Assessment of Environmental Effects – Otawere Reservoir Construction Noise Limits.

The working hours on site are sought to be changed as per the below.

Current

Dam	Day of Week	06:30 to 07:30	07:30 to 18:00	18:00 to 20:00	20:00 to 6:30
Main Dam	Weekdays				
	Saturdays				
	Sundays and PHs				
Saddle Dam	Weekdays				
	Saturdays				
	Sundays and PHs				

	Normal Construction
	Restricted Main Works
	Restricted Saddle Works
	No Works

change to

Dam	Day of Week	06:30 to 07:30	07:30 to 18:00	18:00 to 22:00	22:00 to 6:30
Main Dam	Weekdays				
	Saturdays				
	Sundays and PHs				
Saddle Dam	Weekdays				
	Saturdays				
	Sundays and PHs				

Significant construction works are now underway on site.

Over the past 6 weeks data Adhoc Noise Monitoring has been undertaken at 5 locations within the construction site and around the perimeter of the property which was a more a more conservative approach than measuring at the external façade of an occupied building.

At no point was it detected that the maximum noise limits were being exceeded by construction-related activities with readings typically well below 50dB.

Readings in excess of 70dB were observed multiple times due the presence of large trees blowing in the wind near the Te AhuAhu Point shown in the Map above.

As such the effects of this proposed consent change are considered no more than minor and there is no value in undertaking a specialist report based upon synthetic data and assumptions.

It is proposed that construction noise monitoring will continue throughout the project. Should any complaints be received an adaptive decision-making process will be adopted to reduce this with techniques such as plant selection and scheduling of works.

Level 3
Australis Nathan Building
Britomart
Auckland 1010

PO Box 399
Shortland Street
Auckland 1140
New Zealand

al.nz

9 February 2024

Waikato Regional Council
160 Ward Street
Hamilton Central
Hamilton 3204

Attention: Danielle Hooper

Dear Danielle

Otawere Land Access

1 We act for the Te Tai Tokerau Water Trust (the **Trust**).

2 As you may be aware, the Trust intends to build a reservoir over the area shown as Lot 1 on the plan approved on 02/02/2024 (**attached**) (**Reservoir Land**).

3 The Trust is currently in the process of completing a subdivision which will result in a new title issuing for Lot 1 (i.e. the Reservoir Land), together with new titles for Lots 2 and 3.

4 The subdivision process is well underway and the Trust expects to be in a position to apply for the section 223 certificate in mid-March 2024.

5 In accordance with draft survey plan LT 601128, the following records of title have been allocated:

(a) Lot 1 - 1170707

(b) Lot 2 - 1170708

(c) Lot 3 - 1170709

6 We understand concern has been raised regarding the construction of the reservoir given the Reservoir Land is not currently owed by the Trust but by other parties, being:

(a) Gregory John Moyle and Tania Lee Rita Moyle (the **Moyles**) in respect of RT NA135D/350; and

(b) Marsden Limited Partnership (**Marsden**) in respect of RT 678203.

7 We confirm that the Trust has unconditional agreements in place with both the Moyles and Marsden to buy the Reservoir Land (**SPAs**).

8 Anderson Lloyd has acted for the Trust in relation to certain aspects of these SPAs and we further confirm that title to Lot 1 / the Reservoir Land will transfer to the Trust following completion of the subdivision, with the Moyles to then be recorded as registered owner of Lot 2 and Marsden of Lot 3.

9 Pending completion of the subdivision and transfer of the Reservoir Land title to the Trust, both the Moyles and Marsden have granted the Trust rights to use and access the relevant parts of the Reservoir Land to enable construction of the reservoir.

10 Further, the SPAs include mechanisms to ensure that if the boundaries of the completed reservoir extend beyond the title boundaries of the Reservoir Land then the Trust can undertake a boundary adjustment to correct the boundaries and will pay either / both of the Moyles and Marsden for any necessary additional land.

11 We trust this addresses your concerns and the matter can be progressed.

12 We would be happy to discuss further or answer any queries you may have.

Yours faithfully
Anderson Lloyd

Clare O'Shea
Partner
d +64 9 338 8304
m +64 27 601 2758
e clare.oshea@al.nz

CAUTION:

- This is a Concept Plan. Areas & Dimensions are approximate only and are subject to Final Survey.
- The Vendor & Purchaser must contact the Surveyor if a Sale & Purchase Agreement(s) are entered into using this Plan.
- This Plan is copyright to Shane Stratton Surveying Ltd. No part of this Plan may be reproduced in any form without the prior permission of the above Mentioned.
- All topographical features are approximate only,

Schedule of Proposed Easements			
Shown	Purpose	Servient Tenement	Dominant Tenement
Ⓐ	Right of Way	Lot 3 hereon	Lot 1 hereon

Schedule of Existing Easements			
Shown	Purpose	Servient Tenement	Created By
Ⓑ	Right of Way, rights to convey water, and right to transmit electricity and telecommunications	Lot 2 hereon	D643817.3

PROPOSED SUBDIVISION OF LOT 2 DP 208031
AND LOT 2 DP 479002

TOTAL AREA 390.8202ha
COMPRISED IN RT 678203 AND NA135D/350

Shane Stratton
Licenced Cadastral Surveyor

APPROVED PLAN

Planner: YZhou
RC: 2230251-RMAVAR/A
Date: 02/02/2024

Shane Stratton Surveying Limited
Ph : 0274390092
PO Box 7144 Tikipunga Whangarei
shane@sbsurveyors.co.nz

Te Tai Tokerau Water Trust
Otawere Reservoir Subdivision

Scale 1:15000 (A3)

SHEET NUMBER
1623-1

FILE REF.
SSS1623

DATE: 12/12/23

Shane Stratton
Licenced Cadastral Surveyor

PROPOSED SUBDIVISION OF LOT 2 DP 208031
AND LOT 2 DP 479002
TOTAL AREA 390.8202ha
COMPRISED IN RT 678203 AND NA135D/350

Scale 1:5000 (A3)

SHEET NUMBER
1623-2

Te Tai Tokerau Water Trust
Otawere Reservoir Subdivision

FILE REF.
SSS1623

DATE: 12/12/23

Shane Stratton Surveying Limited
Ph : 0274390092
PO Box 7144 Tikipunga Whangarei
shane@sbsurveyors.co.nz

BEFORE THE EXPERT CONSENTING PANEL

CONCERNING AN APPLICATION BY TE TAI TOKERAU WATER TRUST FOR A WATER STORAGE RESERVOIR AND ASSOCIATED DAMS IN WAIMATE NORTH, NORTHLAND

IN THE MATTER:	of the COVID-19 Recovery (Fast-track Consenting) Act 2020 (**FTA**) and the deliberations and final decision of the Expert Consenting Panel appointed under cls.2, 3 and 4 of Schedule 5 of the FTA to consider applications for resources consents for the construction and operation of a water storage reservoir and associated dams in Waimate North, Northland
Expert consenting panel:	Vicki Morrison-Shaw (Chair) Russell Howie ONZM (Member) David Clendon (Member) Steven Sanson (Member)
Legal representation:	Derek Nolan QC, Bankside Chambers for the Panel Maree Baker-Galloway from Anderson Lloyd and Graeme Mathias from Thomson Wilson Law for the Applicant, Te Tai Tokerau Water Trust
Comments received under cl.17(4) and (5) of Schedule 6 to the FTA:	13 April 2022 (Initial Invitees) 13 May 2022 (Additional Invitees)
Details of any hearing if held under cl.21 of Sch. 6 of the FTA:	No hearing was held (refer clause 20, Schedule 6 to the FTA)
Date of hearing if held:	Not applicable
Date of decision:	18 July 2022
Date of issue:	18 July 2022

RECORD OF DECISION OF THE EXPERT CONSENTING PANEL UNDER CLAUSE 37 OF SCHEDULE 6 OF THE FTA

Contents

PART 1: EXECUTIVE SUMMARY

1. The application for Otawere Water Storage Reservoir is a referred project (**Project**) listed in Schedule 24 to the COVID-19 Recovery (Fast-track Consenting) Referred Projects Order 2020 (**Referral Order**).

2. Te Tai Tokerau Water Trust (**Applicant**) has applied for consents under the COVID-19 Recovery (Fast-track Consenting) Act 2020 (**FTA**) to construct a water storage reservoir and associated dams in the upper catchment of an unnamed tributary of the Waitangi River in Waimate North, Northland (**Application**).

3. The Application involves several activities requiring consent under the Resource Management Act 1991 (**RMA**) and associated regulations and plans. The expert consenting panel (**Panel**) bundled the Application and applied an overall non-complying activity status.

4. The Panel has considered the Application within the dual-purpose framework of the FTA and the RMA.

5. The Panel sought further information from the Applicant on a range of issues and invited comment on the Application from certain identified organisations and individuals.

6. The Panel undertook a site visit on 8 April 2022.

7. The Panel sought legal advice from Derek Nolan QC in relation to the Applicant's ability to apply for consent under the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NESFW**).

8. The principal issues in contention for this Application, which are subject to detailed discussion throughout this decision, can be summarised as follows:

   (a) whether the Project is specified infrastructure for the purpose of the NESFW;

   (b) social and economic effects;

   (c) cultural considerations;

   (d) hydrology, dam design and dam safety (potential for uncontrolled release of water);

   (e) aquatic and terrestrial ecology;

   (f) landscape, natural character and visual amenity; and

   (g) construction effects.

9. Our findings on these issues, as discussed in subsequent sections of this decision, are that, with the conditions we have imposed:

(a) the Project is specified infrastructure for the purposes of the NESFW;

(b) the Project will have significant social and economic benefits for the local area and region;

(c) the Project is consistent with Treaty of Waitangi 1840 (**Treaty**) principles and provides a means for ongoing cultural input;

(d) the hydrological effects are acceptable, the potential for uncontrolled release of water is low and dam safety can be adequately managed;

(e) ecological effects can be adequately offset, compensated for or mitigated;

(f) effects on landscape, natural character and visual amenity are acceptable; and

(g) construction effects can be appropriately managed.

10. In making these findings the Panel confirms that it has considered all the information provided by the Applicant, the persons invited to comment and the legal advice it received.

11. For the reasons set out in the sections that follow the Panel grants consent to the Project subject to the conditions contained in **Appendix 1**.

12. Pursuant to clause 37(7) of the FTA the consents granted in this decision will lapse within 2 years from the date they commence unless given effect to prior.[1]

PART 2: INTRODUCTION AND PROCEDURE

2.1 Introduction to the Project

13. The Applicant seeks consent for the construction and operation of a proposed new water reservoir (**Otawere Water Reservoir**) and associated dams at Waimate North.

14. The reservoir is part of the Mid-North Water Storage Scheme, which is intended to comprise up to four water storage reservoirs and associated water distribution pipe networks in the Mid North (Matawii, Otawere, Mangatoa, and Ruaotehauhau). Consent for the *Matawii* reservoir was granted as a listed Project under the FTA in October 2020.[2]

15. The Project site is located off Te Ahu Ahu Road, in Waimate North, as shown on Figure 1 below (**Site**).

---

1 As per clauses 37(8) and (9) of Schedule 6 to the FTA.

2 *Matawii Water Storage Reservoir - Kaikohe*, Decision of Expert Consenting Panel, 27 October 2020 (***Matawii* decision**).

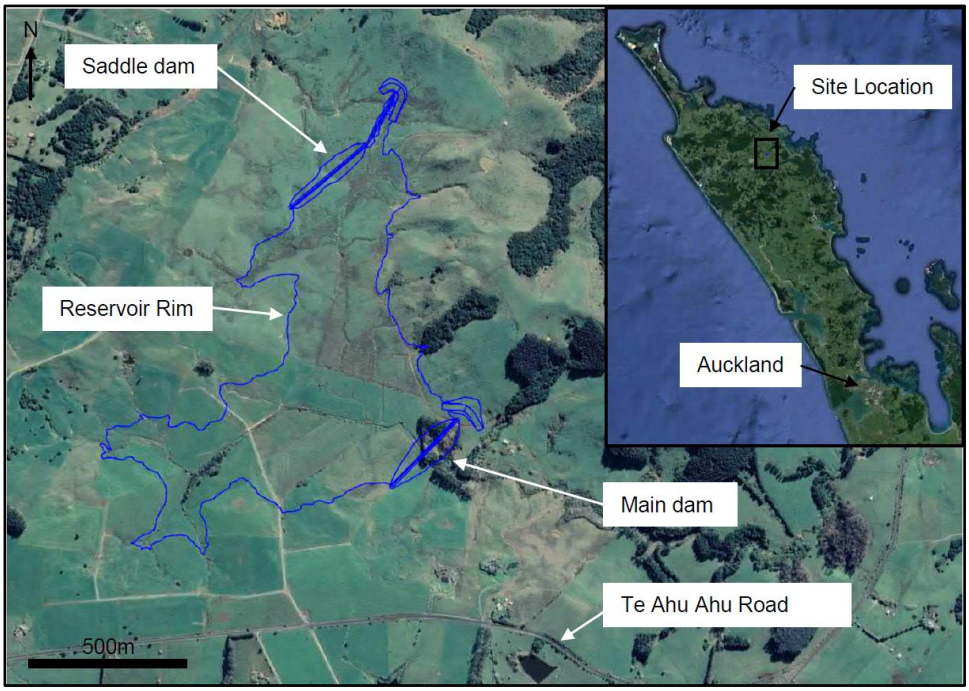

Figure 1: Site location[3]

16. The reservoir is proposed to be constructed across two lots: Lot 2 DP 479002 owned by Marsden Limited Partnership, and Lot 2 DP 208031 owned by Gregory and Tania Moyle.[4] The AEE confirms that the Applicant intends to complete a purchase of these properties once resource and building consents have been granted. It also confirms the Trust intends to lodge an application with the Far North District Council (**FNDC**) to subdivide the two allotments so that the reservoir will be located on one amalgamated lot.[5]

17. The Site is mostly flat, located within a low-lying valley between rolling hills to the west, and moderate slopes on the east. The AEE notes that the Site was selected because it offers an efficient storage to earthworks ratio, it can provide storage for a large amount of water, and because of its proximity to the Waitangi River and Waiaruheiti Stream, which will be used to fill the reservoir.[6]

18. The Site is mostly pasture and is currently being used for grazing dairy cows and beef cattle.

19. The AEE records that the Site:[7]

    (a) contains some isolated areas of degraded wetland and bush primarily along the riparian margins;

    (b) includes springs located around the reservoir which feed into farm ponds and streams;

---

3 Assessment of Environmental Effects February 2022 (**AEE**), Appendix B1, Figure 2.
4 AEE, Appendices J1 and J2 respectively.
5 AEE, section 3.2. A similar statement is made in the Applicant's 8 April 2022 response to the Panel's First Information Request.
6 AEE, s.2.1.
7 AEE, s.3.1.

(c) is drained by an unnamed stream which flows through the location of the main dam and into the Waitangi River (approximately 3 kilometres (**km**) to the north-east of the Site);[8] and

(d) includes a network of streams which for the most part are characterised by modified straightened and deepened channels.

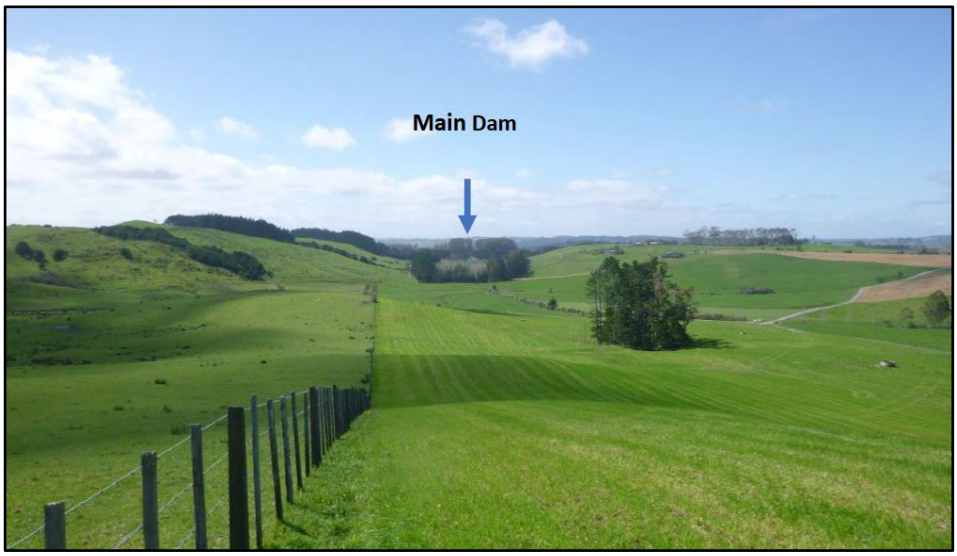

Figure 2: View of location of main dam[9]

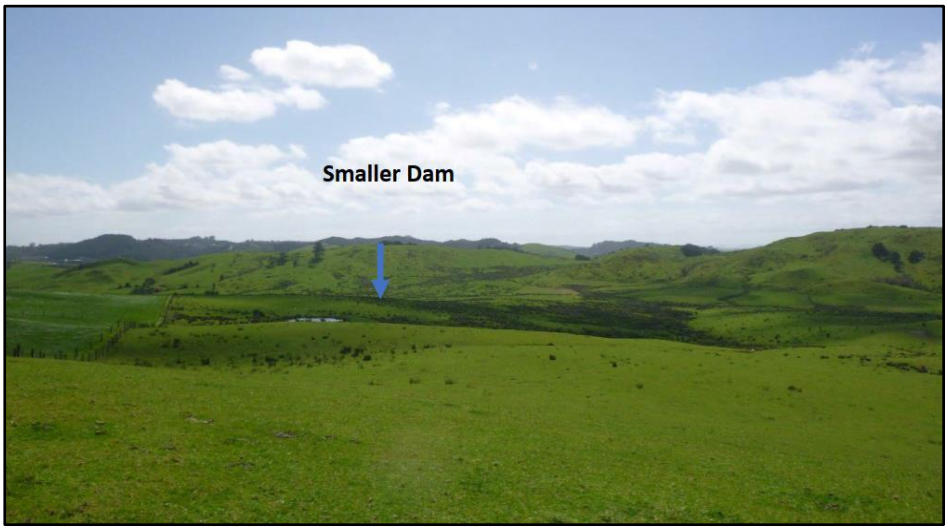

Figure 3: View of location of saddle dam[10]

20. The Site and surrounding area are zoned Rural Production under the Far North District Plan (**FNDP**).

Overview of Application

21. The Application includes the following key activities:[11]

---

8 A small section of an intermittent stream to the north of the saddle dam drains into the Okokako Stream (which is also a tributary of the Waitangi River).
9 AEE, Figure 6.
10 AEE, Figure 7.
11 AEE, pp.7 and 86.

(a) construction of an unlined water storage reservoir in, on, and over the bed of an unnamed tributary of the Waitangi River capable of storing up to 4.1Mm^3 at full supply level of 88mRL;[12]

(b) construction of a main dam (approximately 15m high on an unnamed tributary of the Waitangi River) and saddle dam (approximately 11m high located at the northern end of the reservoir), both dams being around 300m long with crests at 89.5mRL;

(c) earthworks and vegetation clearance for the construction of the dams, reservoir embankments, and land contouring associated with the formation of the reservoir area;

(d) damming and diversion of water associated with constructing the dams, reservoir embankments, and land contouring;

(e) discharge of sediment laden stormwater to water and to land where it may enter water during land disturbance activities;

(f) the taking of groundwater for temporary dewatering purposes at both the main and saddle dams;

(g) the damming of water in an unnamed tributary of the Waitangi Stream;

(h) the take and use of water from the reservoir; and

(i) the discharge of water from the reservoir via a spillway (located at the eastern end of the saddle dam with a 35m long crest at 88m RL), a 1.8m concrete culvert and low-level intake structure.

22. The Applicant holds resource consents to take water from the Waitangi River (AUT.0430.64.01.01) and Waiaruheiti Stream (AUT.042560.01.01). Consideration of those takes do not therefore form part of this Application.[13]

23. Construction is proposed to proceed in seven stages over two consecutive earthwork seasons. While the AEE refers to these as the 2021/2022 and 2022/2023 earthwork seasons,[14] given the timing of lodgement of this Application (February 2022), we have taken the references to mean the 2022/2023 and 2023/2024 earthwork seasons.

Reasons for consent

24. The Application includes the following activities which require consent:

---

[12] RL meaning reduced level and being the height or elevation above the point adopted as the site datum for the purpose of establishing levels.
[13] AEE, pp.7 and 13.
[14] AEE February 2022, s.2.3.

Relevant Plan / standard	Relevant rule / reg	Reason for consent	Activity status[15]
NESFW	45	The construction of the proposed reservoir will involve all activities covered by regulation 45.	D
NESFW	57	The reach of the stream flowing through the footprint of the main dam will be reclaimed for the purposes of constructing the embankment. Part of the upstream reach will be reclaimed through the construction of cofferdam (see Drawing 210038-104 in the Preliminary Dam Design Assessment at Appendix B of the Application).	D
NESFW	71	The unnamed tributary will be temporarily diverted from the work areas during dam construction. This will involve an initial small diversion while culvert(s) and the main conduit are installed, after which the stream will be diverted through the culvert and a coffer dam built to protect the working area from incoming floods. The Applicant is seeking resource consent on a precautionary basis in the event that the activity cannot comply with regulation 70.	D
Proposed Northland Regional Plan (Appeals version, March 2022) (PRP)	C.2.1.11	Constructing the proposed reservoir will involve disturbing the bed of an unnamed tributary of the Waitangi River. This includes disturbance associated with diverting the stream during construction to provide a dry	D

[15] 'C' meaning controlled activity status, 'D' meaning discretionary activity status, and 'NC' meaning non-complying activity status.

Relevant Plan / standard	Relevant rule / reg	Reason for consent	Activity status[15]
		working area, the installation of a culvert offline from the existing tributaries, and the deposition of a substance in the stream for the purposes of reclamation. There is also potential for other stream reaches within the reservoir footprint to be disturbed during reservoir construction. A 30m reach of the stream immediately below the main dam will be lined with riprap to prevent/mitigate erosion of the stream. Similarly, energy dissipation structures with rock riprap will be constructed on an intermittent stream channel below the spillway at the saddle dam. It is likely that the stream protection works may extend beyond the natural alignment of the streambanks and therefore the activities are not permitted by Rule C.2.1.9.	
PRP	C.2.2.4	There is approximately 0.22 hectares (**ha**) of wetland within the footprint of the reservoir that is not deemed to be significant (i.e., not meeting the significance criteria in the PRP) and will be disturbed through construction works.	D
PRP	C.2.2.6	There is just over 4 ha of significant wetland (i.e., the meets the significance criteria in the PRP) within the footprint of the reservoir which will be disturbed as part of construction works.	NC
PRP	C.3.1.7	The stream where the main dam will be located will need	D

Relevant Plan / standard	Relevant rule / reg	Reason for consent	Activity status[15]
		to be diverted during construction to provide a dry working area and to prevent the overtopping of a partially formed embankment.	
PRP	C.3.1.8	The construction of the proposed dams breach permitted activity standards and conditions (refer Rule C.3.1.2).	D
PRP	C.3.1.10	There is a small area of significant wetland in the footprint of the main dam.	NC
PRP	C.5.1.12	The taking of water exceeds permitted standards (volumes). Resource consents are required to authorise: Temporary groundwater dewatering associated with constructing the main dam and saddle dam; Taking up to 4.4 L/s from the stream catchment above the main dam (from available core allocation for the stream) for the purposes of irrigation and other water uses (e.g., firefighting); and Taking flows above the median flow (25.4 L/s) from the stream catchment above the main dam for the purposes of irrigation and other water uses (e.g., firefighting).	D
PRP	C.8.3.4	The earthworks required for constructing the proposed reservoir will exceed permitted and controlled activity standards.	D

Relevant Plan / standard	Relevant rule / reg	Reason for consent	Activity status[15]
PRP	C.8.4.3	Vegetation will be cleared within 10 metres (**m**) of natural wetland and streams when constructing the reservoir embankments and grading the reservoir footprint. This will breach permitted activity standards.	D
PRP	C.8.5.3	The installation of sub-surface drainage at the site of the main dam may involve bores for groundwater control.	C
FNDP	8.6.5.4	The height of the main dam (approximately 15m) exceeds the permitted standard in Rule 8.6.5.1.8 (12m) and potentially also the restricted discretionary standard in Rule 8.6.5.3.2 (15m).	D
FNDP	8.6.5.4	The main dam of the proposed reservoir currently straddles two allotments. The properties will be purchased once resource consents and building consents are granted and the Applicant will lodge an application with FNDC to subdivide the land.	D
FNDP	12.2.6.3	The clearance of indigenous vegetation (i.e., tōtara forest) within 20m of a natural wetland and streams at the Site will not comply with Rule 12.2.6.1.2.	D
FNDP	12.3.6.3	Excavation and filling associated with constructing the proposed reservoir will exceed the volumetric standard in Rule 12.3.6.2.3.	D
FNDP	12.7.6.3	The Application does not comply with the permitted	D

Relevant Plan / standard	Relevant rule / reg	Reason for consent	Activity status[15]
		standards of Rule 12.7.6.1.2 (setback from smaller wetland) and Rule 12.7.6.1.3 (preservation of indigenous wetland).	

Table 1: Reasons for consent

25. Overall, and considering the legal advice we received (which is discussed in **Part 4** below), the Application has a non-complying activity status. This requires us to be satisfied that the Application passes one or more of the s.104D 'gateway' tests to enable us to consider its merits under s.104 of the RMA. Our findings in this regard are set out in **Part 10** of this decision.

2.2 Procedure

26. The Panel records the following matters of procedure in this section:

(a) site visit;

(b) meetings;

(c) requests for further information;

(d) comments on Application;

(e) legal advice to the Panel;

(f) extension of timeframe for decision;

(g) hearing;

(h) draft conditions;

(i) suspension of Application; and

(j) consideration of information, comments and advice.

27. A list of the key procedural dates relevant to this Application are included in **Appendix 2**.

Site visit

28. The Panel (excluding Commissioner Howie)[16] conducted a Site visit on 8 April 2022.

29. At our request, the Applicant prepared an itinerary for the Site visit and agreed to provide us with a guide (Mr Andrew Carvell)[17] to assist us in

[16] Commissioner Howie was unable to attend the Site visit with the Panel. However, he reviewed drone footage provided by the Applicant and was involved in discussions following the Site visit.

[17] Mr Carvell is an engineer who had been involved in the dam design but who is no longer employed by the Applicant.

understanding the proposed location of various aspects of the works on the Site.

30. We travelled separately to the Site and met Mr Carvell at the entrance to the Site. We were also accompanied on the Site visit by Ms Mary McConnell the Project Lead from the Environmental Protection Authority (**EPA**) for this Project.

