel, which is a short narrow tunnel cut through siltstone ('papa') rock.

16. SH3 is classified as a Regional Road in the NZTA's One Network Road Classification (ONRC), being a *'road that makes a major contribution to the social and economic wellbeing of a region, and connects to regionally significant places, industries, ports or airports'*.

17. Strategically, SH3 connects Taranaki through to the Waikato, and onwards to key economic transportation centres at Hamilton, Tauranga and Auckland. This road connection has high economic importance, connecting Taranaki to markets in the north, and providing vital tourism linkages and access to other services.

18. The AEE provided by NZTA summarises the current operational problems associated with the existing road as follows;

    a) A tortuous alignment, with narrow road widths and steep grades.

b) Forward visibility is restricted, and there are significant lengths of road with no, or very limited shoulders.

c) The narrow tunnel physically restricts the size of loads that can use this portion of SH3.

d) The route is vulnerable to interruption, needing to be closed or severely restricted in the event of landslides, rockfalls, breakdowns and crashes.

e) There are limited alternative routes, with all alternatives increasing the journey time between Hamilton and New Plymouth by at least 30%.

19. A detailed safety analysis of the road has been undertaken by NZTA, and over the last 5 years the application identifies that there have been no fatal crashes, 6 serious injury crashes, 8 minor crashes and 18 damage only crashes. NZTA points out that crashes related to loss of control/head on collisions, poor handling, and drivers travelling too fast for the conditions are significantly higher on Mt Messenger than the NZ averages.

20. The objectives of the Mt Messenger Bypass Project are identified by NZTA in the AEE as;

a) To enhance safety of travel on SH3;

b) To enhance resilience and journey time reliability of the State Highway Network;

c) To contribute to enhanced local and regional economic growth and productivity for people and freight between Taranaki and the Waikato;

d) To manage immediate and long term cultural, social, land use and other environmental impacts, by, as far as practicable, avoiding, remedying and mitigating such effects, through route selection, design and conditions.

21. Ngāti Tama exercise mana whenua for this part of Taranaki. They have occupied, defended and exercised mana over the land lying generally between the Mokau River to the north and the Titoki Stream that flows into the Tasman Sea at Wai-iti beach, to the south.

22. The areas referred to as Whitecliffs (west of the current SH3 alignment) and Mt Messenger conservation area (east of the current alignment) are known as

Parininihi by Ngāti Tama and are of high cultural significance. This area was part of the cultural redress in the Ngāti Tama Treaty Settlement under Te Tiriti O Waitangi. The Treaty Settlement Act acknowledges the association of Ngāti Tama with the Mt Messenger Conservation Area, and provides for statutory acknowledgement over this area.

23. The land to the west of the current SH3 alignment (previously known as the Whitecliffs conservation area) is conservation land, administered by Ngāti Tama. In addition to the cultural significance, this area is of high ecological significance, which has become even greater in recent years with work undertaken in the area by the Tiaki Te Mauri o Parininihi Trust. Kokako have recently been reintroduced to this area. The proposed project will avoid all of this land to the west of SH3.

24. The SH3 Mt Messenger bypass is proposed through land to the east of the current SH3 alignment. This land comprises the Mt Messenger Conservation Area and private land owned by Ngāti Tama. NZTA has noted that they will not exercise the Public Works Act (PWA) to secure access to the land, and therefore negotiation with the Runanga is seen as critical in achieving the selected alignment.

25. The project will involve approximately 36 ha of earthworks (comprising approximately 960,000 m^3 of cut and approximately 890,000 m^3 of fill), and approximately 44.4 ha of vegetation clearance over an expected four years of construction. There will be one bridge (120 m long), one tunnel (approximately 220 m long), 9 stream diversions ranging from 75-900 m in length, 17 temporary culverts and 21 permanent culverts associated with the project.

3. Application detail

26. The activities to construct, use and maintain the proposed corridor have been grouped into five consent applications by the TRC, generally covering;
    a) Damming, taking and use of water
    b) Stream diversion and disturbance
    c) Temporary culverts
    d) Permanent culverts
    e) Discharges to the environment

27. The activities to be consented fall under the following Regional Plans for Taranaki

a) The Regional Freshwater Plan for Taranaki (2001);

b) The Regional Air Quality Plan for Taranaki (2011), and;

c) The Regional Soil Plan for Taranaki (2001).

28. The applications included proposed consent conditions that NZTA has offered in order to avoid, remedy or mitigate adverse environmental effects. We understand that there has been further work on proposed conditions by NZTA, and more information on this will be provided at the hearing.

29. The application requested consent duration of 35 years and this has been considered in making a decision on the applications.

3.1 Damming, Take and Use of Surface Water and Associated Temporary Weirs

30. Water will be taken from the Mangapepeke Stream at a suitable location across SH3 at the northern end of the proposed bypass, and from the Mimi River at a suitable location near to where the bypass will connect to the current SH3 alignment to the south.

31. The main purpose of the takes is to provide water for dust suppression purposes during construction, while other activities, such as compaction of granular materials, ground improvements, structural work and vehicle washdown, will be secondary uses of water.

32. The takes will therefore be temporary in nature, commencing when construction commences, and finishing once construction activity ceases and dust is no longer a risk.

33. Water will be taken as required, depending on how dusty the site becomes. The total combined daily take volume is likely to range from 300-450m^3/day.

34. To facilitate the water takes described above, a screened intake and pump will be established in a deeper section of the stream. To raise the water level locally it may be necessary to establish a low weir across all or part of the streambed

to create a small headpond to abstract from. The weirs will be constructed of sandbags or similar temporary materials, and built to allow for fish passage.

35. Each weir will be a maximum of 1m in height, and they will be established prior to construction commencing, and removed at the end of construction when water is no longer required.

3.2 Take and Use of Groundwater

36. Small amounts of groundwater that is intercepted by excavations and tunnelling activities will in effect be taken, and this will be discharged as clean water to the stormwater collection systems on the project. There are no known users of groundwater in the vicinity of the proposed tunnel or cuttings.

3.3 Diversion of Streams

37. Nine permanent stream diversions will be required, ranging from approximately 75 to 900m in length. These are listed in Table 1 and shown in Figure 4 and Figure 5.

38. Two types of diversion have been identified by NZTA:

- Type 1: requires recreation of habitats associated with a natural Lowland Stream. The application identifies approximately 450m of this type of diversion will be required. (See Figure 2).

- Type 2: requires to recreation of natural habitats associated with natural steep streams. The application identifies approximately 2500m of this type of diversion will be required. (See Figure 3).

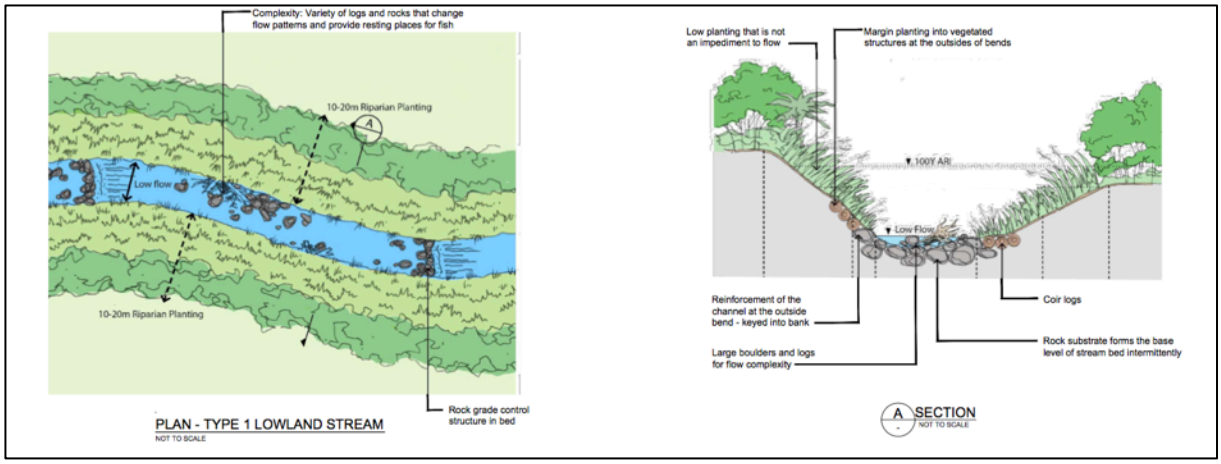

Figure 2. Type 1 Lowland Stream Diversion ***(From: Mt Messenger Bypass, Volume 2, Drawing Set, MMA-DES-DNGCO-DRG-4002 Revision A)***

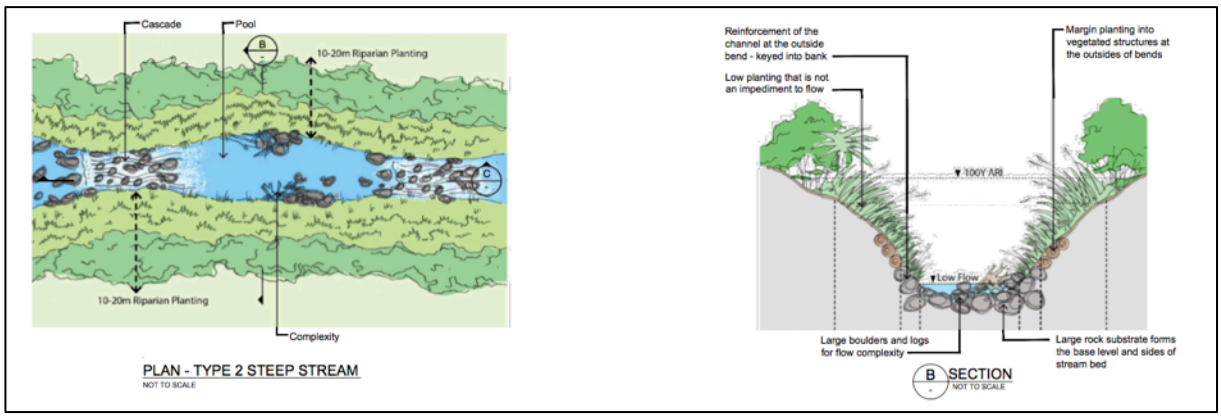

Figure 3. Type 2 Steep Stream Diversion ***(From: Mt Messenger Bypass, Volume 2, Drawing Set, MMA-DES-DNGCO-DRG-4002 Revision A)***

39. Additionally, streams will be diverted for 20-30m each, up and downstream of the permanent culverts for the project.

Table 1: Summary List of Stream Diversions

	Stream	Approximate length of diversion (m)	Stream Type	Stream Gradient	Fish Passage Type	Diversion Type (See figures 2 & 3)	At or About Grid Reference
2	Minor Tributary of Mangapepeke Stream (Ch. 600m)	90	Perennial	Low (0.5-1%)	Swimming	1	X:1738875 Y:5696136 to X:1738731 Y:5696122
3	Tributary of Mangapepeke Stream (Ch. 1050m)	900	Perennial	Steep	Climbing	2	X:1738725 Y:5695725 to X: 1738796 Y:5695676

	Stream	Approximate length of diversion (m)	Stream Type	Stream Gradient	Fish Passage Type	Diversion Type (See figures 2 & 3)	At or About Grid Reference
4	Tributary of Mangapepeke Stream (Ch. 1100m)	200	Perennial	Steep	Climbing	2	X:1738827 Y:5695666 to X:1738619 Y:5695602
5	Mangapepeke Stream (Ch. 1560-1950m)	220	Perennial	Low (0.5-1%)	Swimming	1	X;1739163 Y:5695170 to X:1739216 Y:5695892
6	Upper reaches of Mangapepeke Stream (Ch. 2800-2900m)	100	Perennial	Steep	Climbing	2	X:1738982 Y:5693974 to X:1738968 Y:5694052
7	Upper reaches of Mangapepeke Stream (Ch. 3000-3350)	350	Perennial	Steep	Climbing	2	X:1738853 Y:5693590 to X:1739120 Y:5693813
8	Tributary of Mimi River (Ch. 3650-3900)	300	Perennial	Steep	Climbing	2	X:1738557 Y:5693413 to X:1738475 Y:5693174
9	Tributary of Mimi River (Ch. 4750)	230	Perennial	Steep	Climbing	2	X1737756 Y:5692978 to X:1737745 Y:5692777
10	Minor Tributary of Mimi River (Ch.5225-5300)	75	Perennial	Low (0.5-1%)	Swimming	1	X:1737311 Y:5692475 to X:1737357 Y:5692541

3.4 Temporary Culverts

40. Seventeen temporary culverts are proposed on access tracks, which will be essential to provide access to the main highway alignment during construction. The proposed locations of the temporary culverts are shown in Figures 4 and 5.

41. Temporary culverts will be installed as required. The size of each culvert will vary according to the catchment. They will be removed as the construction access tracks they service are no longer required.

3.5 Permanent Culverts

42. Twenty-one permanent 'cross culverts' (culverts conveying flows from one side of the road alignment to the other) are proposed along the route, with a total length of around 1200m required for the project. These are listed in Table 2 and shown in Figures 4 and 5.

43. Culverts will be constructed of either flexible plastic or concrete, and sized according to engineering specifications.

44. Fish passage has been addressed in the application, and NZTA proposes two types of fish passage. These are listed in Table 2 and described as follows;

- Type 1: culverts with flexible plastic baffles that accumulate sediment and form riffles and rest areas for fish during typical flow conditions.
- Type 2: oversized culverts with invert below bed level, allowing the original bed to reform through the culvert.

Table 2: Summary List of Permanent Culverts

Culvert #	Chainage	Catchment (ha)	Diameter (mm)	Length (m)	Cover (m)	Fish Passage (see paragraph above)	Permanent flow	Debris Fence[1]	At or about Grid Reference
1	250	3.82	1050	24	1.2	Type 1	No	None Required	X:1738665 Y:5696450
2	300	1.80	825	26	1.2	None	No	None Required	X:1738673 Y:5696360
3	570	9.31	1500	67	1.2	Type 2	No	None Required	X:1738775 Y:5696123
4	750	1.91	600	81	1.2	Type 2	Yes	None Required	X:1738859 Y:5695983
5	870	9.41	1350	87	1.2	Type 2	No	Yes	X:1738900 Y:5695873
6	1300	6.82	1350	27	1.2	Type 2	No	Yes	X:1738999 Y:5695455
7	1500	5.78	1200	36	1.2	Type 2	No	Yes	X:1739125 Y:5695288
8	1700	7.95	1200	35	1.2	Type 1	No	Yes	X:1739213 Y:5695139
9	1850	66.78	4x1350	56	2	Type 2	Yes	Yes	X:1739243 Y:5694975
10	2220	1.99	750	37	1.2	None	No	Yes	X:1739124 Y:5694644
11	2300	1.55	750	25	4	Type 2	No	Yes	X:1739089 Y:5694561
12	2400	9.84	1200	74	12	Type 1	Yes	Yes	X:1739059 Y:5694466
13	2700	1.65	600	15	1.2	None	No	Yes	X:1739010 Y:5694189
14	2900	4.72	900	117	16	Type 1	Yes	Yes	X:1739032 Y:5694000
15	2960	50.49	2550	210	26	Type 2	Yes	Yes	X:1739047 Y:5693896

Culvert #	Chainage	Catchment (ha)	Diameter (mm)	Length (m)	Cover (m)	Fish Passage (see paragraph above)	Permanent flow	Debris Fence[1]	At or about Grid Reference
16	3800	13.64	1500	115	11	Type 1	Yes	Yes	X:1738492 Y:5693326
17	4400	3.04	825	22	1.2	Type 1	Yes	Yes	X:1738102 Y:5692876
18	4750	25.54	2100	29	1.2	Type 2	Yes	None Required	X:1737746 Y:5692760
19	4750	25.54	2100	43	1.2	Type 2	Yes	None Required	X:1737736 Y:5692827
20	5150	13.55	1650	40	1.2	Type 2	No	None Required	X:1737430 Y:5692591
21	5650	11.90	1350	34	1.2	Type 2	Yes	None Required	X:1736946 Y:5692371

[1] *Debris control fences will be installed at culvert inlets located in densely vegetated areas with a high risk of debris generation. Typically, they will be installed upstream of culverts to prevent the downstream passage of debris, such as logs, that have the potential for blocking culverts. Where no debris fence is indicted it has been determined that the risk of debris blocking culverts is low.*

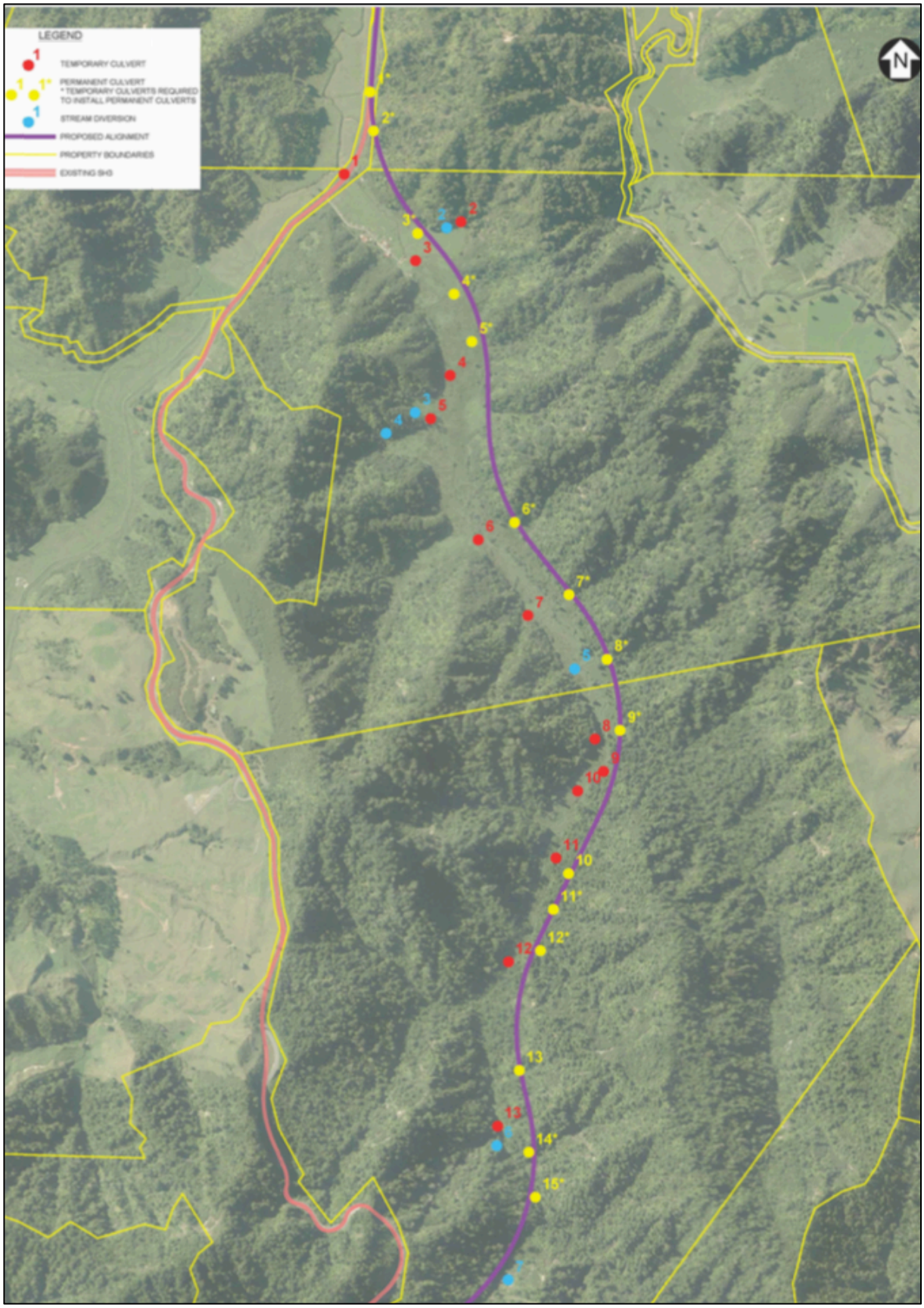

Figure 4. Location of Temporary and permanent culverts, and Stream Diversions – Northern end of Alignment

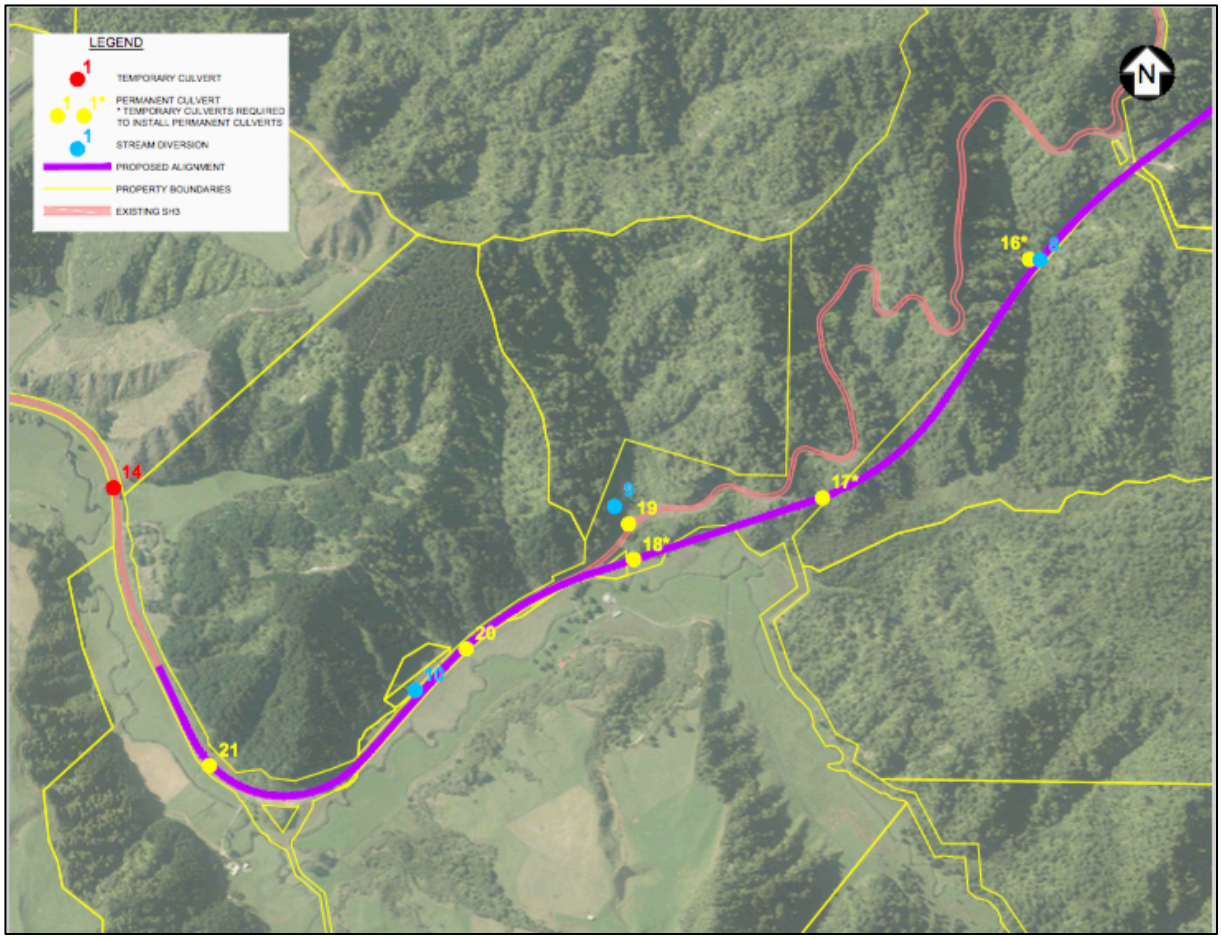

Figure 5. Location of Temporary and permanent culverts, and Stream Diversions – Southern End of Alignment

3.6 Bridge Structure

45. One bridge is proposed on the route, generally between grid references X:1738302 Y:5692981 and X: 1738105 Y:5692876. It will be approximately 120m long, crossing the Mimi Swamp forest (high ecological value) which lies at the base of a steep gully on the southern end of the alignment.