31. As noted in Minute 2 our Site visit included:[18]

    (a) walking and driving over accessible parts of the Site;

    (b) driving the full length of Te Ahu Ahu Road and most of Okokako Road;

    (c) briefly viewing one of the potential offset/wetland restoration sites (Rio's Farm)[19] from the roadside;[20]

    (d) visiting the Ōhaeawai township; and

    (e) visiting the *Matawii* dam construction site to provide context for the type of works that will be undertaken for this Project (albeit on a larger scale for this Project).

32. While we did not visit all the properties potentially affected by a dam breach, the Applicant provided us with drone footage of the potential flood impact zone, which we viewed prior to the Site visit.

33. We record our appreciation to Mr Carvell in assisting us to understand the location of the various aspects on Site, and to Ms McConnell for accompanying us on the Site visit. We confirm no discussion of the merits occurred while Mr Carvell was present.

Meetings

34. The Panel conducted meetings on the following dates:

    (a) 21 March 2022;

    (b) 8 April 2022;

    (c) 19 April 2022;

    (d) 3 May 2022;

    (e) 18 May 2022;

    (f) 26 May 2022;

    (g) 17 June 2022; and

    (h) 23 June 2022.

---

[18] Minute 2, 12 April 2022.
[19] As shown in the AEE, Appendix V, Figure 4.
[20] AEE, Appendix V, Environmental Offset Strategy, Figure 4, p.9.

35. These meetings were generally held virtually on Microsoft Teams, with the 8 April 2022 meeting being the only exception. Three of the four Panel members attended the 8 April 2022 meeting in person with Commissioner Howie joining via Microsoft Teams.

Requests for further information

36. On 22 March 2022, pursuant to its power under clause 25 of Schedule 6, the Panel issued a request for further information to the Applicant (**First Information Request**) regarding the following:

    (a) the specified infrastructure exemption;

    (b) the Applicant's relationship to the land;

    (c) the reasons for consents;

    (d) building across lot boundaries;

    (e) importing of fill;

    (f) climate change and dam design;

    (g) landscape assessment consideration of the cultural impact assessment (**CIA**);

    (h) CIA recommendations and conditions;

    (i) iwi/hapū planning documents;

    (j) ecological peer review recommendations;

    (k) management plans; and

    (l) conditions.

37. A response was requested by 8 April 2022.

38. On 8 April 2022,[21] the Applicant provided a response to most aspects of this request, with the balance of the material being provided on 11 April 2022.

39. On 12 April 2022, the Panel issued a further request for information to the Applicant (**Second Information Request**) regarding the following matters:

    (a) list of properties affected by a potential dam breach;

    (b) landscape/visual;

    (c) ecology;

    (d) cultural/Treaty;

[21] Noting that this response was not received by the Panel until the following day.

(e) water supply;

(f) effects on other properties;

(g) bond;

(h) specified infrastructure and regionally significant infrastructure; and

(i) conditions.

40. A response to item (a) was requested and received by 14 April 2022, with the balance of the material requested and provided by 26 April 2022.

41. The Applicant also subsequently provided the Panel with a plan showing the properties affected by a potential dam breach on 29 April 2022.

42. A third request for further information to the Applicant (**Third Information Request**) was issued on 5 May 2022 following receipt of the Applicant's response to the Second Information Request. The Third Information Request sought information regarding:

(a) proposed conditions 97, 97B and 98; and

(b) the plan referred to in proposed condition 114.

43. The Applicant provided its response to this request on 13 May 2022 proposing changes to the wording of the conditions and providing a copy of the plan referred to in proposed condition 114.

44. The Panel issued its final request for further information to the Applicant (**Fourth Information Request**) on 2 June 2022. This request sought the Applicant's view on the appropriate metric and standard for three parameters included in conditions 140 and 144. A response was requested and received by 10 June 2022.

Comments on Application

45. On 22 March 2022, the Panel issued Minute 1 which set out its decision in terms of those parties from whom comment would be sought.

46. By letters dated 23 March 2022 the Panel then invited comments on the Project from those parties listed in clause 17(6) of Schedule 6 and in clause 7 Schedule 24 of the Referral Order.[22] The Panel also invited comments from neighbours of the Site under clause 17(8) of Schedule 6. Comments were required by 13 April 2022. At the close of this period, comments had been received from 17 parties.

47. On 12 April 2022, following the Panel becoming aware that some property owners who might be affected by a potential dam breach had not been included in the parties invited to comment, the Panel issued Minute 2 indicating that these parties would be invited to comment as soon as

[22] As is required pursuant to clause 17(7) of Schedule 6 of the FTA.

details had been obtained from the Applicant and FNDC. Invitations to comment were subsequently posted to 188 additional parties[23] on 22 April 2022.

48. Two late comments from the first comment period were received on 21 and 29 April 2022 respectively. On 29 April 2022, the Panel issued Minute 3 accepting the two late comments due to the late arrival of the invitations to comment.

49. The second comments period closed on 13 May 2022, with 6 comments received.[24] Two late comments were also received. As the lateness of these comments was due to the late arrival of the invitations, the Panel issued Minute 4 on 23 May 2022 accepting these comments.

50. Collectively, the comments received raised the following matters:

(a) scope of the Project;

(b) specified infrastructure;

(c) fast-track process;

(d) consultation;

(e) dam breach;

(f) effects on groundwater / ground saturation / seepage;

(g) effects on existing water takes;

(h) water security and ability to use reservoir water;

(i) cultural effects;

(j) impacts on flora and fauna;

(k) landscape, natural character and visual amenity effects;

(l) construction effects;

(m) heritage;

(n) carbon footprint;

(o) property values;

(p) management plans; and

(q) conditions.

51. A full list of the persons from whom comments were received and a summary of their comments, along with our brief response to those comments, are set out in **Appendix 2**.

---

[23] While there were 340 land parcels with ownership details identified, as a number of those were owned by the same parties, there were only 188 additional individuals/entities.

[24] There were only six additional submitters as two comments were received from Ms Wendy Atkinson.

52. In accordance with clause 18(5), all comments received by 13 April 2022 and 13 May 2022 were sent to the Applicant for consideration with any response required within 5 working days (**wd**) (as per clause 19).

53. On 26 April 2022, the Applicant advised the EPA that it would not be providing a direct response to any of the comments received from the first round of comments and reserved its position regarding the second round.[25] On 23 May 2022 the Applicant confirmed that it also would not be providing a response to matters raised in the second round of comments.

54. The Panel records that it found this lack of response by the Applicant unhelpful in undertaking its evaluation of the matters raised in the comments. It also tended to underscore the importance of ensuring the conditions provided requirements for affected parties (such as tangata whenua and near neighbours) to be kept informed about the Project, consulted on key plans that may affect them, and provided with a forum to raise any issues.

Legal advice to the Panel

55. At the Panel's request the EPA engaged Derek Nolan QC to provide legal advice on an issue regarding the applicability of the specified infrastructure exemption in the NESFW to the Application. In particular, the Panel requested advice on whether:

    (a) the NESFW applies to the inundation of wetlands;

    (b) the specified infrastructure exemption for lifeline utilities applies given water for firefighting and emergency community supply is not the primary intended end-use of the reservoir water;

    (c) the Applicant's proposed consent conditions are sufficient to ensure that lifeline utility usage is provided for; and

    (d) whether the Project could also be considered as regionally significant infrastructure under the Northland Regional Policy Statement (**RPS**).

56. The Panel provided Mr Nolan QC with a copy of the submission from the Royal Forest and Bird Protection Society of New Zealand Incorporated (**Forest & Bird**) and the Applicant's response to the First Information Request, which addressed some of the matters on which Mr Nolan's advice had been sought. Mr Nolan considered that material and issued his advice on 11 April 2022.

57. The Panel provided the Applicant with a copy of Mr Nolan's advice on 12 April 2022 and invited any comments on that advice as part of the Applicant's response to the Second Information Request.

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[25] Oral advice to the EPA on 26 April 2022, subsequently confirmed by email on 3 May 2022.

58. On 20 April 2022, the Panel was alerted to a recent Fast Track decision (for the proposed *Rangitāne* Maritime development in Northland) that also considered the specified infrastructure and regionally significant exemptions.[26] The Panel provided a copy of this decision to the Applicant on 21 April 2022 in case it wished to comment on the decision in its response to the Second Information Request. The Panel also requested that Mr Nolan issue an addendum to his advice to address the *Rangitāne* decision.

59. On 26 April 2022 a response was received from the Applicant, largely agreeing with Mr Nolan's opinion. No comment was made on the *Rangitāne* decision. Mr Nolan's addendum was also received later that same day. We address the advice received and set out our findings on this issue in **Part 4** of this decision.

Extension of timeframe for decision

60. On 12 April 2022, the Panel issued Minute 2 extending the timeframe for its final decision by 25 wd from 23 May 2022 to 28 June 2022.[27]

61. The Panel considered an extension was required as the scale and nature of the Application was such that the Panel was unable to complete its decision within the original decision-making timeframe. In particular, and in order to fully understand the scale and nature of the Application and its effects, the Panel made four further information requests and sought comment from 188 additional parties that the Applicant had not included in their table of potentially affected parties. Further time was required to allow these processes to be completed and the information arising from these processes to be considered by the Panel.

Hearing

62. Under clause 20 of Schedule 6 of the FTA there is no requirement for a panel to hold a hearing and no person has a right to be heard. However, a panel can hold a hearing if, in its discretion, it considers a hearing to be appropriate (clause 21).

63. On 19 May 2022, the Panel determined that a hearing was not required, on the basis that:

    (a) potentially affected parties (including all owners affected by a potential dam breach) had been given an opportunity to have their say on the Application through the comments process;

    (b) the positions and, where provided, the reasons for the positions of those providing comment were clear;

    (c) the nature of some of the comments raised (e.g., alleged lack of consultation/requests for ongoing consultation) would not be

[26] Record of Jurisdictional Determination of the Expert Consenting Panel for the Rangitāne Maritime Development, 13 April 2022 (***Rangitāne decision***).

[27] Being the maximum time available for an extension under clause 37(3) of Schedule 6 to the FTA.

fixed by holding a hearing, and instead were matters which we were able to address through conditions (such as management plan consultation and community liaison group (**CLG**) requirements);

(d) the Applicant was given opportunities to, and did provide, further information in response to requests from the Panel;

(e) the Applicant and any person who provided comment would have an opportunity to comment on the draft conditions (see below);

(f) the Panel was satisfied it had sufficient information to make a decision;

(g) the Panel did not consider it would be materially assisted by holding a hearing; and

(h) no party requested a hearing.[28]

Draft conditions

64. At the Panel's request, the EPA engaged planning consultants Amelia Linzey and Megan Couture from Beca to assist with the review and preparation of draft conditions. We noted in our Minute 4 that while the Traffic report supplied by the Applicant had been prepared by Beca, we did not consider the engagement of Ms Linzey and Ms Couture to be a conflict as:

(a) the condition writer's scope is limited to the operational workability and effectiveness of the conditions and does not include any review of planning assessment of the effects of the Project;

(b) neither Ms Linzey nor Ms Couture have provided any input to the transport work; and

(c) Beca has structures in place to ensure the contracted staff are the only people providing review and advice on the conditions to the Panel.

65. In accordance with clause 36 of Schedule 6, on 2 June 2022 the Panel issued Minute 5 inviting the Applicant and all persons who commented on the Application to comment on the draft conditions. Any comments were required to be provided no later than 5pm 14 June 2022.

66. At the close of this period the Panel received comments from seven parties: the Applicant, FNDC, the Northland Regional Council (**NRC**), the Department of Conservation (**DOC**), Forest & Bird, Heritage New Zealand Pouhere Taonga (**Heritage NZ**), and one individual submitter. A summary of the comments received and our response to those is contained in **Appendix 4**.

[28] While acknowledging there is no such provision enabling a party to request a hearing under the FTA.

67. The Panel thanks Amelia Linzey and Megan Couture for their advice and assistance with the conditions.

Suspension of Application

68. On 22 June 2022, four working days before the statutory deadline for the issue of the Panel's decision, the Panel discovered that the location and size of the various borrow areas (areas from which excavated material will be won for dam construction) and disposal areas (areas where unsuitable material can be disposed of) had been substantially changed from those on which the relevant expert assessments (including noise and landscape) had been based.[29] In particular borrow area 5 and disposal area 3 had been enlarged and located closer to neighbours that will be affected by the project..

69. The Panel urgently sought clarification from the Applicant on these matters.

70. On 23 June 2022 the Applicant confirmed that:

    (a) the noise assessment (Appendix P to the AEE) had been undertaken on the basis of a previous iteration of the Construction Environmental Management Plan (**CEMP**);

    (b) the CEMP had been updated in November 2021;

    (c) it should have, but had not, updated the noise assessment to reflect the updated CEMP; and

    (d) it wished to suspend the processing of its Application "*because of the need for an updated assessment of noise effects on people from the construction of the proposed reservoir*."[30]

71. The Panel issued Minute 6 later that day accepting the request for suspension.

72. On 1 July 2022 the Applicant forwarded through confirmation emails from its ecological and landscape experts that the revised CEMP borrow and disposal area plans did not alter the conclusions set out in their respective reports.[31]

73. On 11 July 2022, the Applicant forwarded through an updated noise assessment report, along with a proposed amendment to condition 100.[32] The Applicant also indicated that it had provided a copy of the revised

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[29] The dates of both the Appendix P - Noise Assessment (August 2021) Appendix K Landscape Assessment (September 2021) preceding the updated borrow and disposal sites plan (November 2021). While an update to the Landscape Assessment was issued in April 2022 in response to a request from the Panel, this update only addressed matters raised in the CIA. No reference was made to the borrow and disposal sites being updated.

[30] 23 June 2022 letter from Williamson Water & Land Advisory for the Applicant, requesting a suspension.

[31] 30 June 2022 email from Martin Neale of PuhoiStour to Ben Tait; and 30 June 2022 email from Simon Cocker of SCLA to Ben Tait.

[32] Marshall Day, Otawere Water Storage Reservoir Assessment of Noise Compliance, Rp 001 r01 20210594 | 7 July 2022.

noise report to Mr Flude, the nearest affected sensitive receiver. The Panel received an email from Mr Flude later that day indicating that he had met with the Applicant and remained concerned about the project and process.[33]

74. On 13 July 2022, the Applicant advised it had met again with Mr Flude and that while Mr Flude's concerns (regarding noise and other potential effects of the Project) were not resolved the parties had agreed "*to work together in principle to alleviate them*".[34] Also on 13 July 2022 the Panel received a letter from the Applicant requesting that the Panel resume processing its Application as from 15 July 2022.[35] The Panel issued Minute 7 on 14 July 2022 confirming that processing of the Application would resume as from 15 July 2022.[7]

75. We address the implications of the proposed amended borrow and disposal sites, updated noise assessment and proposed condition amendments in **Part 6** of this decision.

Consideration of information, comments and advice

76. The Panel confirms that in making its decision on this Application and the appropriate conditions it has reviewed and considered all the information and comments provided by the Applicant, the feedback from persons invited to comment, and the advice provided by the Panel's advisors: Mr Nolan QC (legal) and Ms Linzey/Ms Couture (planning).

PART 3: LEGAL FRAMEWORK

77. The FTA provides a consenting pathway for both listed and referred projects. This is a referred project.

78. The legal framework applying to decisions under the FTA was carefully described in the *Matawii* decision - the first decision issued under the FTA. While that decision was in respect of a listed project, it provides a useful overview of the FTA, and the Panel adopts (and does not repeat) the relevant aspects of that overview.[36]

79. The *Matawii* decision also has particular relevance to this Application, given the *Matawii* dam was the first of the four Mid-North Reservoir proposals, of which the present Application forms part.

80. The legal framework applying to referred projects has been described in several decisions. To avoid unnecessary repetition, we adopt the summaries set out in the *Waitohi Picton Ferry Precinct*[37] and *Kōpū Marine*

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33 11 July 2022 email from Cameron Flude to Mary McConnell for the EPA.
34 13 July 2022 email from Ben Tait to Mary McConnell at the EPA attaching reporting email from John Proctor of the Applicant.
35 13 July 2022 letter from Ben Tait to Mary McConnell at the EPA.
36 *Matawii* decision, at [1], [50]-[54], [66]-[70], [74], [108], [378]-[380], and [383].
37 Decision of Expert Consenting Panel concerning the *Waitohi Picton Ferry Precinct*, at [55]-[62].

Precinct[38] decisions (excluding from the latter the aspects relating to the Hauraki Gulf Marine Park Act 2000 which is not a relevant consideration here).[39]

3.1 Consideration of consent applications

81. Clauses 31 and 32 of Schedule 6 set out the matters to which a panel considering a referred project must or may have regard, and the matters a panel is entitled to disregard. In terms of these matters:

(a) clause 31(1) requires that a panel must, subject to the FTA's purpose and Part 2 of the RMA,[40] consider any actual and potential effects on the environment, any measures proposed/agreed by the Applicant to ensure positive effects or offset or compensate for negative effects, any relevant provisions of RMA standards, policies, plans, iwi management plans,[41] and any other matter a panel considers relevant.

The Panel confirms it has considered all relevant effects (refer **Parts 5** and **6**) as well as the provisions of all relevant planning documents (refer **Parts 5, 7** and **8**), and Part 2 of the RMA (refer **Part 12**).

(b) clause 31(3) requires a panel to consider any resource management matters in plans prepared by a customary marine title holder if the site is within the coastal marine area.

The Site is not located within the coastal marine area.

(c) clause 31(4) enables a panel to disregard an adverse effect of an activity if a national environmental standard or plan permits an activity with that effect.

The Panel confirms it has not disregarded any adverse effects in terms of this discretion.[42]

(d) clause 31(5)(a) prohibits a panel from considering the effects of trade competition.

The Panel confirms that no trade competition effects were raised or considered.

(e) clause 31(5)(b) restricts a panel from granting resource consents which are contrary to certain provisions in the RMA, regulations made under the RMA, and provisions and conditions under the Marine and Coastal Area (Takutai Moana) Act 2011 (**MACA**).

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38 Decision of Expert Consenting Panel concerning the *Kōpū Marine Precinct*, Thames, 9 March 2022, at [39]-[49].
39 Given this Site is not within or proximate to the Hauraki Gulf.
40 A Panel must however apply s.6 of the FTA in place of s.8 of the RMA (clause 31(2)).
41 As explained in the *Matawii* decision, at [99] and set out in full in Part 5 of this decision below.
42 Noting that permitted activities form part of the Application and have been bundled together with an overall non-complying activity status applied.

The only matter of relevance to this Application is s.107 of the RMA. Our assessment of the Application against the restrictions in s.107 is set out in **Part 11** of this decision.

(f) clause 31(5)(b)(i) prohibits a panel from considering the effects of an activity on any person who has given written approval to that activity provided they have not withdrawn that approval before the Application is determined 31(6).

No written approvals were provided as part of this Application, although as discussed in Part 5 below, Taiāmai provided conditional support for the Application provided certain measures were implemented.

(g) clause 31(7) enables a panel to grant consent for an activity regardless of what activity-type (controlled, restricted discretionary, discretionary or non-complying) the application was expressed to be for.

Here the Panel has determined (for the reasons set out in **Part 4**) that the overall activity status for the Application is non-complying. It has accordingly been assessed as such.

(h) clause 31(8) provides a panel with a discretion to decline an application if it considers the information provided by an applicant is inadequate to determine it.

Considering the AEE and its appendices, which included all the information required under the Referral Order,[43] and the detailed responses to the Panel's requests for information (as is allowed under clause 37(9)), the Panel considers it has sufficient information to determine the Application.

(i) clause 31(10) requires a panel, subject to clause 5 of Schedule 5, to comply with an obligation imposed on a local authority/other decision maker by a Treaty Settlement when making a decision.

There are no Treaty Settlements which currently apply to the Application area.

(j) clause 31(12) requires a panel to decline an application if it is necessary to comply with s.6 FTA.

There are no applicable Treaty Settlements. The Panel consider the Application is consistent with relevant Treaty principles for the reasons set out in **Part 5** below.

(k) clause 32 states that ss.104A to 104D, 105 to 107 and parts of s.138A of the RMA apply with all necessary modifications.

[43] Referral Order clause 6 which required a geotechnical assessment (Appendix B1), hydrology and hydraulic assessment (AEE, Appendices G and H), ecological assessment (Appendix I), landscape and visual assessment (Appendix K), economic assessment (Appendix R), CEMP (Appendix C), ESCMP (Appendix D), dam failure risks (Appendix B1), reservoir operations and safety (AEE, Appendix F).

In relation to these matters we note that:

(i) as the Application overall is a non-complying activity, both ss.104B and 104D of the RMA apply. Our section 104D assessment is set out in **Part 10** below;

(ii) sections 105 and 107 are also applicable given the Application includes discharges associated with constructing and operating the reservoir. Our assessment of these sections is set out in **Part 11** below; and

(iii) section 138A is not applicable as the Application does not include any coastal permits.

3.2 Conditions

82. Clause 35 of Schedule 6 confirms that a panel may grant a resource consent subject to such conditions as it considers appropriate, and that ss.108, 108A to 112, and 220 of the RMA apply (with any necessary modifications).

83. The Panel notes that s.108AA does not apply, but that for the reasons set out in the *Northbrook Wanaka Retirement Village* decision, the Panel accepts that the *Newbury* tests remain relevant, and the Panel's discretion must be exercised on a principled basis.[44]

3.3 Force effect and lapse

84. A consent once granted has the same force and effect as if it were granted under the RMA and the provisions of the RMA apply with any necessary modifications.[45] A consent will lapse unless "*given effect to*" by the specified date (which must not be later than 2 years from the date of commencement)[46] or unless the consent holder applies, and the Council determines it is appropriate to grant an extension to that lapse date (under s.125 of the RMA).

PART 4: SPECIFIED INFRASTRUCTURE

85. As noted, (in **Part 2** above), the Panel sought legal advice on the issue of whether the reservoir was "*specified infrastructure*" such that consents could be granted under the NESFW.

86. "*Specified infrastructure*" is defined in the National Policy Statement for Freshwater Management 2020 (**NPSFM**) as any of the following:

> *(a) infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)*

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44 *Northbrook Wanaka Retirement Village*, at [54]–[55].
45 Refer ss.12(2) and (10) of FTA.
46 Refer clauses 37(7) and (8) of Schedule 6 of the FTA.

(b) regionally significant infrastructure identified as such in a regional policy statement or regional plan

(c) any public flood control, flood protection, or drainage works carried out…

4.1 Overview of legal advice

87. The Applicant provided a legal opinion on this issue with its AEE which had been prepared for its application for referral.[47] This opinion concluded that provided the Application included consent conditions requiring the supply of emergency and firefighting water to Ōhaeawai:

(a) the reservoir would constitute a service provided by a 'lifeline utility;

(b) the infrastructure which stores, supplies and distributes the water would come within the "*specified infrastructure*" definition in the NPSFM; and

(c) works within a wetland would have a discretionary (rather than prohibited) activity status under regulation 45 of the NESFW.

88. As the Applicant's legal opinion had been prepared for the referral process, we sought further information from the Applicant regarding:[48]

(a) where in the proposed conditions supply to Ōhaeawai was required;

(b) whether it had consulted with the relevant civil defence authorities about the need for the reservoir to operate as a lifeline utility; and

(c) the impacts of the decision (if any) of the expert panel in the *Kōpū Marine Precinct* application regarding the meaning of "*specified infrastructure.*"

89. In response the Applicant provided a legal opinion from Graeme Mathias of Thomson Wilson which expressed the view that:[49]

(a) the Project involves a lifeline utility because:

(i) a pipeline will be laid through Ōhaeawai to provide an emergency service for firefighting services and could be treated for drinking water if necessary;

(ii) the Applicant has committed to providing this water and although no condition is proposed to secure the commitment, the Applicant would accept one if the Panel considered it necessary;

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47 AEE, Appendix N.
48 As part of the First Information Request issued on 22 March 2022.
49 Applicant's 8 April 2022 Response to First Information Request, Attachment A Letter from Thomson Wilson Law.

(b) the Project is also regionally significant infrastructure because:

(i) the *Matawii* decision regarded the (smaller) dam in that case as coming within the regionally significant infrastructure list set out in Appendix 3 of the RPS item (1)(g), "*regional and district council water storage and trunk lines;*"

(ii) even if the Project is not regarded as council water storage and trunk lines, it can still be regarded as regionally significant infrastructure for similar reasons to that set out in the *Kōpū Marine Precinct* decision, and in particular:

1. Appendix 3 is not exhaustive - it expressly states that "*Regionally significant infrastructure includes...*;"

2. the objectives and policy framework also expressly contemplate new regionally significant infrastructure being developed; and

3. there is sufficient evidence before the Panel to conclude that the Project is of regional significance.

90. A contrary view was expressed in the submission of Forest & Bird, who regarded the Project as a prohibited activity under regulation 53 of the NESFW. This was on the basis that the Project did not involve regionally significant infrastructure since the primary purpose of the infrastructure was water storage for irrigation rather than the provision of water for lifeline utility purposes.[50]

91. Given the different views expressed and the potential consequences of this issue for the status of this Application (prohibited as opposed to non-complying), the Panel sought legal advice from Mr Derek Nolan QC. Mr Nolan's advice to us was that:[51]

(a) as the Project involved earth working within natural wetlands it would be a prohibited activity unless it came within the "*specified infrastructure*" exemption;

(b) there was no requirement in the NESFW that constructing "*specified infrastructure*" is the sole, primary or dominant purpose;

(c) the Project was infrastructure which would deliver a service operated by a lifeline utility (the Applicant being an entity which supplies or distributes water to inhabitants of a city, district or

[50] Forest & Bird submission, 6 April 2022, at [10]-[16].
[51] Legal opinion of Derek Nolan QC, Otawere water storage reservoir – specified infrastructure, 11 April 2022.

other place for emergency/firefighting purposes), provided conditions were imposed requiring that;

(d) in terms of "*regionally significant infrastructure*":

(i) the Project did not fall within Appendix 3(1)(g) as the reservoir will be operated by a trust rather than a regional or district council - the *Matawii* decision was distinguishable on that point as the proposal in that case involved municipal supply of water;

(ii) the Project could however be regarded as "*regionally significant infrastructure*" since:

1. the term "*regionally significant infrastructure*" was defined inclusively in both the RPS and the PRP;

2. those definitions include a wide range of privately-owned infrastructure;

3. the scale and size of the Project would provide the level of public benefit necessary to qualify as regionally significant;

4. the economic analysis provided with the application supported a finding of regional significance; and

5. the panel in the *Matawii* decision found the reservoir in that case to be regionally significant. The Otawere reservoir is larger and considered to be the cornerstone of the Mid-North reservoir scheme of which *Matawii* forms part.

92. A copy of Mr Nolan's advice was provided to the Applicant and any response was invited as part of the Applicant's response to the Second Information Request.

93. Shortly after receiving Mr Nolan's opinion, a jurisdictional determination of the expert consenting panel for the proposed *Rangitāne* Maritime Development in Northland was issued. This determination found that consents could not be issued for the public boat launching facility, because the proposal did not amount to specified infrastructure and the exemption from prohibited activity status in regulation 45(2) of the NESFW was not engaged.[52]

94. The Panel provided a copy of the *Rangitāne* decision to both the Applicant and Mr Nolan and invited further comment.

[52] Record of Jurisdictional Determination of the Expert Consenting Panel for the Rangitāne Maritime Development under clause 2(4)(a)(ii) of Schedule 6, 13 April 2022, at [38].

95. The Applicant provided a further legal opinion as part of its response to the Second Information Request which:[53]

(a) stated that the pipeline network to Ōhaeawai will be a permitted activity;

(b) offered some conditions to provide certainty that the water pipeline network and connection to Ōhaeawai will be implemented;

(c) concurred with Mr Nolan that the Project falls within both the lifeline utility and regionally significant infrastructure exceptions, but indicated it primarily relied on the lifeline utility exception; and

(d) indicated that the Project also had social and community benefits that are significant and regionally important.

96. Mr Nolan provided an addendum to his opinion which considered the *Rangitāne* decision as well as the Applicant's response to his initial opinion. In summary, Mr Nolan confirmed that:[54]

(a) Nothing he had been provided with had given him cause to revisit his earlier opinion;

(b) the *Rangitāne* decision did not change his opinion that the Project constituted "*specified infrastructure*":

(i) the *Rangitāne* decision did not involve a lifeline utility purpose;

(ii) the assessment of regional significance is fact dependent and the *Rangitāne* proposal may not have met that threshold on its own. This contrasted with the present Application which has been assessed as being regionally significant in its own right;

(iii) he did not agree with the interpretative approach taken to "*regionally significant infrastructure*" in *Rangitāne* because:

1. the NESFW does not require that infrastructure be specifically identified (by class or name) as "*regionally significant infrastructure*" in a policy statement or plan before it can be recognised as such;

2. a requirement that such infrastructure be identified can involve an open-ended class or definition such as appears in the RPS;

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[53] Applicant Response to Second Information Request – Attachment 5 Legal Response to matters raised, 26 April 2022, at [10]-[24].

[54] Otawere water storage reservoir – specified infrastructure – addendum to earlier opinion, 27 April 2022.

3. policy 5.3.1 in the RPS cannot be used to 'read down' that definition;

4. it must be possible for "*regionally significant infrastructure*" not included in the list to still be recognised as such – provided that significance had been established on the evidence; and

(iv) the conditions proposed by the Applicant could be amended to more clearly require the lifeline utility purpose to be achieved.

97. A copy of Mr Nolan's addendum was provided to the Applicant. However, no further comment was sought given the conclusion was largely confirmatory of the Applicant's position.

4.2 Evaluation and findings

98. Having considered all the above material, the Panel is satisfied that the Project involves "*specified infrastructure*", such that consent is able to be applied for as a discretionary activity under the NESFW. This is because:

(a) "*specified infrastructure*" includes "*infrastructure that delivers a service operated by a lifeline utility*";[55]

(b) a lifeline utility includes "a*n entity that supplies or distributes water to the inhabitants of a city, district or other plac*e";[56]

(c) the Project involves the supply of emergency and firefighting water supply to Ōhaeawai;

(d) as Mr Nolan QC and the Applicant's legal advisors' note, there is no requirement that the lifeline utility be the sole, primary or dominant purpose in order for the Project to be regarded as "*specified infrastructure*" – it is sufficient that it is 'a*'* purpose; and

(e) the conditions we have imposed will ensure that the lifeline utility purpose is required to be implemented as part of the consent.

99. Further, and while it is not strictly necessary for us to determine it,[57] we also consider that the Project constitutes "*regionally significant infrastructure*", given:

(a) the inclusive nature of the "*regionally significant infrastructure*" definition in the PRP;

(b) the clear policy recognition in the PRP that additional "*regionally significant infrastructure*" may be developed;

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55 Clause 3.21 of the NPSFM, which applies to the NESFW by virtue of Regulation 3 of the NESFW.
56 The NPSFM applies the definition of 'lifeline utility' as set out in s.4 (and Parts 1 and 2 of Schedule 1) of the Civil Defence Emergency Management Act 2002.
57 Given the Applicant does not seek to rely on the regionally significant infrastructure exemption.

(c) the finding of the expert panel in the *Matawii* decision that the *Matawii* dam was "*regionally significant infrastructure*";

(d) the significantly greater size and scale of the Otawere reservoir (as opposed to *Matawii*); and

(e) the evidence before us that the Otawere reservoir will in fact be "*regionally significant infrastructure*".

100. Finally, we note that while the Application falls for consideration as a discretionary activity under the NESFW, overall, the Application has a non-complying activity status, given the bundling approach we have applied (as explained earlier).

PART 5: CULTURAL CONSIDERATIONS

5.1 Statutory framework

101. Section 6 of the FTA requires all persons performing functions and exercising powers to act in a manner that is consistent with the principles of the Treaty and Treaty settlements.

102. Every consent application is required to include:[58]

(a) information about any Treaty settlements that apply in the project area (clause 9(i));

(b) an assessment against any relevant provisions of a planning document recognised by a relevant iwi authority and lodged with a local authority (clauses 9(1)(h) and 9(2)(g));

(c) a CIA or a statement of reasons by the relevant iwi authority for not providing an assessment (clause 9(5));

(d) an assessment against any resource management matters set out in a planning document prepared by a customary marine title group (clause 9(6)(b));

(e) an assessment of any effects of the activity on the exercise of a protected customary right (clause 10(1)(h));

(f) any cultural effects on the people in the neighbourhood and if relevant the wider community (clause 11(a)); and

(g) an assessment of the activity's effect on natural and physical resources having cultural value for present or future generations (clause 11(d)).

103. We assess each of these requirements in turn, starting with the principles of the Treaty in the next section.

[58] Clause references are to clauses in Schedule 6 of the FTA.

5.2 Assessment of cultural considerations

Principles of the Treaty

104. We are mindful that there is no set or statutorily defined list of Treaty principles that are applicable to applications under the FTA. However, and as noted in the *Matawii* decision:

> *[109] While the FTCA contains no list of principles of the Treaty of Waitangi, case law indicates that these may include principles of active protection, good faith consultation and communication, and a spirit of partnership…*

105. The AEE did not include an assessment of the Project's consistency with these or any other principles of the Treaty. Accordingly, and as noted in Part 2, we requested such an assessment in our Second Information Request.

106. In its response the Applicant referred us to various sections of its AEE and stated that it had:[59]

- *Engaged reasonably and in good faith with Ngāpuhi and relevant hapū;*
- *Sought to understand if the Project will impact on any historic heritage relating to Māori and the relationship of Māori with the Project site; and*
- *Sought to facilitate opportunities for Māori landowners to develop their land through access to sufficient and reliable water.*

107. A CIA was provided by Taiāmai ki te Takutai Moana (**Taiāmai**),[60] the representative organisation for RMA purposes of the hapū that tātai (whakapapa) to the whenua.[61] While the CIA did not directly assess the Project's consistency with the Treaty principles, it stated that:[62]

> *…Freshwater is a precious and limited resource and a taonga of huge significance to all New Zealanders including tangata whenua. Te Tiriti o Waitangi/the Treaty of Waitangi is the underlying foundation of the Iwi/Hapū Crown relationship with regard to freshwater resources. Addressing tangata whenua values and interests across all of the well beings – Te Hauora o te Taiao (the health of the environment), Te Hauora o te Wai (the health of the waterbody) and Te Hauora o te Tangata (the health of the people) – including the involvement of Hapū and Iwi in the overall allocation, protection and management of freshwater, is key to giving effect to Te Tiriti o Waitangi/the Treaty of Waitangi.*

108. The CIA also contained a review of the Applicant's technical reports for ecology, landscape, geotechnical, hydrology, and archaeology and included a range of recommendations to mitigate impacts and provide for

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59 AEE, sections 3.8 (Existing environment: Māori cultural values), 5.5.4 (Effects on natural and physical resources having other special values: cultural and spiritual values), 6.3 (Consultation: iwi and hapū) and 7.3.1 (Section 19 of the Act: economic benefits and costs).

60 AEE, Appendix M.

61 https://www.tkm.govt.nz/iwi/ngapuhi/#.

62 CIA, p.10.

the ongoing involvement of hapū in the Project. The CIA was supported by a letter from the iwi authority Te Rūnanga-Ā-Iwi-O-Ngāpuhi.[63]

109. Taiāmai also provided a letter of conditional support for the Application "*as long as the environmental/water quality actions are monitored and implemented as resource conditions to this application*."[64]

110. The AEE confirmed that the Applicant had attempted to address the relevant CIA recommendations through the conditions of consent but noted that there were other recommendations (such as ongoing engagement) which, in its opinion, went beyond the scope of consent conditions.

111. Taiāmai subsequently made a submission in response to the Panel's invitation to comment which:

(a) emphasised that the Site is a site of significance to local Māori;

(b) noted issues that arose in the separate water take consent processes for the Waitangi River and Waiaruheiti Stream;[65]

(c) stated that Taiāmai considered the soil is unstable for the amount of water being planned within the reservoir;

(d) expressed concerns about a lack of ongoing engagement with local hapū and iwi given the Applicant had stopped the Mid North advisory group which was where the majority of hapū were receiving information about the Project; and

(e) indicated that Taiāmai considered the offsetting plans and area needed to include community benefits that supported localised developments within the Waitangi Catchment area.

112. As already noted in **Part 2**, the Applicant elected not to provide a response to this (or any of the other comments on its Application).

Evaluation and findings

113. The AEE demonstrates that the Applicant has undertaken early and open engagement with tangata whenua for the Mid-North Reservoir scheme of which this Application is part.

114. The Applicant has expressly recognised that the Site, water bodies and natural features within it are of significant value to local hapū,[66] and has sought to actively protect these values through the conditions it has proposed, which seek to avoid, remedy or mitigate effects on these features. These include sediment and erosion controls, ecological compensation and offsetting, and an accidental discovery protocol, amongst others.

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63 AEE, Appendix Z.
64 AEE, Appendix W Letter of Support from Taiāmai.
65 As noted elsewhere in this decision, addressing issues arising out of these processes are beyond our jurisdiction.
66 AEE, p.26.

115. However, we do not consider the Applicant's proposed conditions go far enough in ensuring that its Project is consistent with the Treaty principle of good faith consultation and communication. The Applicant's conditions provided for tangata whenua input in relation to only one management plan (landscape), and for notification only in the event of an accidental discovery of an archaeological site. In our view, such conditions are inadequate to appropriately provide for the full range of interests that tangata whenua have within the Project. We also disagree with the Applicant that provision cannot be made in the conditions for ongoing engagement. The Treaty principles of good faith consultation and a spirit of partnership do not cease to be applicable once an application has been lodged (or determined).

116. We consider it is important that tangata whenua be given the opportunity to provide input into and participate in the Project, and we have imposed conditions to ensure this can occur. As noted in section 5.3 below this includes input into management plans, provision for cultural monitoring, access to undertake tikanga practices in the event of archaeological discoveries, and opportunities to participate in ecological monitoring/surveys and the CLG.

117. Taking into account the consultation and mitigation proposed by the Applicant and the conditions we have imposed, we find that the Project is consistent with the relevant Treaty principles: in particular the principles of active protection, good faith consultation, and partnership.

Treaty settlements

118. The Section 17 Report prepared by the Ministry for the Environment confirmed that:[67]

(a) Te Rūnanga-Ā-Iwi-O-Ngāpuhi is the sole relevant iwi authority in which the proposed reservoir and its downstream catchment are located;

(b) there are no relevant Treaty settlements or Treaty settlement entities; and

(c) there are no negotiation mandates that have been recognised by the Crown and no current Treaty settlement negotiations.

119. Accordingly, there are no relevant Treaty settlements for the Panel to consider.

Planning document recognised by a relevant iwi authority

120. The *Matawii* decision helpfully explained that a planning document could include both iwi and hapū planning documents, provided they have been recognised by the relevant Iwi Authority:

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[67] Ministry for the Environment, Application 2021.034 Otawere Water Storage Reservoir (Te Tai Tokerau Water Trust), Report Prepared in Accordance with Section 17 Covid-19 (Fast-track Consenting) Act 2020 (**Section 17 Report**).

> *[99] An iwi/hapū management plan is any planning document recognised by an Iwi Authority (the authority that represents an iwi and that is recognised by that iwi as having authority to do so). Iwi/hapū management plans may be formal planning documents similar to council policy documents, or they may be a statement of iwi policies in a less formal and detailed memo or report. Plans may be developed by iwi, hapū or whānau and provide a statement on the position of the tangata whenua on a range of issues so that these can be heard and considered by councils and other stakeholders.*

121. Neither the Section 17 Report, nor the AEE directed our attention to any planning document recognised by Te Rūnanga-Ā-Iwi-O-Ngāpuhi. This is despite Ngāti Rēhia, one of the hapū within Taiāmai ki te Marangai takiwā, having an environmental management plan, lodged with NRC.[68] In our First Information Request we sought further information from the Applicant about the status of this document and about whether there were any other relevant iwi or hapū planning documents requiring consideration.

122. In its response the Applicant agreed that the Ngāti Rēhia plan applied to the Site and stated that it did not consider the proposed reservoir conflicted with the provisions of that plan. No assessment of that plan was however provided at that time. This resulted in the Panel making a further request for such an assessment to be provided.[69]

123. In its response to our Second Information Request the Applicant provided the following assessment:[70]

Ref.	Policy/Method	Comment
Policy 10 (2)	Further development of land resources within the rohe of Ngāti Rēhia should not be at the expense of the ancestral relationship of Ngāti Rēhia with that land, our culture and heritage.	It is understood, based on the CIA, that the proposal will not compromise such relationships subject to appropriate measures to address ecological and landscape effects. The CIA was prepared by Taiāmai ki te Takutai Moana who represent Ngāti Rēhia and other hapū that tātai to the area.
Policy 10 (3)	Further development of land resources within the rohe of Ngāti Rēhia should not be at the expense of the environment.	As per comment above.
Policy 10.6.2	The decline of our biodiversity has to be turned around to become at least no more losses for native species and no more increases in pests.	The proposal seeks to achieve no net loss in indigenous biodiversity associated with the Project site.
Policy 11.1	There is an extremely close relationship between Ngāti	The Trust recognises and respects the significant

[68] https://www.nrc.govt.nz/media/zygjx2wg/Ngāti-Rēhia-hapū-environment-management-plan-2014.pdf.
[69] Paragraph 5 of the Second Information Request.
[70] Noting we have corrected some typographical and reference errors in this table.

Ref.	Policy/Method	Comment
	Rēhia, our culture and our traditions with our ancestral waters. This relationship is protected by legislation.	relationship of local hapū with freshwater bodies flowing through and from the Project site.
Policy 11.7	Declining water quality in many of our waterways is largely caused by development pressure, land-based activities and poor land-use practices. Water quality throughout the rohe must be protected from these impacts.	As described in the AEE, the proposal includes the use of best practice erosion and sediment control measures as well as other measures to remedy or mitigate any adverse effects on downstream water quality (refer Section 9 of the AEE).
Policy 11.9	Fencing of agricultural land from waterways and restoring adequate riparian margins along all waterways of indigenous vegetation are effective methods of reducing impacts on water quality. Artificial straightening or diversion of natural waterways should be avoided, and restoration of natural water courses supported.	The proposal includes waterbody restoration and enhancement measures, including revegetation of riparian margins, through the preparation and implementation of an Ecological Offset and Compensation Implementation Plan (refer Section 9 of the AEE).
Method 13.3.3	TRONR will request that the following [policy] be applied to management and access of wāhi tapu by all relevant agencies… [1] Upon any 'accidental discovery' works are to stop immediately until such time that mana whenua are contacted and appropriate protocols are put in place.	The proposal includes procedures that will be undertaken in the event of an accidental discovery of archaeological sites, including burials, human remains or kōiwi tāngata (refer Section 9 of the AEE).
Policy 13.4.1	Our cultural landscape should be afforded at least as high a priority as other landscape values when considered as part of any process under the Resource Management Act, the Conservation Act or the Local Government Act.	The Landscape and Visual Effects Assessment report (refer Appendix K to the AEE) did not address effects on Māori cultural values. This was appropriately left to the authors of the CIA to address. The CIA assessment contains recommendations relating to restoring/enhancing native vegetation and wetland habitats and softening the built form of the reservoir embankments. The CIA also requests that attention be given to the

Ref.	Policy/Method	Comment
		wider landscape values that will be impacted by development and land use change arising from the availability of irrigation water. It is considered that such an assessment would be speculative and not directly related to the proposal.
Policy 13.4.2	Preparation of landscape assessments for resource consent applications and similar processes should be done in conjunction with Ngāti Rēhia to ensure that the cultural aspects of the landscape are given full recognition alongside other values such as natural character and amenity values.	It is understood that the landscape assessment in the CIA is consistent with this policy because it was prepared by Taiāmai ki te Takutai Moana who represent Ngāti Rēhia and other hapū that tātai to the area.

Evaluation and findings

124. We have reviewed the provisions of the Ngāti Rēhia hapū environmental management plan and are satisfied that the Applicant has identified the most relevant policies and method, and we agree with the Applicant's assessment against those provisions.

125. We note that the Ngāti Rēhia plan also states that both the Treaty and He Whakaputanga – the Declaration of Independence 1835 should be considered as relevant planning documents.[71] While these documents do not fall within the scope of clause 9(2)(g), being documents recognised by an iwi authority and lodged with a local authority, the Panel:

(a) has considered the relevant principles of the Treaty (as noted above); and

(b) acknowledges that Rangatira for Ngāti Rēhia and other hapū and iwi signed He Whakaputanga.[72]

126. In addition, we note there is a strong focus within the Ngāti Rēhia environmental plan on ensuring sustainable management, enabling the continuation of kaitiakitanga, and the involvement of Ngāti Rēhia in consenting and monitoring processes for the development of land resources.

127. We are satisfied that overall the Application is consistent with the relevant provisions of the Ngāti Rēhia plan and that the conditions we have imposed appropriately recognise and provide for the relationship of Ngāti

[71] Ngāti Rēhia Hapū Environmental Management Plan, section 8, p.15.
[72] Ngāti Rēhia Hapū Environmental Management Plan, section 8, p.15, and https://nzhistory.govt.nz/page/he-whakaputanga-declaration-independence-database.

Rēhia with the Site and their kaitiakitanga responsibilities (through references to Taiāmai which we understand represent all the hapū with interests in Waimate).

128. No party drew our attention to any other applicable iwi or hapū management plans requiring consideration.

Cultural impact assessment

129. The Project site lies within the Taiāmai ki te Marangai takiwā of the Ngāpuhi rohe. There are four nearby marae: Tauwhara, Oromāhoe, Parawhenua, and Rāwhitiroa.[73]

130. As already noted, the Applicant provided a CIA prepared by Taiāmai on behalf of the hapū of Waimate, as well as letters of (conditional) support from Taiāmai and from Te Rūnanga-Ā-Iwi-O-Ngāpuhi as the iwi authority (refer Appendices M, W and Z respectively).

131. The CIA describes hapū relationships to the whenua and expresses conditional support for the Project provided environmental/ecological values of the hapū are protected and measures are put in place to ensure the anticipated sustainable outcomes are achieved.[74]

132. In relation to benefits, the CIA states at section 3:

> *Te Tai Ao is a view of hapū as kaitiaki of the health of waterways, soils and land/water interactions, Te Ao Maori that we place value on the type of land-use that the proposed Reservoir, supported by this water take application, will facilitate. Aotearoa and particularly Te Taitokerau have an opportunity to take up new ways of growing food for a world and local market that demands quality, provenance and sustainable production methods. Te Tai Ao is an arm of Primary Industries that aligns these values with the tohu or branding that achieves the highest return.*
>
> *The concept of Te Taiao is at the heart of the vision launched by the Primary Sector Council, to do things better for our communities and our businesses. The Te Taiao Framework and Pathways have been developed with guidance from Matauranga Māori specialists, farmers and growers, sector experts and scientists. Regenerative land-use acts as a buffer to climate change and reverses greenhouse gases by utilizing the soils as a carbon sink. Soil is not just a 'medium' it is a living organism that replenishes itself via healthy sub-soil micro-organism interactions. The Waitangi catchment has some of the finest soils in the world and a high value stream habitat. These taonga need to be cared for in such a way that they are preserved or enhanced for every generation to use. Quality jobs that give a social return require horticultural operations that maximize potential and add value. By working in with others in the sector, a sustainable future is ensured.*

133. The CIA identifies the following potential impacts as arising from the Application:[75]

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[73] Section 17 Report, at [10].
[74] Appendix M, section 3 Introduction.
[75] CIA, sections 20-26.

(a) effects on mahinga kai in the upper catchment and below the proposed water take site of the Waiaruheiti stream;

(b) need to protect soils and high value stream habitat in Waitangi catchment;

(c) impacts on fish passage and eel migration;

(d) impacts on native species including tuna, banded kōkopu, and kiwi;

(e) loss of wetland habitat and streams;

(f) landscape changes resulting from the reservoir and land-use change (intensive horticulture) enabled by the reservoir;

(g) impacts on archaeological sites and the relationship of Taiāmai to the land;

(h) potential for loss of life, flooding and damage to property, roads, infrastructure and the natural environment downstream arising from dam failure; and

(i) construction effects such as noise and dust.

134. The CIA noted that the area is known to hapū as Otawere, which we assume has informed the name for the Project.[76]

135. The CIA included a range of recommendations to address these impacts which are helpfully summarised in section 26 of that document.

136. In our First Information Request we sought confirmation from the Applicant as to whether these recommendations had been addressed in the conditions, and if not the reasons why.

137. In its response to us, the Applicant confirmed it considered the proposed conditions were in general alignment with what had been proposed by the CIA authors.[77] However, no detailed assessment was provided.

138. Taiāmai provided further clarification of its concerns through its submission as noted in the Treaty principles section above.

Evaluation and findings

139. In considering the cultural impacts and potential remedial measures, the Panel is cognisant that:

(a) tangata whenua are best placed to explain their relationship with the whenua, awa and other taonga;[78] and

(b) where the considered, consistent and genuine view of tangata whenua is that a proposal will have a significant adverse impact

[76] CIA, section 20 Otawere MN-02 Water Storage Reservoir, subsection 2.1, p.32.
[77] Applicant response to First Information Request, p.4.
[78] *Aotearoa Water Action Incorporated v Canterbury Regional Council* [2020] NZHC 1625, at [277].

on an area of cultural significance to them, it is not open to a panel to find that it would not.[79]

140. While the CIA notes that some aspects of the Project are likely to have significant effects, Taiāmai has provided conditional support to the Project provided its recommendations are accepted. The CIA includes a comprehensive list of recommendations which appear to be intended to demonstrate how the environmental effects of the Project can be appropriately avoided, remedied or mitigated. We have undertaken a detailed assessment of these recommendations and set out our response to each one in **Appendix 5**.

141. We have accepted many of the recommendations, and these are reflected in the conditions we have imposed. Where recommendations relate to matters other than environmental effects or go beyond what we can legally impose as conditions (for example requests for plans to be approved or certified by Taiāmai, or for separate agreements with the Applicant) we have noted that and sought to address the issue in another way (such as through providing for consultation on management plans). Our purpose in doing so, is to ensure that the conditions are clear, consistent, enforceable and effective at mitigating the environmental effects of the Project.

142. In terms of the matters raised in Taiāmai's submission, most of these matters simply served to reinforce matters already raised in the CIA. There are however two matters requiring comment.

(a) Ongoing consultation: We were concerned to note that there appeared to be some issues with ongoing consultation. As noted in the Treaty principles section above, we consider it is important that ongoing consultation and engagement occurs, and we have imposed conditions providing for that.

(b) Other water take consents: While appreciating Taiāmai's concerns about the processes followed for the two existing water takes consents, these were the subject of separate consent processes, and are not matters that we have jurisdiction to address.

143. In summary, while we have not accepted all of Taiāmai's recommendations, we are satisfied that we have appropriately addressed all of the RMA concerns raised, and that the conditions we have imposed are sufficient to appropriately avoid, remedy or mitigate the relevant cultural and environmental effects of the Project.

144. Further, and because we are cognisant that the law in this area is continuing to evolve,[80] we record that even if it is considered that the conditions we have imposed are not effective in avoiding, remedying or

[79] *Tauranga Environmental Protection Society v Tauranga City Council* [2021] NZRMA 492, at [65].

[80] For example we are aware that the issue of whether tangata whenua or the Panel determine the effectiveness of mitigation measures to reduce impacts on cultural values was recently ventilated during the first High Court appeal of a fast-track decision.

mitigating all relevant cultural effects, we consider that the Project warrants consent on the conditions we have imposed, given the significant benefits the Project will have, the ongoing role it provides for hapū input, and the access it provides to areas currently in private ownership.

Customary marine title

145. The Site is a considerable distance inland from the coastal marine area and there are no customary marine titles which affect the Site.[81] Accordingly, an assessment of planning documents prepared by a customary marine title group under s.85 of MACA is not required.

Protected customary rights

146. Given the Site's location and the absence of any protected customary rights applying to or near the Site, an assessment of the effects of the Project on the exercise of a protected customary right is not required.

Cultural effects on people in neighbourhood / wider community

147. Any relevant cultural effects on people within the area have already been addressed in the CIA. No additional effects were drawn to our attention by the Applicant or by any person providing comment. We therefore rely on our assessment above.

Effects on natural and physical resources with cultural value

148. The CIA identified the natural and physical resources deemed to be of cultural value and the effects the Project would have on them. We have addressed those matters above and rely on that assessment for this criterion.

5.3 Summary of findings and conditions imposed

149. Having closely considered all the above matters, the Panel is satisfied that:

(a) the Project includes all the information required in a consent application under clauses 9, 10 and 11 of Schedule 6;

(b) the Project, with the conditions we have imposed:

(i) is consistent with the relevant principles of the Treaty;

(ii) is consistent with the provisions of the Ngāti Rēhia hapū environmental management plan;

(iii) appropriately recognises and provides for the relationship of tangata whenua with the Site and for kaitiakitanga by:

[81] Estimated as some 15 kms using the maps provided to us.

1. providing for tangata whenua input into management plans and any material changes to those plans;

2. requiring a cultural monitoring plan to set out the recommended monitoring requirements during construction;

3. providing for Taiāmai involvement in the pre-start meeting;

4. requiring Taiāmai to be consulted about methods for the provision of native eel and fish passage;

5. requiring Taiāmai to be supplied with a copy of any ecological monitoring and survey reports;

6. requiring notification to and access for Taiāmai to undertake any necessary tikanga in the event of any accidental archaeological discoveries;

7. requiring Taiāmai to be invited to participate in the CLG; and

(iv) sufficiently mitigates any potential adverse effects on cultural values.

PART 6: EVALUATION OF EFFECTS

150. This section contains our evaluation of the effects of the Project (other than cultural impacts where were addressed in **Part 5** above).

151. The effects of the Application are evaluated in the following sections:

(a) social and economic effects;

(b) hydrology, dam design and dam safety;

(c) aquatic and terrestrial ecology;

(d) construction effects;

(e) effects on existing water users;

(f) landscape, natural character and visual amenity;

(g) heritage; and

(h) other matters.