46. The bridge will be a three span steel ladder deck superstructure, with a composite concrete deck slab 12.8m wide. It will comprise 2 outer spans (35m long) and a 50m long inner span. Inclined steel frame piers will be supported from the sides of the valley. A similar bridge was constructed in the Matahorua Gorge, and this is shown below in Figure 6.

47. The supporting piers will be constructed on a rock slope, with reinforced concrete pad foundations. Mini-piles may be used if necessary depending on the depth to suitably competent rock layers. Rock bolts and/or netting drapes

may also be used to control the slope and prevent rock-falls near the pier foundations.

48. The design of the bridge will enable components to be lifted into place from the sides using large cranes. This will mean that access to the valley floor, and the ecologically significant swamp, will not be required.

Figure 6: Bridge similar to that proposed – Matahorua Gorge (source: figure 4.8 of AEE)

3.7 Discharge of Stormwater and Sediment

49. The project will involve significant cut, fill and vegetation clearance, over an expected four years of construction.

50. Large portions of the project alignment will be in areas with greater than 20% slope. The lower gradient sections at either end of the proposed alignment are located within flood plains.

51. Stormwater and sediment will be discharged from the land disturbance activities. Runoff will come from:

- Vegetation removal and clearance;
- Haul roads and access tracks;
- Stockpiles;
- Spoil disposal sites;
- Construction yards;
- Stream works;

- Bridge and tunnel construction; and,
- Bulk earthworks.

52. The discharge of stormwater and sediment has been identified as a significant environmental risk on this project given the challenging work environment, and the local climate.

3.8 Vegetation Clearance

53. Approximately 44.4 ha of vegetation will be cleared for the project, including the area for the permanent road footprint, the areas required for temporary access tracks, laydown areas and drains.

54. There will also be 'edge effects' where habitats are compromised due to the loss of adjacent vegetation and this is allowed for in the 44.4 ha area.

55. The area comprises;

- 19.5 ha primary indigenous forest
- 13.8 ha secondary indigenous forest
- 11.1 ha rushland/sedgeland vegetation which is a mix of indigenous and exotic vegetation.

56. The application identifies that up to 17 large emergent podocarps will be removed, and these have been identified due to their significance. These trees provide habitat for epiphytes, birds, lizards, and invertebrates. The vegetation clearance may result in the removal of species recorded as threatened or regionally distinctive.

57. It is noted that the TRC is concerned with vegetation clearance that occurs on land containing slopes greater than 28 degrees, and the effects on the soil resource under the RSP. We are also concerned about of vegetation clearance from the beds and banks of rivers and the effects of this on indigenous biodiversity under the RFWP. The NPDC will address all other matters relating to vegetation clearance, in particular as they relate to indigenous biodiversity.

58. The clearance of vegetation has been identified as one of the factors contributing to stormwater sediment discharge on this project. A separate consent is sought for the discharge of stormwater and sediment and my discussion in relation to sediment discharges includes the runoff associated with vegetation clearance.

3.9 Discharges to air

59. There is potential for dust to be generated on the work site for the duration of construction. Other discharges to air include discharges of odour, if potentially contaminated soils are excavated, or from exhaust emissions however these are unlikely to be significant, and my focus has therefore been on dust emissions.

60. Sources of dust during construction include;

- Establishment of yards, site and haul roads
- Topsoil removal and redistribution
- Excavations
- Soil stabilisation and base course construction
- Loading and unloading of bulk materials (soil, aggregate etc)
- Stockpiling – including unloading and placement, and removal
- Vehicle movements on unsealed roads
- Wind erosion from exposed areas and stockpiles

61. The most significant sources of dust are identified by NZTA as being stockpiles, exposed areas during earthworks, and vehicle movements on unsealed roads.

3.10 Planting of vegetation in waterways

62. Restoration planting within wetlands and swamps is included in the mitigation measures proposed by NZTA. First, hardy successional vegetation

(examples given by NZTA include manuka, hukihuki, ramarama, houhere and putaputaweta) will be planted. This 'nursery habitat' will then be inter-planted with swamp forest species, including kahikatea and swamp maire.

63. All planting will be done by hand once work in that specific area is complete.

64. Six hectares of swamp forest restoration planting is proposed to fully offset the loss of the kahikatea and swamp maire forest affected by the Project.

4. Existing Environment

4.1 Location and topography

65. The project area is located 57 km north of New Plymouth City, east and topographically, below, the current SH3 alignment, 20 km south of the Taranaki Regional Boundary with the Waikato Region, and between the small settlements of Uruti and Ahititi.

66. Mt Messenger is located within steep, topographically complex hill country, either side of which are relatively open rural valleys that are prone to flooding.

4.2 Climate

67. The prevailing wind direction is identified by NZTA, from TRC data, as being from the South-Southwest and the climate is temperate.

68. Median annual rainfall is noted to be higher than average, at approximately 1.8m-2.0m per year. Monthly average rainfall for the nearest TRC meteorological station ranges from 75-100mm in November and January-March to 115-155mm for the other months. (TRC data – January 2003-December 2016).

4.3 Surface water and Freshwater Ecology

69. The project area is located within two valley catchment systems – the Mangpekepeke to the North (3.4 km of the proposed route) and the Mimi to the South (2.4 km of the route).

70. The Mangapepeke Stream flows to the Mangaongaonga Stream then on to the Tongaporutu River, which enters the Tasman Sea about 7 km north of the project area.

71. The Mimi River flows south-west and enters the Tasman Sea between Waiiti and Urenui.

72. The Mangapepeke catchment above the project site has an area of about 332 ha. Its headwaters are located within the project area, and further east.

73. The Mimi catchment has a total catchment area of approximately 13 235 ha, with an area of 978 ha being located above the project site. This catchment originates from the hill-country about 4.5 km to the east of Mt Messenger.

74. Due to the weak structure of the soils throughout the catchment, rivers and streams are prone to high sediment loads especially during storm events. Additionally, both streams are unfenced and stock have access to the waterway. This is causing erosion to the stream banks. This can be seen in the photos in Figure 7 to Figure 10 below.

75. Both the Mimi River and Mangapepeke Stream are expected to have elevated turbidity during high rainfall events, however no data is currently available on the baseline turbidity of either waterway.

Figure 7. NZTA Site E TL4, Mangapepeke Stream catchment, facing upstream. (From Ecology Supplementary Report, February 2018, page 43)

Figure 8. NZTA Site E TL6, Mangapepeke Stream catchment, facing upstream. (From Ecology Supplementary Report, February 2018, page 44)

Figure 9. NZTA Site Ea28 Mimi River tributary facing downstream in June 2017. NZTA note the water is turbid due to runoff from cattle pugging. (From Technical Report 7b, Freshwater Ecology, December 2017, page 89)

Figure 10. NZTA site E7, Mimi River tributary facing downstream in June 2017. Bank erosion and lack of riparian management clearly visible.(From Technical Report 7b, Freshwater Ecology, December 2017, page 88)

76. The NZTA's ecological report noted that in the Mimi, aquatic macroinvertebrate communities indicated 'excellent' water quality/ condition along the main stem of the river and in the forested headwater streams. However small tributaries running through pasture were heavily modified and affected by stock (eg cattle pugging). These had macroinvertebrate communities indicative of 'poor' ecological condition (ie. site Ea28 which is shown above in Figure 9).

77. In the lower reaches of the Mimi River, monitoring by NZTA shows longfin eel, adult inanga, redfin bully, giant and banded kōkopu are found, and Paratya shrimp, kōura and freshwater mussel are common. In the steeper gullies of the Mimi tributaries further upstream (closer to the project area), MCI scores indicate good to excellent habitat and water quality. No fish were recorded during the surveys but kōura were observed.

78. Moderate habitat values were noted in the lower section of the Mangapepeke Stream by NZTA, with MCI scores indicating 'fair' to 'good' water quality and habitat, and a diversity of fish present (including adult inanga, eel, common and redfin bully, koura and Paratya shrimp). This part of the stream is about 1.4m wide and 0.4m deep. The narrow, shallow upper section of the stream has high MCI scores, indicating excellent water quality and habitat. Waterfalls in the Mangapepeke headwaters however form fish barriers, and accordingly the abundance of fish was found by NZTA to be low.

79. The Mimi swamp forest (Kahikatea Swamp Forest) is located in close proximity to the alignment.

Figure 11. Mimi River tributary flowing through the Kahikatea swamp forest (NZTA site Ea25). (From Technical Report 7b, Freshwater Ecology, December 2017, page 38)

80. Appendix IA of the *Regional Fresh Water Plan for Taranaki* (RFWP) lists a number of streams and stream catchments with high natural, ecological and amenity values. The Mimi River is included, noted for its high recreational value for whitebaiting and the good diversity of native aquatic fauna including eels, whitebait, bully and torrent fish. The aesthetic values of the river are also

noted, as 'good scenic values, steep cliffs with Pukatea Forest', and high ecological values in upper reaches are recorded. The estuary at the coast is considered an area of outstanding coastal value, and the retained native vegetation is also noted.

81. The Tongaporutu River is noted in Appendix IA of the RFWP for its recreational value (whitebaiting and canoeing) and the good diversity of native aquatic fauna including eels, whitebait, bully and torrent fish and the presence of threatened species. This river is highly rated for aesthetic and scenic values, and estuary at the coast is also considered an area of outstanding coastal value. Water quantities and flows are noted to contribute significantly to high recreational, scenic and aesthetic values. The native forest in the upper reaches is also noted.

82. The entire proposed route lies within an identified Key Native Ecosystem (KNE). KNE's are areas the TRC has identified as having significant biodiversity values for the region.

4.4 Vegetation

83. The ecology and terrestrial vegetation of the area are described in detail in the technical reports prepared by NZTA (Technical Reports 7a to 7g). The project area is located within the North Taranaki Ecological District and straddles an ecological boundary between two broad forest classes. The Mimi and upper Mangapepeke catchments are characterised Podocarp, broadleaved forest while the lower Mangapepeke (and north) is podocarp, broadleaved and beech forest.

84. The application states that the Parininihi land to the west of the current SH3 alignment (previously known as the Whitecliffs conservation area), will not be affected by the project. This area is ecologically significant, being a large (1332 ha) and rare tract of continuous forest sequence through coastal, semi-coastal and lowland bioclimatic zones. This forest area is described as the best example of primary coastal hardwood-podocarp forest on the west coast for the North Island (Technical Report 7a). This area has been the subject of extensive pest control (started in the early 1990's), and is where Kokako have been successfully reintroduced by the Runanga in recent years.

85. The vegetation of the project area (east of the current SH3 alignment) would once have been very similar to that in the area to the west, however this area has not received the same pest control as the western side, and as a consequence its ecological condition has diminished. This is apparent along the proposed route, where the forest composition is dominated by canopy trees of lower palatability to pests, such as tawa, rewarewa, nikau and tree ferns.

86. Within the Mangapepeke Stream Catchment the vegetation (and associated habitat for fauna) would once have been dense swamp forest, but this has been affected by long term grazing, fire and logging with the result being a transition to open, grazed rush-lands and poor quality grazing.

87. There are several large, emergent trees along, or immediately adjacent to, the proposed SH3 alignment. These large old trees play a significant ecological role in the forest ecosystem, and provide important wildlife habitat.

88. While the NZTA Ecological reports do not specifically differentiate between the vegetation within and that outside of waterways, it is noted that;

a) the area identified as having the greatest ecological significance in the immediate project area is the area of swamp forest and non-forest wetland in the Valley floor of the northern Mimi catchment (the Mimi Swamp Forest). We have therefore included these wetlands in my assessment of effects, including indigenous biodiversity, these being within the jurisdiction of the TRC.

b) the vegetation on the stream banks is likely to be similar to the adjoining vegetation and accordingly is afforded the same values in my assessment.

4.5 Terrestrial Fauna

89. Given the project area is largely within an area of indigenous vegetation, the area provides habitat for a range of terrestrial fauna, most of which is indigenous. This fauna includes;

- Invertebrate fauna - earthworms, coleoptera (beetles), butterflies and cicada. The diminished ecological condition of the vegetation in the project area

also reflects in the habitat due to the absence of pest control. No threatened species are known to inhabit the wider project area.

- Herpetofauna – based on available records up to 13 species of skinks, gecko and frogs could be present within the project area, including the threatened 'Archey's' frog and a number of species listed as 'at risk'.

- Birds – 38 bird species are recorded in the project area, 23 of which are indigenous. Of these, nine are listed as at risk; fernbird, spotless crake, NZ Falcon, North Island brown kiwi, North Island robin, long-tailed cuckoo, whitehead and black shag. In 2017, 20 North Island Kokako were released into the Parininihihi land to the west of the current SH3 alignment. It is possible that some of these individuals may disperse into the project area over time.

- Bats – Surveys in the project area identified the presence of long-tailed bats, listed as 'Nationally Vulnerable'. No short-tailed bats were recorded during the surveys and these are unlikely to be present.

4.6 Hydrology

90. Technical Report 14 (Geotechnical Appraisal) identifies that the deeply dissected terrain dictates the catchments and sub-catchments of the north Taranaki hills are of limited size and respond rapidly to rainfall, with minimal surface infiltration due to the steep slopes and low permeability rocks and soil cover.

91. Storm hydrographs prepared by NZTA show rapid peak flows with a quick drop-off to background flow levels.

92. The deep rock cuttings required along the route cover quite large areas and direct precipitation onto the cutting slopes and road reserve will be high, adding to any surface water runoff from the natural slopes above. NZTA notes that these flows should ideally be diverted to adjacent gullies where possible.

93. Flow data is not specifically available for either stream however the lower section of the Mangapepeke Stream (near the current SH3) is a small low gradient stream about 1.4m wide and 0.4m deep, in runs, with occasional deep pools. The lower section of the Mimi near the current SH3 alignment is a low

gradient stream about 2.1m wide and 0.45m deep, in runs, also with occasional deep pools.

4.7 Geology

94. The surface geology at Mt Messenger is dominated by the Mount Messenger Formation (Mim), which comprise marine turbidite sands and muds deposited in outer shelf to basin floor settings in the Taranaki Basin during the Late Miocene. These rocks are typically soft, ranging from silty, fine-grained sandstones to silty mudstones. These formations are exposed in numerous rock cuttings and natural outcrops along the existing SH3 route through the Mt Messenger area. The rock is commonly known as Papa and is common throughout this part of Taranaki.

4.8 Hydrogeology/Groundwater

95. NZTA notes in their Geotechnical Appraisal (Technical Report 14) that "*no data is currently available on groundwater depths within the hilly terrain. A continuous hydrostatic water table is expected to be present at considerable depth, but perched groundwater is likely to be present within the more porous sandstone layers. Groundwater movement is expected to follow individual sub-horizontal beds with higher hydraulic conductivities, following the gentle dip of the beds towards the west, exiting the slopes at distinct spring lines*".

96. The application identifies (Geotechnical Appraisal Report, Technical Report 14, page 6) that '*groundwater levels are expected to be very shallow (<1 to 2m below ground level) within the valley and gully bottoms, responding seasonally to variation in precipitation and runoff rates'*.

4.9 Air Quality

97. The existing air quality is expected to be very good, due to the relatively undeveloped rural area characterised by low intensity farming (particularly at the northern and southern ends of the alignment) and indigenous bush.

98. Existing air emissions in the area are very limited and will have only localised effects (e.g. motor vehicles using the existing SH3; domestic heating emissions,

if any, from the residential houses along the route and intermittent discharges from farming activities). Marine aerosols/salt spray will contribute to background levels.

4.10 Cultural heritage

99. Te Runanga o Ngāti Tama (the Runanga) have prepared a Maori Values Assessment in relation to the project. This report identifies that the proposed alignment involves Treaty settlement land and areas of major importance to the Ngāti Tama. The land was returned to Ngāti Tama through the treaty settlement process, having previously been the subject of raupatu (confiscation) following the land wars. Ngāti Tama note in their report that the project effectively repeats this raupatu, putting the Runanga in a very difficult situation.

100. Ngāti Tama note that the transfer of the Whitecliffs and Mt Messenger conservation areas (which Ngāti Tama refer to as Parininihi) as the jewel in the crown of their historical Treaty settlement. Parininihi has been referred to as 'Te Matua Kanohi o Ngāti Tama Whanui' – 'The parent (principal) face of Ngāti Tama', demonstrating its significance.

101. Ngāti Tama have occupied, defended and exercised mana over the land between the Mokau River and the Titoki Stream at Wai-Iti beach, on the west coast of the North Island.

102. The Runanga point out in their report that within their rohe, the waterways and mountain peaks from which the waters are source have cultural and spiritual significance to Ngāti Tama. The waterways of the area are significant resources to Ngāti Tama, and have sustained their identity, customs and livelihoods for generations. The project area has historically been and remains an area of major importance to Ngāti Tama as an important part of their rohe, traditions, customs and identity. The assessment notes that the inland Mt Messenger area was historically connected to the coastal pa of Ngāti Tama through walking tracks – some of which still exist and are used to this day.

4.11 Other consents

103. No existing consents are in place that would relate to or be used to facilitate the project.

5. Statutory Acknowledgement

104. Three iwi authorities are considered to have an interest in the Mt Messenger area, based on the areas of interest identified through the Treaty Settlement process as follows:

- Ngāti Tama Claims Settlement Act 2003: Schedule 2 – Mount Messenger Conservation Area as shown on SO 14706

- Ngāti Mutunga Claims Settlement Act 2006: Schedule 3 – Mount Messenger Conservation Area as shown on SO 324311 and Mimi River within the area of interest as shown on SO 336081

- Ngāti Maniapoto – Office of Treaty Settlements has advised TRC that there is an Agreement in Principle for an area of interest including Mt Messenger at its northern end.

105. Statutory Acknowledgements are set out in Appendix 4 of the Taranaki Regional Policy Statement (RPS, 2010) with those associated with Ngāti Tama detailed in Appendix IVB, and Ngāti Mutunga in Appendix IVD.

106. The Mt Messenger Conservation Area (Schedule 4 of the Ngāti Tama Claims Settlement Act 2003) and the Tongaporutu River (Schedule 10 of the Ngāti Tama Claims Settlement Act 2003), into which the Mangapepeke Stream discharges, are statutory acknowledgments of Ngāti Tama. As such the Crown acknowledges the statement by Ngāti Tama of the cultural, spiritual, historical, and traditional association of Ngāti Tama with the both the Mt Messenger Conservation area and the Tongaporutu River as set out below:

Mt Messenger Conservation Area

This is an important area containing Ngāti Tama pa sites and mahinga kai sources of birds and fish.

The once great Katikatiaka Pa was located here, inhabited by the descendants of Uerata, who were among the fighting elite of Ngāti Tama. It was an important vantage point, built in 2 divisions, and extending to the seaward clifftops. Tihi Manuka, a refuge pa, also situated in the area, was directly connected to an important inland track.

Kiwi, kahurangi, kereru, eels, inanga, and the paua slug were traditional resources found here. Papa clay types found here were used for dyeing muka. A range of temperate zone flora was also available to Ngāti Tama from this area, including beech, rata, rimu, and a variety of ferns. Important mahinga kai streams include Te Horo, Ruataniwha, Waipingao, and Waikaramarama.

Tongaporutu River

This area can be considered part of the heart of Poutama country, to whose fighting fame some notable Ngāti Tama warriors contributed. It was the battleground of many a hostile incursion from the north, located between Te Umukaha Pa and Omaha Pa. On the southern bank of the Tongaporutu stood Pou Tehia Pa. A little westward on the headland stood Pukeariki Pa and offshore was Te Kaeaea's island pa, Pa Tangata.

The proximity and quantity of sea and forest resources, the abundance of river and agricultural produce, the subtropical climate, and relatively protected river inlet was a paradise for the closely linked coastal population. Among the most famous of the area was Te Kaeaea, also known as Taringa Kuri, and brother of Te Puoho, their parents being Whangataki II and Hinewairoro, both of whom trace their lineage back to the Tokomaru.

107. The Mt Messenger Conservation Area within the Area of Interest of Ngāti Mutunga and the Mimi River (Schedule 3 of the Ngāti Mutunga Claims Settlement Act 2006), are statutory acknowledgments of Ngāti Mutunga. The project area is within the Mt Messenger acknowledgement area, and approximately 6 km upstream of the Mimi River acknowledgement area. As such the Crown acknowledges the statement by Ngāti Mutunga of the cultural, spiritual, historical, and traditional association of Ngāti Mutunga with the both the Mt Messenger Conservation area and the Mimi River as set out below:

Mt Messenger Conservation Area within the area of interest

The traditions of Ngāti Mutunga illustrate the cultural, historical and spiritual association of Ngāti Mutunga to the Mt Messenger Conservation Area within the area of interest. For

Ngāti Mutunga, traditions such as these represent the links between the world of the gods and present generations. These histories reinforce tribal identify, connection and continuity between generations and confirm the importance of the Mt Messenger Conservation Area within the area of interest to Ngāti Mutunga.

The Mt Messenger Conservation Area and its surrounding area of of great cultural significance to Ngāti Mutunga. Mt Messenger Conservation Area was a significant mahinga kai source from which the physical wellbeing of Ngāti Mutunga was sustained and the spiritual wellbeing nourished.

The medicinal qualities of the plant life in the Mt Messenger Conservation Area were also important to Ngāti Mutunga. These cultural aspects of the Area constitute an essential part of the heritage of Ngāti Mutunga.

Kaka, kiwi, kahurangi kererū, tuna inanga (whitebait) and the pāua slug were traditional resources found here. To ensnare some of the abundant bird life within the area known today as Mt Messenger Conservation Area, the people of Ngāti Mutunga would hollow out miro longs as drinking troughs for the birds such as kererū and wait in hiding for them.

Papa clay types found here were used for dying muka. A range of temperate zone flora was also available to Ngāti Mutunga from this area including beech, rata, rimu, and a variety of ferns. A range of materials was also collected from the area for waka, building and clothing.

Ngāti Mutunga have always maintained a considerable knowledge of the lands of the Mt Messenger Conservation Area and surrounding area, its history, the traditional trails of the tūpuna in the area, the places for gathering kai and other taonga, and the ways in which to use the resources of the Mt Messenger Conservation Area. Proper and sustainable resource management has always been at the heart of the relationship with Ngāti Mutunga with the Mt Messenger Conservation Area. The sustainable management of the resources of the Area remains important to Ngāti Mutunga today.

The traditional values of mana, mauri, whakapapa and tapu are central to the relationship of Ngāti Mutunga with the Mt Messenger Conservation Area. One of the roles of Ngāti Mutunga as tangata whenua is to protect the mauri of the Mt Messenger Conservation Area. Whakapapa defines the genealogical relationship of Ngāti Mutunga to the Area. Tapu describes the sacred nature of the Area to Ngāti Mutunga. Mana, mauri, whakapapa

and tapu are all important spiritual elements of the relationship of Ngāti Mutunga with the Mt Messenger Conservation Area. All of these values remain important to the people of Ngāti Mutunga

Mimi River within the area of interest

The traditions of Ngāti Mutunga illustrate the cultural, historical and spiritual association of Ngāti Mutunga to the Mimi River within the Area of interest. For Ngāti Mutunga, traditions such as these represent the links between the world of the gods and present generations. These histories reinforce tribal identify, connection and continuity between generations and confirm the importance of the Mimi River within the area of interest to Ngāti Mutunga.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Mimi River, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to the people of Ngaāti Mutunga today.

The full name of the Mimi River is Mimitangiatua. The river was also known as Te Wai o Mihirau. Mihirau was an ancestress of the Te Kekerewai hapū and was a prominent women of her time. The name Te Wai o Mihirau is referred to in the Ngaāti Mutunga pepeha:

Mai Te Wai o Mihirau (Mimi River) ki Te Wai o Kuranui (Urenui), koia tera ko te whakararunganui taniwha

There are a number of pā and kāinga located along the banks of the Mimi River. These include Mimi- Papahutiwai, Omihi, Arapawanui, Oropapa, Pukekohe, Toki-kinikini and Tupari. There were also a number of taupā (cultivations along the banks of the river.

Arapawanui was the pāof Mutunga's famous grandsons Tukutahi and Rehetaia. They were both celebrated warriors, especially Rehetaia who took the stronghold of Kohangamouku belonging to Ngaāti Mutunga's southern neighbours Ngāti Rahiri.

The Mimi River and associated huhi (swampy valleys), ngahere (large swamps) and repo (muddy swamps) were used by Ngaāti Mutunga to preserve taonga. The practice of keeping wooden taonga in swamps was a general practice of the Ngaāti Mutunga people.

The Mimi River has nourished the people of Ngāti Mutunga for centuries. Pipi, Pūpū (cats eye), tio (oyster) and pātiki (flounder) were found in abundance at the mouth of the river. Inanga (whitebait) were caught all along the banks of the river.

The Mimi River has always been an integral part of the social, spiritual and physical lifestyle of the Ngāti Mutunga people. Ngāti Mutunga also used the Mimi River for baptizing babies. When members of Ngāti Mutunga were sick or had skin problems they were taken to the river to be healed.

All elements of the natural environment possess a life force and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāti Mutunga whanau to the Mimi River.

To the people of Ngāti Mutunga, all the rivers and their respective valleys are of the utmost importance because of their physical, spiritual and social significance in the past, present and future.

6. Regional Plans for Taranaki

108. The proposed activities require consideration against the objectives, rules and policies of the relevant statutory plans. The statutory plans relevant to this application are the RAQP, RFWP and the RSP. The RAQP has been operative since 2011. Both the RFWP and RSP have been operative since 2001.

109. The activity does not comply with rules in the RAQP, RFWP and RSP, as detailed in Table 3 below.

Table 3: Summary of Activity Status under TRC Plans

Activity	Activity	RMA Reference	TRC Plan	Rule	Activity Status	Comments
Take and use surface water	To take water from the Mimi River for dust suppression and other construction activities associated with the development of the Mt Messenger Bypass	S14	RFWP	16	Discretionary	
Take and use groundwater	To take groundwater encountered during tunnel activities and cut excavations and ongoing operation of the Mt Messenger Bypass route	S14	-	-	Discretionary	Not covered by any rule in the RFWP. RMA s14 applies
Damming/ diversion - weirs	To dam water in the Mimi River and Mangapepeke Stream with a 1 metre weir	S14	RFWP	20	Discretionary	
Stream diversions	To realign watercourses through newly	S14	RFWP	20	Discretionary	

Activity	Activity	RMA Reference	TRC Plan	Rule	Activity Status	Comments
	constructed channels, including associated streambed disturbance and reclamation					
Temporary Culverts – installation and use and decommission	To install and use and remove temporary culverts	S14	RFWP	64 - install 56 - remove	Discretionary	
Permanent culverts - installation and use	To install and use permanent culverts	S14	RFWP	64	Discretionary	
Bridge	To construct a new bridge over the Mimi River, including associated disturbance of the stream bed	S13	RFWP	64	Discretionary	
Discharge stormwater and sediment from earthworks	To discharge stormwater and sediment onto and into land and into the Mangapepeke Stream and Mimi River and their tributaries from earthworks associated with the establishment of the Mt Messenger Bypass	S15	RFWP	27	Controlled	Controlled activity standards/terms: A site erosion and sediment control management plan shall be submitted to the TRC.
Vegetation Clearance - waterways	To remove vegetation from the bed and banks of the Mangapepeke Stream, Mimi River and their tributaries associated with establishing the Mt Messenger Bypass	S13	RFWP	68	Discretionary	
Vegetation disturbance on erosion prone land	Clearance of vegetation where any part of that disturbance is on land with a slope greater than 28°	S9	RSP	2	Controlled	Controlled activity standards/terms: A site erosion and sediment control management plan shall be submitted to the TRC.
Discharge of dust to Air	To discharge contaminants (dust) to air from earthworks associated with the establishment of the Mt Messenger Bypass	S15	RAQP	44	Controlled	Controled activity standards/terms: A dust control management plan shall be submitted

Activity	Activity	RMA Reference	TRC Plan	Rule	Activity Status	Comments
						to the TRC
Planting of vegetation – use of stream bed	To undertake riverbed planting for restoration of diverted stream beds associated with the establishment of the Mt Messenger Bypass	S13	RFWP	68	Discretionary	

110. The default position when there are multiple resource consent applications is to consider them as a whole, and not artificially divide them into component parts which may require consent under a number of different rules. In this case a 'bundling' approach to activity status is applied to overlapping resource consent applications so that the most restrictive activity status is applied to the entire proposal. It is considered that this is appropriate, as even though some of the activities have controlled status, the effects of exercising the consents will overlap, and have consequential flow on effects on matters to be considered in the discretionary applications. (South Park Corp Ltd v Auckland City Council [2001] NZRMA 350). Accordingly, the activity overall is considered discretionary, while the various applicable rules identified in Table 3 above provide guidance as to the appropriate policies and objectives to be considered in relation to the proposed activities.

7. Pre application consultation

111. NZTA implemented a consultation strategy as part of the consenting of this project. The consultation with interested parties, which began in March 2016 is noted by NZTA to be ongoing. NZTA notes that this consultation has:

- assisted in identifying the potential effects on the environment;
- enabled the avoidance of some potential effects on the environment; and
- assisted in the development of mitigation measures.

112. The project engagement approach implemented by NZTA had the following objectives:

- Raise awareness and inform key stakeholders including the public and road users about the project, including its benefits and key deliverables.
- Encourage stakeholders to become involved in Project activities.
- Nurture relationships with key influencers/opinion leaders by keeping them informed about the Project and invite their input.
- Ensure consistent and cohesive messaging and approaches to engagement and communications that align with the broader Awakino to Mt Messenger Programme. Identify any communication and engagement risks and respond with appropriate measures to mitigate those risks.

113. Phase One of consultation commenced in November 2014, with the main engagement from March to April 2015, associated with the initial investigation phase. This phase aimed to create awareness and seek input from the local community and stakeholders. At this time, the Awakino Gorge to Mt Messenger webpage went live and an online survey was undertaken to capture the publics' views on the existing SH3. Targeted stakeholder meetings were also held with DOC, Ngāti Tama and Ngāti Maniapoto.

114. Phase two involved targeted early engagement with stakeholders during August and November 2016, to set the scene for wider public consultation. Key stakeholders were emailed to provide updates on the programme, future investigation and formal consultation options. The website was updated, and a programme newsletter developed and mail dropped throughout the communities from Urenui to Te Kuiti. Interested parties were invited to join the mailing list. Meetings with DOC and Iwi were held, and potentially affected landowners were contacted.

115. Phase three occurred between November 2016 and January 2017, focussing on gauging viewpoints on the proposed options. This phase included wider public engagement on the three route options.

116. Overall, consultation occurred with the stakeholder groups shown in Table 4.

Table 4: Parties consulted

Stakeholder Groups	Constituent parties
Key Stakeholders	• Affected and potentially affected landowners. • SH3 Working Party (SH3WP) • Department of Conservation • Local Communities

Stakeholder Groups	Constituent parties
	• NPDC • TRC
Iwi	• Ngāti Tama as mana whenua. • Neighbouring iwi – Ngāti Mutunga (south) and Ngāti Maniapoto (north).
Interest Groups	• Freight organisations and industry, including Mainfreight, Port Taranaki, Fonterra. • Roading maintenance contractors (Downer and Transfield) • Road Transport Association (RTA)
Neighbours	
Wider Community	

117. NZTA continued to consult during the consenting process and have undertaken to continue consultation and engagement throughout the ongoing operation of the activities at the site.

118. Section 7 and Table 7.4 of the AEE provide a summary of the consultation undertaken, including dates and issues raised by the interested parties.

119. NZTA noted that all of the issues raised during consultation were addressed in the application.

8. Notification and submissions

120. The applications were publicly notified on 30 January 2018. Notification of the TRC and NPDC applications and NoR was done jointly, with the NPDC providing the administrative functions.

121. One thousand, one hundred and seventy seven (1177) submissions were received. Of these, 1154 of these were in support of the proposal, with reasons for support generally as follows:

a) SH3 is a vital link to the north for them and their family, for the wider community and the other people and businesses of Taranaki.

b) Safety conditions will be significantly improved over Mt Messenger and the highway will become a reliable route.

c) Project designs appear to address the requirements for a modern highway design, and are also sensitive to the environment.

d) TRC is urged to grant the applications so work can start on this regionally important transport infrastructure project.

122. All of the submissions in support relate generally to the NoR application and matters dealt with largely by the NPDC. For this reason they are not discussed in detail in this TRC report.

123. Two (2) submissions, from Te Runanga O Ngāti Tama, Tiaki Te Mauri o Parininihi Charitable Trust were neutral on the proposal. These raised matters that are relevant to the TRC applications and are discussed in detail below.

124. Twenty (20) submissions against the proposal were received. These too raised matters relevant to consideration of the TRC applications and these too are discussed in more detail below.

8.1 Submission from Te Runanga O Ngāti Tama

125. Te Runanga O Ngāti Tama ('the Runanga') note in their submission that they have not reached any final agreement on how the cultural effects of the project are to be addressed but remains committed to continuing dialogue with NZTA. We have taken this into account, and at the time of writing this report, note the NZTA's stance in their Application for Consent is that if they are unable to make agreement with the Runanga, they will not invoke the provisions of the PWA to secure the land for the proposed corridor. It is therefore assumed that if agreement is not reached, then the project as proposed will not proceed.

126. The Runanga's focus is on seeking that the cultural effects on Ngāti Tama are avoided, remedied or mitigated (including by offsets).

127. In their submission, the Runanga state that in event that the cultural effects are not adequately addressed [by NZTA] the Runanga consider that the appropriate course is the consideration of an alternative alignment, namely the online route option.

128. The Runanga identify that there is no commonly accepted methodology for substantively addressing cultural effects, particularly in a manner that takes into account or accords with the Treaty of Waitangi. The Runanga considers the matters involved in this case bring the Treaty of Waitangi provision in the RMA into focus and highlight the importance of providing for the long-term sustenance and tino raNgātiratanga of Ngāti Tama, which the Treaty of Waitangi seeks to achieve.

129. The Runanga has considered a number of measures, including cultural recognition within the project design, cultural indicators, participation in the ecological restoration aspects, among other matters. They consider substantive measures are needed to avoid, remedy or mitigate the effects of the project on Ngāti Tama in a manner that recognises and provides for the relationship of Ngāti Tama with their ancestral lands and taonga, and achieves the principles of the Treaty of Waitangi. We consider that the proposed conditions on the consent will appropriately address these concerns, and while we are unable to recommend specific conditions in relation to the requirement for NZTA to involve the Runanga in aspects of the project, if the Runanga and NZTA are agreeable to further conditions of this nature being imposed, this would be an option to further address the concerns raised in their submission.

130. We have taken into account the cultural matters raised by the Runanga in considering the applications for consents from the TRC, however have not proposed conditions as we do not wish to impose requirements over tangata whenua without their approval. At the time of writing, consultation between NZTA and the Runanga is ongoing, and expected to be presented at the hearing. We therefore anticipate that there may be some items which tangata whenua would like to see included as conditions of consent in order to formalise their requirements.

8.2 Submission from Tiaki Te Mauri o Parininihi Charitable Trust

131. Tiaki Te Mauri o Parininihi Trust (TTMoPT) works closely with Te Runanga o Ngāti Tama ('the Runanga'). As such, their submission is consistent with what that of the Runanga.

132. The TTMoPT wishes to ensure that the effects of the project on Parininihi and the taonga bird and other native flora and fauna are fully avoided, remedied

or mitigated. We consider that the conditions proposed on the consents will achieve this insofar as these are relevant to the consents sought from the TRC and we anticipate that these effects will be further addressed in the proposed conditions on the NoR from the NPDC.

133. TTMoPT anticipate that their interests are being considered through the engagement between NZTA and the Runanga. However, in the event that these interests are not met, their submission is intended to provide a basis for the TTMoPT to consider its interests more directly if necessary.

134. The cultural matters raised by TTMoPT are ones we have considered when assessing the applications for consents.

8.3 Submission from the Director General of the Department of Conservation

135. The submission from the Director General of the Department of Conservation ('DoC') relates to adverse ecological effects on bats, herpetofauna, terrestrial ecology, avifauna, invertebrates, freshwater ecology and marine ecology, and to the ecological mitigation and offset proposals.

136. The matters identified within the DoC submission which are associated with the consideration of the applications made to the TRC are summarised as;

a) Effects that the sediment discharge will have on the flora and fauna within the affected project streams and catchments.

b) Effects on indigenous biodiversity within waterways, and on the stream bed.

c) Effects of the diversion activities and the concern that the mitigation and offsetting proposed will not adequately address the impacts.

d) Concerns about the robustness of the methodologies used for assessment and mitigation/offsetting.

137. We consider that the proposed conditions on consents will formalise the mitigation measures offered by the NZTA and set standards to address the concerns raised by DoC, insofar as they relate to the activities requiring consent from the TRC.

138. We understand that NZTA has engaged further with DoC, and expect that any further mitigations or offsets proposed will be discussed and where necessary formalised at the hearing and included as conditions of consent as appropriate.

8.4 Submission from the Royal Forest and Bird Protection Society

139. The Royal Forest and Bird Society (Forest & Bird) considers that the project will have a significant adverse effect on biodiversity and associated values, including (but not limited to) substantial effects on terrestrial vegetation, indigenous bat habitat and freshwater ecology.

140. Forest & Bird considers that aspects of the assessments of ecological effects have been insufficient to allow ecologists to provide comprehensive advice on the magnitude of effects of the project to decision-makers.

141. Forest & Bird does not believe the proposed conditions associated with the resource consents and the designation put forward by NZTA are sufficient to ensure adequate avoidance, remediation, mitigation or offsetting of adverse effects will be achieved.

142. We consider that the conditions proposed on the consents will appropriately address the concerns expressed by Forest & Bird insofar as they relate to the activities requiring consent from the TRC, i.e. freshwater ecology and effects on the beds of rivers and streams (biodiversity). We anticipate that the proposed conditions put forward by the NPDC on their NoR and Land Use Consents will further address the concerns raised by the submitter relating to biodiversity and habitat, with these matters lying more in their jurisdiction than TRC's.

8.5 Submissions from Te Korowai Tiaki o te Hauāuru Incorporated

143. Te Korowai Tiaki o te Hauāuru Incorporated (Te Korowai) oppose the entire proposal in its submission.

144. Te Korowai notes that the NZTA has obtained initial cultural effects assessments from the Runanga. Te Korowai believes that the Runanga has acknowledged that none of the identified options are acceptable, and all involve significant adverse cultural effects. This we consider is a matter to be resolved between Te Korowai and the Runanga.

145. Te Korowai considers that no clarity or transparency as to the nature of cultural mitigation or offsetting has been provided.

146. A number of concerns are raised about the acquisition of Ngāti Tama land and the issue of a NoR. These concerns are beyond the scope of what the TRC can consider in relation to TRC applications, but are able to be dealt with by the NPDC. We also note that NZTA has indicated it does not intend to use the PWA to acquire the land.

147. Te Korowai notes that any remedies relating to adverse cultural impacts will need to benefit both the Runanga and the affected hapu. It also notes that no agreement, or no appropriate agreement, is in place to avoid, remedy or mitigate the significant adverse cultural effects.

148. Te Korowai considers that alternative sites and methods exist, and the Multi Criteria Analysis (MCA) approach adopted by NZTA is inadequate and has breached Treaty principles, as well as basic Part 2 RMA expectations in relation to matters of national importance.