6.1 Social and economic effects

152. The Applicant notes that:[82]

> *In 2018, Kaikohe had the highest deprivation score in Northland, while Kerikeri South, less than 30 minutes' drive away, had one of the lowest. There are no geographic or land fertility reasons why this should be so. There are, however, infrastructural ones such as water management and availability.*

153. The 'Northland Strategic Irrigation Infrastructure Study'[83] concluded, in part, that strategic water management including its related infrastructure could potentially assist with achieving community aspirations and outcomes. It identified the main economic benefit arising from increased irrigation as being a significant increase in employment opportunities and associated economic and social benefits.

154. The economic assessment provided as part of the AEE predicts that the direct economic benefits of the construction phase of the Project would include:[84]

(a) $24 million of contracted reservoir construction works;

(b) $9 million of work on pipeline infrastructure; and

(c) 108 construction jobs across several local contractors.

155. The assessment also predicts significant derived economic impacts arising from the land use changes (pastoral to horticultural) enabled by the availability of water. These benefits are estimated to include multi-million investments in establishing horticultural production and post-harvest facilities, as well as a significant number of horticultural and post-harvest jobs.

156. The assessment notes that these benefits are particularly important in the wake of the COVID-19 pandemic, which has:[85]

(a) intensified disparities between disadvantaged and better off communities throughout the country; and

(b) resulted in widespread closures of smaller businesses.

Comments received

157. Very few submitters commented directly on the expected economic and social benefits of the Project. Of those that did the main benefit identified was the water security that better availability of water would have for surrounding landowners.[86]

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82 AEE, section 5.2.1.1, p.40.
83 Chris Frost, et al. 18 December 2015. Northland Strategic Irrigation Study. Prepared for Northland Regional Council by Opus, BERL and Aqualinc.
84 AEE Appendix R Economic Assessment, p.7.
85 AEE, Appendix R, p.3.
86 Refer to the submissions by Okokiwi Downs Limited and Greg Moyle, as summarised in Appendix 2 to this decision.

158. One submitter, Forest & Bird, expressed the view that the effects/benefits of future water use could not be considered as part of this Project since the use of the water does not form part of the Project.

Evaluation and findings

159. The Application presents a well referenced and defensible high-level summary of Northland's economic and demographic status. It notes areas of high deprivation, lack of employment and other opportunities, and the mismatch between the potential for primary production in an area with good soils and a (generally) benign climate, and the infrastructure and investment to enable the realisation of that potential.

160. While forecasting of economic and social benefits expected from a development are to some degree speculative, and while the potential future land use changes for the area do not directly form part of the Application, we are satisfied that even if we limit our consideration strictly to the direct benefits, these will be significant for the local area and Northland region.

161. Further, the use of water for firefighting and emergency purposes, does form part of the Application (with conditions being imposed to require this usage) and we are therefore able to, and do, consider the benefits that this use provides to the local area.

162. While we are cognisant that future land use changes and the benefits attaching to those changes, do not form part of the Application before us, we consider in general terms we are able to recognise that some benefits are likely to result from such uses. This is because the purpose of the Mid-North Water Scheme, of which this reservoir is the 'cornerstone' is to:[87]

> • *Support land use change which positively contributes to the health of waterways in Northland;*
>
> • *Create a more reliable water supply that will give landowners greater options to utilise their land; and*
>
> • *Improve community wellbeing.*

163. The Otawere reservoir on its own, is predicted over time to support up to 1,300 hectares of horticultural development.[88] Even if this land use change is only partly achieved, it would still result in significant economic benefits to the area – as has occurred following the construction of other water reservoirs in the area, such as Lake Manuwai.[89]

164. The relatively short construction timeframe and the Applicant's commitment to and readiness to proceed with the Project (as evidenced by the funding available to the Applicant[90] and the well-advanced stage of

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87 AEE, section 1.2, p.2.
88 AEE, section 1.1, p.1.
89 Lake Manuwai, while significantly bigger than Otawere (at some 144 ha in size), is an example of constructed reservoir located a similar distance (15 km) from Kerikeri but to the northwest.
90 AEE, section 5.2.1.1.

the *Matawii* dam),[91] also means that these benefits will start to be realised immediately following the commencement of consent.

165. Accordingly, we are satisfied that the Project will have significant social and economic benefits which align with the (first part of the) purpose of the FTA to "*urgently promote employment to support New Zealand's recovery from the economic and social impacts of COVID-19 and to support the certainty of ongoing investment across New Zealand." Our* assessment of the second part of the purpose, namely "*the sustainable management of natural and physical resources*" is covered in other parts of this decision.

6.2 Hydrology, dam design, and dam safety

Hydrology

166. The Otawere reservoir is proposed to have a storage capacity of 4.1M cubic metres. Based on a peak daily application rate of 3mm and there being 110 days of irrigation in a season, this reservoir will service some 690 ha initially.[92]

167. The water in this reservoir is to be retained by two dams, the higher one is on a minor un-named tributary of the Waitangi River and the other, a saddle dam, is virtually on the catchment divide between the un-named tributary and a tributary of the north flowing Okokako Stream, itself also a tributary of the Waitangi River.

168. Being near the head of the catchment, natural catchment inflows to the reservoir will be relatively small and insufficient to meet the demand.[93] Most of the water supply to the reservoir will be provided by pumping water from the Waiaruheiti Stream, which is a tributary of the Waitangi River and from the Waitangi River itself.[94]

169. The maximum elevation of the water surface in the reservoir is to be RL88.0m and the areal extent of the reservoir, when full, is 81 ha.[95] Simulation of the reservoir level resulting from the available inflows to the reservoir over a 39-year period and the predicted irrigation withdrawals, show lake level fluctuations throughout the range with three occasions when it would be empty. This indicates the adequacy of the water supply and storage volume to meet the predicted irrigation demand. The simulation also shows the frequent periods when the reservoir will be below its maximum capacity.[96]

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91 Which the Panel had the benefit of seeing as part of our site visit.
92 AEE, Appendix H Hydrology Assessment, section 2.3, p.2. This section goes on to note that in future "*an additional pumped high-flow take may be added to the reservoir, enabling an even larger area to be supported*."
93 AEE, section 2.2, p.8 Table 1.
94 Water permit AUT.042560.01.01 authorises the taking of up to 250 L/s from the Waiaruheiti Stream for the purposes of augmenting water levels in the reservoir. Water permit AUT.0430.64.01.01 authorises the taking of up to 500 L/s from the Waitangi River for the same purpose.
95 AEE, Appendix H Hydrology Assessment, section 6, p.16, Table 9.
96 AEE, Appendix H Hydrology Assessment, section 7.1.1, p.17 Figure 17.

170. Three sources of water for storage in the reservoir have been adopted in the hydrological analysis. A high flow abstraction from the un-named tributary (0–172 l/s), a core allocation from the un-named tributary (0–2 l/s), and a high flow pumped abstraction from the Waiaruheiti Stream (0–250 l/s).[97] Although abstraction from the Waitangi River is mentioned in the Application, it has not been included in the hydrological analysis.

171. The AEE indicated that consents for the abstraction of water from the Waiaruheiti Stream and the Waitangi River had already been granted and we requested and received a copy of those consents from the Applicant.[98] Consent AUT.042560.01.02 authorises the taking of up to 250 l/s of water from the Waiaruheiti Stream between 1 May and 31 January provided the flow in the stream is not reduced below 30 l/s by this abstraction. Consent AUT.043064.01.01 authorises the taking of up to 500 l/s of water from the Waitangi River when the river flow is greater than 852 l/s provided the abstraction does not exceed 50% of the flow that is above 852 l/s.

172. Assessment of the natural flows at the points of abstraction has been made using a catchment flow model which relies on known rainfall records, flow records, evapotranspiration records, catchment areas and topography for the area. Satisfactory correlation of the modelled results with measured flows at two sites in the Waitangi River was achieved.

173. At the site of the dam on the un-named stream, where the catchment area is just 164 ha, the catchment flow model predicts a median flow of 25 l/s. The 7-day mean annual low flow (7-day MALF) is predicted to be 5.4 l/s with a maximum flow of 1,529 l/s.

174. Policy H.4.1, Table 27, in the PRP sets the minimum flow to be retained in the stream of 80% of the 7-day MALF, which in this case is 4.4 l/s.

Table 27: Primary minimum flows for rivers

River water quantity management unit	Minimum flow (l/s)
Outstanding rivers	100 percent of the seven-day mean annual low flow
Coastal rivers	90 percent of the seven-day mean annual low flow
Small rivers	80 percent of the seven-day mean annual low flow
Large rivers	80 percent of the seven-day mean annual low flow

175. Policy H.4.3, Table 30, of the PRP limits abstractions when the stream flow is below the median of 25 l/s to 40% of the 7-day MALF, which is 2.2 l/s provided also that the minimum flow is maintained.

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97 AEE, Appendix H Hydrology Assessment, section 2.3, p.2 Table 1.

98 Copies of the consents were attached to the Applicant's 26 April 2022 response letter to our Second Information Request, as Attachments 3b and 3a respectively.

Table30: Allocation limits for rivers

River water quantity management unit	Allocation limit (m^3/day)
Outstanding rivers	10 percent of the seven-day mean annual low flow
Coastal rivers	30 percent of the seven-day mean annual low flow
Small rivers	40 percent of the seven-day mean annual low flow
Large rivers	50 percent of the seven-day mean annual low flow

176. Abstraction of water for storage when natural flows in the un-named stream are below the median of 25 l/s are referred to in the Application as a core allocation. Policy H.4.3 then requires that only up to 2.2 l/s may be taken for storage in the reservoir and that the minimum flow of 4.4 l/s, or the natural flow if it is less, must be left in the stream.

177. The conditions as originally proposed by the Applicant in the AEE appeared to require the natural flow to be passed downstream when it was less than 25 l/s (their condition 98) and there did not seem to be any condition that would allow the taking of the core allocation. At our request, the Applicant responded to this issue by amending its proposed condition 97 and inserting a new condition 97B that inter alia purported to authorise the taking of 2 l/s from the un-named stream between 1 April and 31 October when catchment flows in that stream were 25 l/s or less. Their condition 98 remained unaltered and still required that upstream catchment flows in the un-named stream be left unaltered when those flows were 25 l/s or less. We found these conditions to be contradictory and confusing.

178. The Applicant provided a further refinement of these conditions on 13 May 2022.

Comments received

179. A comment from NRC queried whether the hydrological analysis was consistent with the values provided by NRC and whether it was possible for the hydrological model to be calibrated using the long-term recorder site at the bottom of the Waitangi River.[99] NRC did not however provide any reasons for its query and the Applicant elected not to respond to comments received by the Panel, so it is not possible for the Panel to form any view on those matters.

180. As noted earlier (in **Part 5** above), Taiāmai also provided comments on the hydrological report and sought provision for a peer review of that report.

Evaluation and findings

181. We are satisfied that the Hydrological Assessment is adequate for estimating the availability of water for the project and for assessing the impact of the project on the un-named stream. Resource consents for the abstraction of water from the Waiaruheiti Stream and the Waitangi River

[99] A similar comment was also included in the NRC's comments on conditions.

have been previously granted and are not under consideration in this Application.

182. We have not received any information that the Hydrological Assessment is inadequate such that a peer review is required. The assessment follows the usual methodology for estimating flows from a catchment. The catchment of the un-named stream at the high dam site is small and contributes only a modest amount of water to the reservoir. Resource consents for abstraction of water from the Waiaruheiti Stream and the Waitangi River have been granted already. We are satisfied the Hydrological Assessment is fit for purpose and we do not require there to be a peer review.

183. In terms of the wording of the proposed water take conditions we are mindful that:

(a) Policy H.4.1 requires a minimum flow of 4.4 l/s to be retained in the un-named tributary. If the natural flow is less than 4.4 l/s, then no water may be taken; and

(b) Policy H.4.3 limits abstraction to 2.2 l/s when the streamflow is less than 25 l/s provided also that the minimum flow is maintained.

184. We redrafted the conditions provided by the Applicant to reflect the intention of these policies more clearly, and to describe the methodology for estimating the natural flow in the un-named tributary at the main dam site.

185. With the conditions we have imposed we are satisfied that hydrological effects will be appropriately addressed.

Dam design

186. The proposed reservoir includes two earth dams each with a core zoned for its impermeability. Each dam has internal drainage systems (chimney and blanket drains and if required abutment drains), upstream and downstream batter slopes of 1(V):3(H), riprap on the upstream face, a crest width of 5m and a crest elevation of RL 89.5m with a full reservoir level of RL 88.0m.[100]

187. The main dam located on the un-named stream is the highest at 16.5m above existing ground level with a crest length of approximately 300m and the embankment is to contain a volume of 128,000m^3 above the existing ground level. Up to 12m of excavation for the foundations is proposed, producing 220,000m^3 of excavated material. Embankment construction below existing ground level is estimated to be a further 135,000m^3.

188. The saddle dam is to be 10.7m high above existing ground level with a crest length of approximately 480m. It contains 63,000m^3 in the embankment above existing ground level and a further 84,000m^3 below

[100] AEE, Appendix B1 Preliminary Dam Design Assessment, pp.3-4.

existing ground level. Excavation at the Site of up to 9m produces 116,000m^3 of excavated material.

189. A 35m long spillway is incorporated into the saddle dam at the eastern end. It is a concrete ogee weir with a sill at RL88.0m, the full supply level of the reservoir. The spillway below the weir is to comprise reinforced grass.

190. Dam design is preliminary. It is in some respects indicative only with detailed design still to be undertaken and dependent on more detailed site investigations. Some aspects will depend on the conditions experienced when the site is excavated. Provisional curtain grouting beneath the dams to control foundation seepage is shown and wells to control gas pressure beneath the dams may be needed.

191. A low level 1.8m concrete culvert is to be incorporated into the main dam to take the diverted flow during construction, to provide for the residual flow and to provide for emergency dewatering of the reservoir. It may also include up to two 300mm pressurised pipes for irrigation water supply. Alternatively, irrigation supply may use a floating pumped outlet. A control gate is planned on the inlet to the low-level culvert and a pipe slung inside the culvert is to allow the passage of low flows.[101]

192. Particular care will be required to ensure the low-level culvert does not present any leakage path.

Foundations

193. The geology of the site is complex. An emplacement fault runs through the locations of both dams and along the left or east side of the reservoir. It is over laid by alluvial and landslide material and is said to be inactive. It is a geologic structure that is described as a contact surface with mixed origins.[102] It is not regarded as a possible fault source.

194. At the main dam site, the alluvial material is to be excavated and the foundation material is expected to be low permeability clay-rich soils. Once exposed any defects will be corrected by ground improvement, dental treatment or grouting.[103]

195. At the saddle dam site, unsuitable alluvial material will be excavated to expose low permeability foundation material and local defects are to be corrected.[104]

196. There has been significant investigation of ground conditions at the dam sites and in the reservoir. Seven machine boreholes have been drilled, 49 test pits dug, 31 cone penetrometer tests and three hand augered boreholes have allowed soil properties to be evaluated and foundation

[101] AEE, Appendix B1 Preliminary Dam Design Assessment, section 7.2.3.
[102] AEE, Appendix B1 Preliminary Dam Design Assessment, Geotechnical Interpretative Report, section 5.1.
[103] AEE, Appendix B1 Preliminary Dam Design Assessment, section 7.3.2.
[104] AEE, Appendix B1 Preliminary Dam Design Assessment, section 7.4.2.

competence to be assessed. Once exposed any foundation defects are to be remedied.[105]

197. Existing ground slopes within and around the reservoir have been examined to detect any land instability, either existing or due to reservoir operations or construction. A potential area of instability occurs upstream of the left (east) abutment of the main dam and particular attention is to be given to this area in detailed design and during construction. Some remedial and strengthening work will be required.

Earthquakes

198. The site is relatively inactive seismically. There are no known fault sources in the vicinity of the site. Shaking may be experienced from earthquakes some distance away. The closest active fault is a possible extension of the Kerepehi Fault some 200 km away in the Hauraki.[106]

199. Nevertheless, for the design of the dams, accelerations from earthquakes need to be assessed. The operating basis earthquake with an annual exceedance probability (**AEP**) of 1:150 is estimated to have a peak ground acceleration (**PGA**) of 0.07g. The safety evaluation earthquake with an AEP of 1:10,000 has a PGA of 0.21g and the credible maximum earthquake (**CME**) has a PGA of 0.23g.

200. The CME has been adopted for analysing the response of the dams to earthquake loads.

Comments received

201. The only comment received regarding the matters addressed in this section came from Taiāmai, who expressed concern about the instability of the soil for the amount of water being planned.[107]

Evaluation and findings

202. We are satisfied that the appropriate investigations, design assumptions and design have been undertaken/applied for this preliminary stage of the Project. These aspects have also been subject to peer review.[108]

203. The results of further site investigations and information uncovered during construction will be required to be addressed through detailed design. Because of the iterative nature of the Project timely independent expert reviews will also be needed. We have provided for these matters in the conditions we have imposed.

Dam safety

204. Both dams required for the reservoir are high potential impact classified (**PIC**) dams under the NZ SOLD Guidelines.

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[105] AEE, Appendix B1 Preliminary Dam Design Assessment, Geotechnical Interpretative Report, p.4.
[106] AEE, Appendix B1 Preliminary Dam Design Assessment, section 6.3. It is noted that the report mistakenly refers to the name of the fault as the 'Kerehepu Fault'.
[107] We note this in our summary of submissions attached as Appendix 3.
[108] AEE, Appendix Y Peer Review of Preliminary Design.

205. Assessment of the flooding extent in the event of an uncontrolled discharge from the reservoir due to a failure of either dam has shown it would cause major damage to residential houses and critical or major infrastructure, would lead to between 11 and 100 people being put at risk and could cause the potential loss of life of between 2 and 10 people.[109]

206. The probability of such an event occurring is very low but is relevant for the design and operation of the dams. Conservative design criteria result from the high potential impact classification.

207. Design flood flows adopted are for normal service 1:100 AEP of 20m^3/s and for the extreme flood event a probable maximum flood (**PMF**) of 81.4m^3/s.[110] Freeboard in the reservoir together with the flow capacity of the weir spillway permits passage of the PMF without any overtopping of the dams.

208. During flood events all streams will be in spate and below the confluence of the un-named tributary the Okokako stream flood flows will not be increased by the discharge from the reservoir. Some erosion protection of the un-named stream below the spillway may be needed.[111]

209. While the main dam is being constructed, flows in the un-named tributary are to be controlled by an upstream coffer dam, a diversion channel and the low-level culvert through the main dam. These facilities are designed to pass the 1:50 AEP flood in accordance with the requirements for a high PIC dam.[112]

210. Piping, overtopping, rainy day and sunny day dam failure models have been analysed and the downstream flooding extent determined. Some 11 houses would be damaged or destroyed and two state highway bridges would be damaged or destroyed.[113]

211. Design, construction and operation of the dams even under these severe flood and earthquake events is expected to avoid uncontrolled release of the water in the reservoir but it remains prudent to have an Emergency Action Plan (**EAP**) and indeed such a plan is required by the NZSOLD Guidelines.

212. A draft EAP prepared by the Applicant requires Te Tai Tokerau Water Trust, the owner of the dams, to be responsible for the notification of an emergency and the implementation of the EAP.

213. The conditions proposed by the Applicant require independent expert reviews of the dam design and construction at milestone stages, an EAP during construction, an EAP for when the dams are operational and a dam safety management system for monitoring and maintaining the dams. Adherence to the NZSOLD Dam Safety Guidelines is also required.

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[109] AEE, Appendix G1 Hydrology and Hydraulics Assessment, p.2.
[110] AEE, Appendix G1 Hydrology and Hydraulics Assessment, sections 5.4 and 5.5.
[111] AEE, Appendix G1 Hydrology and Hydraulics Assessment, section 5.6.
[112] AEE, Appendix G1 Hydrology and Hydraulics Assessment, section 7.2.1.
[113] AEE, Appendix G1 Hydrology and Hydraulics Assessment, Appendix B Damage Level Assessment, section 2.

Comments received

214. Comments were invited initially from those adjoining the Site and secondly from those properties that would receive flood water if there was a failure of the dam(s). Nine submissions, all relating to downstream flooding in the event of a dam failure, were received:

(a) Phillippa Atkinson asked for assurance of compensation if damage was caused by a dam failure;

(b) Roger Atkinson on behalf of the RF Atkinson Family Trust sought consultation;

(c) Jane and Mark Wagstaff, requested that the Applicant carry insurance for their protection in the event of a dam breach;

(d) Alexander Hansen from Roseburn Farms Ltd asked to be kept informed of progress to reduce risk or possible damage;

(e) Wendy Atkinson sought assurance of compensation if her property was affected, consultation by the Applicant and no change to existing access to the water;

(f) Edward Court said that if the Project did not affect the Waitangi River, then it would be ok;

(g) Allision Atkinson, asked for the same relief as Wendy Atkinson;

(h) Bruce Thompson from Puketona Properties expressed concern about being exposed to flooding and wanted no disruption to TOP Energy's operations; and

(i) Raewyn Gordon for Pukeawa Trust requested adequate warning of any dam breach and the control of sediment. She supported a well-managed water storage Project.

215. The submission from Taiāmai also recommended compliance with the NZ SOLD guidelines.

Evaluation and findings

216. We specifically note that under the NZSOLD Guidelines both dams are classified High PIC structures. This means that the design, construction and operation of the dams is required to meet the highest standards. In particular, the dams are required to withstand the maximum credible earthquake and to safely pass the probable maximum flood. The owners of the dams must operate a dam safety management system and implement an emergency action plan that applies during construction and when operating the dams.

217. The Site is in a low seismic area with no known faults. The nearest fault structure is some 200 km distant. Volcanic activity in the area is ancient and now dormant.

218. The locations of the dams are near or at the head of the catchments they intersect and so will have only small catchments to generate flood flows. Spillway capacity can cope with the probable maximum flood without any risk of overtopping. Flood flows downstream will not be increased by the reservoir and some lessening of the natural flood flows will be provided by attenuation in the reservoir.

219. We have imposed requirements that during design and construction of the dams, independent expert reviews are conducted at milestone stages, an EAP is operative at all stages and that a dam safety and management system is followed when the reservoir is commissioned. While there may be some overlap with other regulatory regimes (such as the Building Act 2004 and Health and Safety requirements), we are satisfied for the reasons set out in *Eyre v Canterbury Regional Council*[114] that such conditions are permissible to address RMA requirements.

220. Many of the comments received referred to a need for consultation between the Applicant, contractor and residents of the area. We agree and a CLG is to be required.

221. We are satisfied that the highest and appropriate safeguards are imposed and that any residual risk to downstream properties is so small as to not constitute an environmental effect that needs to be considered further.

6.3 Aquatic and terrestrial ecology

222. The preliminary assessment of ecological values and effects report (Appendix I to the AEE)[115] identifies and summarises the significant ecological characteristics of the Site. It notes that there are no mapped areas of ecological significance within the Site, but that it is proximate to a number of protected natural areas.

223. The Applicant provides a summary of the methods used to assess the ecological values (aquatic and terrestrial) of the Site, and the anticipated effects of this large-scale Project. The assessment relies upon a combination of desk top studies and field work, utilising modelling tools and techniques that appear to align with current good practice.

224. The Site is an operational livestock farm, a heavily modified landscape comprised mostly of pasture. There are however elements of the environment that require consideration, notably stream habitat; wetland areas; a remnant of native forest; and some exotic vegetation.

225. The stream ecological valuation[116] undertaken by the Applicant assessed the freshwater ecology values as low, noting particularly the paucity of invertebrate communities. It did however identify the presence of long-fin

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[114] *Eyre v Canterbury Regional Council* [2016] NZEnvC 178, at [50]-[54].
[115] Otawere Water Storage Reservoir: Preliminary Assessment of Ecological Values and Effects, PuhoiStour, 7 December 2020.
[116] PuhoiStour 2020 s.4.2.

eel, an 'at risk - declining' native species, along with native banded kōkopu and short-fin eels.[117]

226. The presence of long-fin eel triggers criteria in the RPS that classify the stream channels as 'significant habitats of indigenous fauna'.

227. The Applicant proposes mitigation including careful management of sediment during the construction phase, and a consent condition requiring a Freshwater Fauna Salvage and Relocation Plan (**FFSRP**). The Applicant also proposes to provide for both upstream and downstream fish passage for eels as part of the reservoir design, construction and operation.[118]

228. The ecological report notes that some inundation of streams is inevitable if the proposed reservoir is constructed and recommends offsetting adverse effects elsewhere in the same or nearby catchments, with the associated objective of achieving (at least) a 'no nett loss' of ecological function, and additionality in biodiversity in perpetuity.

229. The Site includes 4.05 ha of indigenous dominated (albeit highly degraded) wetland, and other non-contiguous wetlands with a total area of 0.31 ha. These areas meet the threshold to be deemed 'significant; under the RPS.

230. The ecological value of the wetlands ranges from moderate to very high, the latter due to the inclusion of gum land wetlands which are classified nationally as a critically endangered ecosystem.[119]

231. As noted in the ecological report, the drainage of natural wetlands, which would be required under this Application, is a prohibited activity under NESFW unless one of the exemptions applies. The "*specified infrastructure*" exemption applies to this Application for the reasons set out in **Part 4** of this decision.

232. The ecological report identified potential roosting and foraging habitat for long-tailed bats on the Site, that will be removed in the construction of the reservoir.[120] These bats are classified as 'Threatened - Nationally Critical' and deemed to have very high ecological value. Given the small size and fragmented nature of such habitat, it is considered unlikely that short-tailed bats would be present.

233. An acoustic survey[121] did not record the presence of any bats but given their high value the Applicant proposes to protect against potential harm during vegetation removal by way of a Vegetation Removal Protocol, and to mitigate for loss of habitat as part of the proposed ecological offset and compensation plan, which will be incorporated into the conditions of consent.

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[117] AEE, Appendix I, p.20.
[118] AEE s.2.4.4.
[119] PuhoiStour 2020 S6.1.
[120] PuhoiStour 2020 s.6.2.
[121] PuhoiStour s.6.2.2.

234. A similar approach is proposed to manage potential adverse effects on herpetofauna and avifauna. The ecological report notes that the Applicant proposes conditions requiring the preparation of appropriate management plans and protocols.[122]

235. The Applicant acknowledges that some permanent loss of stream sections and areas of wetland is an inevitable consequence of the proposed reservoir.[123] It is proposed that effects from the Project that cannot be avoided, remedied or mitigated should be managed by way of offsetting.