149. Te Korowai's first preference is to decline the proposal (including the NoR and all related resource consent applications). Its second preference is to impose conditions on the NoR and resource consent conditions that achieve all of the following:

- Avoid significant and more than minor adverse cultural, landscape and biodiversity effects;
- Remedy and mitigate residual adverse cultural, landscape and biodiversity effects;
- Enter into cultural mitigation and offsetting agreements with relevant hapu including members of Te Korowai as representatives of affected hapu;
- Address the issues identified in this submission.

150. We consider that the conditions proposed on the consents will ensure that NZTA avoid, remedy or mitigate significant biodiversity effects insofar as is able to be achieved on the consents sought from the TRC. In turn, it is expected that this will go at least some way to mitigating adverse cultural effects. We have consulted with the NPDC to confirm that the conditions on the NoR and

NPDC Land Use Consents will seek to address landscape and biodiversity effects.

151. We are unable to recommend cultural mitigation and offsetting agreements with tangata whenua as conditions of consent. However, additional conditions could be included should they be volunteered by NZTA and providing tangata whenua were agreeable to these.

8.6 Submission from Poutama

152. In their submission Poutama claim mana whenua over the area, and provide justification for this. They note that they are still reviewing documents and, at the time of the submission, were in a position to undertake a cultural assessment. It is anticipated that Poutama will elaborate on their concerns and the outcome of their cultural assessment at the hearing.

8.7 Submissions from other parties

153. Fifteen (15) submissions against the applications for consents were received from members of the public. These submissions generally expressed concern for the following matters which can be considered by the TRC;

a) Removal of indigenous vegetation and associated effects on flora and fauna and the wider ecosystem.

b) Effects on biodiversity, loss of carbon sink, and loss of bird habitat.

c) Effects on water quality and instream flora and fauna.

d) Effects on wetlands.

e) Concerns about runoff and flooding potential.

f) Lack of consultation with Iwi and Hapu.

g) Generation of dust in the summer and sediment runoff in the winter.

8.8 Submissions in support – To be heard

154. Thirty parties have submitted in support of the application and wish to be heard. All matters raised in the submissions in support relate to transport effects, which are considered by the NPDC.

9. Assessment of effects

155. The effects of the application are assessed against the existing environment which is described in section 4.

156. The effects of the proposed project which are within the jurisdiction of the TRC are summarised as follows;

a) Effects on surface and groundwater quality and quantity as a result of water takes and structures required to facilitate these takes, where applicable (surface).

b) Effects on surface water quality and instream biodiversity associated with stream diversions, temporary and permanent culverts;

c) Effects specific to the bridge structure and the wetland it spans;

d) Effects on surface water quality and instream biodiversity associated with the discharge of sediment from earthworks, including exposed soils where vegetation is removed.

e) Effects associated with vegetation clearance on land including slopes greater than 28 degrees, including the effects on indigenous biodiversity from vegetation clearance from the banks and beds of waterways.

f) Effects associated with the discharge of dust.

g) Effects associated with the planting of vegetation in the stream bed.

157. The hierarchy of addressing environmental effects is Avoid – Remedy – Mitigate – Offset - Compensate. All of these are relevant to the activities for which consent it sought, and we propose formalising measures by way of conditions on consent where appropriate.

158. The applicant has identified measures to avoid remedy, mitigate and offset adverse environmental effects, and proposes these be documented in a suite of management plans. The framework for some management plans, and drafts of others, has been provided in the application.

159. We acknowledge these management plans, and the importance of them for the project. NZTA proposes to adopt its own guideline as the erosion and sediment control standard, through the implementation of the Construction Water Management Plan to address the management of sediment. However, the standards are not specifically imposed through the conditions proposed by NZTA. To avoid ambiguity, where appropriate we have recommended standards (by way of consent conditions) to set clear expectations of what must be achieved by the NZTA. Mr Stewart of Southern Skies has assisted us with the preparation of the conditions.

160. The entire project is fundamentally reliant on offsetting to address significant adverse effects which are unable to be avoided, remedied or mitigated. At the time of writing we must rely on the information we have to date, which suggests the following offsets will be made by the NZTA;

a) 230 ha of pest management (supported by a buffer pest management area for a total area of 560ha);

b) 6 ha of kahikatea/swamp forest restoration planting (note the supplementary report dated February 2018 identified that this would no longer be required, however this was still included in the conclusion and it is therefore assumed NZTA will continue with this proposed swamp forest restoration);

c) 8.38 ha of mitigation planting of indigenous species;

d) The planting of 3400 native plant seedlings – 200 seedlings of the same species of each significant tree removed along the Project footprint;

e) Fencing and riparian planting of 8.627 km of stream length outside of the project footprint, further downstream on the banks of the Mimi River and/or Mangapepeke Stream .

161. The NZTA has calculated that the offset and mitigation package is expected to generate no net loss in biodiversity 10 years following construction of the bypass and a net gain from year 15 onwards.

162. Ecological review of the application by Wildlands on behalf of the NPDC and TRC has raised concerns about whether the area proposed by NZTA is sufficient, and whether the offsetting as proposed will achieve the outcomes stated. We expect more information about this at the hearing.

163. TRC are also concerned that the offset and mitigation package will occur on land not owned or controlled by NZTA and reliant on landowner approval for its completion. Given the importance of this offsetting in addressing adverse effects, we propose a condition requiring NZTA to demonstrate to TRC's satisfaction that offsetting will occur and appropriate legal mechanisms are in place prior to the consents being exercised.

164. The project is also fundamentally reliant on NZTA reaching agreement with Te Runanga o Ngāti Tama (the Runanga) to place the road through Runanga owned land. NZTA has indicated that they will not use the compulsory acquisition provisions in the Public Works Act to acquire the land. At the time of writing this report it is understood that consultation with Ngāti Tama is ongoing.

9.1 Effects of Take and Use of Surface and Ground Water and Associated Structures

165. The potential effects of taking and using water will be those resulting from potentially reduced flows and levels and include effects on ecology, water quality, water availability, cultural effects on the mana and spiritual sustenance associated with the water and in the case of surface water takes, direct effects on fish from being taken into the intake or trapped against the screens.

166. The potential adverse effects associated with the 2 weirs proposed (one in the Mimi and one in the Mangapepeke) will include direct effects associated with the short term construction activities, the short term effects of their presence and use, and effects of their removal. The effects include;

a) Potential sedimentation from earthworks and construction, including effects from deposition of sediment on stream beds and on water clarity. Deposited sediment can smother or abrade in-stream fauna, including periphyton and other food sources which are essential to fish survival. Deposition can also reduce habitat.

b) Any clearance of vegetation in and around the stream to create the weirs, can cause sedimentation and direct effects of fish injury, stranding or death;

c) Effects on water quality associated with the use of concrete in and around the waterways;

d) Short term effects on fish passage during construction and the presence of temporary weirs;

e) Loss of in-stream habitat and function; and,

f) Maori cultural effects on the mana and spiritual sustenance associated with the water.

167. The adverse effects of reduced flow, including effects on water quality and other users, are largely avoided and generally mitigated by ensuring that adequate water remains available and the limits set on the consent take into account other users. This is typically achieved by ensuring that the total allocation is not too high, and by restricting taking, or stopping it completely, during low flow periods.

168. The direct effects of the intake on fish are able to be avoided by ensuring that the intake has a screen with intake and screen velocities that are not too high for fish to swim against.

169. There will be minor loss of habitat associated with the weir construction and removal and potential effects of this can be avoided, remedied or mitigated by ensuring correct choice of materials, the discharge of sediment is minimised (duration and volume) and ensuring fish passage.

170. Adverse effects on Maori and cultural matters are also largely addressed by avoiding the direct effects noted above. However, any evaluation of cultural effects must include the broader aspects that result from water being a source

of mana and spiritual sustenance, being intricately linked to, and reflective of the wellbeing of tangata whenua. If tangata whenua have specific concerns, these may be able to be addressed by way of further consent conditions if parties were in agreement.

171. The surface water takes proposed are small in scale and will be temporary for the duration of site earthworks activities, largely used for dust suppression. This use of the water will assist in avoiding and mitigating other potential effects associated with the project works.

172. The groundwater takes proposed are small in scale and associated only with shallow groundwater that is encountered during site works.

173. We consider that the low volumes and the nature of takes being temporary in the case of surface water, and incidental in the case of groundwater, will ensure that cultural impacts are minimised.

174. The applicant has proposed the following mitigation measures:

a) Limits on the daily volume of take; and

b) Removal of equipment (including structures) when no longer required.

175. In addition to the measures above, we have recommended proposed conditions on the rate of surface water take, that will ensure sufficient flows remain in the stream and the intakes are screened to minimise the direct impacts on any fish present. We also recommend that restrictions be placed on the timing of installation of the two weirs, so that works do not occur in winter, and have recommended requirements for fish passage. This will reduce effects on fish migration, and reduce the risk of erosion or catastrophic loss of all or part of the structure in a flood.

176. Placing volumetric limits on the groundwater takes sought would be artificial, and rates will be difficult to measure meaningfully. We consider that simply limiting the groundwater take to shallow groundwater encountered during excavations for permanent cut faces and tunnels is the only condition required on this consent.

177. Overall we consider that effects on water quality or quantity associated with the water takes and associated structures (2 weirs) are not likely to be significant, and effects can be addressed with the conditions proposed.

9.2 Effects of Stream Diversion Activities, Temporary and Permanent culverts

178. The potential adverse effects associated with the 9 stream diversions, 17 temporary culverts and 21 permanent culverts will include direct effects associated with the short term construction activities, and long term, permanent effects of the waterways once the diversions and permanent structures are in place. The effects include;

a) Potential sedimentation from earthworks and construction, including effects from deposition of sediment on stream beds and on water clarity. Deposited sediment can smother or abrade in-stream fauna, including periphyton and other food sources which are essential to fish survival. Deposition can also reduce habitat.

b) Excavation and filling in of stream channels and banks, and the clearance of vegetation in and around the stream to facilitate the work, can cause sedimentation and direct effects of fish injury, stranding or death;

c) Effects on water quality associated with the use of concrete in and around the waterways;

d) Effects on short term fish passage and habitat during construction including the presence of temporary weirs, temporary diversions and machinery in and around the waterways;

e) Loss of in-stream habitat and function, freshwater ecology and loss of indigenous biodiversity;

f) Loss of natural character and amenity; and

g) Maori cultural effects on the mana and spiritual sustenance associated with the water.

179. We agree with the statements in the application that some of the effects associated with the permanent diversion of the waterways proposed are significant, and have potential to be significant for some time. These effects are unable to be mitigated and offsetting is proposed by NZTA to address these effects.

180. It is noted in the application and associated ecological assessments that fine sediment is a typical feature of the substrate in streams around Mt Messenger, due to the papa mudstone geology. High sediment loads appear to be a natural feature of these steams, and this is acknowledged along with the assessment that in the absence of mitigation, this situation can be exacerbated and erosion can be accelerated. We note with respect to sediment discharges that the consents for diversions and culverts will focus on mitigation measures to avoid, remedy and mitigate sediment generated at the immediate site of the diversion/culvert, while the consent to discharge stormwater and sediment from the project site (discussed in later paragraphs) will address runoff from exposed soils and areas.

181. NZTA has identified that all diversions will be undertaken in accordance with the following principles;

- Diversions will seek to replicate the character of the overland flowpath and/or watercourse;
- Re-aligned overland flowpaths and/or watercourses will have similar hydraulic capacity to existing channels;
- Where floodplain flow is interrupted, additional waterway capacity will be provided in compensation;
- Reconstructed watercourses will replicate the natural materials and characteristics of the original watercourse to ensure similar ecological functions are maintained; and,
- Fish-passage will be restored where it is interrupted and determined to be necessary by the freshwater ecologist.

182. Mitigation measures to address the effects associated with stream diversion and culvert works are proposed by NZTA, and include;

a) The activities will be included in the detailed Construction Water Management Plan (CWMP), which will document all management practices, structures and self-monitoring to ensure the risks associated with sediment and erosion are minimised.

b) NZTA will ensure they follow best practice at all times, to ensure they do not significantly increase the sediment losses from the catchment compared to what is currently occurring.

c) Monitoring by the TRC can ensure ongoing compliance with the E&SCP.

d) Particular care will be taken with the highest risk areas, which have been identified by NZTA as the Mimi Stream and the kahikatea swamp forest downstream.

e) Fish recovery protocols will be implemented, and these will include detailed information on recovery of fish prior to any works in-stream, rescuing fish from any material/spoil removed from the stream, and relocating the fish that are recovered. The protocols will also include requirements for reporting.

f) NZTA will ensure that there is always a flow of water downstream of the work area, by ensuring that there are temporary clean water diversions around the active work sites.

g) Effects on fish passage will be mitigated by minimising the duration of works in most cases. For the longer diversions (i.e. either side of the proposed tunnel), temporary culverts will be installed beneath the fill areas, and spat ropes will be provided in these to provide fish passage until the permanent diversion is complete and the culverts can be removed.

h) The loss of habitat and indigenous biodiversity, and the loss of natural character and amenity that will occur as a result of the diversion and culvert activities will be addressed by the offsetting measures proposed by NZTA, in the form of improving and enhancing the habitat, biodiversity, natural character and amenity of a larger section of the same waterway. NZTA proposes 8.627 km of riparian fencing and planting to offset the waterways effects.

i) With respect to the temporary culverts, it is noted that these will be removed when no longer required.

183. In relation to the offsetting measures proposed along stream margins by the NZTA, the review by Wildlands notes that *'it is important that any tributaries earmarked for restoration purposes do not already have indigenous woody vegetation along their riparian margins, i.e. there needs to be a clear benefit as a result of restoration works'*. We agree with this, and note that if there is a level of existing vegetation in the riparian area proposed for offset, we expect the offset areas to be adjusted accordingly.

184. NZTA has noted that they will avoid works during the winter period as much as possible. Given the nature of the work site and the challenges presented by the topography and climate in this location, we recommend conditions that require winter works to be assessed and require approval from TRC.

185. Temporary structures are to be removed once no longer required.

186. NZTA identifies that cultural protocols are to be developed with the Runanga. While we are unable to recommend conditions to this effect, if tangata whenua was in agreement conditions could be included on the consent that require these protocols to be put in place prior to starting works, and these could include;

a) protocols for the stream diversion activities, including addressing the re-alignment of the waterways and the effect this has on the mauri of the waterway; and

b) the process for fish recovery and release, and any cultural steps tangata whenua identify need to be taken to ensure the new sections of the waterways are culturally and spiritually integrated into the existing waterway network and the land.

187. A review of the ecological affects assessment has been carried out by Wildlands on behalf of the NPDC and TRC. This review questions whether the area proposed for offsetting is sufficient to achieve the outcomes NZTA have identified. We anticipate there will be more discussion on this matter at the hearing.

188. We are concerned that the offset planting proposed is potentially located on land not under the control of NZTA. Given the importance of this offsetting in addressing adverse effects, we propose a condition requiring NZTA to demonstrate to TRC's satisfaction that offsetting will occur and appropriate legal mechanisms are in place prior to the consents being exercised.

189. As the 8.627 km of riparian planting and fencing proposed is to offset the effects of both the diversion and permanent culverts, we also propose a condition linking the consents to clarify that this is the case.

190. Overall, we consider that the effects of the installation of diversions and culverts can be addressed with the immediate mitigation measures at the site of the works. Additionally the permanent and long term effects associated with diversions and permanent culverts (i.e. loss of indigenous biodiversity) are able to be addressed by the mitigation and offsetting measures proposed by NZTA.

9.3 Effects of Bridge Structure

191. Adverse effects associated with the construction, operation and maintenance of the proposed bridge structure include:

a) Damage to the ecologically significant wetland beneath the bridge during construction and maintenance;

b) Landscape effects;

c) Effects on natural character and amenity associated with the waterway; and,

d) Runoff from the bridge surface into waterways may cause erosion or scour if not properly controlled.

192. The NZTA has identified the following methods for avoiding, remedying and mitigating potential effects associated with the bridge structure;

a) the design of the bridge will enable components to be lifted into place from the sides using large cranes. This will mean that access to the valley floor, and the ecologically significant swamp below, will not be required during construction.

b) The structure has been specially designed to minimise land disturbance and minimise vegetation and land disturbance at the pier footings.

c) A SCWMP will be prepared for the bridge construction works.

d) Runoff from the bridge will be collected, conveyed and discharged at a point appropriate to prevent flooding, erosion and scouring. Upstream flows from the road pavement that may discharge across the bridge deck will be minimised by ensuring engineering design incorporates diverting upstream flows.

193. Conditions reflecting the above are recommended on the consent where applicable. Additional restrictions will be placed on timing of works to avoid the winter period.

194. Balancing the effects on natural character and amenity against the potential ecological effects, and weighing this against the alternatives to installing the bridge (which in its own right is a significant mitigation measure compared to the alternative means of crossing the swamp), we are of the opinion that the bridge will preserve, as far as practically possible, the natural landform while also preserving the adjoining and underlying ecologically significant swamp forest.

9.4 Effects of Discharge of Stormwater and Sediment from Earthworks and Exposed Soils Resulting From Vegetation Clearance

195. We have identified the discharge of stormwater and sediment as one of the key environmental risks associated with this project given the particularly challenging topography and climate of the project area. We consider that the potential for erosion and the potential for accelerated runoff and associated sediment discharge is further exacerbated in many areas as the earthworks will occur within soils that will have been recently cleared of indigenous vegetation.

196. We have therefore engaged an erosion and sediment control specialist, Campbell Stewart of Southern Skies Ltd to provide guidance and input into this aspect of the project.

197. Mr Stewart has reviewed the application and supporting information, and considers that from an erosion and sediment control perspective, Mt Messenger is a high risk and challenging project. Mr Stewart reiterates the particular challenges of the project site, which have also been identified by DoC (and which Mr Stewart has been given permission to repeat), as follows;

- *Site topography which comprises steep, incised bush covered gully systems with limited to no existing access to most of the works area;*
- *The papa clay soils which are described as fine sands, silts and clays which will be susceptible to erosion under saturated conditions*
- *High rainfall within this elevated west coast area;*
- *The design characteristics of the earthworks which include large scale box cuts and sidling cut/fill operations across steep slopes along with large scale/deep fill embankments extending up incised gully watercourse systems;*
- *Large numbers/lengths of temporary and permanent stream diversion and culvert installations within difficult terrain;*
- *The high ecological values associated with the site receiving environments.*

198. The effects of the discharge of stormwater and sediment include;

a) Potential degradation of downstream waterways;

b) Potential sedimentation from earthworks and construction, including effects from deposition of sediment on stream beds and on water clarity. Deposited sediment can smother or abrade in-stream fauna, including periphyton and other food sources which are essential to fish survival. Deposition can also reduce habitat, and in steep topography such as Mt Messenger, deposition can be quite pronounced in the absence of effective mitigation;

c) Effects on hydraulic loading and flows, including exacerbation of flooding;

d) Effects on slope stability;

e) Loss of amenity and in-stream habitat and function, freshwater ecology and biodiversity; and,

f) Maori cultural effects on the mana and spiritual sustenance associated with the water.

199. The application from NZTA suggests that the effects of the discharge of stormwater and sediment will be adequately addressed by the following proposals;

a) Designing and operating erosion and sediment control measures in accordance with the NZTA Guideline, except where site constraints prevent full compliance.

b) Controlling the works (including vegetation clearance) through an overall Construction Water Management Plan (CWMP) and Specific Construction Water Management Plans. The CWMP is a project-wide document and a draft has been submitted.

c) Monitoring the erosion and sediment control measures and receiving environment in accordance with a Construction Water Discharges Monitoring Programme. At the time of writing, this report was still being prepared. The principles of the proposed site monitoring are described in Section 9 of the draft CWMP. They include:

- Weather forecast monitoring for daily and weekly planning;
- Visual assessments of the receiving environment;
- Flocculation monitoring;
- Devices monitoring, which includes monitoring of outflow turbidity and/or total suspended solids associated with a selection of SRPs;
- Monitoring of the receiving environment through manual sampling (flow, turbidity and total suspended solids), both upstream and downstream of discharges where required; and
- Seasonal water quality and habitat surveys pre and post earthworks in accordance with an Ecological and Landscape Management Plan (E & LMP).

200. Slope stability is addressed in the geotechnical report provided by NZTA, along with water control measures to prevent impacts on formed slopes. The effects of the discharge of stormwater on slope stability (e.g. erosion) can be addressed with appropriate design.

201. With detailed and responsive mitigation, we are satisfied that the effects of the activity can be mitigated however we reiterate the findings of Mr Stewart, that there is justification for stringent, certain and enforceable consent conditions. Adoption of the NZTA Guideline is considered a minimum standard, and measures beyond this standard that we deem necessary are listed in the consent conditions recommended.

202. While the NZTA has proposed techniques for avoiding, remedying and mitigating the effects of stormwater and sediment discharges, the levels of mitigation that are able to be achieved have not been specified or detailed by NZTA. While the mitigation (including techniques and plans) proposed is appropriate and adequate as a means of providing assurance that suitable steps are being taken onsite to mitigate effects, we consider that definitive standards on the receiving water are required to ensure that the plans are achieving the required levels of mitigation.

203. Mr Stewart has assisted us in preparing the recommended conditions on the consent to discharge stormwater and sediment and these provide the necessary certainty on control of effects.