236. The stream sections are characterised for the most part as modified, straightened and deepened channels. Due to a range of historic and contemporary factors they are assessed as having low ecological values.[124] The Site visit we undertook supported this view. The permanent streams do however provide habitat for long-fin eel, an at-risk species, and other valued native species including banded kōkopu and short-fin eel.[125]

237. The wetland areas are generally degraded due to the combined effects of drainage, stock access and the introduction of exotic weed and pest species. Nevertheless, the size and composition of some remnants are such that they do have high or very high ecological value and are deemed significant under both the RPS and PRP.[126]

238. The Applicant proposes an offsetting and compensation strategy guided by a number of principles, including: no net loss, preferably nett gain of ecological function and values; additionality; permanence; ecological equivalence; stakeholder participation; science and traditional knowledge.[127]

239. The Applicant proposes the following:

    (a) plant 1.4 ha of current farmland to create secondary tōtara forest (in the medium term) as an offset for the inundation of 0.17 ha of forest within the reservoir footprint;

    (b) enhance and restore approximately 6.5 ha of wetland habitat, as well as vegetated buffers at two locations near the Site to offset the inundation of 4.5 ha of wetland in the reservoir footprint. The total area of wetland offsets and associated buffer will be approximately 14.4 ha;

    (c) enhance, primarily through riparian planting, approximately 15 km of stream channel to offset the inundation of approximately 7.5 km of stream within the reservoir footprint.

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[122] PuhoiStour 2020 s.7.
[123] Otawere Water Storage Reservoir – Environmental Offset Strategy, 3 November 2021, PuhoiStour and Morpheum Environmental.
[124] AEE part 1, 3.5.1.
[125] Ibid.
[126] AEE3.5.2
[127] PuhoiStour and Morpheum p.16.

Comments received

240. DOC expressed concern at a perceived lack of information in the Application, which in its view inhibited a clear understanding of the effects of the Project and whether those effects have been adequately addressed.

241. DOC considered there was uncertainty regarding what species of fauna might be affected; a lack of detailed management plans; and a lack of detail regarding legal mechanisms to ensure biodiversity offset measures are protected in perpetuity.

242. DOC also questioned whether the Project can be considered "*specified infrastructure*" so as to not be captured by the provisions of the NESFW.

243. Forest & Bird also raised the issue of NESFW criteria for "*specified infrastructure*". They also made suggestions as to how conditions might be imposed to address the loss of indigenous vegetation and habitat values, fish passage, and relocation of any reptiles found on the Site.

244. Taiāmai sought more environmental benefits from the Project, and environmental restoration that provided benefits and engagement opportunities for hapū and the wider community.

245. Allison Atkinson expressed a non-specific concern about the potential for environmental degradation resulting from the Project.

Evaluation and findings

246. The Panel considers it has sufficient to make a decision on the potential ecological effects of the Project, as:

(a) the Applicant's ecological report by PuhoiStour provided an assessment of affected ecology, contained a range of recommendations, and indicated that if those recommendations were adopted, then effects on ecology could be mitigated, offset and compensated for;[128]

(b) the peer review of the ecology report by NZ Environmental, concluded that the amount of survey effort and range of survey types was appropriate given the scale of the project and types of effects anticipated, and that effects could be addressed through conditions, management plans and monitoring;[129]

(c) PuhoiStour confirmed that the changes to the CEMP borrow and disposal area plans in November 2021 did not affect their conclusions;[130] and

[128] AEE, Appendix I, section 7.
[129] AEE, Appendix S.
[130] 30 June 2022 email from Martin Neale of PuhoiStour to Ben Tait.

(d) the Applicant also provided an environmental offset strategy which outlined the measures proposed to address the residual ecological effects of the Project.[131]

247. Management plans are an acceptable and orthodox method to set out the detail of how effects will be avoided, remedied, mitigated or offset. The Panel also accepts that offsetting is an appropriate method to address effects that are not manageable through the first three steps of the effects mitigation hierarchy.

248. The Panel has imposed conditions with the linked objectives of achieving positive ecological outcomes, while meeting the reasonable expectations of hapū, interested parties and the wider community. This includes a requirement that appropriate mechanisms are put in place to ensure the offsets are protected in perpetuity.

249. The Panel has included a requirement for both DOC and Taiāmai to be consulted about the ecological management plans, to ensure that their views on appropriate methods can be considered. Forest & Bird indicated that they did not wish to be consulted on such plans due to resourcing constraints.[132] A requirement for a CLG also provides an avenue for potentially affected landowners to receive information and raise any concerns about the Project.

250. The issue of "specified infrastructure" has already been addressed in **Part 4** above.

251. Overall, we accept the conclusions set out in the AEE and consider that, with the imposition of the conditions we have imposed, that the ecological effects of the Application will be acceptable.

6.4 Construction effects

252. Under this topic we consider:

(a) noise and vibration;

(b) construction traffic; and

(c) erosion, sediment, ground contamination and dust.

Noise and vibration

253. Marshall Day Acoustics assessed the noise levels that would be generated by the construction activities and machinery at various locations within the Site.[133]

254. As already noted in **Part 2** above, a few days before the statutory deadline for this decision, the Panel became aware that the Applicant had failed to

[131] AEE, Appendix V.

[132] The draft conditions the Panel circulated for comment included provision for Forest & Bird to be consulted, however these references were removed at Forest & Bird's request from the final version of conditions. Refer Appendix 4.

[133] AEE, Appendix P Construction Noise Assessment.

update its noise assessment following a revision to its CEMP in November 2021. The revision to the CEMP had relocated and enlarged some of the borrow and disposal areas, locating them closer to at least one neighbouring property. The Panel sought an urgent response from the Applicant, which resulted in the Application being suspended while an updated noise report was produced.

255. On 11 July 2022, the Applicant provided us with an updated report from its noise consultants Marshall Day.[134] This report confirmed that with the more restricted definition of "restricted works" for the main dam (outlined in Table 6), the altered construction layout for the borrow and disposal areas shown in Riley plan 210038-162 dated 23 November 2021 (which was reissued in that report with a July 2022 date),[135] will not have any additional adverse noise effects.[136]

256. Predicted noise at the 27 nearby sensitive receivers from the altered construction layout either remain unaltered or are within +/- 1 dB LAeq, a change that would not be noticeable. One site at 766 Te Ahu Ahu Road experiences a 2 dB LAeq increase, again a change that would not be noticeable.

257. Noise levels at three addresses, 821, 839, and 839A Te Ahu Ahu Road would reach 59 - 62 dB LAeq from construction activities at the Main Dam and from simultaneous construction at both dams. We note that the highest risk of noise exceedance is at 830 Te Ahu Ahu Road which is located on the project site and will not be used for residential purposes during the construction period. At 841 Te Ahu Ahu Road the noise level would be 55 dB LAeq from simultaneous construction work.[137]

258. Lower levels of noise, of between 47 – 55 dB LAeq, would be experienced at a further 16 properties from simultaneous construction. At other properties construction noise will be discernable but not at a level significantly different to the background rural sound.[138]

259. A measure of the acceptability of construction noise is provided by the construction noise standard NZS6803:1999 (**Standard**). It divides the weekday into four periods:

- the morning shoulder 0630 – 0730;
- the daytime 0730 – 1800;
- the evening shoulder 1800 – 2000; and
- the nighttime 2000 – 0630.

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[134] Marshall Day Acoustics, Otawere Water Storage Reservoir, Assessment of Noise Compliance, 7 July 2022 (**revised noise report**), Section 6.

[135] We understand the only difference between the November 2021 plan and the July 2022 plan is the issue date and the revision number (2).

[136] The revised noise report also provided further details about the types of machinery proposed for some of the works (Table 1), proposed a change to condition 100 (Section 5) included the November 2021 CEMP plans (Appendix B) and revised predicted noise contour plans (Appendix C), as well as a new appendix D which contains an explanation of indicative noise effects.

[137] Revised noise report, Table 4.

[138] Ibid.

260. Saturdays and Sundays (including public holidays) are divided into two periods each: 0730 – 1800 and 1800 – 0630.

261. Average and maximum noise levels for these periods that are provided in the Standard are given in Table 2 of the revised noise report and reproduced below.

Table 2: Construction noise levels for activities sensitive to noise[3] (e.g. occupied dwellings)

Time of week	Time period	Long-term duration[4]	
		dB L_{Aeq}	dB L_{AFmax}
Weekdays	0630 – 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 – 0630	45	75
Saturdays	0730 – 1800	70	85
	1800 – 0630	45	75
Sundays and public holidays	0730 – 1800	55	85
	1800 – 0630	45	75

262. All predicted noise levels at the sensitive receivers during the daytime on weekdays and on Saturdays fall below the levels suggested by the Standard. Restrictions on construction activities and their location within the Site will be required at other times, (i.e., the morning shoulder and night-time periods on weekdays and on Saturday nights and during Sundays) for noise levels to be kept at or below the levels suggested in the Standard.

263. Marshall Day summarised in Tables 5 and 6, the restrictions required on work activities and locations so that noise levels at the sensitive receivers would fall within the limits of the Standard. Those tables are reproduced below.

Table 5: Timeline of work allowance and restrictions for each dam

Dam	Day of the Week	Time period			
		0630 – 0730 Morning shoulder	0730 – 1800 Daytime	1800 – 2000 Evening Shoulder	2000 – 0630 Night-time
Main Dam	Weekdays	Restricted Main works	Normal construction		No works
	Saturdays	No works	Normal construction	No works	
	Sundays and public holidays	No works	Restricted Main works	No works	
Saddle Dam	Weekdays	Normal construction			Restricted Saddle works
	Saturdays	Restricted Saddle works	Normal construction	Restricted Saddle works	
	Sundays and public holidays	Restricted Saddle works	Normal construction	Restricted Saddle works	

Table 6: Recommended restrictions on construction activities to enable compliance outside of the "daytime" construction period

Dam	Relevant noise limit	Allowed areas of work	Restricted areas of work
Main Dam	55 dB L_{Aeq} Sundays and public holidays, morning shoulder	Plant and truck movements to the North only, only utilising: • borrow areas 1, 2 and 3 • disposal area 4	No works on/to: • borrow area 5 • disposal area 3 for "Restricted Main Works"
Saddle Dam	45 dB L_{Aeq} Night-time	Plant and truck movements to the South-east only, only utilising: • borrow areas 1 and 4 • and disposal area 1, 5 and 6	No works on/to: • borrow areas 3 and 6 • disposal area 2 for "Restricted Saddle Works"

264. The revised noise report referred to the noise conditions the Panel had circulated for comment and recommended one change to condition 100 as follows:

> *100. Should a reasonable complaint be received by FNDC or the consent holder, the consent holder must engage a suitably qualified and experienced acoustic expert to investigate as soon as practicable and within ten (10) working days to confirm whether the noise limits set out in Conditions 97 have been exceeded. Measurements in accordance with the requirements of NZS6803:1999 as per Condition 98 are subject to appropriate meteorological conditions.*

265. As already noted in **Part 2**, we were informed that the Applicant had provided the revised noise assessment to Mr Flude (the nearest sensitive receiver), and that consultation had been undertaken with him. While consultation did not result in a resolution of Mr Flude's concerns, we understand the parties agreed "*to work together in principle to alleviate them*".[139]

Comments received

266. Three submitters made direct reference to construction noise effects from the Project.

267. Mr MacDonald expressed a broad concern about noise from construction and from wildlife that might inhabit the reservoir. Construction noise levels at Mr MacDonald's property (693 Te Ahu Ahu Road) are predicted to be well within the limits provided in the Standard except at night when the conditions on the consents require reduced activity so that the Standard is met. Mr MacDonald's residence is some 1,400m from the main dam. No evidence of troublesome noise levels from wildlife on the reservoir was provided to us and we do not expect that to be an issue.

268. Mr Hansen from Roseburn Farms Ltd, with part of the farm property situated in the overflow path, expressed a broad concern about construction noise lasting for several years. The Project is planned to be completed in two construction seasons and noise levels will be controlled to meet the levels in the Standard. No sensitive noise receivers on this property have been identified.

[139] 13 July 2022 email from Ben Tait to Mary McConnell at the EPA attaching reporting email from John Proctor of the Applicant.

269. Mr and Mrs Flude live at 839A Te Ahu Ahu Road, some 400m south of the main dam and slightly above the reservoir level. They, along with residents at 821 and 839 Te Ahu Ahu Road and to a lesser extent, 841 Te Ahu Ahu Road, are the residents most likely to be affected by construction noise. The Fludes are concerned about the extended construction noise effects on their health and safety, having chosen to live in this area for the peace and outlook. We understand these concerns remain despite the revised noise report showing a slight reduction in noise (-1dBA), and restrictions on works in areas close to their residence in the revised noise report.[140] They have other concerns about dust affecting their water supply, and about effects on their property values and views.

Evaluation and findings

270. We have carefully considered whether from a procedural standpoint we are able to accept and rely on the revised noise report, given the late receipt of the report meant that it did not form part of the material available for submitters to comment on. In this instance we consider we can for the following reasons:

(a) the report is an update to the original report rather than an entirely new report;

(b) the update was necessitated by changes to the internal site construction layout;

(c) the noise report confirms that the amended layout:

(i) does not affect any additional sensitive receivers;

(ii) has no material change to the noise levels predicted for the 27 nearby sensitive receivers already identified;

(iii) can comply with the relevant noise standards with the construction works restrictions proposed;

(d) the noise report includes further restrictions on works associated with the main dam which will be of benefit to the nearest affected occupied residential property (Mr Flude);

(e) Mr Flude's property is predicted to receive the same level of noise or slightly less noise (1dBA reduction from main dam and simultaneous works);

(f) Mr Flude was provided with a copy of the revised noise report and attended a meeting with the Applicant to discuss it;

(g) while Mr Flude's concerns about construction noise remain, no new or different concerns were raised as a result of the amended noise report;[141]

[140] 11 July 2022 email from Cameron Flude to Mary McConnell for the EPA.
[141] In his email and subsequent discussion with Mary McConnell from the EPA.

(h) no other nearby sensitive receiver made a submission raising noise issues, other than Mr MacDonald, and the revised noise report predicts no material change to the noise experienced by Mr MacDonald's property.[142]

271. We consider the noise levels for prolonged construction noise suggested in the Standard provide for an acceptable noise environment and that they will ensure compliance with the requirements of the FNDP. We also consider that the restrictions on work activities at certain times as proposed in the revised noise report are necessary to meet the Standard and that they are appropriate. While we appreciate the Applicant proposed tweaks to these restrictions in its consultation with Mr Flude, we understand these tweaks were not agreed, and we consider the restrictions proposed in the revised noise report are clearer and more consistent with the Standard. We have imposed conditions to that end.

272. However, and notwithstanding the updated predictions in the revised noise report we remain concerned about the temporary increase in noise at the Flude property (839A Te Ahu Ahu Road) from works at the main dam. This is particularly in the evening period from 6.00pm to 8.00pm on weekdays, given the impact normal construction noise levels may have on Mr Flude and his young family.[143] Accordingly, we require that only restricted works at the main dam can be undertaken on weekdays between 6.00pm and 8.00pm. This is reflected in an amended Table 5 below.

<table>
<tr><th rowspan="2">Dam</th><th rowspan="2">Day of the Week</th><th colspan="4">Time period</th></tr>
<tr><th>0630—0730
Morning Shoulder</th><th>0730—1800
Daytime</th><th>1800—2000
Evening Shoulder</th><th>2000—0630
Night-time</th></tr>
<tr><td rowspan="3">Main Dam</td><td>Weekdays</td><td>Restricted Main works</td><td>Normal construction</td><td>Restricted Main works</td><td>No works</td></tr>
<tr><td>Saturdays</td><td>No works</td><td>Normal construction</td><td colspan="2">No works</td></tr>
<tr><td>Sundays and public holidays</td><td>No works</td><td>Restricted Main works</td><td colspan="2">No works</td></tr>
<tr><td rowspan="3">Saddle Dam</td><td>Weekdays</td><td colspan="3">Normal construction</td><td>Restricted Saddle works</td></tr>
<tr><td>Saturdays</td><td>Restricted Saddle works</td><td>Normal construction</td><td colspan="2">Restricted Saddle works</td></tr>
<tr><td>Sundays and public holidays</td><td>Restricted Saddle works</td><td>Normal construction</td><td colspan="2">Restricted Saddle works</td></tr>
</table>

273. We have incorporated aspects of the revised noise report's recommended amendments to condition 100 in the noise conditions we have imposed. In addition to the restrictions on works, we have also imposed conditions which:

[142] A 2dBA increase is predicted during main dam and simultaneous works which will not be perceptible and will be controlled by the restrictions on construction works.

[143] Mr Flude in his comments on conditions noted a particular concern regarding the effect of construction at this time on his baby and 3 year old child's sleep patterns in the morning and evening shoulder periods.

(a) require noise monitoring at the commencement of the night works for the saddle dam;

(b) require an investigation by a suitably qualified acoustic expert when a complaint is received followed by noise monitoring (if the complaint relates to a potential noise exceedance) in response to a complaint; and

(c) where a noise limit is exceeded, require the activities causing the noise to stop, and an activity specific construction noise management plan to be prepared and certified and the best practicable option(s) that will be implemented to manage the noise from the activity.

274. While construction noise will be evident in the area for the two-year construction duration, it will not be unreasonable and can be appropriately managed with the conditions we have imposed.

Construction traffic

275. Beca estimates traffic generated by the Project will amount to:[144]

(a) 56 trips per day for a period totaling 12 weeks of trucks carrying drainage material to the Site. If truck and trailer units are used the number of trips would be halved;

(b) 8 trips per day of concrete trucks over a total of 8 weeks (the Beca report refers to 48 trips per day but based on the analysis used this figure should be 8);[145] and

(c) 76 trips per day of staff vehicles with 15 trips during the peak hour.

276. Earth moving will be confined to the Site with excavated unsuitable material being deposited within the Site and engineered fill also sourced from within the Site.

277. Access to the Site is to be located at the existing farm access 693-821 Te Ahu Ahu Road where an intersection is to be constructed that conforms to the NZTA Special Use Access Diagram D (refer Appendix E to the conditions). This point of access has been chosen because sight distances in both directions are adequate. The access road is to be metaled[146] with passing bays in accordance with the FNDP.

278. Parking is to be provided at the Site office which is to be offset from the access road. Access will be locked off when the Project is not in operation.

279. Te Ahu Ahu Road and Old Bay Road are primary collector roads with daily traffic volumes of 2,588 and 2,148 respectively and a speed limit of 80

[144] AEE, Appendix Q Construction Transport Assessment.
[145] AEE, Appendix Q, s.4.1, p.9.
[146] While the Beca report referred to only 300m of the access track being metaled, we have imposed a requirement for all internal access tracks to be metaled.

kph. Apart from improving the access off Te Ahu Ahu Road and signaling Site access and local truck crossing signs, Beca considers the rest of the roading network can accommodate the small increase in traffic generated by the Project.

280. Over dimension loads will have the usual individual provisions.

281. Conditions proposed by the Applicant included a Construction Traffic Management Plan (**CTMP**) generally in accordance with the Beca report, the management of traffic flows, access locations and availability, construction times, truck routes, road maintenance and temporary traffic management.

Comments received

282. Two submitters referred directly to construction traffic effects:

(a) FNDC, who requested conditions be imposed requiring:

(i) a CTMP based on the Beca report;

(ii) before and after road condition assessments;

(iii) maintenance and remedial works during and after completion of the Project by the Applicant; and

(iv) an upgraded access from Te Ahu Ahu Road; and

(b) Waka Kotahi, who sought that an appropriate CTMP and EAP be implemented.

Evaluation and findings

283. We conclude that with an upgraded access to the Site at 693-821 Te Ahu Ahu Road and appropriate signage the roading network will accommodate the modest increase in traffic during construction. We accept the Beca report is comprehensive and contains appropriate recommendations. We have imposed conditions to require compliance with these recommendations.

284. In response to matters raised in submissions and in comments on conditions we have also amended the conditions to require:

(a) before and after pavement condition surveys together with an obligation to repair any damage caused by the construction activity;

(b) the first 300m of all internal access tracks to be metaled and a requirement for wheel washing;

(c) an EAP (as noted in the dam safety section above).

285. We consider that with the conditions we have imposed, construction traffic effects will be acceptable.

Erosion, sediment, ground contamination and dust

286. Construction of the two dams is a major earthworks project that will have extensive bare ground exposed to rainfall from time to time and which can generate sediment laden runoff and dust from wind erosion and traffic disturbance. Control of the loss of sediment and dust from the Site will be an important and continuing task during construction.

287. Earthworks are mostly contained within the location of the reservoir and dam footprints. Borrow areas and disposal areas have been identified generally within those boundaries.

288. The Applicant outlined the measures it intended to take to control the loss of sediment and dust from the Site in a draft erosion and sediment control plan.[147] This plan addressed dust as well as measures to control erosion and capture sediment, especially during heavy rainfall. The plan applied the provisions of the "*Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*, June 2016/005 (**GD05**)" which we understand has been adopted by the NRC for its region.

289. A preliminary site investigation for ground contamination was undertaken by Williamson Water and Land Advisory.[148] The key findings of this report were that:[149]

(a) no 'HAIL'[150] activities have occurred on site;

(b) the conceptual site model shows no source of contamination is present;

(c) consent requirements for contaminated land are not applicable; and

(d) while there are no contaminated land implications for construction within the Site, a suitably qualified person should be notified if unexpected contamination is encountered.

290. Conditions proposed by the Applicant include the preparation and certification of the erosion and sediment control plan, adherence to GD05, stormwater facilities to cope with the runoff for up to a 1 in 20-year rainfall event, including erosion protection and the maintenance of a series of erosion and sediment control measures during construction. Earthworks between May and the end of September are also proposed to be prohibited unless specifically allowed by the NRC.

Comments received

291. No submissions referred to sediment discharges from the Site.

292. Two submissions referred to possible dust issues arising from the works:

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147 AEE, Appendix D Draft Erosion and Sediment Control Plan.
148 AEE, Appendix O Ground Contamination Assessment.
149 AEE, Appendix O, p.ii.
150 Being activities listed in the Ministry for the Environment's Hazardous Activities List.

(a) Mr Macdonald who lives some 800m west of the main dam, made a general inquiry about the generation of dust at the Site; and

(b) Mr and Mrs Flude who live about 380m south of the main dam, are concerned that dust from the Project might contaminate their water supply.

Evaluation and findings

293. We accept that the measures proposed by the Applicant and outlined in the draft erosion and sediment control plan will be effective in controlling erosion, sediment and dust.

294. The conditions we have imposed require compliance with these measures and with best practice sediment and erosion control standards. They also require that any nuisance effects from sediment discharges and dust emissions beyond the boundaries of the Site be mitigated and/or rectified.

295. We also accept the findings in the preliminary site investigation report and have imposed a condition addressing the accidental discovery of contamination during site works.

296. With these conditions we consider potential erosion, sediment, dust and contamination can be appropriately managed.

C6.5 Effects on existing water users

297. The Hydrology Assessment Report provided as Appendix H of the Application notes that there is only one consented surface water take downstream of the proposed reservoir, approximately 16 km from the Site.[151]

298. That report concludes that given the distance of the take from the Site (some 16 km), and the large number of tributaries flowing into the river above the point of the consented take, that there will be no impact on the take from harvesting under either high-flow or low-flow conditions. It also concludes that water will remain available for permitted takes during high flows.

Comments received

299. FNDC, the holder of the consented water take, made no specific reference to this point, proposing only that there should be *"Conditions of consent requiring re assessment of hydraulic water flows and catchment flows post construction, i.e., changes to NRC flood data, and downstream catchment flows."*

300. No other comments were received in relation to this topic.

[151] Consenting for Otawere Water Storage Reservoir Hydrology Assessment, Te Tai Tokerau Water Trust, 18 January 2021, s.8.

Evaluation and findings

301. We accept the findings in the Hydrology Report that any potential negative impacts on downstream users will be no more than minor.[152]

302. We have imposed conditions controlling the taking of water and requiring the measuring and reporting of water use which we consider will avoid, remedy or mitigate any such effects.

6.6 Landscape, natural character, and visual amenity

303. The landscape and visual assessment report (**LVA**) provides an overview of the landscape, visual amenity and natural character elements of the Site.[153]

304. The Site is generally contained between ridges 100 – 120m above sea level (**asl**) and steeply sloping, elevated and dissected hills that rise to around 170m asl. The Site occupies a low-lying and undulating valley floor which opens to the north.

305. The northern (saddle) dam is situated within a landscape which is characterised by a sense of openness, with a gently rolling terrain. The landscape character displayed by the location of the southern (main) dam is more enclosed, with more dramatic, steeper terrain.

306. The Site is situated within the headwaters of the wider Waitangi River catchment. The network of streams (unnamed tributaries) onsite flow approximately 3 km downstream, a small section of intermittent stream drains into a tributary of the Okokako Stream, with remaining streams draining into the Waitangi River. These various streams within the Site are characterised as being modified by straightened and deepened channels.

307. The Site is primarily in pasture and grazed. Pockets of native forest and various groves of trees are found on elevated land to the west and east of the Site. Native remnants to the west and north are representative of vegetation patterns that occur in Waimate North, with broadleaf trees punctuating the landscape.

308. A native forest occupies areas to the east, with smaller remnants occurring in the dissected gullies on the south-western hill flanks. The LVA refers to a DOC report identifying this vegetation as the Waitangi Forest alluvial remnants and records the following as being present:[154]

    (a) tall kānuka shrubland with tōwai and tānekaha and occasional tōtara on hillslopes;

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[152] AEE, Appendix H, p.23.

[153] AEE, Appendix K, and as updated on 26 April 2022 in response to our Second Information Request. As noted earlier in Part 2, Simon Cocker also later confirmed that the changes to the CEMP borrow and disposal area plans in November 2021 did not affect his conclusions.

[154] Updated LVA, section 4.4, referring to P05/085 Conning, Linda. N*atural areas of Kerikeri Ecological District: reconnaissance survey report for the Protected Natural Areas Programme*. Whangarei: Dept. of Conservation (Northland Conservancy), 1999, p.120.

(b) tall kānuka shrubland with tānekaha and occasional kōwhai, cabbage tree, māhoe, tōtara, lowland ribbonwood, tītoki, kōhūhū and muehlenbeckia australis on alluvial river flats;

(c) taraire-pūriri-tōwai forest with occasional rimu, rewarewa, kahikatea, tawa, miro and pukatea. Tōtara is locally common; and

(d) secondary tōtara forest with occasional mamaku and pūriri.

309. The ecological report[155] explains that the historic vegetation cover in the area would have consisted of kauri, podocarp, broadleaved forest, kahikatea, and pukatea swamp forest.

310. These characteristics are often associated with less productive grazing land, such as steeper slopes, fingers of riparian vegetation within gullies, or on the flatter, low-lying and wet areas of pasture. Remnants of swamp forest are a characterising feature of the area. In contrast, exotic vegetation such as pine, shelterbelts and barberry hedges impart an impression of a productive landscape. Much of the indigenous forest cover in the area has been cleared for farming and forestry, resulting in a fragmented landscape largely comprised of pasture paddocks.

311. From a land use perspective, pastoral grazing permeates the landscape, however this is intertwined with the geological, hydrological, and ecological characteristics considered earlier. Rural residential uses also permeate the landscape, and these largely occur along the Te Ahu Ahu, Okokako, Montrose, and Waimate North Road corridors.

312. The visual catchment is defined by the Okokako Road ridge to the west, Te Ahu Ahu Road ridge to the south, Montrose Road ridge to the north, and to the east by adjacent hills. The most proximate viewers are the occupants of the three dwellings on Te Ahu Ahu Road which offer views north along the valley from a minimum separation distance of between 600m-700m. A single dwelling to the south-west on Te Ahu Ahu Road offers distant views to the Site at a minimum distance of 1.3 km. Views from properties along Okokako Road are largely screened from the Site, but some do have views at a distance of around 1 km through vegetation at its northern end. Montrose Road properties on its south side, 2 km from the north-west of the Site have views to the south-east along the valley. Momentary views to the Site are also possible from Montrose Road. Finally, passengers of aircraft are offered transitory views of the Site from a height of around 200 m as they pass over the Site to and from the Kerikeri Airport.

313. We note that the LVA did not explicitly address natural character of the waterbodies affected by the Project, however this was attended to in the ecological report. Stream habitat downstream of the main embankment is in a relatively natural state in comparison to the modified streams within the Site. We concur that the natural character of the existing waterbodies

[155] AEE, Appendix I.

and their margins is typical of a pastoral environment. Ecological offsetting will result in overall enhancement of natural character.

314. The landscape also contains archaeological and cultural values. The Site is situated adjacent to a number of recorded archaeological sites concluded to be associated with gum digging activity and gold prospecting.

315. In terms of the landscape, section 21 of the CIA states that:

> *Hapu have unique cultural and historical associations with land and water. Our view as kaitiaki takes an enduring perspective that looks to the well-being of generations to come as provided by the health of natural resources. It is with this lens that we undertake the Landscape Assessment for the proposed Otawere Water Storage Reservoir. Hapu have a historical and cultural connection to the unique 'landscape' values of this area. Whakapapa to Te Ahuahu and Waitangi are etched into pepeha of the haukainga and Pa such as Okuratope and Te Ahuahu tell of early tupuna who were builders of pa and later tupuna who were the gardeners of Taiamai. This landscape speaks to us of our tupuna with their gardens protected by the many pa from Taiamai to the volcanic cones of Waitangi. One of the early tracks connecting east west and kai moana to hua whenua and mahinga kai, runs through this landscape. Important remnants of forest in the vicinity remaining in Maori ownership give signature to the landscape and clues as to its potential restoration.*

316. The CIA also specifically supported/recommended:

(a) for the proposal to slope earthwork angles to reflect those present in the surrounding area;

(b) planting along the dam structures and spillway swales;

(c) the use of riprap within the reservoir marginal zone and dam wall structure;

(d) that a condition of consent be included, providing for a Landscape Management Plan with input from neighbouring properties, hapū, and ecological specialists; and

(e) access to the margins of the water bodies for hapū to practice mahinga kai.

317. Because the LVA report had been prepared prior to the CIA being finalised, we requested and received an updated report which considered the cultural values raised in the CIA.[156] The updated report more appropriately considered the recommendations of the CIA from a landscape perspective. This resulted in recommendations within the updated LVA being more closely aligned with those of the CIA.

318. Also and as noted earlier, a few days before the statutory deadline for this decision, the Panel identified that the borrow and disposal plans in the CEMP predated the CEMP. The Applicant subsequently forwarded email

[156] 26 April 2022, Applicant Response to our Second Information Request, Attachment 1, Landscape and Visual Effects Assessment 26 April 2022.

confirmation from its landscape expert that the change did not affect any of the conclusions set out in the landscape report. Accordingly, we evaluate the landscape, natural character and visual amenity effects arising from this Project based on the LVA dated April 2022.[157]

Comments received

319. Mr and Mrs Flude, a near neighbour, were concerned about the impacts of the Project on their outlook and amenity both during construction and after completion of the Project.

Evaluation and findings

320. We consider the updated LVA to be appropriate for the nature and scale of the Project and acknowledge that it has been developed in accordance with Te Tangi A Te Manu – Aotearoa New Zealand Landscape Guidelines 2022. Whilst we did seek further consideration of landscape items, we did not consider a peer review of the LVA was necessary.

321. We adopt the characterisation of the Site and surrounds in the updated LVA from a landscape and visual amenity perspective.

322. From an effects perspective, we adopt the conclusion of the updated LVA that:[158]

(a) effects during construction will be difficult to mitigate to a less than minor level. However, such effects are temporary and will subside over time;

(b) landscape effects will be moderate locally once the mitigation measures are completed, and low when considered in the context of the environment, again once the mitigation measures have been implemented;

(c) visual effects will be low, with the exception of the three closest dwellings (which include Mr Flude's dwelling where effects will be moderate);

(d) there are specific mitigation measures that can assist with addressing the potential adverse landscape and visual amenity effects; and

(e) the Project can be supported from a landscape and visual effects perspective.

323. We have imposed conditions to ensure that landscape and visual effects are appropriately mitigated and managed. This includes most of the recommendations of the CIA as outlined above,[159] as well as more specific

[157] 30 June 2022 email from Simon Cocker of SCLA to Ben Tait.
[158] Updated LVA, s.8, p.23.
[159] For a more detailed response to the CIA recommendations refer **Part 5** above and **Appendix 5**.

requirements to liaise with local landowners and develop a Landscape Management Plan suitable for the site and surrounds.

6.7 Heritage

324. The historic heritage values of the Site were addressed by the Applicant in the archaeological assessment provided as part of the AEE.[160]

325. The findings and recommendations of the archaeological assessment were summarised in the AEE as follows:

> *The Archaeology Assessment report (Appendix L) concludes that the proposed reservoir will not affect any known archaeological or historic heritage sites and features. However, the Archaeology Assessment report states that it is possible that unrecorded archaeological sites of features may be affected by construction works and therefore the Trust should apply for an archaeological authority from Heritage New Zealand Pouhere Taonga and prepare an appropriate archaeological site instruction to monitor higher risk areas and provide protocols for managing effects on other areas. It also makes recommendations on consulting with tangata whenua, including on developing protocols around appropriate tikanga for Māori archaeological sites and features and opportunities for monitoring of earthworks.*
>
> *The proposed conditions of consent (refer Section 9) include an accidental discovery protocol for any area of Project works that is not covered by an archaeological authority.*

Comments received

326. Comments were received from three invitees on heritage matters:

(a) Heritage NZ agreed with the recommendations in the archaeological report and strongly recommended that an archaeological authority be applied for to avoid future delays;

(b) the Minister of Arts, Culture and Heritage supported the intent of the Project and noted the comments of Heritage NZ; and

(c) Taiāmai referred to the information provided in the CIA and the archaeological report and noted that the reservoir is a site of significance to local Māori.

Evaluation and findings

327. We accept the conclusions set out in the AEE that the Project will not directly impact any known archaeological sites. However, we also accept that the area is an important site for local Māori and that as noted in the archaeological report, the Heritage NZ submission, and the CIA, there is potential for further archaeological sites to be uncovered during earthworks.

328. To ensure that any accidental discoveries are managed appropriately we have imposed a condition requiring adherence to an accidental discovery

[160] AEE, Appendix L.

protocol, and an advice note regarding the need for an archaeological authority if a discovery is made. Further, and as noted in **Part 5** above, we have also imposed conditions which:

(a) require a cultural monitoring plan to identify activities and areas where monitoring is recommended (such as in wetlands given tangata whenua have identified them as being potential storage sites); and

(b) provide for tikanga processes to be undertaken should any accidental finds be discovered.

329. We are satisfied that with the conditions we have imposed the effects on heritage are able to be appropriately managed.

6.8 Other matters

330. A number of other matters were raised in comments which appear to go beyond matters that the Panel is able to address under the FTA and RMA frameworks. These included:[161]

(a) Concerns about the effects of the consented water takes on the Waitangi River and Waiaruheiti Stream. The effect of these water takes were considered through separate consenting processes when the consents were granted last year.[162] The Panel is not able to consider the effects of these takes again through this process;

(b) Effects on property values. As the legal advice for the Applicant pointed out effects on such values is "*simply another measure of adverse effects on amenity value*s"[163] and as the Environment Court has noted "*the correct approach is to consider those effects directly, rather than market responses because the latter can be an imperfect measure of environmental effects;*"[164]

(c) Effects on insurability and insurance premiums. As the Applicant's legal advice pointed out, considering such effects may result in a double-counting of adverse environmental effects. There are also issues with quantification which depends on a range of external factors distinct from the Application (company policies, policy holder matters and the like).[165] More generally in relation to insurance, we note we have separately imposed a public liability insurance condition to address potential effects of a dam breach scenario;

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[161] A full summary of all the comments received on the Application is set out in Appendix 3.
[162] Water Take Consent from Waitangi River AUT.043064.01.01, granted 31 October 2021, and Water Take Consent from Waiaruheiti Stream AUT.042560.01.02, granted 28 February 2021.
[163] Applicant Response to the Second Further Information Request - Attachment 5– 26 April 2022 Anderson Lloyd Memorandum – Legal Response to matters raised in RFI 2, at [4].
[164] *City Rail Link Ltd v Auckland Counci*l [2017] NZEnvC 204, at [63].
[165] Applicant Response to Second Further Information Request – Attachment 5 – 26 April 2022 Anderson Lloyd Memorandum – Legal Response to matters raised in RFI 2, at [6] and [7].

(d) Request for confirmation as to whether a property will be connected to the water supply. These are operational decisions for the Applicant;

(e) Requests to be directly informed or consulted about the Project. These are generally matters for the Applicant. However, the Panel notes that all parties invited to comment have had the opportunity to put forward their views for consideration by the Panel. The Panel is also r cognisant of the benefits that ongoing liaison would provide during the construction phase of the Project, and we have imposed community liaison group conditions to enable that to occur;

(f) Requests that the Project not be fast tracked. The decision as to the availability of the fast-track process was made by the Minister when accepting the Project for referral. The Panel have no jurisdiction to revisit the Minister's decision;

(g) Requests to award tenders to local businesses. These are matters for the Applicant to determine as part of its construction of the Project; and

(h) Requests for agreements or support for other projects. These are not matters the Panel can impose, but the Applicant may choose to consider them outside of this process.

331. The above matters are therefore not addressed further in this decision.

332. We also note that, in the interests of brevity, we have not included a detailed response to each submission which has raised concerns regarding effects. However, we confirm we have considered all of the effects raised, read all submissions, and considered all of the points made in carrying out our assessment of effects. Where an effect is not specifically mentioned in this decision, we confirm we accept and adopt the conclusions set out in the AEE in relation to that effect.

PART 7: NATIONAL POLICY CONSIDERATIONS

333. This section addresses national policy considerations comprising both applicable National Policy Statements and National Environmental Standards/Regulations.

334. The only National Policy Statement of relevance to the Application is the NPSFM.

335. The three National Environmental Standards/Regulations of relevance to the Application are the:

(a) NESFW;

(b) Resource Management (National Environmental Standards for Sources of Drinking Water) Regulations 2007 (**DW Regulations**); and

(c) Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (**Water Take Regulations**).

336. We note that the AEE refers to the National Environment Standard for Air Quality 2014, but because there are no aspects of the Application that are likely to result in discharges exceeding the standard, we do not need to consider or make any findings with respect to it.

337. We also note that the AEE refers to the Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soils to Protect Human Health) Regulations 2011 and attaches a preliminary site investigation report (Appendix O). As noted in **Part 6** above, because the preliminary site investigation report concludes that no HAIL activities have occurred onsite, there are no contaminated land consents required under this Standard. We therefore do not consider it further in this Part.

7.1 NPSFM

338. The NPSFM is a relevant consideration for us given the nature of the Project and its reliance on the taking and use of freshwater.

339. Section 8.3 of the AEE considers the relevant objective and policies of the NPSFM. For context the NPSFM contains 1 objective and 15 policies.

340. The objective of the NPSFM reflects the hierarchy of obligations in Te Mana o Te Wai:

> *2.1 Objective*
>
> *The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises:*
>
> *(a) first, the health and well-being of water bodies and freshwater ecosystems*
>
> *(b) second, the health needs of people (such as drinking water)*
>
> *(3) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*

341. The Applicant considers that the Project is consistent with the hierarchy of obligations because:[166]

- *the ecological values of the stream is given priority by ensuring that there are sufficient flows downstream of the proposed reservoir embankment;*
- *existing downstream water users will not be adversely affected and the provision of adequate environmental flows will sustain potential future users; and*

[166] AEE, section 8.3, pp.68-72.

- *it will provide for social and economic wellbeing through the sustainable use of water.*

342. **Parts 5** and **6** of this decision outline the relevant assessments and our findings on effects (including in relation to freshwater, ecology, and social, economic and cultural wellbeing). Based on those assessments and findings, we accept that the Application is consistent with the objective of the NPSFM.

343. In terms of policies:

(a) Policy 1 relates to Te Mana o Te Wai and is closely associated with the Objective. Consistency has been found here as outlined above.

(b) Policy 2 requires that Māori freshwater values are identified and provided for and tangata whenua are involved in freshwater management. The Applicant refers us to the policies in Chapter D.1 of the PRP as well as the findings and recommendations of the CIA. As most of the CIA recommendations in relation to these matters have been incorporated into the Application, and as we have imposed conditions providing for cultural monitoring and tangata whenua input into management plans we consider the Project is also consistent with this policy.

(c) Policy 3 relates to freshwater being managed in an integrated way, that effects of the use and development of land are considered on a whole of catchment basis - including effects on receiving environments. The command area of the reservoir sits across numerous catchments, and we accept the Applicant's view that it has applied an integrated approach and appropriately recognised and assessed the effects on freshwater. We are also comfortable that with the mitigation and offset measures incorporated and the conditions we have imposed, the Project is consistent with this policy.

(d) Policy 4 provides for freshwater being managed as part of New Zealand's integrated response to climate change. The Project notes that the reservoir is expected to improve resilience to climate change via increasing diversity of land use options (i.e., potential changes from traditional farming to horticulture), and through making a very small contribution to minimising greenhouse gas emissions. The provision of water to Ōhaeawai for emergency and firefighting purposes will also provide support to local communities in times of drought and during climatic events that may contribute to more frequent fire and fire hazard events. We find no difficulty in finding consistency here.

(e) Policy 5 directs the regional council to manage freshwater through the National Objectives Framework. This policy is not implicated by the Project.

(f) Policy 6 is that there is no further loss of the extent of natural wetlands, wetland values are protected, and their restoration is promoted. The Project will result in the inundation of around 4.5 ha of natural wetlands. The Applicant proposes to offset the inundated wetland areas by enhancing and restoring approximately 6.5 ha of existing degraded wetland habitat, as well as vegetated riparian buffers. While no new wetland is created, we accept that the restoration and protection of a greater amount of wetland and the planting of riparian buffers is at least partially consistent with this policy. We have imposed conditions to ensure the values of this wetland are protected in perpetuity and restoration is promoted.

(g) Policy 7 is that the loss of river extent and values is avoided to the extent practicable. Here, the reservoir will inundate and affect around 4,797 m (6,343 m^2 of streambed area) of continually flowing permanent streams and around 2,575 m (1,505 m^2 streambed area) of intermittently flowing streams. Once operational, the streams and tributaries across the Site will change from relatively modified, straightened and deepened, soft bottom stream channels to a lake habitat. The effects of this habitat modification are proposed to be offset through the enhancement of some 15 km of riparian planting of stream channels. This offset has been considered in **Part 6** of this decision and for those reasons we accept the Project is not contrary to this policy.

(h) Policy 8 is that the significant values of outstanding water bodies are protected. In this instance the Site is not mapped as such.

(i) Policy 9 is that the habitats of indigenous freshwater species are protected. Three freshwater species were recorded within the footprint of the proposed reservoir – longfin eel, shortfin eel, and banded kōkopu. Policy 9 was appropriately addressed in the *Matawii* decision which noted that "*...interpretation of Policy 6 need not focus on prescriptive protection of individual items for the sake of them, but more sensibly if relevant on the future local extent of the objectives in an holistic sense and no-net- loss, or event net gain*." Given the offset measures promoted in the AEE and secured through conditions of consent we accept the policy will be met.

(j) Policy 10 relates to the protection of habitats of trout and salmon. These were not identified as being relevant in this instance.

(k) Policy 11 is that freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. The Project will not result in over-allocation as defined in the NPSFM because it will not exceed any relevant take limits.

(l) Policy 12 of the NPSFM is not relevant because it is about national targets for primary contact recreation.

(m) Policies 13 and 14 relate to regional council monitoring and reporting and as such are not considered relevant.

(n) Policy 15 is that communities are enabled to provide for their social, economic and cultural wellbeing. The Applicant's view is that increasing social, economic and cultural wellbeing is at the heart of its Project. We accept the project will enable such wellbeing.

344. In addition to the above, we also had regard to relevant comments within the CIA and from DOC.

345. In terms of the CIA, this considered the freshwater and terrestrial values of the Site and noted tuna (eel) as a mahinga kai that is traditionally harvested within the hapū rohe. The CIA also supported the need for a Lizard Management Plan.

346. DOC specifically commented on 3.22 of the NPSFM 'Natural Inland Wetlands'. Their comments in this respect largely referred to the "*specified infrastructure*" provision. We addressed this issue in **Part 4** of this decision and do not revisit it here.

347. Reminding ourselves that we are to assess consistency overall,[167] and taking into account the conditions we have imposed, we consider that overall the Project does not compromise and is consistent with the outcomes anticipated in the NPSFM.

7.2 NESFW

348. The NESFW sets requirements for carrying out certain activities that pose risks to freshwater and freshwater ecosystems. The standards are designed to:

(a) protect existing inland and coastal wetlands;

(b) protect urban and rural streams from in-filling;

(c) ensure connectivity of fish habitat (fish passage);

(d) set minimum requirements for feedlots and other stockholding areas;

(e) improve poor practice intensive winter grazing of forage crops;

(f) restrict further agricultural intensification until the end of 2024; and

(g) limit the discharge of synthetic nitrogen fertiliser to land and require reporting of fertiliser use.

[167] Refer **Part 10** below where we discuss the assessment approach in more detail.

349. The AEE identifies regulations 45, 57, 62, 66, 68 and 69 as being relevant to the Application.

(a) Regulation 45 confirms the construction of "*specified infrastructure*" is to be assessed as a discretionary activity. We have addressed the reasons why we consider the Project falls within the definition of "*specified infrastructure*" in **Part 4**. The AEE notes that the construction of the reservoir will involve all activities covered by regulation 45, that being vegetation clearance, earthworks or land disturbance, and the taking, use, damming, diversion and discharge of water within the specified setback requirements. The effects that arise from these activities have been assessed throughout this decision.

(b) Regulation 57 concerns the reclamation of rivers as a discretionary activity. The reach of the stream flowing through the footprint of the main dam will be reclaimed for the purposes of constructing the embankment. Part of the upstream reach will be reclaimed through the construction of the cofferdam. Like the above, the effects of the reclamation have been detailed earlier in this decision.

(c) Regulations 62, 66, and 68 set information requirements relating to structures and passage of fish, dams, and aprons and ramps (respectively). We have imposed a condition to ensure that the relevant information is provided to NRC. As such, we confirm that the Project meets these regulations.

(d) Regulation 69 relates to conditions of resource consent for a culvert, weir, flap gate, dam or ford structure in, on, over, or under the bed of any river or connected area. Regulation 69 requires the imposition of certain conditions to ensure that provision for the passage of fish does not reduce over the relevant structure's lifetime. We have imposed eel and fish passage conditions to ensure these requirements are met.

350. Given the above, we consider the Project is consistent with the requirements set out in the NESFW.

7.3 DW Regulations

351. The DW Regulations impose requirements in order to protect sources of drinking water from becoming contaminated. The regulations apply to source water before it is treated and specifically to sources used for human drinking water.

352. In **Part 6** above, we have noted that FNDC holds a water take permit for public water supply purposes downstream of the reservoir. The AEE states that the construction and operation of the reservoir will not introduce or increase the concentrations of contaminants that would trigger thresholds within these regulations. We have imposed conditions requiring monitoring to ensure this water take is not affected.

7.5 Water Take Regulations

353. The Water Take Regulations establish a nationally consistent regime for measuring water use. The regulations only apply to a water permit that allows freshwater to be taken at a rate of 5 litres per second or more, and do not apply to a water permit for a 'non-consumptive take'. A 'non-consumptive take' is one where the same amount of water is returned to the same water body at or near the location from which it was taken, and there is no significant delay in taking the water.[168]

354. The Project includes a water permit to authorise the taking of water from the stream catchment above the main dam which exceeds the 5 litres per second threshold. The water will be used to fill the reservoir, and in that sense the water is being returned at or near the water body from which it is taken with no significant delay. However, as the return is to the reservoir rather than the stream from which it was taken, the take can be regarded consumptive. Irrespective of whether the take is regarded as consumptive, we consider it is appropriate to require the Applicant to measure the water take, take records, and electronically submit the water take data to NRC in accordance with the regulations. We have imposed a condition which provides for the measurement and reporting of water, and we are satisfied the information and reporting requirements can be met in this respect.

PART 8: REGIONAL AND DISTRICT PLANS

355. This part sets out the Panel's consideration of the relevant regional and district planning documents.

8.1 RPS

356. The RPS sets regional objectives and policies which are relevant to the Project. In this regard the AEE identifies the key themes set out in the RPS as relating to (in summary):

(a) freshwater quality;

(b) freshwater quantity;

(c) indigenous ecosystems and biodiversity;

(d) natural, character, features and landscapes; and

(e) regionally significant infrastructure.

357. We also consider the objectives associated with Integrated Catchment Management, Enabling Economic Wellbeing, Efficient and Effective Infrastructure, Natural Hazard Risk, Active Management, and Tangata Whenua Role in Decision Making as relevant.

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[168] Water Take Regulations, reg.4.

358. The AEE states that the reservoir will likely have localised positive impacts on water quality, since it is being constructed on land that has long been used for pastoral farming, will trap inputs of sediment, and requires riparian planting and wetland restoration/enhancement. We accept this and have imposed conditions to ensure water quality is appropriately managed.

359. In terms of freshwater quantity, we accept that the Project would be consistent with the RPS objectives and policies, and in particular policy 4.3.4 which seeks to promote water harvesting, storage, and conservation. We also note that the Project has existing water take consents which will be used to supplement flows into the reservoir.

360. In terms of ecosystems and biodiversity, whilst we accept the Project results in effects that cannot be avoided, remedied, or mitigated, overall, we agree that the Project will result in no-net loss by way of ecological off-setting. We also concur with the management plan approach to ensure that ecosystems and biodiversity are further identified, protected, and preserved. This approach in our view safeguards Northland's ecological integrity.

361. In terms of economic wellbeing, this decision has previously considered the potential economic benefits and wellbeing enhancements likely to result from the Project. We find that the Project will increase the economic wellbeing of Northland and its communities.

362. Whilst not specifically listed as "*regionally significant infrastructure*", the proposed reservoir certainly meets the characteristics of an asset that will be significant to the region. This has been addressed earlier in this decision and we find consistency here with the RPS.

363. The reservoir will enhance the ability of Northland and its communities to be resilient to water-based issues whilst enabling positive economic and wider land use changes that can support regional economic development and community wellbeing. Accordingly, the Project represents efficient and effective infrastructure and is consistent with the RPS.

364. In terms of a tangata whenua role in decision making, we acknowledge the positive and crucial role that tangata whenua as kaitiaki play in the management of natural and physical resources. Our decision includes enhanced opportunities for tangata whenua to be included post consent, and this enables the building of long-term relationships, and the integration of mātauranga Māori and Te Ao Māori concepts into the development.

365. In terms of natural hazard risk, whilst some geotechnical hazards have been identified, none of these are considered to be fatal to the Application. Further, the Site is not considered to be subject to contaminated soils. We have considered the potential risk to people and property in this decision. We are comfortable that the risks and impacts of natural hazard events, including climate change, on people, property, natural systems,

infrastructure, and the regional economy have been minimised in accordance with the RPS.

366. The natural character of freshwater has been considered earlier. We consider that the qualities and characteristics of the freshwater bodies outside of the reservoir footprint and in close proximity to the Site will be protected and, in some instances, enhanced.

367. The Project also exhibits a high degree of active management, and the conditions ensure that natural character, areas of significant indigenous vegetation and significant habitats of indigenous fauna are improved as a result.

368. Overall, we considered that the Application is consistent with the RPS.

8.2 PRP

369. The AEE provides a thorough assessment of the relevant objectives and policies of the PRP, and these align directly to the RPS. Given the conclusions found above with respect to the RPS we similarly find that the Project is consistent with the aims and intents of the PRP.

8.3 FNDP

370. The Application includes an assessment against the objectives and policies of the Rural Production Zone, and we have considered this alongside the Rural Environment aims and intents.

371. The Rural Environment seeks the following Environmental Outcomes:

(a) a rural environment where natural and physical resources are managed sustainably;

(b) a rural environment in which a wide variety of activities are enabled, consistent with safeguarding the life-supporting capacity of air, water, soil, and ecosystems;

(c) a dynamic rural environment which is constantly changing to meet the social and economic needs of the district's communities through the sustainable management of natural and physical resources;

(d) the maintenance of areas of significant indigenous vegetation and significant habitats of indigenous flora and fauna including aquatic habitats, and an increase in such areas that are formally protected;

(e) adverse effects arising from potentially incompatible activities are avoided, remedied, or mitigated;

(f) the maintenance of values associated with outstanding natural features and landscapes in the rural environment; and

(g) a rural environment where change is acknowledged whilst amenity values are maintained and enhanced to a level that is consistent with the productive intent of the zone.

372. The Rural Production Zone seeks to:

(a) provide for a wide variety of activities to take place in a manner that is consistent with the sustainable management of natural and physical resources and compatible with the productive intent of the zone;

(b) enable the social, economic, and cultural well-being of people and communities, and their health and safety, whilst safeguarding the life-supporting capacity of the environment and avoiding, remedying, or mitigating adverse effects on it; and

(c) ensure that the adverse effects of incompatible activities are avoided, remedied, or mitigated.

373. In our view the Application is consistent with the above objectives and policies as it will result in the Environmental Outcomes Expected in the Rural Environment and Rural Production Zone being met.

374. In terms of natural and physical resources such as indigenous flora and fauna and soils, the following Environmental Outcomes Expected are relevant:

(a) population numbers of rare and threatened species of flora and fauna are maintained or increased, and their habitat enhanced;

(b) existing areas of significant indigenous vegetation and significant habitats of indigenous fauna do not suffer further degradation, and are, where possible, managed to enhance the area, and new and/or alternative areas are developed;

(c) the district's exceptional biological diversity, including its high level of endemism, is maintained and enhanced for national benefit;

(d) an increase in those areas of significant indigenous vegetation and significant habitats of indigenous fauna, which are formally protected;

(e) the people of the Far North will have an increased awareness of the indigenous biodiversity of the area and a stronger commitment to its protection and enhancement;

(f) retention and enhancement of the life-supporting capacity of soil resources of the district; and

(g) a reduced rate of loss of soil through erosion.

375. In our view, the Application will contribute to these expected outcomes and as such is consistent with Chapter 12 – Natural and Physical Resources of the FNDP.