204. We note that for a project such as that proposed, an extensive TRC monitoring programme for the duration of activities would be standard procedure, with the consent holder meeting the costs of this programme.

9.5 Effects of Vegetation Clearance

205. Effects of vegetation removal as a whole and as they relate to the discharge of stormwater and sediment are discussed above.

206. There are however other effects that are required to be considered by the TRC in association with the application to remove vegetation under the RSP, and centering on the effects on ecology and indigenous biodiversity where the vegetation is in or on the banks of waterways under the RFWP.

207. The TRC is concerned with the loss of indigenous biodiversity associated with the removal of vegetation from the banks and beds of rivers, and the effects are considered significant. For any vegetation clearance outside of the river bed, the NPDC has jurisdiction for managing the effects of the clearance on indigenous biodiversity. We have confirmed this approach with the NPDC.

208. The above notwithstanding, the mitigation measures proposed by the applicant for the wider effects of vegetation clearance are equally as relevant to the vegetation on the bed and banks of the streams as they are to the remaining areas. The ecological effects of the vegetation clearance have been detailed extensively by NZTA in various ecological reports, and supplementary reports.

209. Our overall assessment is consistent with that put forward in the AEE; that the effects of the indigenous vegetation removal will be significant, and cannot be avoided, remedied or mitigated. In the absence of mitigation options, NZTA therefore proposes to offset the effects as follows;

a) Undertaking an intensive, multi-species pest management programme over an area of 1085 ha, with the focus being on controlling rats, possums, mustelids, feral cats, feral pigs and goats to very low densities, and fencing to exclude livestock. This management will continue in perpetuity (or until such time as pest management in its current form is no longer necessary to sustain the levels of biodiversity created).

b) Restoration planting of 6 ha of swamp forest.

c) Planting of 200 seedlings of the same species for every significant tree (as identified in the application) that has to be felled.

d) Restoration planting of all secondary scrub areas along the footprint plus temporary construction areas such as access tracks and storage areas that retain conditions suitable for planting, being approximately 9 ha in total.

210. NZTA proposes that protocols for managing the ecological and landscape effects will be detailed in an Ecology and Landscape Management Plan (ELMP).

211. The pest management component of the offsetting package will also be formalised in a Pest Management Plan (PMP).

212. NZTA is developing cultural protocols with the Runanga, and it is anticipated that the Runanga will identify a number of protocols and procedures they require to mitigate the cultural effects of the vegetation clearance. If these protocols are unable to be successfully negotiated, conditions to address potential cultural issues could be appropriate, with agreement from tangata whenua.

213. While we are unable recommend conditions of consent that involve the Runanga, conditions to formalise the requirements of the Runanga may include (but not be limited to);

a) tangata whenua involvement in the development of Management Plans; and

b) Consultation regarding the sourcing of plants and cultural requirements and inputs associated with the planting and establishment of them;

214. We consider that the effects of the vegetation clearance can be offset in the manner proposed by NZTA however note the disagreement regarding the calculations of areas required, particularly as this relates to the pest management programme. Further conditions around the offsetting may be required.

215. We are concerned that the land on which the offsetting is to occur is not controlled by NZTA, and if landowners are not in agreement, then it will not be able to occur. Given the importance of this offsetting in addressing adverse effects, we propose a condition requiring NZTA to demonstrate to TRC's satisfaction that offsetting will occur and appropriate legal mechanisms are in place prior to the consents being exercised.

216. With respect to vegetation in and on the banks of waterways, we also propose conditions that restrict the potential damage to the stream and the ecology associated with it relating to felling and vegetation removal methods in and around waterways.

217. NZTA proposes the pest management programme to continue in perpetuity, and we are of the opinion that this is a key aspect of the pest management offset proposed. We have however identified that the TRC is restricted in terms of its ability to put conditions on the consent for vegetation clearance to be perpetual, given that this consent will ultimately expire. We have therefore raised this matter with the NPDC and anticipate that they will place conditions on the NoR and/or land use consent that will reflect the perpetual nature of the offsetting, and the ongoing responsibilities of the NZTA for this.

9.6 Effects of Discharge of Dust

218. Effects of the discharge of dust are expected to be minor, and include;

a) Deposition of dust on exposed surfaces, including plants, which can in extreme cases disrupt photosynthesis;

b) Health effects associated with fine particulate;

c) Amenity effects associated with dust plumes and deposition;

219. Detailed mitigation measures have been identified by NZTA, and these will be formalised in a Dust Management Plan (DMP), which it is proposed the TRC will review and, where necessary, approve prior to activities commencing. The DMP will include;

a) Identification of potential sources of dust taking into account the construction programme/methodology;

b) Identification of sensitive receptors in proximity to identified potential sources of dust for targeted dust management;

c) Dust management and mitigation measures to address dust effects;

d) Monitoring of potential dust generation, including assessment of weather conditions/soil conditions and visual dust assessments;

e) Training of staff in relation to dust management; and,

f) A dust complaint system so that action can be taken to avoid, remedy or mitigate dust events and adapt the dust management systems if adverse effects occur.

220. We have taken into account the above, incorporated these where appropriate, and recommended conditions that are consistent with other similar activities consented in Taranaki.

9.7 Effects of Planting of vegetation in stream beds

221. Incorrectly done, there is potential for damage to the swamp hydrology and ecosystems as they currently exist. NZTA propose that this be mitigated by ensuring that the appropriate plans are in place, and that the design and management of the swamp forest restoration proposed is undertaken by a qualified restoration ecologist, with experience in challenging natural conditions such as those present on this site.

222. The works proposed however are to mitigate and offset the effects of vegetation clearance which will occur on other parts of the route, and to enhance the existing ecological values of the swamp areas affected. Undertaken correctly, the works will achieve this purpose.

9.8 Positive Effects/Benefits

223. Positive effects associated with the activities are also able to be taken into account under the RMA.

224. Safety Benefits identified in the AEE include;

- Improved safety star rating for SH3.
- Improved forward visibility.
- Passing opportunities.
- Reduced driver frustration
- Improved alignment
- Safer access to recreational walking tracks.

225. Resilience and journey time benefits identified in the AEE include;

- Fewer closures
- Faster recovery from closure events

- Improved reliability
- Reduced driver frustration
- Increased speeds.
- Reduced journey time for all modes of transport.

226. Economic benefits include;
    - Lower vehicle operation costs
    - Reduced journey time, especially for over-dimension loads which currently cannot use the route.
    - Reduced costs to the community in terms of travel time, vehicle operating costs, accident costs, carbon emission reductions, road maintenance costs.

227. Environmental, cultural and social benefits include;
    - Reduced CO2 emissions from vehicles due to shorter length of trip and flatter grades.

228. In terms of the weighting of the benefits put forward, these are predominantly associated with the economics, transport and resilience and do not relate directly to the activities for which consent is sought from the TRC. They do however provide context as to why the consent applications have been made.

9.9 Tangata whenua - Cultural Effects

229. The project area is in the Rohe of Ngāti Tama. Section 8.4.1 of the AEE identifies that the area is culturally significant to them, and in identifying this early on NZTA has been able to work closely with the Runanga in developing the project design, with a focus on avoiding, mitigating or offsetting effects on cultural, landscape and ecological values. This is particularly relevant and important in this case where the land involved is owned by the Runanga.

230. Cultural aspects are proposed to be incorporated into the project design where appropriate, however the mechanism for ensuring this is currently unclear, as is the ongoing involvement by tangata whenua in the 'life' of the consents, and the project, which we consider is essential.

231. We anticipate further information will be provided at the hearing that will clarify the structure for tangata whenua involvement through the life of the

consents and the project. We note that other groups with an interest in this project have also submitted and raised concerns. We also anticipate that the concerns raised by the other groups will be elaborated on at the hearing. This may result in additional conditions on consent.

232. Further information may result in the commissioner being able to consider further conditions which the third parties agree to, and can therefore be placed on the consent without concern that they will be ultra vires.

10. Assessment of Alternatives

233. As per schedule 4 of the RMA, NZTA have provided information on the detailed process they went through to consider alternative routes, sites and methods for completing the project before deciding on the alignment option that is subject to their application. We have reviewed this information and as we anticipate that this process will be described in detail at the hearing, will not repeat it in our report.

234. Additionally, as per s. 105 of the RMA, the TRC is required to have regard to '*any possible alternative methods of discharge including into any other receiving environment*'. This applies to the discharges of sediment and stormwater, and the discharge of dust.

235. In terms of the discharge of dust, there are no alternative receiving environments, and focus is on avoiding, remedying and mitigating effects. NZTA has detailed these measures, and these are to be formalised by way of conditions.

236. In terms of the discharge of stormwater and sediment, these and various alternative methods for mitigation have received considerable attention and the NZTA has identified appropriate methods to mitigate effects from the discharges. Discharge to land in the first instance is preferred and this will occur via sediment treatment ponds (the location of which has been identified by NZTA on project drawings). Mitigation measures, and standards that will be achieved, are to be formalised via consent conditions.

11. Statutory Assessment

11.1 Sustainable Management (Part 2 of the RMA)

237. Part 2 of the RMA is called 'Purpose and Principles' and comprises sections 5, 6, 7 and 8. Section 104 of the RMA requires that consideration of applications for consents be 'subject to Part 2'. Until a recent high court decision *RJ Davidson Family Trust V Marlborough District Council,* (Davidson*)* this has been considered to require an overall broad judgement approach in the form of a full analysis of the activity against Part 2 of the RMA.

238. The High Court decision in *Davidson* has called this traditional approach into question, and in accordance with this decision, Part 2 only applies when there is 'invalidity, incomplete coverage or uncertainty of the meaning of statutory planning documents'.

239. On this basis, the NZTA note that the applications for resource consent may therefore not be subject to the overall broad judgement approach. We note however that the Regional Freshwater Plan for Taranaki (RFWP) is due for review, meaning that it may not completely cover the areas in question, and the Regional Soil Plan for Taranaki (RSP) is directed at forest harvesting activities. Furthermore, the *Davidson* case is still the subject of an appeal to the Court of Appeal. A traditional Part 2 analysis was therefore provided by NZTA to take into account that it is possible that the current position on Part 2 will alter or be clarified through this appeal process. We agree that this was a prudent stance to take, also noting the age and potential uncertainty within the RFWP & RSP.

11.2 Section 5

240. Section 5 of the RMA states that the purpose of the RMA is to promote the sustainable management of natural and physical resources. 'Sustainable management' means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:

- sustaining the potential of natural resources to meet the reasonably foreseeable needs of future generations;
- safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- avoiding, remedying and mitigating adverse effects of activities on the environment.

241. The consents sought are essential to the project, which NZTA presents will significantly improve safety, route resilience, regional connectivity and travel times over the Mt Messenger section of SH3.

242. The activity will have adverse environmental effects, which are discussed elsewhere in this report. Not all effects can be avoided, remedied or mitigated and environmental offsetting is proposed as the next step in the hierarchy of addressing adverse effects. Ensuring effects can be appropriately avoided, remedied, mitigated and, in this case, offsetting is critical in our recommendation to grant the consents, and these methods can be formalised by way of appropriate and robust consent conditions.

11.3 Section 6

243. In achieving sustainable management, section 6 of the RMA requires specified matters of national importance to be recognised and provided for. Of particular relevance to the application are:

- the preservation of the natural character of the coastal environment, wetlands, and lakes and rivers and their margins, and the protection and of them from inappropriate subdivision, use and development (section 6(a));
- protection of significant habitats of indigenous fauna (section (6c));
- the maintenance and enhancement of public acess to and along the coastal marine area, lakes and rivers (section (6d))
- the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga (section 6(e)).

244. These matters are discussed in section 10.3.1-10.3.4 below.

11.3.1 Natural Character

245. The natural character of the Mimi River and Mangapepeke streams is provided by features including their setting, form and other visual characteristics. Some of this natural character is related to the flow and appearance of the water in the waterway.

246. In relation to the water takes, ensuring the takes allow for minimum flows and are not excessive will protect the natural character associated with water flows.

247. In relation to stream diversions, some the natural character will be lost as areas of natural streams are to be diverted, culverted and channelised. In these cases, options to mitigate the loss of natural character are limited to recreating the original stream character as much as possible with planting and substrate recreation. Some of the negative effects will remain however, and these will need to be offset, by enhancing the natural character of the stream in other, undiverted areas. Natural character of waterways up and downstream of diversions will be protected by ensuring that the diversions do not impede or exacerbate flows (normal and flood events), they are designed and installed to ensure there is no erosion and scouring of the bed or banks, and they are placed and/or designed to provide for fish passage. Works to undertake the diversions must be appropriately managed to avoid discharge of contaminants that may affected instream water quality or downstream habitats, the 'new' areas of stream must be as close as practicable to what was originally present, and the 'old' areas must be appropriately reinstated.

248. In the context of structures in the waterways, natural character will be preserved by ensuring that the structures do not impede or exacerbate flows (normal and flood events), they are designed and installed to ensure there is no erosion, undermining and scouring of the bed or banks, and they are placed and/or designed to provide for fish passage. Residual effects associated with the permanent culverts are also to be offset, by enhancing the natural character of the stream in other, unaffected areas. Bridge structures must be controlled so no contaminants can enter the waterway, and the effects on the natural character (including landscape) are minimised and mitigated by appropriate design. Temporary structures are to be removed as soon as practical once they are not required and under conditions to ensure adverse effects associated with their removal are avoided, remedied or mitigated.

249. In the context of discharges to the waterways, natural character can be preserved by ensuring the discharges are of a quality and quantity that have minimal impact on flow and water clarity. We consider minimum standards are essential in achieving this, in addition to the mitigation measures proposed. This will ensure that the mitigation measures are achieving the standard necessary.

250. Vegetation clearance will have significant effects on the natural character where rivers and streams are considered in the context of a large tract of native vegetation. These effects are only able to be partially mitigated with revegetation of stream banks. The common method of addressing these effects is offsetting them by increasing or enhancing the streams elsewhere in the catchment, and this is proposed by NZTA.

11.3.2 Significant habitats of indigenous fauna

251. In the context of taking from a river, habitats of indigenous fauna are protected by ensuring that the proportion of flow taken is not excessive and, at all times, sufficient flow is retained downstream of the taking for ecosystem health.

252. In the context of diversion of waterways, habitats of indigenous fauna are protected by ensuring that the diversions do not impede or exacerbate flows (normal and flood events), they are designed and installed to ensure there is no erosion and scouring of the bed or banks, and they are placed and/or designed to provide for fish passage. Works to undertake the diversions must be appropriately managed to avoid discharge of contaminants that may affected instream water quality or downstream habitats, the 'new' areas of stream must be as close as practicable to what was originally present, and the old areas must be appropriately reinstated.

253. In the context of structures within and over the waterways (i.e. culverts and bridge structures), habitats of indigenous fauna are protected by ensuring that the structures do not impede or exacerbate flows (normal and flood events), they are designed and installed to ensure there is no erosion, undermining and scouring of the bed or banks, and they are placed and/or designed to provide for fish passage. Runoff from bridge structures must be controlled so no contaminants can enter the waterway.

254. In the context of discharges to the environment, habitats of indigenous fauna are protected by ensuring the effects of discharges are avoided, remedied or mitigated. Procedures for avoiding, remedying and mitigating effects are to be documented in detailed management plans for the works, including dust, stormwater and sediment.

255. Vegetation clearance will have significant effects on the habitat of indigenous flora and fauna. These effects are only able to be partially mitigated and the common method of addressing them is offsetting them by increasing or enhancing similar indigenous habitat elsewhere. This is proposed by the NZTA.

11.3.3 Access to rivers

256. Access to the rivers and streams has been addressed by NZTA in their application. Existing access is able to be maintained, and in places, access will be enhanced by incorporating access provisions into the project design.

11.3.4 Cultural Relationships

257. To occur in accordance with section 6 of the RMA, the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga must be provided for and recognised throughout all aspects of the proposal.

258. The entire project area, including the water, soil, land, vegetation, flora and fauna, landscape and cultural heritage associated with it is very significant to Ngāti Tama and they have been involved throughout the application process.

11.4 Section 7

259. In achieving sustainable management Section 7 of the RMA also specifies matters that the TRC must have particular regard to. The matters relevant to this application are:

- kaitiakitanga (section 7(a));
- the ethic of stewardship (section 7(aa));
- the efficient use and development of natural and physical resources (section 7(b));

- the maintenance and enhancement of amenity values (section 7(c));
- the intrinsic value of ecosystems (section 7(d));
- the maintenance and enhancement of the quality of the environment (section 7(f)); and
- protection of the habitat of trout and salmon (section 7(h)).

260. Our recommendation has been developed while having particular regard to these matters.

11.5 Section 8

261. In achieving sustainable management Section 8 of the RMA also requires the principles of the Treaty of Waitangi to be taken into account. The principles of the treaty include partnership, mutual benefit and active protection. Fonterra recognises these principles and has engaged with Iwi throughout the application process. The principles of the Treaty of Waitangi have been taken into account, including the principles of partnership, active protection, redress, Rangātiratanga, the duty to act reasonably, honourably and in good faith, and the courtesy of early consultation.

11.6 Consideration of application (section 104)

262. Subject to Part 2 of the RMA, when considering an application for a resource consent, the TRC must have regard to:

- any actual and potential effects on the environment of allowing the activity; and
- any relevant provisions of a National Policy Statement;
  - *National Policy Statement for Fresh Water Management* (NPS Freshwater);
  - *New Zealand Coastal Policy Statement* (NZCPS);
  - *National Environmental Standards for Air Quality* (NES Air Quality);
  - Regional Policy Statement for Taranaki (RPS);
  - RFWP, RSP, RAQP; and
- any other matter the consent authority considers relevant and reasonably necessary to determine the application.

263. The actual and potential effects on the environment have been assessed in section 11 of this report. The provisions of the RPS and relevant regional plans are discussed below.

11.7 National Policy Statement for Freshwater Management

264. The National Policy Statement for Freshwater Management (NPS Freshwater) provides a National Objectives Framework to assist regional councils and communities to more consistently and transparently plan for freshwater objectives.

265. The NPS Freshwater came into effect on 1 August 2014 and amendments made in August 2017 took effect on 7 September 2017. Local authorities are required by the RMA to give effect to the NPS Freshwater through plans and policy statements.

266. Objectives A1 and A2 of the NPS Freshwater, which relate to the safeguarding of ecosystems and the health of communities, and to maintaining and enhancing water, are of particular relevance to the applications.

267. Objective AA1 is to consider Te Mana O Te Wai in the management of freshwater, and policy AA1 identifies that this will be achieved by every regional council making or changing regional policies and plans to consider and recognize for Te Mana o te Wai, noting that this recognizes the connection of water with the broader environment, and values identified through engagement and discussion with the community, including tangata whenua, must inform the setting of freshwater objectives and limits.

268. NZTA have identified a range of measures to safeguard aquatic ecosystems and maintain or improve water quality, including measures to manage sediment and erosion control during the construction works and treatment for stormwater runoff from the operational road surface. With the assistance of an expert in sediment and erosion control, we have further recommended minimum standards to be achieved by the project.

269. TRC has incorporated the relevant transitional policies relating to freshwater management into the RFWP and RPS, and an assessment of these is set out below. For these reasons we consider the Project is consistent with the NPS Freshwater.

11.8 National Environmental Standard for Air Quality

270. The National Environmental Standard for Air Quality has been given effect to by the TRC in the RAQP. The RAQP is discussed below.

11.9 New Zealand Coastal Policy Statement

271. The New Zealand Coastal Policy Statement has been given effect to by the TRC in the Regional Coastal Plan, and given consideration in assessing some parts of the application.

11.10 Regional Policy Statement

11.10.1 TRC Roles for Protection of Indigenous Biodiversity

272. Under s30 of the RMA, regional councils have the function of controlling the use of land for the purpose of maintaining and enhancing ecosystems in water bodies and coastal water. They are also responsible for objectives, policies and methods for maintaining biological diversity.

273. Under s31 of the RMA, territorial authorities are responsible for controlling the effects of the use, development, or protection of land, including for the purpose of maintaining indigenous biological diversity.

274. Section 62(1)(i)(iii) of the RMA requires a regional policy statement to state the local authority responsible, in the whole or any part of the region, for specifying the objectives, policies and methods for the control of the use of land to maintain indigenous biodiversity.

275. In accordance with section 62(1)(i)(iii) of the Resource Management Act, the RPS for Taranaki states that:

> *the three territorial authorities of the region will be responsible for specifying the objectives, policies and methods for the control of the use of land to maintain indigenous biological diversity except where the control of the use of land relates to the Taranaki Regional Council's functions under the Act regarding:*
>
> - *the coastal marine area; and*

- *the beds of rivers, lakes and other waterbodies.*

276. Accordingly, while it is acknowledged that there is significant overlap when the activity is considered as a whole, the TRC will generally consider the effects of the activity on indigenous biodiversity in relation to effects of the activity on the coastal marine area, or the beds of rivers, lakes and other water bodies, and effects on indigenous biodiversity that stem from activities other than use of land (for example discharges to the environment). NPDC will consider the effects of the activity associated with land use aspects of the proposed project.

11.10.2 Relevant provisions of the Regional Policy Statement

277. The RPS has been operative since January 2010 and provides the basis for the management of natural and physical resources in Taranaki. The RAQP, RFWP and RSP are consistent with the RPS and provide more specific policies necessary to appropriately manage Taranaki's natural resources. Therefore, by having regard to the RFWP we have also had regard to the RPS.

278. However, being more recent than the RFWP and RSP, the RPS has some objectives and policies that are relevant to this application, and may not be reflected in the RFWP or RSP. Specifically these are RFWP WAL Policy 5 (relating to effects of new takes on existing takes) and WAL Policy 6 (endorsing the first in first served principle in water allocation). We have reviewed these, and confirmed that they have minor relevance to the water take activities proposed. We have also reviewed the RPS objectives and policies, and confirm there are no conflicts with those in the RSP.

11.11 Regional Fresh Water Plan

279. We have had regard to the relevant policies of the RFWP, especially those listed below.

- Policies 3.1.2 to 3.1.7 – relating to protection and enhancement of natural, ecological and amenity values of fresh water (inculding wetlands);
- Policies 3.2.1-3.2.3 – relating to maintenance and enhancement of public access to waterways;

- Policies 4.1.1 to 4.1.6 – relating to recognising and providing for the culture and traditions of tangata whenua, incorporating customary knowledge into management of freshwater, and parcicipation of Iwi and Hapu of Taranaki in decision making around freshwater resources;
- Policy 5.1.1 – relating to enabling appropriate use and development of fresh water;
- Policy 5.A1.1-5.A1.3 – relating to avoiding adverse effects on the life-supporting capacity of freshwater associated with discharges to freshwater;
- Policies 5A.2.1 and 5A.2.3 – relating to avoiding adverse effects on the life-supporting capacity of freshwater associated with taking of water;
- Policies 6.1.2 to 6.1.6 – relating to allocating water and managing the adverse of taking and using surface water;
- Policies 6.2.1-6.2.4 – relating to adverse effects on surface water quality from the discharge of contaminants from point sources;
- Policies 6.4.1- 6.4.3 – relating to the sustainable management of groundwater;
- Policy 6.6.1-6.6.4 – relating to the placement or maintenance of structures to avoid adverse effects, allow for provision for fish passage, ensure flow capacity is maintained and control of plants; and
- Policy 6.6.9 – detailing the matters that the TRC will consider when assessing consent applications for uses of river and lake beds (natural, ecological and amenity values of the water bodies, relationship of tangata whenua with the water body, adverse effects on water quality, and possible mitigation measures).

280. We have had regard to the relevant policies of the RSP, specifically those listed below.

- Policies 1.1-1.3 – relating to maintaining and enhancing the soil resource of the Taranaki region by avoiding, remedying or mitigating accelerated erosion.

281. We have had regard to the relevant policies of the RAQP, specifically those listed below.

- Policies 1.1-1.3 – relating to managing the effects of discharges of contaminants to air, including hazardous, noxious, dangerous, or toxic contaminants, dust and odour;
- Policy 2.1 – relating to the management of air quality in the region;

- Policies 2.3-2.7 – relating to discharges to air in relation to sensitive activities, cross media effects, reverse sensitivity, cumulative effects and application of the best practicable option;
- Policies 3.1 and 3.2 – relating to the protection of the air resource (taonga) and wāhi tapu from the intrusion of odour or visual contaminants;
- Policies 6.1-6.3 – relating to discharge of contaminants to air from site development, earthworks or the application of soil conditioners.

282. The policies, while requiring consideration of effects on such matters such as ecology, amenity, Maori culture and traditions, are generally about allowing for the appropriate use of fresh water, soil resources and air while avoiding, remedying or mitigating adverse environmental effects. Policies that are particularly relevant to these applications are discussed in the following paragraphs.

11.12 Regional Freshwater Plan

283. Policy 3.1.2 identifies that the adverse effects of activities on the natural character, ecological and amenity values of all rivers, lakes and wetlands and their margins in the Taranaki region will be avoided, remedied or mitigated, having regard to:

(a) the topography and form of the river, lake or wetland;

(b) the natural flow characteristics, hydrological functions and natural water levels and their fluctuations in rivers, lakes and wetlands;

(c) ecosystems, habitats and species;

(d) existing water quality and the need to maintain or enhance that quality;

(e) recreational, fishery, aesthetic and scenic values.

284. Policy 3.1.2 identifies that the life-supporting capacity of fresh water will be safeguarded and the adverse effects of activities on aquatic habitats and fresh water ecosystems will be avoided, remedied or mitigated having regard to:

(a) the maintenance of biological and physical processes;

(b) the existing and potential productivity, diversity, importance and variability of aquatic ecosystems;

(c) habitat characteristics, including habitats for aquatic species at different stages of their life cycle, habitats of threatened, vulnerable or rare species, and habitats for terrestrial life that use the water body;

(d) the significance of indigenous flora and fauna, including the habitat of indigenous fish;

(e) the habitat of trout.

285. Further to 3.1.2 and 3.1.3, policy 3.1.4 identifies rivers and streams where high natural, ecological and amenity values will be maintained and enhanced as far as practicable or remedied or mitigated. These rivers and streams are listed in Appendix 1A of the RFWP. The Tongaporutu River, into which the Mangapepeke stream flows, is included noting that it has a good diversity of native aquatic fauna including eels, whitebait, bullies and torrent fish and presence of threatened species. Recreational uses (canoeing, whitebaiting) are identified, and the river is highly rated for aesthetic and scenic values. The Tongaporutu estuary is considered to be an area of outstanding coastal value. The Mimi River is identified as having high recreational value for whitebaiting and a good diversity of native aquatic fauna including eels, whitebait, bullies and torrent fish. Good scenic values, steep cliffs with puketea forest are noted in the RFWP, as are high ecological values in the upper reaches of the stream (noting this is where the proposed activities will be carried out). The Mimi estuary is considered to be an area of outstanding coastal value.

286. Effects on water quality and quantity will be able to be avoided or mitigated and these mitigations can be formalised by way of consent conditions. These mitigations will also serve to protect the values in the Tongaporutu River, which receives water from the Mangapepeke Stream but which will not be directly impacted by vegetation clearance, or stream diversions. However some aspects of the proposal, particularly relating to effects associated with vegetation clearance and stream diversions, will result in a loss of natural character, ecological and amenity value in the upper reaches of both the Mimi River and Mangapepeke Stream. The only remedy in this case is to offset the effects by enhancing the natural character, ecological and amenity values of

another portion of each waterway. Accordingly, an offset package is proposed, and our overall assessment that the proposed activities will be acceptable is dependent on the suitability of, and delivery of the offsets proposed by NZTA.

287. Policy 4.1.1 identifies that Wāhi tapu and other sites or features of historical or cultural significance to Iwi and hapu of Taranaki, and the cultural and spiritual values associated with fresh water, will be protected from the adverse effects of activities, as far as practicable. NZTA has consulted with the Runanga in relation to mitigation measures, mitigating factors, and proposed offsetting, which will give effect to this policy.

288. Policy 5.1.1 is that when managing the use and development of fresh water the TRC will recognise the positive benefits of the use, the existing uses of any physical resources that have a specific-use purpose, the effects on existing lawfully established activities and the need for all activities to avoid, remedy or mitigate adverse environmental effects in accordance with the objectives and policies of this plan.

289. While not directly related to the use of water, NZTA has identified a number of benefits associated with the proposed activities, including social and economic benefits to the wider community. There are no existing uses or existing lawfully established uses which will be affected.

290. Policy 5A.1.1 is a transitional policy from the NPS on Freshwater Management. The policy details that, when considering any application for discharge consent, the TRC must have regard to:

- the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water, and
- the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

291. It has already been identified that not all effects on the freshwater ecosystem will be able to be avoided or mitigated, and environmental offsetting is proposed as a means to remedy these effects. Similarly, avoiding the discharge of sediment and stormwater is not feasible in this case, and NZTA is relying on

mitigation and remedy which will be formalised in a site erosion and sediment control management plan. We have had regard to these matters in considering these applications.

292. Policy 5A.1.2 is also a transitional policy from the NPS on Freshwater Management. This policy deals with effects associated with contact recreation. It is unlikely that the proposed activities will impact on water quality to the extent that there would be health effects associated with secondary contact with freshwater.

293. Policy 6.1.5 specifies matters the TRC will consider when assessing resource consent applications for the taking of water. These matters include:

- the need to ensure that surface water is available for reasonable domestic needs, stock drinking water requirements, and fire fighting purposes;
- the need for the volumes of water sought;
- the need to use water efficiently and with a minimum of waste;
- what alternative sources of water or water collection or storage methods have been considered; and
- maintenance of minimum flows and reduction or suspension of takes.

294. We have had regard to the above matters in this assessment.

295. Policy 6.2.1 states that in managing point-source discharges to land and water, the TRC will recognise and provide for the different values and uses of surface water including:

(a) natural, ecological and amenity values;

(b) the relationship of tangata whenua with water;

(c) the maintenance and enhancement of aquatic ecosystems, and water quality for fisheries and fish spawning;

(d) use of water for water supply purposes;

(e) use of water for contact recreation.

296. The above values have been recognised, and where appropriate, provided for (points (a), (b) and (c) being the most relevant to the subject applications).

297. Policy 6.2.2 identifies that discharges of contaminants or water to land or water from point sources should:

(a) be carried out in a way that avoids, remedies or mitigates significant adverse effects on aquatic ecosystems;

(b) maintain or enhance, after reasonable mixing, water quality of a standard that allows existing community use of that water for contact recreation, and water supply purposes, and maintains or enhances aquatic ecosystems;

(c) be of a quality that ensures that the size or location of the zone required for reasonable mixing does not have a significant adverse effect on community use of fresh water or the life supporting capacity of water and aquatic ecosystems.

298. The discharge of sediment and stormwater can be carried out in a manner that avoids, remedies and mitigates potential and actual adverse effects on aquatic ecosystems and this can be formalised by way of conditions on consent. Conditions will also be put in place requiring water quality to comply with appropriate limits.

299. Policy 6.6.1 identifies that the placement or maintenance of structures within river and lake beds will be managed so as to avoid, remedy or mitigate:

(a) adverse effects on the habitat of aquatic and terrestrial flora and fauna, including the passage of fish;

(b) erosion or accretion of river and lake beds or banks;

(c) the exposure or destabilisation of existing structures within the bed;

(d) the effects of flooding and erosion;

(e) adverse effects on water quality and aquatic life.

300. As stated above, it has already been identified that not all effects on the freshwater ecosystem associated with the diversion of waterways will be able to be avoided or mitigated, and environmental offsetting is proposed as a means to remedy these effects. Fish passage, erosion and flood flows have been considered and conditions can be imposed to ensure these aspects are provided for.

301. Policy 6.6.6 identifies that disturbances to river and lake beds shall be timed, and/or carried out in a manner and location, that will avoid, remedy or mitigate any adverse effects on seasonal fish migration or spawning, including the disturbance of:

(a) gravel bedded rivers on the ring plain between May and October;

(b) lower river and estuarine areas between March and June.

(c) lower river and estuarine areas between mid-August and end-November.

302. Policy 6.6.9 – When assessing resource consent applications for uses of river and lake beds, the TRC will consider:

(a) the natural, ecological and amenity values of the water bodies;

(b) the relationship of tangata whenua with the water body;

(c) adverse effects on water quality and aquatic life and instream habitat;

(d) possible mitigation measures including appropriate timing of works, provision of fish passage and provision of alternative access.

303. We have had regard to the above matters in this assessment.

11.13 Regional Air Quality Plan

304. Policy 6.1 identifies that the discharge of contaminants to air from site development, earthworks or the application of soil conditioners, including the rate and concentration of the discharge, will be managed to avoid, remedy or mitigate any significant off site adverse effects on the environment arising from the discharge. This is able to be achieved on this project.

11.14 Regional Soil Plan

305. The Regional Soil Plan for Taranaki (RSP) is focussed on the soil resource, and addresses the discharge of sediment associated with vegetation clearance. It does not cover matters related to indigenous biodiversity, being more focussed on forestry activities.

306. Policy 1.1 identifies that the TRC will encourage sustainable land management practices that control the adverse effects of soil and vegetation disturbance activities on erosion-prone land throughout the Taranaki region, with particular focus on:

(a) Accelerated erosion of soil on hill country land; and

(b) Localised accelerated blow-out and re-deposition of sand in the coastal sand country.

307. Policy 1.3 identifies that the TRC will encourage the retention of appropriate vegetative cover on erosion-prone land by:

(a) Discouraging soil or vegetation disturbance where that disturbance is likely to cause significant accelerated erosion;

(b) Encouraging re-vegetation as soon as practicable following soil or vegetation disturbance on land susceptible to accelerated erosion; and

(c) Encouraging the voluntary retirement of highly erosion-prone land for the purpose of soil conservation, where this is the most appropriate land use option.

308. Minimising vegetation clearance to that necessary and ensuring re-vegetation and stabilisation of exposed areas will be enforced by way of conditions as appropriate.

12. Summary and conclusions

309. The applications sought cover activities associated with the construction, establishment and use of a new alignment through the Mt Messenger section of State Highway 3.

310. After public notification 1177 submissions were received. 1154 were in support, 20 in opposition and 2 were neutral. 17 Late submissions were also received. The submissions against the proposed activities insofar as they relate to the consents sought from the TRC primarily related to loss of biodiversity, effects on indigenous flora and fauna, and cultural effects.

311. The recommendations of this report, including the conditions, have been developed by TRC taking into account the submissions received and the likely effects on the environment.

312. The proposed new alignment for SH3 at Mt Messenger will have positive social and economic effects for the wider Taranaki community.

313. In summary, with appropriate and effective offsetting, granting these applications as recommended is consistent with the RPS, and Regional Plans. The offsetting of effects enables the activities to occur in a manner which promotes sustainable management.

13. Duration and review

314. The application requested a consent duration of 35 years and this has been applied to consents for permanent activities. We note that section 9 consent (vegetation disturbance on erosion prone land) can be issued in perpetuity, however in this case we have also applied a 35 year duration.

315. The recommendation provides for the conditions to be reviewed at various intervals to deal with any unforeseen adverse environmental effects specific to that particular consent.

316. No lapse date is recommended, with the RMA default lapse date of 5 years considered appropriate.

14. Monitoring

317. The TRC will develop a Monitoring programme for the project, and additionally NZTA have indicated that they will also develop a comprehensive Monitoring Plan. The NZTA Monitoring Plan will identify the techniques, methodologies and procedures that will be employed to acquire data in relation to, and monitor compliance with the conditions of the consents, and the effects of the discharge of stormwater and sediment on habitat, macroinvertebrate communities and native fish populations. The TRC

monitoring programme will provide surety for the community that the standards are being achieved.

15. Consent conditions

318. The special conditions recommended are considered to be reasonably necessary to avoid, remedy or mitigate adverse environmental effects and to ensure that the nature and scale of the activity is consistent with the application and the assessment of environmental effects presented.

319. The conditions primarily set standards and require specific mitigation measures. These standards and measures are necessary to ensure that the negative effects are addressed appropriately.

320. As part of conditions of consent, the TRC will require the following reports, plans, protocols and programmes;

a) **Fish Recovery Protocols** to ensure reasonable steps are taken to relocate fish prior to diversion of waterways and permanent culverting activities, and to ensure any fish that become stranded during the works are recovered appropriately.

b) A **Riparian Management Plan** which details how the offset mitigation works will be undertaken and maintained to ensure that there is no net loss of biodiversity after 10 years, and a net gain after 15.

c) A specific **report on the effects of vegetation removal from the beds of rivers** on lizards, bats and birds, and details on how these specific effects will be mitigated.

d) A **Site Management Plan** which details the procedures for sediment and erosion control to ensure the standards specified by the TRC are met.

e) A **Construction Water Quality Monitoring Programme** which details baseline and ongoing monitoring to ensure standards are being complied with, and triggers for various procedures are established.

f) A **Dust Management Plan** to ensure the effects of dust are avoided, remedied or mitigated.

321. Where management and other plans are required as conditions of consent, these are for the purpose of demonstrating how the consent holder intends to comply with the conditions of consent.

16. Recommendations

16.1 Surface Water Take Consents

322. That consents;

- **10601-1.0 -** To take water from the Mimi River for dust suppression and other construction activities associated with the construction of the Mt Messenger Bypass.

- **10602-1.0 -** To take water from the Mangapepeke Stream for dust suppression and other construction activities associated with the construction of the Mt Messenger Bypass

be approved for a period to 1 June 2030, subject to the following conditions:

General condition

a. The consent holder shall pay to the TRC all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The rate of taking from each site shall not exceed 10 litres per second up to a maximum of 150 m^3 per day from the Mimi River, and 300 m^3 per day from the Mangapepeke Stream.

2. No more than 25% of the instantaneous flow, measured at the point of abstraction, shall be taken.

3. At least 5 working days before this consent is first exercised the consent holder shall notify the TRC. Notification shall include the consent number and the date that water will be first taken, and shall be emailed to worknotification@trc.govt.nz.

4. Before exercising this consent the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking (or a nearby site in

accordance with Regulation 10 of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010. The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of ± 5% at intervals not exceeding 15 minutes. Records of the date, the time and the rate and volume of water taken shall be made available to the Chief Executive, TRC at all reasonable times.

5. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring and recording equipment required by the conditions of this consent ('the equipment'):

   (a) has been installed and/or maintained in accordance with the manufacturer's specifications; and/or

   (b) has been tested and shown to be operating to an accuracy of ± 5%.

   The documentation shall be provided:

   (i) before this consent is exercised;

   (ii) within 30 days of the installation of a water meter or datalogger;

   (iii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and

   (iv) no less frequently than once every five years.

6. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person and a maintenance report provided to the Chief Executive, Taranaki Regional Council within 30 days of the work occurring.

7. Any water meter or datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval. In addition the data logger shall be designed and installed so that Taranaki Regional Council officers can readily verify that it is accurately recording the required information.

8. The records of water taken shall:

   (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;

   (b) specifically record the water taken as 'zero' when no water is taken; and

   (c) for each 12-month period ending on 30 June, be provided to the Chief Executive, Taranaki Regional Council within one month after end of that period;

9. At all times the consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the abstraction of water, including, but not limited to, the efficient and conservative use of water.

10. The consent holder shall ensure that the intake is screened to avoid fish entering the intake or being trapped against the screen. Once installed, the consent holder shall ensure that no modification is made to the intake that:

   (a) increases the aperture size of any intake screen; or

   (b) increases velocity of water toward any screen (approach velocity) or across any screen (sweep velocity); or

   (c) in any other way that could increase the likelihood of juvenile fish entering the intake or being trapped against the screen.

11. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually until 2022 and at 3-yearly intervals thereafter for the purposes of:

   (a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or

   (b) requiring continuous measuring and recording of the flow immediately downstream of the take site; and/or

(c) requiring any data collected in accordance with the conditions of this consent to be transmitted directly to the Taranaki Regional Council's computer system, in a format suitable for providing a 'real time' record over the internet.

16.2 Groundwater Take Consents

323. That consents sought in application 17-10429-1.0(A), listed as follows;

- **10603-1.0 -** To take groundwater encountered during tunnel activities and ongoing operation of the tunnel associated with the Mt Messenger Bypass route; and

- **10604-1.0 -** To take groundwater encountered during cut excavations associated with the Mt Messenger Bypass route

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The only water taken shall be shallow groundwater encountered during the creation of permanent cut faces and tunnels necessary for construction and operation of the Mt Messenger Bypass.

2. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually until 2022 and at 3-yearly intervals thereafter for the purposes of:

   (a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or

   (b) to require any data collected in accordance with the conditions of this

consent to be transmitted directly to the Council's computer system, in a format suitable for providing a 'real time' record over the internet.

16.3 Damming consents

324. That consents sought in application 17-10429-1.0(A), listed as follows;

- **10659-1.0 -** To dam water in the Mimi River with a weir.
- **10660-1.0 -** To dam water in the Mangapepeke Stream with a weir.

be approved for a period to 1 June 2025, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The weir shall be located at or about the location shown in Table 1.

Table 1. Locations of Weirs

	Stream	Location
10659-1.0	Mimi River	Mimi River, south of works area, at location near to the alignment tie-in point to SH3.
10607-1.0	Mangapepeke Stream	Mangapepeke Stream, North of project area, at location across SH3.

2. The height of the weir shall not exceed 1 metre above the existing bed.

3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 5 working days prior to commencing construction of the weir. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Final location co-ordinates shall be provided to the TRC at this time.

4. During installation and removal of the weirs the consent holder shall:

a) minimise the amount of sediment discharged to streams;

b) minimise the amount of sediment that becomes suspended in streams; and

c) mitigate the effects of any sediment in the stream, by undertaking the work in general accordance the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

5. Between 1 May and 31 October there shall be no disturbance of any part of the stream bed covered by water. This applies to installation and removal of the weir.

6. The weir shall be temporary and shall be removed when no longer required and no later than 6 months after completion of the project.

7. Upon removal the consent holder shall remove all introduced material from the bed of the stream, and reinstate the bed, as far as practicable, to its to original condition.

8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review annually during the month of June annually until 2022 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.4 Diversion consents

325. That the consents sought in application 17-10429-1.0 (B), listed as follows;

- **10606-1.0 -** To realign (#2) approximately 90m of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10607-1.0 -** To realign (#3) approximately 900m of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10608-1.0 -** To realign (#4) approximately 200m of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10609-1.0 -** To realign (#5) approximately 220m of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation generally.