376. Accordingly, overall, in our view the Application is considered to be consistent with the relevant provisions of the FNDP.

PART 9: CONDITIONS

377. As noted in **Part 2** above, the Panel circulated a draft set of conditions to the Applicant and all persons who had provided comment on the Application on 2 June 2022. At the close of the comments period (14 June 2022) comments were received from 7 parties: the Applicant, FNDC, NRC, DOC, Forest & Bird Heritage NZ and a near neighbour (Mr Flude). A summary of the comments received on the draft conditions, along with our response to those comments is attached at **Appendix 4**.

378. More generally, we confirm that in coming to our decision on conditions we considered all advice and comments received, and where a change has not been adopted, it is because we considered it was unnecessary or inappropriate given the findings made in this decision and the wording of other conditions.

379. We have generally covered our discussion on conditions within our findings for each topic (refer **Parts 5** and **6** above) and in **Appendix 4**. However, there are a number of points which either have not yet been addressed or which we consider would benefit from further explanation. These are:

(a) structure of the conditions;

(b) water use and quality conditions;

(c) management plans;

(d) project liaison, complaints and the CLG; and

(e) the review condition.

9.1 Structure of the conditions

380. We structured our condition set so that it was clear:

(a) what types of consents had been granted for each activity;

(b) which conditions applied to which activities by including an index of consents and by grouping the conditions into four discrete parts:

(ii) general conditions - which apply to all activities/consents;

(iii) pre-construction - which set out the steps or requirements before construction can commence;

(iv) construction - which set out the relevant controls and requirements applying while construction is being carried out; and

(v) filling, commissioning and operation of the Reservoir - which sets out the operational controls and ongoing requirements during the operation of the Reservoir;

(c) which council was the relevant authority for each activity by identifying the specific council(s) in both the index and the relevant conditions;

(d) what was meant by the terms used in the conditions by including a definition section and by using those terms consistently throughout the conditions;

(e) which persons needed to be consulted about which plans by identifying them in the conditions and / or Appendix A; and

(f) what plans required review and / or certification and the appropriate process for each.

9.2 Water, take, use and quality conditions

381. The water take, use and quality conditions were a particular focus for commentors on conditions. We have imposed conditions which we consider will effectively manage these issues. In particular:

(a) with respect to water take, and as explained in **Part 6** above, we were concerned to ensure the conditions were clear as to the amount of water that could be taken and when. We have imposed conditions which we consider make plain what is required;

(b) we have imposed conditions which require the measurement and reporting of water use from three locations – the tributary from which water will be taken, the reservoir itself, and the outlet of the main dam, in order to measure flows released from the dam into the tributary;

(c) with respect to water quality, while initially we contemplated imposing conditions requiring compliance with certain water quality standards from the PRP, we have accepted the Applicant's advice that:

(i) the standards only apply in relation to discharge permits; and

(ii) the quality of the water in the reservoir will largely be beyond the Applicant's control (given it will be a function

of run-off from the surrounding catchment most of which is not owned by the Applicant).

We have however retained requirements for water quality monitoring in both the reservoir and stream so that any unanticipated effects can be identified, and if necessary, addressed through the review condition (refer below).

9.3 Management plans

382. Another particular focus of persons providing comment were the use of management plans and the wording of the various management plan conditions.

383. In its original submission, DOC expressed reservations about the high degree of reliance on the use of management plans, instead of undertaking "*assessment and planning up-front*". Forest & Bird expressed similar reservations, and both indicated the need for clearly worded objectives and criteria in any management plan conditions. These themes were repeated in their comments on conditions.

384. NRC provided detailed feedback on the proposed management plan conditions, and in particular the need for consistency in terms used, certainty as to timing for preparation and certification, and the need for clear wording to ensure the plans are enforceable for compliance purposes. Compliance officers at NRC also provided helpful feedback about issues that had arisen with the interpretation and application of the conditions for the *Matawii* dam.

385. In determining the wording of the management plan conditions we are cognisant that the conditions must be specific, clear and accurate;[169] and must not impermissibly delegate to management plans matters that are properly the subject of conditions.[170] We have made a number of changes to the conditions following receipt of the comments on conditions, and we are satisfied that our conditions now meet those requirements.

9.4 Project liaison, complaints and the CLG

386. Two of the consistent themes in the comments we received were:

(a) a desire for members of the community to be consulted and kept informed about the Project – particularly as regards the potential for adverse construction effects (such as noise, dust etc) to occur; and

(b) for there to be a clear process and requirements for the Applicant to address complaints/issues as they arise.

387. While we acknowledge that the Applicant undertook some preliminary consultation with adjoining property owners, tangata whenua, the councils

[169] *Ferguson v Far North District Council* [1999] NZRMA 238 (EC).
[170] *Wellington Fish and Game Council v Manawatu-Regional Council* [2017] NZEnvC 37, at [175].

and Waka Kotahi prior to filing its Application; it is clear that the Applicant did not consult all potentially affected persons (such as those affected by a potential dam breach) or stakeholders (such as DOC). The Applicant also made no provision for further engagement with these parties during construction.

388. We consider it is important that provision be made for such engagement during construction, given that is when the majority of the potential adverse effects may occur. We have included conditions requiring that:

(a) project liaison person(s) be appointed and be contactable at all times prior to the start of enabling works and for 12-months after successful commissioning;

(b) a CLG be established:

(i) to provide a forum for the Applicant to share Project information, enable members to raise any issues/opportunities associated with construction and monitor the effects of construction on the community;

(ii) which includes representatives from the Applicant and its construction contractor;

(iii) whose membership is open to representative(s) of Taiāmai, neighbouring and downstream property owners, the councils, Waka Kotahi, and DOC;[171] and

(iv) continue in force until 12 months following the successful commissioning of the reservoir.

389. We have also included conditions requiring the Applicant to adopt a complaints management process, which requires investigation, notification to the relevant council(s), and reporting back to the complainant of measures taken or proposed to be taken. The Project liaison person(s) remain the primary point of contact for persons with complaints about construction.

390. We consider these conditions, alongside the other conditions we have imposed (such as the requirement for the Applicant to fix any damage to the road caused by the Project, and the requirement to undertake noise monitoring if requested by FNDC in response to a complaint), will appropriately manage any construction related concerns for affected parties.

9.5 Review condition

391. While the Applicant expects to complete the construction of the reservoir within two earthworks seasons, we have included a review condition, in

[171] Noting we had originally included Forest & Bird as well but removed them at their request from this and other conditions.

case there are delays to this timeframe, and in case any unanticipated adverse effects arise.

392. Further, given dams are a permanent land-use, we consider it is important that the relevant regulatory authority has the power to periodically review the conditions to make sure they still remain fit for purpose and appropriately manage operational effects.

393. The review condition we have imposed enables (but does not require) NRC/FNDC to review the conditions annually in order to require the adoption of best practical option(s) for discharges, to address unanticipated effects, to adjust water abstraction rates or volumes if the water is not able to be fully utilised, to amend recording or reporting methods for water, and/or to require greater water use efficiencies.

PART 10: SECTIONS 104B AND 104D

394. Given the Project falls for consideration as a non-complying activity, the Panel is also required to consider s.104B and 104D of the RMA.

10.1 Section 104B

395. Section 104B sets out the parameters that a consent authority has with respect to non-complying activities. The Panel may grant or refuse an application; and if it grants an application, may impose conditions under s.108 of the RMA.

396. As demonstrated in other parts of this decision, we have considered all of the matters in s.104 that are relevant to this Application and are satisfied that consent to the Application can be granted. In accordance with s.104B of the RMA, we exercise our discretion in favour of that outcome, and do so subject to the conditions set out in **Appendix 1**.

10.2 Section 104D

397. As a non-complying activity, before the Panel can grant consent to the Application, we must be satisfied that it meets one of the 'gateway' tests under s.104D of the RMA. This requires that either:

(a) the adverse effects on the environment will be minor; or

(b) the application is for an activity that will not be contrary to the objectives and policies of the relevant plan and/or proposed plan in respect of the activity.

398. For an activity to be "*contrary*" to the objectives and policies of the relevant plans, it must be "*opposed to*" or "*repugnant to*" the objectives and policies of the relevant plans.[172] In undertaking an assessment of the activity

[172] *Outstanding Landscape Protection Soc Inc v Hastings DC* [2008] NZRMA 8.

against the relevant objectives and policies, these provisions are to be considered in their entirety or "*as a whole*."[173]

Applicant's assessment

399. The Applicant concludes that the Applicant passes the s.104D gateway as:[174]

(a) the potential adverse effects of the Project on the environment will be "*appropriately and sufficiently addressed by implementing the proposed conditions of resource consent*" - which include measures to offset adverse effects on the extent and values of natural wetlands and streams, amongst a range of other measures associated with the construction and operation of the reservoir; and

(b) the Project is consistent with, and not contrary to the objectives and policies of the relevant national and regional planning instruments.

Evaluation and findings

400. The Panel's evaluation of the environmental effects and assessment against the relevant plans and policies is set out in **Parts 6, 7** and **8** above.

401. In relation to the effects gateway test, while the Project includes some significant adverse effects (such as the loss of natural wetlands and streams), and moderate landscape effects for near neighbours, the Panel considers that with the offsets and mitigations proposed in the conditions, overall, the potential adverse effects on the environment will be no more than minor.

402. However, even if the effects gateway test is not met, the Panel considers that the Application meets the objectives and policies gateway test, as overall, the Project is not contrary to the relevant objectives and policies.

403. The Panel therefore finds that the Project meets at least one of s.104D gateway tests, meaning that consent is able to be granted to the Application.

PART 11: SECTIONS 105 AND 107 RMA

11.1 Section 105

404. As the Project involves discharges to the environment,[175] both during construction and during the subsequent operation of the reservoir, the Panel is required to consider the following matters set out in s.105 of the RMA:

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[173] *RJ Davidson Family Trust v Marlborough District Council* [2016] NZEnvC 81.
[174] AEE, section 10, p.104.
[175] Refer paragraph 21 above.

> *(a) the nature of the discharge and the sensitivity of the receiving environment;*
>
> *(b) the Applicant's reasons for the proposed choice; and*
>
> *(c) any possible alternative methods of discharge, including discharge into any other receiving environment.*

405. We have largely addressed these matters in other parts of this decision. As the Applicant's AEE and supporting technical assessments confirm:[176]

(a) the relevant discharge effects from sediment laden water, dust, stormwater, and water are temporary and can all be appropriately managed by way of conditions;

(b) the discharges are an integral part of the Project and best practice methods have been adopted to minimise any adverse effects; and

(c) there are no practicable alternative methods of discharge.

406. Having considered the relevant discharges, the Panel concur with the Applicant's conclusion on these matters, and we have imposed conditions which we consider will ensure discharges are appropriately managed.

11.2 Section 107

407. Under clause 31(5) of Schedule 6, the Panel must not grant a resource consent that is contrary to s.107 of the RMA.

408. Section 107 prevents discharge permits being authorised if the discharge of water or contaminants into water (or onto land in circumstances that may result in it entering water) would result in:

> *(a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*
>
> *(b) any conspicuous change in the colour or visual clarity;*
>
> *(c) any emission of objectionable odour;*
>
> *(d) the rendering of fresh water unsuitable for consumption by farm animals; or*
>
> *(e) any significant adverse effects on aquatic life.*

409. The Applicant has assessed the potential for such effects to arise in Table 11 of its AEE.[177] We concur with that assessment and note we have addressed the effects of discharges elsewhere in this decision (notably **Parts 6-8**). We have imposed conditions which require compliance with best practice standards and measures (such as the implementation of erosion and sediment controls) to ensure discharges associated with the Project will not breach the s.107 restrictions. On this basis, we consider s.107 is not a bar to the granting of consent for this Project.

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[176] AEE, Table 11, p.37.
[177] AEE, section 5.1, pp.36-37.

PART 12: PURPOSE OF THE FTA AND PART 2 OF THE RMA

410. An expert consenting panel is required to determine consent applications in accordance with the provisions of the FTA.[178]

411. While the FTA includes an express requirement for the Minister[179] at the referral stage to consider whether a Project will help to achieve the purpose of the FTA by reference to a number of factors (s.19 of the FTA), there is no equivalent provision for expert consenting panels. Instead, clause 31 of Schedule 6 makes our consideration of the effects, offsets, compensation, planning documents and any other relevant matters, subject to Part 2 of the RMA and the purpose (s.4) of the FTA – noting that the FTA Treaty provision (s.6) applies in place of s.8 of the RMA.[180]

412. The FTA does however require every application to contain an assessment of the activity against Part 2 of the RMA, the purpose of the FTA, and the matters set out in s.19 of the FTA. The Applicant's AEE contained an assessment of these matters in sections 7.1 to 7.3.

413. In considering these matters, we are mindful that as the Court of Appeal stated in *RJ Davidson Family Trust v Marlborough District Council*,[181] where a plan has been prepared having regard to Part 2 of the RMA, then resort to Part 2 would not likely add any value, and Part 2 cannot be used to justify an outcome contrary to policies. We record our understanding that the RMA policies and plans to which we have had regard give effect to Part 2, although we acknowledge that some appeals still remain to be determined for parts of the PRP. We have therefore not found it necessary to apply an overall broad judgment approach to Part 2.

414. In any case having reviewed the AEE, the supporting technical reports, the information and comments received, both on the AEE and the draft conditions, the Panel considers that the Project will achieve the purpose of the FTA and Part 2 of the RMA by:

(a) creating employment during the construction phase;

(b) investing in water infrastructure in the local area;

(c) enabling increased productivity and/or new land uses (including large scale conversion of pastoral land to horticulture) as a result of the improved availability and reliability of water;

(d) better enabling the Northland regional community to provide for its health and safety through the provision of a lifeline utility service (firefighting and emergency water supply to Ōhaeawai); and

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178 Clause 1 of Schedule 5 to the FTA.

179 Minister is defined in s.7 of the FTA as "*the Minister of the Crown who, under the Authority of any warrant or with the authority of the Prime Minister is for the time being responsible for the administration of this Act*".

180 Clause 31(2) of the Sixth Schedule.

181 *RJ Davidson Family Trust v Marlborough District Council*]2018] NZCA 316.

(e) ensuring the sustainable management of natural and physical resources through enabling greater capture and re-use of rainwater, the incorporation of design, control and other measures to ensure the appropriate avoidance, remediation or mitigation of adverse effects, and the enhancement of offset areas.

415. Overall, and subject to the conditions set out in **Appendix 1,** it is our finding that the Application will be consistent with both the purpose of the FTA and Part 2 of the RMA.

PART 13: FINAL DECISION

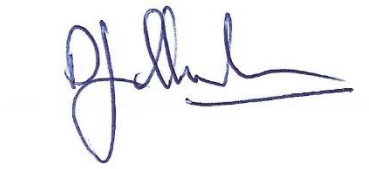
416. We are satisfied that the FTA, Schedule 6 (clauses 31 and 32) considerations are all met and that the dual purposes of the FTA and the RMA are achieved by this decision.

417. For the reasons given in this decision, consent for the development is granted subject to the conditions attached as **Appendix 1**.

418. In accordance with clauses 38 and 45 of Schedule 6, the Panel records that a person entitled to appeal must file any appeal no later than 15 wd after they have received notice of this decision.

Vicki Morrison-Shaw (Chair)

Russell Howie ONZM (Member)



David Clendon (Member)

Steven Sanson (Member)

APPENDIX 1: CONDITIONS OF CONSENT

Index of Consents

Ref	Resource consent	Description	Expiry date
RC.1	Water permit (s13(1) and s14(1)) – NESFW NRC	Disturbance, and the take, use, damming, diversion, and discharge of water associated with the construction of specified infrastructure within or near a natural wetland	35 years
RC.2	Water permit (s13(1)) – NESFW NRC	Reclamation of the bed of a river	35 years
RC.3	Water permit (s13(1)) – NESFW NRC	The placement and use of a culvert during construction	35 years
RC.4	Land use (s9(2)) NRC	Earthworks outside the bed of a river or wetland, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water	Unlimited
RC.5	Land use (s9(2)) NRC	Vegetation clearance in riparian areas	Unlimited
RC.6	Water permit (s14) NRC	The installation of sub-surface drainage (bores) at the site of the Main Dam for groundwater control.	35 years
RC.7	Water permit (s13) NRC	Disturbance of the stream bed during construction: • at, upstream, and downstream of the site of the Main Dam (including the disturbance associated with diverting the unnamed tributary of the Waitangi River during the construction to provide a dry working area and the installation of a culvert offline from the existing tributaries). • at an intermittent stream at the location of the spillway • at other locations within the reservoir footprint Construction activities will also include the reclamation of a stream and the depositing of material into streams.	35 years
RC.8	Water permit (s13) NRC	Disturbance of a wetland that is not classified as significant.	35 years

Ref	Resource consent	Description	Expiry date
RC.9	Water permit (s13) NRC	Disturbance of a wetland that is classified as significant.	35 years
RC.10	Water permit (s13 and s14) NRC	The diversion of water in a river and associated disturbance of the bed or deposition of material on the bed.	35 years
RC.11	Water permit (s13 and s14) NRC	The construction, placement, and use of the Main Dam for the purposes of damming water and the associated disturbance, and the damming and diversion of water at the Main Dam	35 years
RC.12	Water permit (s14) NRC	Damming and diversion of water in a significant wetland	35 years
RC.13	Water permit (s14) NRC	Taking of water from an unnamed tributary of the Waitangi River and groundwater dewatering associated with constructing the main dam and saddle dam	35 years
RC.14	Land use (s9(3)) FNDC	Activities associated construction and operation of the Main Dam	Unlimited
RC.15	Land use (s9(3)) FNDC	The clearance of indigenous vegetation within 20m of a natural wetland	Unlimited
RC.16	Land use (s9(3)) FNDC	Excavation and filling associated with constructing the proposed reservoir	Unlimited
RC.17	Water permit (s13) FNDC	Works within setbacks from smaller wetlands and the destruction of indigenous wetland.	35 years

Definitions and explanation of terms

The table below defines the acronyms and terms used in the conditions. Defined terms are capitalised throughout the conditions.

Abbreviation / term	Meaning / definition
AMP	Avifauna Management Plan
ASCNMP	Activity-Specific Construction Noise Management Plan
Application	Means the application and assessment of environmental effects lodged with the Environmental Protection Authority on 2 February 2022 and the applicant's responses to requests for further information dated 8 April 2022, 26 April 2022, 13 May 2022, and 10 June 2022 and the July 2022 borrow and disposal areas plan attached as Appendix C
CEAP	Construction Emergency Action Plan
CEMP	Construction Environmental Management Plan
Certification	Certification of a Management Plan means confirmation that the Management Plan adequately gives effect to its objectives and contains all of the information required by the conditions of consent
Certified	Refers to a Management Plan that has completed the Certification process specified in Condition 32
CLG	Community Liaison Group
CMP	Cultural Monitoring Plan
Commissioning	Means the process that begins when instruction is given to deliver water to fill the reservoir and is complete when the reservoir reaches its full supply level and is in a stable and properly functioning state
Competent Engineer	Means a suitably qualified and registered independent Chartered Professional Engineer and who, where the review or certification relates to matters of dam design, construction, or the preparation and peer review of documentation required for large dams, has a minimum of 10 years' experience in those activities, is experienced in the design and construction of large dams with an assessed Potential Impact Category of 'High' and is a Category A Recognised Engineer for the purposes of the NZSOLD Guidelines (or equivalent)
Completion of Construction	When activities associated with the Construction Works are finished, and Commissioning can begin
Completion of Offsetting Measures	Refers to when offset and compensation actions have been achieved, and objectives, performance targets and performance standards specified in the EOIP have been met
Construction Works	Activities undertaken to construct the Project under these resource consents

Abbreviation / term	Meaning / definition
council	Refers to either FNDC or NRC. For the purposes of Certification, the relevant council is identified in each Management Plan condition
CTMP	Construction Traffic Management Plan
Dam Construction Works	Activities undertaken to construct the Main and Saddle Dams under these resource consents
DOC	Department of Conservation
DSMS	Dam Safety Management System
EAP	Emergency Action Plan
ECR	Environmental Compensation Ratio
Enabling Works	Includes the following and similar activities: • site establishment including site entrances, fencing, site office(s) and associated services • surveys and monitoring • establishing erosion and sediment control measures • establishing temporary traffic control measures, including signage, etc.
EOIP	Ecological Offset Implementation Plan
ESCMP	Erosion and Sediment Control Management Plan
FFMP	Flushing Flow Management Plan
FFSRP	Freshwater Fauna Salvage and Relocation Plan
FNDC	Far North District Council
GD05	Auckland Council Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Guideline Document 2016/005 Incorporating Amendment 2
LandMP	Landscape Management Plan
LMP	Lizard Management Plan
NESFM	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
NRC	Northland Regional Council

Abbreviation / term	Meaning / definition
Main Dam	The south-eastern dam as shown in Appendix B
Northland CDEM	Northland Civil Defence Emergency Management Group
NZECP34	New Zealand Electrical Code of Practice for Electrical Safe Distances 2001
NZSOLD Guidelines	New Zealand Society on Large Dams (NZSOLD) Dam Safety Guidelines 2015 (ISBN: 978-0-908960-65-1)
Operation	Means when Commissioning is complete and the OWSR is ready for use
ORMP	Operational Reservoir Management Plan
OWSR or reservoir	Otawere Water Storage Reservoir
Project	The construction, operation and maintenance of the Otawere Water Storage Reservoir, and associated works
Project Liaison Person(s)	The person(s) appointed to be the main and readily accessible point(s) of contact for persons interested in, or affected by, construction and commissioning activities
RECCE	Reconnaissance plot descriptions is a technique used for inventory and monitoring vegetation types and monitoring change
RMA	Resource Management Act 1991
Saddle Dam	The northern dam, near the primary spillway as shown in Appendix B
SEV	Stream Ecological Valuation
Stage of Works	A separable part of the Project (e.g., by milestone or construction activity)
Start of Construction	The time when Construction Works start
Successful Commissioning	Means when the OWSR has reached a stable and properly functioning state
Waka Kotahi	Waka Kotahi NZ Transport Agency
Working Day	Has the same meaning as under section 2 of the RMA
WSMP	Water Supply Management Plan

Appendices to these Conditions

Appendix A – List of neighbouring and downstream property owners and occupiers

Appendix B – Saddle and Main dam locations

Appendix C – Borrow and Disposal areas plan

Appendix D – Vegetation Removal Protocol

Appendix E – Waka Kotahi Diagram D

General Conditions

	Standard Conditions
1	Except as provided for in the conditions below and subject to final design, the Project shall be undertaken in general accordance with the information submitted with the Application dated 2 February 2022 and the applicant's responses to clause 25 of Schedule 6 to the COVID-19 Recovery (Fast-track Consenting) Act 2020 requests for further information dated 8 April 2022, 26 April 2022, 13 May 2022, and 10 June 2022, and the July 2022 borrow and disposal areas plan attached as Appendix C.
2	Where there is inconsistency between: (a) the information identified in Condition 1 above and these conditions, these conditions shall prevail; (b) the information and plans lodged with the Application and further information provided post lodgment, the most recent information and plans shall prevail; and (c) the draft management plans and/or management plan frameworks lodged with the Application and the management plans required by the conditions of these resource consents, the requirements of the management plans as set out in the relevant conditions shall prevail.
3	A copy of the plans and resource consent conditions must always be kept on-site either electronically or in hard copy during Construction Works.
4	The consent holder must pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by council under Section 36 of the RMA.
5	Prior to the Start of Construction the consent holder must hold a pre-start meeting that: (a) is located on the subject site; (b) is scheduled not less than five working days before the anticipated commencement of works;

	(c) includes compliance monitoring officer[s] from FNDC and NRC; (d) includes representation from the contractors who will undertake the works; and (e) includes representatives from Taiāmai ki te Takutai Moana Resource Management Unit. The purpose of the meeting is to discuss the relevant erosion and sediment control measures, stream works methodologies for that site (if relevant), share information in respect to the conditions of consent, review management plan requirements, discuss the timeframes for the works and ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.
	Consent lapse and expiry
6	Pursuant to clause 37(7) of Schedule 6 to the COVID-19 Recovery (Fast-track Consenting) Act 2020, the consents numbered RC.1, RC.2, RC.3, RC.4, RC.5, RC.6, RC.7, RC.8, RC.9, RC.10, RC.11, RC.12, RC.13, RC.14, RC.15, RC.16, and RC.17 shall lapse two years from the date of their commencement unless they have been given effect to, surrendered or have been cancelled at an earlier date.
7	Pursuant to section 123 of the RMA the consents numbered RC.1, RC.2, RC.3, RC.6, RC.7, RC.8, RC.9, RC.10, RC.11, RC.12, RC.13 and RC.17 shall expire 35 years from the date of their commencement unless they have been surrendered or been cancelled at an earlier date.
8	The duration of the land use consents for the OWSR is unlimited unless it has lapsed, surrendered, or been cancelled at an earlier date.
	Review of conditions
9	Council may, in accordance with Section 128 of the RMA, serve notice on the consent holder of its intention to review the conditions of this consent within three months prior to each anniversary of the commencement of the consent for any one of the following purposes: (a) to require the consent holder to adopt the best practical option to remove, remediate or reduce any adverse effects on the environment resulting from discharges; (b) to determine whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; (c) to adjust the consented rate or volume of water abstraction should monitoring or future changes in water use indicate that the consented rate or volume is not able to be fully utilised; (d) to adjust or alter the method of recording and reporting information on water that is dammed, taken, and used; or (e) requiring greater efficiency of water use.