- **10610-1.0 -** To realign (#6) approximately 100m of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10611-1.0 -** To realign (#7) approximately 350m of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10612-1.0 -** To realign (#8) approximately 300m of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10613-1.0 -** To realign (#9) approximately 230m of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation.

- **10614-1.0 -** To realign (#10) approximately 75m of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation.

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. This consent authorises the permanent diversion of the full stream flow through a reconstructed channel, and reclamation of stream bed at the locations detailed in Table 1 below.

Table 1. Locations of Stream Diversions

	Stream	Approximate length of diversion (m)	At or About Grid Reference (NZTM)
10606-1.0	Minor Tributary of Mangapepeke Stream (Ch. 600m)	90	X:1738875 Y:5696136 to X:1738731 Y:5696122
10607-1.0	Tributary of Mangapepeke Stream (Ch. 1050m)	900	X:1738725 Y:5695725 to X: 1738796 Y:5695676
10608-1.0	Tributary of Mangapepeke Stream (Ch. 1100m)	200	X:1738827 Y:5695666 to X:1738619 Y:5695602
10609-1.0	Mangapepeke Stream (Ch. 1560-1950m)	220	X;1739163 Y:5695170 to X:1739216 Y:5695892
10610-1.0	Upper reaches of Mangapepeke Stream (Ch. 2800-2900m)	100	X:1738982 Y:5693974 to X:1738968 Y:5694052
10611-1.0	Upper reaches of Mangapepeke Stream (Ch. 3000-3350)	350	X:1738853 Y:5693590 to X:1739120 Y:5693813
10612-1.0	Tributary of Mimi River (Ch. 3650-3900)	300	X:1738557 Y:5693413 to X:1738475 Y:5693174
10613-1.0	Tributary of Mimi River (Ch. 4750)	230	X1737756 Y:5692978 to X:1737745 Y:5692777
10614-1.0	Minor Tributary of Mimi River (Ch.5225-5300)	75	X:1737311 Y:5692475 to X:1737357 Y:5692541

2. The new stream channel shall have a flow capacity no less than that of the existing stream channel. Where floodplain flow is interrupted, additional waterway capacity shall be provided in compensation.

3. The diversions shall be designed and constructed to replicate the flow capacity and aquatic habitat values of the upstream and downstream channel sections and in such a manner so as to avoid causing any new or exacerbating any existing flooding effects on adjacent and upstream land.

4. The exercise of this consent shall not restrict fish passage.

5. The consent holder shall take reasonable steps to recover and relocate fish from the stream prior to the diversion occurring, and shall relocate any fish uncovered or stranded during the works.

6. Fish recovery protocols shall be developed by the consent holder and provided to the Chief Executive, Taranaki Regional Council, at least 40 working days prior to the exercise of this consent. The fish recovery protocol shall detail why the relocation proposal is reasonable considering such matters as:

    (a) practicality of holding fish and returning to the same location,

    (b) significance of the fish from a biodiversity perspective,

    (c) suitability of alternative nearby habitat,

    (d) the likelihood of the fish thriving at the new location.

    (e) and include as a minimum;

    (f) information on recovery of fish prior to any works in-stream;

    (g) procedures for rescuing fish from any material/spoil removed from the stream;

    (h) procedures for relocating the fish that are recovered and ensuring that these are placed back in an environment similar to where they were removed;

    (i) Any cultural protocols required by the Runanga;

    (j) Details of consultation with both Te Runanga o Ngati Tama and

Department of Conservation regarding the protocols;

(k) Procedures for reporting to interested parties, including;

(i) Number and species of fish recovered and relocated prior to works;

(ii) Number and species of fish rescued and relocated during works; and,

(iii) Where the fish were relocated to.

The purpose of this condition is to demonstrate that condition 5 is being met.

7. The consent holder shall provide design plans and calculations for each diversion of permanently flowing watercourses to the Taranaki Regional Council, at least 40 working days prior to any works authorised by this consent commencing. The purpose of this condition is to demonstrate that conditions 2 to 4 of this consent will be complied with.

8. The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity of the stream during the construction, implementation and maintenance of the works, including:

(a) completing all works in the minimum time practicable;

(b) avoiding placement of excavated material in the flowing channel;

(c) keeping machinery out of the actively flowing channel, as far as practicable;

(d) reinstating any disturbed areas as far as practicable; and

(e) by generally undertaking the work in general accordance the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

9. Between 1 May and 31 October no work shall be undertaken on any part of the stream bed that is covered by water.

10. The consent holder will maintain a continuous flow of water downstream of the work area by ensuring that there are temporary clean water diversions around the active work sites.

11. To mitigate and offset the effects of this consent and consents 10633-1.0 to 10653-1.0 (permanent culverts), the consent holder shall plant and fence all streams within the designation boundary and shall plant and fence a further 8.627 km of waterways within the Mimi and Mangapepeke catchments outside of the designation boundary.

12. Fencing outside the designation boundary shall occur in areas where there is no existing riparian fencing, and planting shall occur where there is less than 30% existing indigenous vegetation cover. Alternatively, in areas where there is existing vegetation cover, the revegetation area shall be increased to account for this.

13. The fencing and riparian planting in condition 11 shall;

    (a) be completed as soon as practicable, and no later than 48 months from the first exercise of this consent,

    (b) ensure the riparian planting achieves 80% cover within 5 years of establishment of the plants, and

    (c) fences are maintained in perpetuity.

14. Prior to the exercise of this consent the consent holder shall demonstrate to the Chief Executive, Taranaki Regional Council, that legal mechanisms are in place to ensure that access to the land required for the offsetting in conditions 11-13 is secured.

15. The consent holder shall prepare a Riparian Management Plan (RMP) for the project that demonstrates compliance with conditions 11 to 13. The RMP shall be provided to the Chief Executive of the Taranaki Regional Council at least 40 working days prior to works commencing. The plan shall include at a minimum:

    (a) Details on construction, placement and location of fences;

    (b) Details on plant species, density and planting methodology;

    (c) A programme for maintenance of the riparian planting and fencing including a name and contact details for the person responsible for implementing the plan;

    (d) Details on consultation with Tangata Whenua and Department of

Conservation in relation to the RMP.

16. The consent holder shall maintain the re-aligned channel by repairing any erosion, scour or instability of the stream bed or banks.

17. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually until 2022 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.5 Temporary Culverts

326. That consents sought in application 17-10429-1.0(C), listed as follows;

- **10616-1.0 -** To install and use a temporary culvert (#1) in the Mangapepeke Stream.

- **10617-1.0 -** To install and use a temporary culvert (#2) in an unnamed tributary of the Mangapepeke Stream.

- **10618-1.0 -** To install and use a temporary culvert (#3) in the Mangapepeke Stream.

- **10619-1.0 -** To install and use a temporary culvert (#4) in the Mangapepeke Stream.

- **10620-1.0 -** To install and use a temporary culvert (#5) in an unnamed tributary of the Mangapepeke Stream.

- **10621-1.0 -** To install and use a temporary culvert (#6) in an unnamed tributary of the Mangapepeke Stream.

- **10622-1.0 -** To install and use a temporary culvert (#7) in the Mangapepeke Stream.

- **10623-1.0 -** To install and use a temporary culvert (#8) in an unnamed tributary of the Mangapepeke Stream.

- **10624-1.0 -** To install and use a temporary culvert (#9) in an unnamed tributary of the Mangapepeke Stream.

- **10625-1.0 -** To install and use a temporary culvert (#10) in the Mangapepeke Stream.

- **10626-1.0 -** To install and use a temporary culvert (#11) in the Mangapepeke Stream.

- **10627-1.0 -** To install and use a temporary culvert (#12) in an unnamed tributary of the Mangapepeke Stream.

- **10628-1.0 -** To install and use a temporary culvert (#13) in an unnamed tributary of the Mangapepeke Stream.

- **10629-1.0 -** To install and use a temporary culvert (#14) in the Mangapepeke Stream.

- **10630-1.0 -** To install and use a temporary culvert (#15) in an unnamed tributary of the Mangapepeke Stream.

- **10631-1.0 -** To install and use a temporary culvert (#16) in an unnamed tributary of the Mangapepeke Stream.

- **10632-1.0 -** To install and use a temporary culvert (#17) in an unnamed tributary of the Mimi River.

be approved for a period to 1 June 2025, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The culvert shall be constructed generally in accordance with the information provided with the application and Table 1 below.

2. The culvert authorised by this consent shall be located in accordance with Table 1 below.

Table 1. List of Temporary Culverts

Temporary Culvert #	Consent Number	Stream	At or about Grid Reference (NZTM)
1	**10616-1.0**	Mangapepeke Stream	X:1738605 Y:5696260
2	**10617-1.0**	Mangapepeke Stream	X:1738875 Y:5696150
3	**10618-1.0**	Mangapepeke Stream	X:1738770 Y:5696060

Temporary Culvert #	Consent Number	Stream	At or about Grid Reference (NZTM)
4	**10619-1.0**	Mangapepeke Stream	X:1738850 Y:5695795
5	**10620-1.0**	Mangapepeke Stream	X:1738805 Y:5695695
6	**10621-1.0**	Mangapepeke Stream	X:1739020 Y:5695465
7	**10622-1.0**	Mangapepeke Stream	X:1738915 Y:5695415
8	**10623-1.0**	unnamed tributary of the Mangapepeke Stream	X:1739030 Y:5695240
9	**10624-1.0**	unnamed tributary of the Mangapepeke Stream	X:1739185 Y:5694955
10	**10625-1.0**	Mangapepeke Stream	X:1739205 Y:5694880
11	**10626-1.0**	Mangapepeke Stream	X:1739145 Y:5694835
12	**10627-1.0**	unnamed tributary of the Mangapepeke Stream	X:1739095 Y:5694680
13	**10628-1.0**	unnamed tributary of the Mangapepeke Stream	X:1739080 Y:5694570
14	**10629-1.0**	Mangapepeke Stream	X:1738985 Y:5694440
15	**10630-1.0**	unnamed tributary of the Mangapepeke Stream	X:1738985 Y:5694185
16	**10631-1.0**	unnamed tributary of the Mangapepeke Stream	X:1738960Y:5694060
17	**10632-1.0**	unnamed tributary of the Mimi River	X:1736765 Y:5692895

3. The consent holder shall be responsible for the design, structural integrity and maintenance of the culverts and for any erosion control works that become necessary to preserve the integrity and stability of the waterway channel and/or to control erosion as a result of the exercise of this resource consent.

4. The culvert pipe shall be designed to carry the flows in the stream in a 1 in 20 year flood event.

5. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 5 working days prior to the exercise of this consent. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.

6. Any work carried out in the river bed shall be separated from running water, by a temporary coffer-dam and/or diversion using sand bags or some other form of contained of fill.

7. The consent holder shall ensure that any concrete placed in the channel is not exposed to flowing water for a period of 48 hours after it has been placed.

8. Between 1 May and 31 October no work shall be undertaken on any part of the stream bed that is covered by water.

9. The consent holder shall take all practicable steps to minimise stream bed disturbance, sedimentation and increased turbidity during installation of the culvert, including by:
   (a) completing all works in the minimum time practicable;
   (b) avoiding placement of excavated material in the flowing channel;
   (c) keeping machinery out of the actively flowing channel, as far as practicable;
   (d) reinstating any disturbed areas as far as practicable; and
   (e) by generally undertaking the work in general accordance the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

10. The culvert shall not restrict fish passage.

11. The culvert structures authorised by this consent shall be designed, constructed and maintained in such a manner so as to avoid causing any new or exacerbating any existing adverse flooding effects on adjacent and upstream land.

12. The culvert shall remain the responsibility of the consent holder and be maintained so that:
   (a) it does not become blocked, and at all times allows the free flow of water through it; and
   (b) the consent holder repairs any erosion, scour or instability of the stream bed or banks that the culvert causes.

13. All culverts authorised by this consent shall be removed as soon as practical once they are no longer required, and no later than 6 months after the completion of the Mt Messenger bypass project.

14. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually until 2022 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.6 Permanent culverts

327. That consents sought in application 17-10429-1.0 (D), listed as follows;

- **10633-1.0 -** To install and use a culvert (#1) in an unnamed tributary of the Mangapepeke Stream.
- **10634-1.0 -** To install and use a culvert (#2) in an unnamed tributary of the Mangapepeke Stream.
- **10635-1.0 -** To install and use a culvert (#3) in an unnamed tributary of the Mangapepeke Stream.
- **10636-1.0 -** To install and use a culvert (#4) in an unnamed tributary of the Mangapepeke Stream.
- **10637-1.0 -** To install and use a culvert (#5) in an unnamed tributary of the Mangapepeke Stream.
- **10638-1.0 -** To install and use a culvert (#6) in an unnamed tributary of the Mangapepeke Stream.
- **10639-1.0 -** To install and use a culvert (#) in an unnamed tributary of the Mangapepeke Stream.
- **10640-1.0 -** To install and use a culvert (#8) in an unnamed tributary of the Mangapepeke Stream.
- **10641-1.0 -** To install and use a culvert (#9) in an unnamed tributary of the Mangapepeke Stream.
- **10642-1.0 -** To install and use a culvert (#10) in an unnamed tributary of the Mangapepeke Stream.
- **10643-1.0 -** To install and use a culvert (#11) in an unnamed tributary of the Mangapepeke Stream.
- **10644-1.0 -** To install and use a culvert (#12) in an unnamed tributary of the Mangapepeke Stream.

- **10645-1.0 -** To install and use a culvert (#13) in an unnamed tributary of the Mangapepeke Stream.

- **10646-1.0 -** To install and use a culvert (#14) in an unnamed tributary of the Mangapepeke Stream.

- **10647-1.0 -** To install and use a culvert (#15) in the Mimi River.

- **10648-1.0 -** To install and use a culvert (#16) in an unnamed tributary of the Mimi River.

- **10649-1.0 -** To install and use a culvert (#17) in an unnamed tributary of the Mimi River.

- **10650-1.0 -** To install and use a culvert (#18) in an unnamed tributary of the Mimi River.

- **10651-1.0 -** To install and use a culvert (#19) in an unnamed tributary of the Mimi River.

- **10652-1.0 -** To install and use a culvert (#20) in an unnamed tributary of the Mimi River.

- **10653-1.0 -** To install and use a culvert (#21) in an unnamed tributary of the Mimi River.

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The culvert shall be constructed generally in accordance with the information provided in the application for consent.

2. The locations and design of the culvert shall be as shown in Table 1 below.

Table 1. List of Permanent Culverts

Culvert #	Consent Number	Minimum Diameter (mm)	Maximum Length (m)	Depth of Cover (m)	Debris Fence[1]	At or about Grid Reference (NZTM)
1	**10633-1.0**	1050	24	1.2	None Required	X:1738665 Y:5696450
2	**10634-1.0**	825	26	1.2	None Required	X:1738673 Y:5696360
3	**10635-1.0**	1500	67	1.2	None Required	X:1738775 Y:5696123
4	**10636-1.0**	600	81	1.2	None Required	X:1738859 Y:5695983
5	**10637-1.0**	1350	87	1.2	Yes	X:1738900 Y:5695873
6	**10638-1.0**	1350	27	1.2	Yes	X:1738999 Y:5695455
7	**10639-1.0**	1200	36	1.2	Yes	X:1739125 Y:5695288
8	**10640-1.0**	1200	35	1.2	Yes	X:1739213 Y:5695139
9	**10641-1.0**	4x1350	56	2	Yes	X:1739243 Y:5694975
10	**10642-1.0**	750	37	1.2	Yes	X:1739124 Y:5694644
11	**10643-1.0**	750	25	4	Yes	X:1739089 Y:5694561
12	**10644-1.0**	1200	74	12	Yes	X:1739059 Y:5694466
13	**10645-1.0**	600	15	1.2	Yes	X:1739010 Y:5694189
14	**10646-1.0**	900	117	16	Yes	X:1739032 Y:5694000
15	**10647-1.0**	2550	210	26	Yes	X:1739047 Y:5693896
16	**10648-1.0**	1500	115	11	Yes	X:1738492 Y:5693326
17	**10649-1.0**	825	22	1.2	Yes	X:1738102 Y:5692876
18	**10650-1.0**	2100	29	1.2	None Required	X:1737746 Y:5692760
19	**10651-1.0**	2100	43	1.2	None Required	X:1737736 Y:5692827
20	**10652-1.0**	1650	40	1.2	None Required	X:1737430 Y:5692591
21	**10653-1.0**	1350	34	1.2	None Required	X:1736946 Y:5692371

3. The consent holder shall provide design plans and calculations for each culvert to the Taranaki Regional Council, at least 40 working days prior to any works authorised by this consent commencing. The purpose of this condition is to demonstrate compliance with the conditions of this consent.

4. The culvert structures authorised by this consent shall be designed, constructed and maintained in such a manner so as to avoid causing any new or exacerbating any existing adverse flooding effects on adjacent and upstream land.

5. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 5 working days prior to the exercise of this consent. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.

6. Any work carried out in the river bed shall be separated from running water, by a temporary coffer-dam and/or diversion using sand bags or some other form of contained of fill.

7. The consent holder shall ensure that any concrete placed in the channel is not exposed to flowing water for a period of 48 hours after it has been placed.

8. Between 1 May and 31 October no work shall be undertaken on any part of the stream bed that is covered by water.

9. The consent holder shall take all practicable steps to minimise stream bed disturbance, sedimentation and increased turbidity during installation of the culvert, including by:
   (a) completing all works in the minimum time practicable;
   (b) avoiding placement of excavated material in the flowing channel;
   (c) keeping machinery out of the actively flowing channel, as far as practicable;
   (d) reinstating any disturbed areas as far as practicable; and
   (e) by generally undertaking the work in general accordance the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

10. To avoid introduction of unwanted pests, all machinery shall be thoroughly cleaned of soil and plant debris prior to use on the stream diversion works.

11. The consent holder will maintain a continuous flow of water downstream of the work area by ensuring that there are temporary clean water diversions around the active work sites.

12. The culvert shall not restrict fish passage.

13. The consent holder shall take reasonable steps to recover and relocate fish from the stream prior to the diversion occurring, and shall relocate any fish uncovered/stranded during the works.

14. Fish recovery protocols shall be developed by the consent holder and provided to the Chief Executive, Taranaki Regional Council, at least 40 working days prior to the exercise of this consent. The fish recovery protocol shall detail why the relocation proposal is reasonable considering such matters as;

(a) practicality of holding fish and returning to the same location,
(b) significance of the fish from a biodiversity perspective,
(c) suitability of alternative nearby habitat,
(d) the likelihood of the fish thriving at the new location.

and include as a minimum:

(e) information on recovery of fish prior to any works in-stream;
(f) procedures for rescuing fish from any material/spoil removed from the stream;
(g) procedures for relocating the fish that are recovered and ensuring that these are placed back in an environment similar to where they were removed;
(h) any cultural protocols required by the Runanga;
(i) details of consultation with both Te Runanga o Ngati Tama and Department of Conservation regarding the protocols;
(j) procedures for reporting to interested parties, including;
    (i) Number and species of fish recovered and relocated prior to works;
    (ii) Number and species of fish rescued and relocated during works; and,
    (iii) Where the fish were relocated to.

The purpose of this condition is to demonstrate that condition 13 is being met.

15. To offset the effects of this consent and consents 10606-1.0 to 10614-1.0 (diversions), the consent holder shall plant and fence all streams within the designation boundary and shall plant and fence a further 8.627 km of waterways within the Mimi and Mangapepeke catchments outside of the designation boundary.

16. Fencing outside the designation boundary shall occur in areas where there is no existing riparian fencing, and planting shall occur where there is less than 30% existing indigenous vegetation cover. Alternatively, in areas where there is existing vegetation cover, the revegetation area shall be increased to account for this.

17. The fencing and riparian planting in condition 15 shall;

(a) be completed as soon as practicable, and no later than 48 months from the first exercise of this consent,

(b) ensure the riparian planting achieves 80% cover within 5 years of establishment of the plants, and

(c) fences are maintained in perpetuity.

18. Prior to the exercise of this consent the consent holder shall demonstrate to the Chief Executive, Taranaki Regional Council, that legal mechanisms are in place to ensure that access to the land required for the offsetting in conditions 15-17 is secured.

19. The consent holder shall prepare a Riparian Management Plan (RMP) for the project that demonstrates compliance with conditions 15 to 17. The RMP shall be provided to the Chief Executive of the Taranaki Regional Council at least 40 working days prior to works commencing. The plan shall include at a minimum;
    (a) Details on construction, placement and location of fences includong details of arrangements made with landowners to use their land;
    (b) Details on plant species, density and planting methodology;
    (c) A programme for maintenance of the riparian planting and fencing including a name and contact details for the person responsible for implementing the plan;
    (d) Details on consultation with Tangata Whenua and Department of Conservation in relation to the RMP.

20. On completion of works, the banks of the channel upstream and downstream of the culvert shall be no steeper than the existing natural banks. Where the bank consists of fill, the fill must be well compacted with batter slopes no steeper than 2 horizontal to 1 vertical.

21. The culvert shall remain the responsibility of the consent holder and be maintained so that:
    (a) it does not become blocked, and at all times allows the free flow of water through it; and
    (b) the consent holder repairs any erosion, scour or instability of the stream bed or banks that the culvert causes.

22. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review annually during the month of June annually until 2022 and at 3-yearly

intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.7 Bridge consent

328. That consent sought in application 17-10429-1.0(D), listed as follows;

- **10654-1.0 -** To construct, use and maintain a bridge over the Mimi River, including associated disturbance of the stream bed.

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The bridge shall be constructed generally in accordance with the application for consent.

2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 5 working days prior to the exercise of this consent. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.

3. The consent holder shall be responsible for the design, structural integrity and maintenance of the bridge and for any erosion control works that become necessary to preserve the integrity and stability of the bridge and the underlying wetland and/or to control erosion as a result of the exercise of this resource consent.

4. Works in the wetland beneath the bridge are to be limited to the minimum required to achieve the bridge structure, and any areas that are disturbed are reinstated to their original condition.

5. The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity of the waterway during the construction, implementation and maintenance of the works, including by:
   (a) completing all works in the minimum time practicable;
   (b) avoiding placement of excavated material in the flowing channel;
   (c) keeping machinery out of the actively flowing channel, as far as practicable;
   (d) reinstating any disturbed areas as far as practicable; and
   (e) by generally undertaking the work in general accordance the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review annually during the month of June annually until 2022 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.8 Consent for vegetation removal

329. That consent sought in application 17-10429-1.0(E);

- **10657-1.0 -** To remove and disturb vegetation associated with constructing the Mt Messenger bypass.

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The vegetation disturbance and removal authorised by this consent is that associated with the construction of the Mt Messenger Bypass, and shall occur as generally described in the application.

2. To mitigate the effects of the exercise of this consent, the consent holder shall;

   (a) Complete restoration planting of 6 ha of 'swamp forest' within 12 months of completion of the by-pass being opened to traffic.

   (b) Complete and maintain restoration planting of all secondary scrub areas along the footprint plus temporary construction areas such as access tracks and storage areas that retain conditions suitable for planting, being approximately 9 ha in total, within 12 months of the by-pass being opened to traffic.

3. The consent holder shall prepare a Management Plan, which shall identify measures to avoid, remedy, mitigate and offset potential adverse effects of the removal of vegetation from the beds of rivers on ecological and biodiversity values.

4. The Plan in Condition 3 may be part of the wider Ecological and Landscape Management Plan (ELMP) and shall address the effects on:

a) Vegetation and habitat in stream beds (including wetlands);

b) Herpetofauna (lizards);

c) Bats;

d) Avifauna;

e) Invertebrates (including peripatus species);

f) Fish, kōura and kākahi;

g) Water quality; and

h) Rehabilitation and restoration planting of vegetation within the beds of affected rivers.

In determining how these effects shall be avoided, remedied and mitigated, the consent holder shall consult with Tangata Whenua and the Department of Conservation. This report shall be provided to the Chief Executive, Taranaki Regional Council TRC at least 40 working days before the commencement of vegetation disturbance or removal.

5. The consent holder shall ensure that the slash is managed and stored in a manner that as far as practicable avoids an increase in erosion or sediment discharges or exacerbates flood risk. This shall include, as a minimum:

(a) only storing slash on sites that are stable;

(b) not storing slash on areas of fill;

(c) creating benches on steep sites to store slash on;

(d) preventing run-off building up behind slash piles;

(e) storing slash away from water ways and the paths of floodwaters;

(f) not allowing slash to build up in waterways; and

(g) ensuring slash piles are stable and placed away from steep slopes to prevent accelerated soil erosion from debris avalanche.

6. Trees shall be felled away from, and not be dragged through, any waterway unless this is necessary to avoid endangering the health and safety of workers.

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review annually during the month of June annually until 2022 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.9 Discharge stormwater and sediment

330. That consent;

- **10655-1.0 -** To discharge stormwater and sediment onto and into land and into the Mangapepeke Stream and Mimi River and their tributaries from earthworks associated with the construction of the Mt Messenger Bypass

be approved for a period to 1 June 2025, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. This consent authorises the discharge of stormwater from land where earthworks is being undertaken for the purpose of constructing the Mt Messenger Bypass ('The Project').

2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the consented activity.

3. All discharges of stormwater and sediment shall be undertaken in accordance with an approved Construction Environmental Management Plan (CEMP). The purpose of the CEMP is to provide an overarching framework to ensure that the Project remains within the limits and standards required by these conditions and that works appropriately avoid, remedy, mitigate or offset more than minor adverse effects on the environment.

4. The CEMP shall include as a minimum;

a) Contact details of personnel responsible for the management, operation and maintenance of all key erosion and sediment control structures, including the person identified in condition 12;

b) A description of the training and education programme that is proposed;

c) Details of emergency contacts who have authority to authorise immediate response actions;

d) Methods for recording and responding to queries and complaints;

e) A schedule of construction activities including sequencing;

f) The location of the major cut and fill operations;

g) Maintenance, monitoring and reporting procedures;

h) The location of on-site rain gauge(s) and procedures for monitoring these;

i) Procedures and timing for review and/or amendment to the site specific erosion and sediment control measures;

5. Subject to the additional performance standards listed below, all erosion and sediment control measures will be designed, constructed and maintained in accordance with the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014:

a) All erosion and sediment control devices shall be located outside the 20 year Annual Return Interval (ARI) flood level, unless no other viable location exists;

b) Clean and dirty water diversion channels, shall be sized to accommodate the flow from a 100 year ARI storm unless site constraints prevent it, in which case the they shall accommodate the flow from a 20 year ARI storm event with an additional 300 mm freeboard;

c) Pumping of all sediment laden runoff and groundwater during Construction Works shall be to Sediment Retention Ponds (SRPs), Decanting Earth Bunds (DEBs), or temporary sediment retention devices such as container impoundment systems;

d) The discharge from all DEBs and SRPs that serve a catchment area greater than 500 m^2 shall be treated using a liquid flocculant and a rainfall activated dosing system. Flocculation shall be undertaken and managed in accordance with the Flocculation Management Plan required by condition 15 below.

e) All DEBs shall have a volume no less than 3 m^3 for every 100 m^2 of contributing catchment;

f) All SRPs and DEBs shall be fitted with floating decants that are designed to discharge at a rate of 3 litres per second per ha of contributing catchment;

g) All SRPs shall have a volume no less than 3 m^3 for every 100 m^2 of contributing catchment and shall contain decant pulley systems and a forebay with a minimum volume of 10% of the pond volume;

h) All dirty water diversion channels shall be designed and constructed with sediment sumps with a minimum volume of 2m^3 per sump and spaced at intervals of no more than 50m.

6. The consent holder shall ensure those areas of the site where earthworks have been completed are stabilised against erosion as soon as practically possible and within 14 days after completion of any works authorised by this consent. Stabilisation shall be undertaken by providing measures (vegetative and/or structural) that will minimise sediment runoff and erosion and shall be completed in accordance with the measures detailed in the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

7. Re-vegetation and/or stabilisation of all disturbed areas is to be completed in accordance with the measures detailed in the 'Erosion and Sediment Control Guidelines for State Highway Infrastructure – Construction Stormwater Management'; New Zealand Transport Agency 2014.

8. The consent holder shall provide real-time telemetered monitoring turbidity (NTU) in both the Mimi River and the Mangapepeke Stream at a point upstream and downstream of the works, and this telemetered information shall be directly available to the Taranaki Regional Council. If there is no suitably representative upstream location the monitoring the consent holder shall identify an alternative

location or methodology for continuous comparative monitoring to provide an indication of the effects that the works have on water quality.

9. The consent holder shall provide real-time telemetered record of the flow in to and out of two SRPs (one in the Mimi River and one in the Mangapepeke Stream catchment). These SRPs must be receiving runoff from active earthworks catchment associated with the main bypass works (i.e. not associated with the disposal areas of the site yards or compounds). This telemetered information shall be directly available to the Taranaki Regional Council.

10. The Consent Holder shall submit an updated Construction Water Discharges Monitoring Programme (CWDMP) to the Taranaki Regional Council for approval at least 30 working days prior to the commencement of activities authorised by this consent. This monitoring programme shall include:

    a) Results and findings of baseline monitoring to date;

    b) Identification of upstream and downstream monitoring points on the Mimi River and Mangapepeke Streams including the real time monitoring required by condition 8;

    c) SRP turbidity monitoring locations and procedure including continuous recording of two SRPs, (one in the Mimi River and one in the Mangapepeke Stream catchment) as required by condition 9;

    d) Erosion and sediment control monitoring and maintenance procedures that will be implemented to detect and prevent any adverse sediment effects;

    e) Specific water quality triggers for the implementation of specific site management actions, when suspended sediment reduction through any SRP is less than 90%;

    f) Specific water quality monitoring procedures based on the water quality triggers , including rainfall monitoring trigger events of 25mm / 24hrs and 15mm / hr;

    g) Specific management responses that will be undertaken in response of the water quality triggers and any other adverse sediment effect that is identified;

    h) Recording and reporting procedures;

i) Meteorological monitoring;

j) Post-event monitoring.

11. The baseline monitoring in condition 10.a) above shall be completed prior to the commencement of earthworks.

12. The consent holder shall appoint a representative(s) prior to the exercise of this resource consent who shall be the Taranaki Regional Council's principal contact person(s) in regard to matters relating to this resource consent. The consent holder shall inform the Taranaki Regional Council of the representative's name and how they can be contacted, prior to this resource consent being exercised. Should that person(s) change during the term of this resource consent, the consent holder shall immediately inform the Taranaki Regional Council and shall also give written notice to the Taranaki Regional Council of the new representatives name and how they can be contacted.

13. At least 10 working days prior to the commencement of any stage of earthworks the consent holder shall provide to the Taranaki Regional Council, for certification, a Specific Construction Water Management Pan (SCWMP) for the works associated with that stage or activity. Each SCWMP shall include the relevant following information:

    a) Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control to minimise the potential for sediment discharge from the site, including site plans showing the location of all devices;

    b) The design criteria and dimensions of all key erosion and sediment control structures, confirming compliance with Condition 5;

    c) A summary of construction methodologies for the following aspects, where relevant to the given stage or activity covered by the SCWMP:

        i) Staging of earthworks;

        ii) Cut and fill operations;

        iii) Disposal of surplus or unsuitable cut; and

iv) Dewatering.

d) A site plan/s of a suitable scale to identify:

i) The locations of waterways;

ii) The extent of soil disturbance and vegetation removal;

iii) Any "no go" and/or buffer areas to be maintained undisturbed adjacent to watercourses, including specific identification of sensitive ecological areas where threatened species and /or habitats are to be protected;

iv) Areas of cut and fill;

v) Locations of topsoil (and fill) stockpiles;

vi) All key erosion and sediment control structures;

vii) The boundaries and area of catchments contributing to all erosion and sediment control devices;

viii) The locations of all specific points of discharge to the environment; and

ix) Any other relevant site information.

e) Construction timetable for the erosion and sediment control works and the bulk earthworks proposed; and

f) Timetable and nature of progressive site rehabilitation, stabilisation and re-vegetation proposed.

Each stage or activity of earthworks shall be implemented in accordance with the corresponding certified SCWMP.

14. The consent holder shall, prior to earthworks commencing in any stage or activity, submit to the Taranaki Regional Council "As-Built Certification Statements" signed by an appropriately qualified and experienced professional certifying that erosion and sediment control structures have been constructed in accordance with the corresponding certified Specific Construction Water Management Plan. Certified controls shall include clean water diversion channels/bunds, dirty water diversion channels/bunds, sediment retention ponds, decanting earth bunds, silt fences. The As-Built Certification Statements shall be supplied to the Taranaki

Regional Council within 5 working days of the completion of the construction of those controls. Information contained in the certification statement shall include at least the following:

a) Confirmation of contributing catchment areas;

b) The location, capacity and design of each structure;

c) Position of inlets and outlets;

d) Stability of structures; and

e) Measures to control erosion.

15. Prior to the commissioning of any flocculation dosing system, the consent holder shall provide the Taranaki Regional Council with a Flocculation Management Plan. The Flocculation Management Plan shall include as a minimum:

a) Specific design details for the flocculation system;

b) Monitoring, maintenance (including post-storm) and including a record system that ensures the system continues to function as intended;

c) Details of optimum dosage including assumptions;

d) Results of any initial flocculation trial;

e) A spill contingency plan; and

f) Contact details of the persons responsible for the operation and maintenance of the flocculation treatment system and the organisational structure to which this person shall report.

16. The consent holder shall undertake all activities authorised by this consent in accordance with a certified Flocculation Management Plan and any certified changes.

17. The consent holder shall ensure that the site is appropriately stabilised by 30 April of each year unless otherwise approved in writing by the Taranaki Regional Council. Stabilisation shall be undertaken by providing adequate measures (vegetative and/or structural and including pinned geotextile, pavement,

metalling, hydro-seeding, re-vegetation and mulching) that will minimise erosion of exposed soil to the greatest extent practical.

18. Subject to condition 19, no earthworks shall be undertaken during any 1 May to 30 September period, apart from necessary maintenance work.

19. After considering a request the Chief Executive, Taranaki Regional Council may authorise earthworks during a 1 May to 30 September period if, he/she determines that the likely environmental effects are not more adverse than they would be if the work was undertaken during the October to April period. Any request under this condition must be made before 15 April. In considering a request for winter earthworks, the Chief Executive shall consider as a minimum:

    a) The nature of the site and the specific earthworks proposed;

    b) The quality of the existing/proposed erosion and sediment controls;

    c) The compliance history of the site/operator;

    d) Seasonal/local soil and weather conditions;

    e) Sensitivity of the receiving environment; and

    f) Impacts on fish migration and spawning.

20. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and annually thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.10 Consent for discharge of dust to air

331. That consent sought in application 17-10429-1.0 (E), listed as follows;

- **10656-1.0 -** To discharge contaminants (dust) to air from earthworks associated with the establishment of the Mt Messenger Bypass

be approved for a period to 1 June 2025, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The activities authorised by this consent shall be undertaken generally in accordance with the application.

2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.

3. At least 40 working days prior to undertaking any construction works associated with the Project, the consent holder shall submit a Dust Management Plan (DMP) to the Taranaki Regional Council. The DMP shall set out practices and procedures and methods to be used to manage, mitigate and monitor dust emissions during the Project. The DMP shall include, but need not be limited to:

   (a) identification of potential sources of dust taking into account construction activities and the construction programme;

   (b) identification of sensitive receptors likely to be adversely affected by emissions of dust;

   (c) the process for receiving and adressing complaints about dust;

(d) methods for managing and mitigating adverse dust effects that may arise from construction activities, particularly in proximity to sensitive receptors. Where appropriate, these methods may include:

(i) the use of water carts or sprinklers to apply water to areas generating dust;

(ii) reducing vehicle speeds on unsealed surfaces; and

(iii) the use of commercial dust suppressants;

(iv) an outline of the methods for managing the effects of dust on the dwellings at 2528, 2750 and 3072 Mokau Road; and

(v) the methods of monitoring for potential dust generation, including assessment of weather conditions, soil conditions and visual dust assessments.

4. The exercise of this consent shall not cause any noxious, dangerous, offensive or objectionable dust beyond the site boundary.

5. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

16.11 Consent to plant in riverbeds

332. That consent;

- **10658-1.0 -** To undertake riverbed planting for restoration of diverted stream beds associated with the establishment of the Mt Messenger Bypass

be approved for a period to 1 June 2053, subject to the following conditions:

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act, 1991.

Special conditions

1. The planting shall be undertaken generally in accordance with the application for consent.

2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 5 working days prior to the commencement of planting work. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.

3. The consent holder shall ensure that the area and volume of stream bed disturbance during planting is, as far as practicable, minimised and any areas that are disturbed are, as far as practicable, reinstated.

4. The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity of the stream during the planting, including:
   (a) completing all works in the minimum time practicable;
   (b) avoiding placement of excavated material in the flowing channel; and
   (c) keeping machinery out of the actively flowing channel, as far as practicable.

5. The planting shall not restrict flow or exacerbate flooding events.

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and annually thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Appendix I: List of Consents Sought

Application - IRIS ID	Application wording	Consent No	Applicant	Subtype	Lodged Date	Consent wording
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10601-1.0	New Zealand Transport Agency	Take Surface Water	15/12/17	To take water from the Mimi River for dust suppression and other construction activities associated with the development of the Mt Messenger Bypass
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10602-1.0	New Zealand Transport Agency	Take Surface Water	15/12/17	To take water from the Mangapepeke Stream for dust suppression and other construction activities associated with the development of the Mt Messenger Bypass
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10603-1.0	New Zealand Transport Agency	Take Groundwater	15/12/17	To take groundwater encountered during tunnel activities and ongoing operation of the tunnel associated with the Mt Messenger Bypass route
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10604-1.0	New Zealand Transport Agency	Take Groundwater	15/12/17	To take groundwater encountered at 10 locations from cut excavations associated with the Mt Messenger Bypass route
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10659-1.0	New Zealand Transport Agency	Dam/Weir	15/12/17	To dam water in the Mimi River with a 1 metre weir
17-10429-1.0 (A)	To dam, take and use surface water from the Mangapepeke Stream and Mimi River, and to erect and use temporary weirs on the bed of the Mangapepeke Stream and Mimi River associated with constructing the Mt Messenger Bypass, and to divert, take and use groundwater as a consequence of excavations and tunnelling associated with constructing and operating the Mt Messenger Bypass	10660-1.0	New Zealand Transport Agency	Dam/Weir	15/12/17	To dam water in the Mangapepeke Stream with a 1 metre weir
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10606-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#2) a section of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10607-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#3) a section of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10608-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#4) a section of an unnamed tributary of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10609-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#5) a section of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10610-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#6) a section of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10611-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#7) a section of the Mangapepeke Stream through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10612-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#8) a section of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10613-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#9) a section of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (B)	To divert, disturb, realign and modify sections of the Mangapepeke Stream, Mimi River and their tributaries associated with constructing and operating the Mt Messenger Bypass	10614-1.0	New Zealand Transport Agency	Realign Waterway	15/12/17	To realign (#10) a section of an unnamed tributary of the Mimi River through a newly constructed channel, including associated streambed disturbance and reclamation
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10616-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#1) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10617-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#2) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10618-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#3) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10619-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#4) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10620-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#5) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10621-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#6) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10622-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#7) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10623-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#8) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10624-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#9) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10625-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#10) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10626-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#11) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10627-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#12) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10628-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#13) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10629-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#14) in the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10630-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#15) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10631-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#16) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (C)	To install, use and remove temporary culverts in the Mangapepeke Stream, Mimi River and their tributaries for the purpose of constructing the Mt Messenger Bypass	10632-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a temporary culvert (#17) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10633-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#1) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10634-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10635-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#3) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10636-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#4) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10637-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#5) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10638-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#6) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10639-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10640-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#8) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10641-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#9) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10642-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#10) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10643-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#11) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10644-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#12) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10645-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#13) in an unnamed tributary of the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10646-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#14) in the Mangapepeke Stream
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10647-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#15) in the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10648-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#16) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10649-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#17) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10650-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#18) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10651-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#19) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10652-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#20) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10653-1.0	New Zealand Transport Agency	Structure - Culvert	15/12/17	To install and use a culvert (#21) in an unnamed tributary of the Mimi River
17-10429-1.0 (D)	To install and use culverts in the Mangapepeke Stream, Mimi River and their tributaries and to install a bridge over a tributary of the Mimi River associated with constructing and operating the Mt Messenger Bypass	10654-1.0	New Zealand Transport Agency	Structure - Bridge	15/12/17	To construct a new bridge over the Mimi River, including associated disturbance of the stream bed
17-10429-1.0 (E)	To discharge to land, water and to air from soil disturbance and earthworks, to undertake vegetation clearance, and to undertake riverbed planting associated with constructing and operating the Mt Messenger Bypass	10657-1.0	New Zealand Transport Agency	Vegetation clearance	15/12/17	To remove vegetation from the bed and banks of the Mangapepeke Stream, Mimi River and their tributaries associated with establishing the Mt Messenger Bypass
17-10429-1.0 (E)	To discharge to land, water and to air from soil disturbance and earthworks, to undertake vegetation clearance, and to undertake riverbed planting associated with constructing and operating the Mt Messenger Bypass	10655-1.0	New Zealand Transport Agency	Land/Water Industry	15/12/17	To discharge stormwater and sediment onto and into land and into the Mangapepeke Stream and Mimi River and their tributaries from earthworks associated with the establishment of the Mt Messenger Bypass
17-10429-1.0 (E)	To discharge to land, water and to air from soil disturbance and earthworks, to undertake vegetation clearance, and to undertake riverbed planting associated with constructing and operating the Mt Messenger Bypass	10656-1.0	New Zealand Transport Agency	Air - Dust	15/12/17	To discharge contaminants (dust) to air from earthworks associated with the establishment of the Mt Messenger Bypass
17-10429-1.0 (E)	To discharge to land, water and to air from soil disturbance and earthworks, to undertake vegetation clearance, and to undertake riverbed planting associated with constructing and operating the Mt Messenger Bypass	10658-1.0	New Zealand Transport Agency	Planting	15/12/17	To undertake riverbed planting for restoration of diverted stream beds associated with the establishment of the Mt Messenger Bypass