	Bond
10	The consent holder must provide and maintain in favour of NRC a bond to: (a) enable any adverse effects on the environment resulting from the consent holder's activities and not authorised by these consents to be avoided, remedied, or mitigated; (b) secure the maintenance and/or rehabilitation of the site should the construction of the dam not be completed for any reason; and (c) ensure the performance of any monitoring obligations of the consent holder relating to long-term effects under this consent. Enabling Works must not start until the consent holder has provided the bond to NRC and the bond has been accepted by NRC. *Advice note:* *These conditions do not constitute permission to undertake any activity, works or effect that might require additional resource consents relating to the Project.*
11	The bond must be in a form approved by NRC and must, subject to these conditions, be on the terms and conditions required by NRC.
12	Subject to Condition 10, the bond must provide that the consent holder remains liable under the RMA for any breach of the conditions of consent which occurs prior to the maintenance and/or rehabilitation of the site if that is required.
13	Unless the bond is a cash bond, the performance of all conditions of the bond must be guaranteed by a guarantor acceptable to NRC. The guarantor must bind itself to pay for the carrying out and completion of any condition in the event of any default of the consent holder, or any occurrence of any adverse environmental effect requiring remedy.
14	The amount of the bond: (a) must be fixed by NRC who must take into account any matters submitted by the consent holder to be relevant to the determination of the amount; and (b) may be varied at any time by agreement between the consent holder and NRC. The consent holder must provide reasoning / justification for any requested variation to the bond quantum.
15	The bond must be in place before Enabling Works to the Completion of Offsetting Measures.
16	All costs relating to the bond must be paid by the consent holder.
	Insurance
17	At least 30 working days prior to the start of Enabling Works, and at all times thereafter, the consent holder must:

	(a) hold a current public liability insurance policy in terms acceptable in all respects to NRC, and which covers all reasonable insurable contingent risks associated with the construction and operation of the OWSR, including offsite impacts to third party property associated with any reasonably foreseeable failure of any part of the OWSR (including damage or destruction of possessions, including but not limited to damage to Top Energy Power Lines and Waka Kotahi assets), together with a reasonable provision for reconstruction and reinstatement; and (b) provide a copy of the public liability insurance to NRC for certification that the requirements set out in clause (a) have been met. *Advice note:* *For the purposes of this Condition, the term "possession" refers to items owned by an individual or business, such as buildings, structures, assets and/or equipment.*
	Reservoir Design
18	The OWSR must be designed, constructed, and maintained in accordance with the objectives, principles, and requirements of the NZSOLD Guidelines. *Advice note:* *These conditions seek to regulate the environmental effects associated with dam construction and ensure that the NZSOLD guidelines have been followed during dam design. They do not replace any requirements under the Building Act 2004, which regulates dam design and construction, and ensures that dam design has been done in accordance with relevant standards and an appropriate peer review has been obtained.*
19	Detailed design for the OWSR must demonstrate: (a) adequate dam strength; (b) stable embankment slopes; (c) competent foundation and abutment material; (d) stable reservoir slopes; and (e) an adequate drainage design that provides for precise monitoring.
20	At least 20 working days prior to Start of Construction of each dam, the consent holder shall: (a) submit detailed engineering designs and drawings to NRC for Certification that the design is in general accordance with the Application; and (b) identify any changes between the detailed engineering designs and drawings and those submitted with the Application.
21	The methods for provision for fish and native eel upstream and downstream passage must be: (a) incorporated into the design and operation of the OWSR;

	(b) determined through consultation with Taiāmai ki te Takutai Moana Resource Management Unit and DOC; and (c) documented in the ORMP.
	Milestone Dam Design and Peer Review Process
22	The following Stages of Works must be reviewed by a Competent Engineer to confirm that they are being undertaken in accordance with the objectives, principles, and requirements of the NZSOLD Guidelines: (a) after completion of investigations and before the Main Dam and Saddle Dam designs are finalised; (b) after the Main Dam and Saddle Dam designs are completed and before the Start of Construction; (c) after the Main Dam and Saddle Dam foundations have been exposed and before dam construction commences; (d) periodically, for example when significant levels in the dam are reached such as, at drainage layers or when compacted levels reach ¼, ½, and ¾ of the final height; (as identified in the CEMP) during Main Dam and Saddle Dam construction; (e) after construction of the Main Dam and Saddle Dam is completed and before filling of the reservoir; and (f) at the time of Commissioning (to certify Successful Commissioning).
23	The review required by Condition 22 must be completed, and evidence of the review and its findings (including any actions by the consent holder in response to these findings) must be: (a) forwarded to NRC, before any subsequent Stage of Works can progress; and (b) provided to FNDC. *Advice note:* *In the event of an unresolved dispute arising from the review, a third Competent Engineer may be engaged by the consent holder to arbitrate. The third Competent Engineer must be agreed between NRC and the consent holder.*

Pre-Construction Conditions

	Project Liaison
24	A Project Liaison Person (or persons) must be appointed by the consent holder to be the main and readily accessible point(s) of contact for persons interested in, or affected by, construction and commissioning activities. A Project Liaison Person's contact details shall be readily available via the Project website, and they shall be contactable at all times.

25	The Project Liaison Person (or persons) must be appointed prior to the start of Enabling Works to a date twelve months following the Successful Commissioning of the Project.
	Community Liaison Group
26	After completion of investigations and before the dam designs are finalised, a CLG shall be established. The CLG shall: (a) hold regular meetings at a frequency agreed by the CLG; and (b) be dis-established twelve months following the Successful Commissioning of the Project.
27	The purpose of the CLG is to provide a forum: (a) to share information on the Project design, construction activities and programme of works; (b) for the parties listed in Condition 28(d) to (i) to raise issues of concern in relation to Construction Works or identify opportunities for the Project team to respond to; and (c) to monitor the effects on the community arising from Construction Works in these areas.
28	The CLG shall include the following parties from the Project team: (a) a Project Liaison Person(s); (b) a representative from Te Tai Tokerau Water Trust; and (c) a representative of the construction contractor. A representative(s) from the following entities and individuals shall be invited to participate in the CLG: (d) Taiāmai ki te Takutai Moana Resource Management Unit; (e) Neighbouring and downstream property owners and occupiers listed in Appendix A to these conditions; (f) FNDC; (g) NRC; (h) Waka Kotahi; and (i) DOC. *Advice note:* *Participation in the CLG by entities and individuals identified in clause (d) to (i) is voluntary.*
29	The consent holder shall: (a) assist the CLG to hold regular meetings throughout the construction period; (b) in consultation with the CLG, establish terms of reference for the CLG that address the: (i) purpose and scope of the CLG and the frequency of meetings;

	(ii) confirms that the consent holder is responsible for all reasonable costs associated with resourcing of the CLG; and (iii) any other matters as identified by the CLG. (c) prepare an agenda for each meeting and prepare minutes recording actions. A copy of the minutes shall be provided to the meeting invitees within a reasonable time following the meeting. *Advice note:* *Reasonable costs associated with resourcing the CLG includes venue hire, catering, administrative support, etc., but does not include reimbursement / remuneration for any participant's time (which is voluntary) or costs associated with travelling to and from a meeting.*
	Management Plan Certification Process and Implementation
30	Enabling Works must not commence until all of the following are met: (a) the bond required by Condition 10 is in place; (b) the insurance required by Condition 17 is in place; and (c) the Cultural Monitoring Plan required by Condition 37 has been Certified.
31	Construction Works must not commence until all of the following are met: (a) the detailed engineering designs and drawings required by Condition 20 have been Certified; (b) the CMP required by Condition 37 has been Certified; (c) the CEAP required by Condition 40 has been Certified; (d) the CEMP required by Condition 44 has been Certified; (e) the ESCMP required by Condition 48 has been Certified; (f) the CTMP required by Condition 52 has been Certified; (g) the lizard scouting and survey required by Condition 55 has been completed and the LMP required by Condition 58 has been Certified (if triggered by the lizard and scouting survey); (h) the FFSRP required by Condition 61 has been Certified; (i) the AMP required by Condition 64 has been Certified; and (j) any brown Kiwi scouting and relocation required by Condition 67 has been completed; (k) the EOIP required by Condition 69 has been Certified; and (l) the pavement condition survey required by Condition 73 has been completed.
32	Unless otherwise stated in this consent: (a) the Certification process for management plans required by the conditions of this consent must be confined to confirming that the management plans adequately give effect to their objectives and contain the required information. (b) if twenty (20) working days have passed since a Management Plan has been provided for Certification, and the consent holder has not received a response from council, the Management Plan shall be deemed Certified. (c) if the council's response is that they are not able to certify the Management Plan the consent holder shall:

	(i) request that the council provide reasons and recommendations for changes to the management plan in writing; and (ii) consider any of the reasons and recommendation of the council and resubmit an amended Management Plan to be Certified. If the consent holder has not received a response from council within five (5) working days of the date of resubmission, the amended Management Plan will be deemed to be Certified.
33	Any Certified management plan may be amended to reflect any change in design, construction methods or management of effects without the need for re-certification where: (a) the amendment/s have no, or a de minimis adverse effect on the environment, or is a change that results in an improved environmental outcome; or (b) the amendment is an administrative change, including nominating personnel. Any management plan amended under this Condition must be provided to council within five (5) Working Days of the change.
34	Amendments to management plan(s) that do not meet the requirements of Condition 33 must: (a) be re-Certified prior to the commencement of any works to which the amended management plan(s) relate; and (b) obtain feedback / consultation if required by the condition.
35	Any management plan(s) that requires feedback, consultation or peer review during its development must: (a) allow a minimum of ten (10) working days for feedback; and (b) include the feedback in the final version of the management plan(s) submitted to council for Certification, including how feedback has been incorporated, and where feedback has not been incorporated, the reasons why.
36	The consent holder must: (a) comply with; (b) construct, operate and maintain the Project in accordance with; and (c) undertake monitoring and reporting in accordance with – the latest version of any Certified management plan(s) or plan amended under Condition 34.
	Cultural Monitoring Plan
37	Prior to Enabling Works, a CMP must be submitted to NRC for Certification in accordance with the process set out in Condition 31.

38	The purpose of the CMP is to set out the cultural monitoring requirements and measures to be implemented during construction activities, to acknowledge the historic and living cultural values of the area to ngā hapū o Waimate and to minimise potential adverse effects on these values.
39	The Cultural Monitoring Plan must: (a) be prepared by a person endorsed by the Taiāmai ki te Takutai Moana Resource Management Unit; (b) identify sites and areas where cultural monitoring is required during particular Construction Works (e.g., in wetlands and water bodies) and details of the monitoring measures; (c) identify any other specific activities requiring cultural monitoring and details of the monitoring measures; (d) identify personnel nominated by Taiāmai ki te Takutai Moana Resource Management Unit to undertake cultural monitoring, including any geographic definition of their responsibilities; (e) detail personnel nominated by the consent holder and Taiāmai ki te Takutai Moana Resource Management Unit to assist with management of any issues identified during cultural monitoring, including implementation of the Accidental Discovery Protocol developed under Condition 103; (f) detail any pre-construction monitoring and surveys that may assist in the monitoring role (e.g., lizard surveys); and (g) include any requirements or protocols for any pre-start blessings or cultural inductions (if any).
	Construction Emergency Action Plan
40	Prior to the Start of Construction, a CEAP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
41	The Objective of the CEAP is to detail a pre-determined plan of action to be implemented if a dam safety emergency develops during construction to limit damage to the dams and downstream areas (including property, possessions, and infrastructure) and to prevent the loss of life.
42	The CEAP must be prepared by a Competent Engineer and in accordance with the recommendations of the NZSOLD Guidelines and relevant New Zealand dam safety legislative requirements and: (a) include identification of emergency conditions which could endanger the integrity of the dams, and which would require immediate action; (b) include a description of the procedures which should be followed by the contractor and operating personnel to initiate emergency procedures at the dam; (c) include the timeframes for warning appropriate emergency management agencies and other agencies for their implementation of protection measures for downstream communities and infrastructure; and (d) be prepared in consultation with: (i) the Northland CDEM; (ii) Waka Kotahi; and

	(iii) the CLG.
43	A copy of the Certified CEAP must be provided to: (a) the groups listed in Condition 42(d); (b) neighbouring and downstream property owners and occupiers listed in Appendix A to these conditions; (c) FNDC; and (d) NRC.
	Construction Environmental Management Plan
44	Prior to the Start of Construction a CEMP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
45	The objective of the CEMP is to set out the methodologies, practices, and procedures to be adopted to manage Construction Works.
46	The CEMP must be prepared by a suitably qualified and experienced person and must include: (a) a description of: (i) the Construction Works programme and staging approach; (ii) a process for dealing with design adjustments including notification protocols; (iii) construction works methodologies; (iv) key construction quality performance metrics and processes for dealing with performance deviations; (b) a detailed site layout including the borrow and disposal areas identified in Appendix C; (c) the design and management specifications for all earthworks on-site and their location; (d) the name of the principal contractor and any sub-contractor(s); (e) the names and telephone numbers of the Project Liaison Person(s) and emergency contact personnel, who must be able to be contacted at all times; (f) a maintenance programme for haul and access roads; (g) the security and spill management systems proposed for any refueling and maintenance depots; (h) the environmental complaints management procedures and response measures; (i) the compliance monitoring, environmental reporting, and environmental auditing measures, including a requirement to provide the results or outcomes of such monitoring, reporting, and auditing to NRC; (j) a copy of any archaeological authority and an Accidental Discovery Protocol in accordance with Condition 103; (k) a copy of the Certified CMP in accordance with Condition 37; (l) the site security arrangements; (m) a requirement for a copy of the CEMP to be held on site; (n) the mitigation and contingency measures for (but not limited to) the following: (i) erosion control and construction material loss;

	(ii) preventing spills (including oils, hydraulic fluids, other chemicals) and contingency containment and clean-up provisions in the event of accidental spillage of hazardous substances; (iii) occurrences of non-compliance; and (iv) failure of protection works for earthworks. (o) procedures for the management of works which directly affect or are located in close proximity to existing network utility services; and (p) the commissioning sequence for the reservoir, including a description of the parameters for determining that the reservoir is in a stable and properly functioning state (Successful Commissioning).
47	A copy of the Certified CEMP must be provided to FNDC.
	Erosion and Sediment Control Management Plan
48	Prior to the Start of Construction, a ESCMP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
49	The objective of the ESCMP is to set out the practices and procedures to be adopted during construction of the Project to manage the effects of earthworks on the surrounding environment.
50	The ESCMP must be prepared in consultation with Taiāmai ki te Takutai Moana Resource Management Unit and in accordance with GD05 and include: (a) the expected duration (timing and staging) of the major cut and fill operations, drainage works, disposal sites for unsuitable materials/overburden, and clean water diversions; (b) diagrams and/or plans, of a scale suitable for on-site reference, showing the locations of the major cut and fill operations, disposal sites for unsuitable materials, erosion and silt control structures/measures, and water quality sampling sites; (c) details of erosion and sediment controls including specific pond design and calculations as required; (d) supporting calculations and catchment boundaries for the erosion and sediment controls; (e) the commencement and completion dates for the implementation of the proposed erosion and sediment controls; (f) methods to be used to stabilise batter faces; (g) details of surface re-vegetation of disturbed sites and other surface covering measures to minimise erosion and sediment runoff following construction; (h) measures to minimise sediment being deposited on public roads, beyond the works area; and (i) measures to avoid a dust nuisance occurring on neighbouring properties during dam construction.
51	A copy of the Certified ESCMP must be provided to FNDC.
	Construction Traffic Management Plan

52	Prior to the Start of Construction, a CTMP must be submitted to FNDC for Certification in accordance with the process set out in Condition 32.
53	The objective of the CTMP is to set out the methods and procedures to manage the safety and access risks on the road network adjacent to the reservoir construction site access as a result of construction traffic.
54	The CTMP must be prepared by a suitably qualified experienced traffic engineer with a current STMS Certificate and: (a) address the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (b) specify the locations of site access points and their connections to public roads; (c) detail the methodology for ensuring the continued access to all properties affected by the construction process for both vehicles and pedestrians (access must be maintained at all times unless the prior written approval of the landowner has been obtained); (d) include construction dates and hours of operation; (e) detail truck route diagrams both internal to the construction site and external to the local road network; (f) detail the traffic management measures required for over-dimension loads and large deliveries, including details on how larger trucks will enter / leave the site; and (g) specify temporary traffic management signage/details for both pedestrians and vehicles to appropriately manage the interaction of these road users and heavy construction traffic.
	Lizard scouting and survey
55	Prior to the Start of Construction, a suitably qualified and experienced herpetologist must carry out scouting / surveying of the site for native (threatened / at risk) lizards, geckos and/or skinks.
56	The scouting / surveying required by Condition 55 must: (a) be completed between 1 October and 30 April and in weather conditions favourable to herpetofauna activity; (b) be recorded by a suitably qualified and experienced herpetologist on an Amphibian/Reptile Distribution Scheme (ARDS) Card (or similar form that provides the same information); and (c) be sent to FNDC, NRC, DOC and Taiāmai ki te Takutai Moana Resource Management Unit as soon as practicable following the completion of the scouting / survey.
57	If the survey and scouting required by Condition 55: (a) indicates the presence of native (threatened / at risk) lizards, geckos and/or skinks in the Project site, a LMP must be prepared in accordance with Condition 58. (b) does not indicate the presence of native (threatened / at risk) lizards, geckos and/or skinks in the Project site, no further action is required.

	Lizard Management Plan
58	Subject to Condition 57, a LMP must be submitted to NRC for Certification in accordance with the process set out in Condition 32 prior to the Start of Construction.
59	The objective of the LMP is to minimise construction impacts on at risk or threatened lizard, gecko and/or skink populations present within the Project site and identify a suitable location for their relocation.
60	The LMP must be prepared by a suitably qualified and experienced herpetologist and must: (a) be prepared in consultation with: (i) Taiāmai ki te Takutai Moana Resource Management Unit; and (ii) DOC. (b) include a description of species to be targeted; (c) include a description of the monitoring, management, any contingency measures, and reporting requirements to NRC; (d) set out vegetation removal protocols and timings; (e) state the salvaging methodology, including destructive habitat searching for skinks and gecko spotlighting; (f) detail the relocation site characteristics, location, and any pest control requirements; (g) include other mitigation measures which will benefit lizards such as restoration planting and habitat enhancement; and (h) confirm the details of the suitably qualified and experienced herpetologist(s) that will undertake lizard salvaging.
	Freshwater Fauna Salvage and Relocation Plan
61	Prior to the Start of Construction, a FFSRP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
62	The objective of the FFSRP is to minimise the impact of construction activities on at risk or threatened indigenous freshwater fish species affected by the Project.
63	The FFSRP must be prepared by a suitably qualified and experienced ecologist and: (a) be prepared in consultation with: (i) Taiāmai ki te Takutai Moana Resource Management Unit; and (ii) DOC. (b) be peer reviewed by a suitably qualified and experienced ecologist; (c) include a description of the monitoring, management, any contingency measures, and reporting requirements; (d) include a description of species to be targeted; (e) include the methods to minimise potential injury or mortality during Construction Works and reservoir filling; (f) include the salvage and relocation methodology for the relocation or removal of at risk or threatened species that may not be able to relocate unaided;

	(g) detail the relocation site characteristics and location, should salvage and relocation be required; (h) include any other measures which will benefit freshwater fauna such as restoration planting and habitat enhancement; (i) state the monitoring and reporting requirements; and (j) confirm the details of the suitably qualified and experienced ecologist(s) that will undertake salvaging.
	Avifauna Management Plan
64	Prior to the Start of Construction, an AMP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
65	The objective of the AMP is to minimise construction impacts on at risk or threatened avifauna during Construction Works.
66	The AMP must be prepared by a suitably qualified and experienced ecologist and: (a) be prepared in consultation with: (i) Taiāmai ki te Takutai Moana Resource Management Unit; (ii) FNDC; and (iii) DOC. (b) be peer reviewed by a suitably qualified and experienced ecologist; (c) include a description of the monitoring, management, any contingency measures, and reporting requirements; (d) include a description of species to be targeted, (e) include habitat descriptions and locations of target avifauna; (f) include vegetation removal protocols and bird nest check protocols; (g) include a salvage and relocation methodology for brown kiwi, and other avifauna that may not be able to relocate unaided; (h) detail the relocation site characteristics and location, should salvage and relocation be required; (i) include any other measures which will benefit avifauna such as restoration planting and habitat enhancement; (j) state the monitoring and reporting requirements; and (k) confirm the details of the personnel undertaking salvaging.
	Brown Kiwi Scouting and Relocation
67	Prior to the Start of Construction: (a) certified kiwi dog-handlers must be used to determine the presence of any kiwi within identified kiwi habitat on site; (b) identified kiwi shall be translocated outside of the impact footprint into suitable habitat in accordance with Condition 64; (c) methods to prevent kiwi entering construction zones (such as exclusion fencing or other suitable good practice methods) shall be deployed; and (d) any kiwi eggs (or chicks) found in nests close to the construction area that risk being disturbed will be collected (when the eggs are old enough to be moved safely) and taken to kiwi incubation and chick-rearing facilities.

68	The relocation and monitoring of any relocation completed as part of Condition 67 must be undertaken in accordance with the recommendations of the CMP and AMP.
	Ecological Offset Implementation Plan
69	Prior to the Start of Construction, an EOIP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
70	The objective of the EOIP is to: (a) achieve no net loss and preferably a net gain in extent and values of natural wetlands and streams; (b) minimise the delay between loss of extent and values of natural wetlands from the project and gain or maturation of ecological outcomes; and (c) secure the outcomes of the offset and/or compensation so that they last in perpetuity.
71	The EOIP must be prepared by a suitably qualified and experienced ecologist and: (a) be prepared in consultation with: (i) Taiāmai ki te Takutai Moana Resource Management Unit; and (ii) DOC. (b) include a description of the offset, including the location(s) of the proposed planting, updated current onsite SEV scores, updated offset SEV scores and ECR calculations, species list, size, spacing, and weed and pest management programme to support the establishment of plantings, and the management activities required to achieve 5-yearly performance targets and the offset objectives; (c) consider existing hydrology and wetland connectivity when selecting an appropriate wetland offset site; (d) consider wetland offset plants that are suitable for nesting and foraging of wetland birds; (e) identify any measures that may need to be undertaken to strengthen and complement the natural vegetation patterns within the site and immediately surrounding area; (f) identify measure(s) to protect areas used for offsetting including: (i) the legal mechanism(s) to be used to ensure the areas are protected in perpetuity; and (ii) any fencing of the areas and the exclusion of grazing stock; (g) include a legally binding agreement with the relevant landowners to allow access to the offset areas for planting, maintenance, and monitoring purposes; (h) a process to review and redesign offset and compensation actions should they not be achieved or not be likely to achieve the offset or compensation performance targets; (i) be peer reviewed by suitably qualified and experienced ecologist; (j) identify monitoring and reporting requirements, which must include: (i) fifth-yearly monitoring of areas used for wetland and stream offsetting and whether or not the objectives, performance targets and performance standards specified in the EOIP have been met and requiring the replacement of any failed plantings; and

(ii) the Provision of a report every five years to NRC and to Taiāmai ki te Takutai Moana Resource Management Unit outlining the offset and compensation actions completed in that five-year period, including an evaluation of the progress of the offset and compensation.

Advice note:

Approvals may also be required under the Wildlife Act 1953, so the consent holder should ensure that the methodologies adopted under this condition do not conflict with any requirements of the that Act.

72 The EOIP required by Conditions 69 must incorporate (but is not limited to) the following offsetting and compensation requirements:

(a) the offsets identified in this Table:

Ecosystem type	**Offset quantum (ha)**
Tōtara forest	1.4
Mānuka, kanuka gumland, *Machaerina* sedgeland	0.76
Mānuka wetland	1.3
Mānuka – kiokio – *Machaerina* wetland	0.2
Eleocharis – *Schoenoplectus* – *Machaerina* wetland	0.24
Indigenous-dominated *Juncus* wetland	6.0
Exotic-dominated *Juncus* wetland	0.2
Isolpeis turf wetland	0.03
In respect to Threatened kānuka and at risk mānuka	Incorporate a high proportion of kanuka and mānuka ~~should be incorporated~~ into offset plantings
All ecosystems	1.7 ha of bush retirement, and 10 m buffer plantings around all wetlands (including gumland wetlands).

(b) in respect to bats:
  (i) planting trees that will provide potential commuting, foraging and roost habitat in the future;
  (ii) selecting revegetation sites that will provide suitable foraging and commuting habitat such as wetlands and stream riparian habitat; and
  (iii) if Condition 104 identifies bat roosts, one artificial bat roost box for every c. 2,500 m^2 of lost habitat should be erected within the chosen offset sites or within existing mature vegetation adjacent to the proposed footprint;

(c) offset and compensation plantings must maximise landscape connectivity for North Island brown kiwi and other bird species;

(d) monitoring must be undertaken at offset planting sites at years 1, 3, 5 ,10 and 25 to assess whether offsetting targets are being met using RECCE plots;

	(e) a total of one permanent 10 x 10 m RECCE plot for every two hectares of planting will be established, with at least one RECCE plot in each ecosystem type being offset; (f) adaptive management must be used where offset targets are not being met which may include increasing the total planting area; and (g) any other offsetting requirements as specified in the CMP, AMP and LMP.
	Pavement condition survey
73	Prior to the Start of Construction, a walkover survey and video survey of the following locations must be undertaken by the consent holder, and a representative from FNDC, identifying defects of the roadway. (a) the road 50m either side of all site entrance(s); (b) the intersection of Old Bay Road with Te Ahu Ahu Road; and (c) the intersection of Waimate North Road with Te Ahu Ahu Road. Details of these existing defects must be submitted to FNDC prior to works commencing, including a description and photographs of the defects and identification of their location.
	Site entrances
74	Prior to the Start of Construction, all construction entrances(s) must be stabilised to minimise the tracking of spoil or debris off-site onto public road surfaces. All material tracked onto off-site surfaces as a result of the consent holder's operations must be removed as soon as possible, and at least daily. The stabilised construction entrance(s) must be maintained throughout the duration of Construction Works.
75	All construction entrances(s) must have appropriate site access delineation including appropriate warning signs and line markings.
76	The main construction entrance must be: (a) located at the existing farm access at 693 – 821 Te Ahu Ahu Road; and (b) upgraded and sealed to meet the Waka Kotahi Diagram D access layout (included as Appendix E to these conditions).

Construction Conditions

	Construction entrances, access, and traffic
77	The site office and parking area must be offset from the main access track and locked when unoccupied.
78	Intersection warning or truck crossing warning signs must be installed at the SH1 / Old Bay Road and Old Bay Road / Te Ahu Ahu Road intersections.

	Advice note: *The location of warning signage should be reviewed if the expected construction traffic route change from Dargaville and Whangārei.*
79	The maximum vehicle speeds within the site must be 20 km/hour, with visible signage notifying visitors.
80	The first 300m of all internal access tracks must be metaled, and wheel washing stations must be provided to minimise tracking material onto Te Ahu Ahu Road.
81	Internal passing bays must be 15m long and a total width of 5.5m.
82	All earthmoving machinery, pumps, generators, and ancillary equipment shall be operated so that spillages of fuel, oil and similar contaminants are prevented, particularly during refueling and machinery services and maintenance.
	Erosion, sediment, and dust control
83	No earthworks can be carried out between 1 May and 30 September in any year unless the prior written agreement of NRC has been obtained. Any request to undertake works between 1 May and 30 September must be in writing and must be made at least 10 working days prior to the proposed commencement date of the works. This written request must include an updated ESCMP that has been prepared in accordance with Condition 48. *Advice note:* *Should the consent holder wish to undertake earthworks between 1 May and 30 September, NRC may request a review and update of the FFSRP and the AMP as works within this period may impact avifauna and freshwater fauna.*
84	Prior to the Start of Construction: (a) all required erosion and sediment control measures on the subject site must be constructed in accordance with the Certified ESCMP of Condition 48. The installation of all erosion and sediment controls, must be supervised by a suitably qualified and experienced person; and (b) a certificate must be submitted to NRC, signed by an appropriately qualified and experienced person, stating that the erosion and sediment controls have been constructed in accordance with the latest Certified version of the ESCMP.
85	The operational effectiveness and efficiency of all erosion and sediment control measures specifically required by the ESCMP must be maintained throughout the duration of earthworks activity as long as there is a potential for sediment movement arising from dam construction activities into any waterways and until the site is permanently stabilised against erosion. A record of any maintenance work must be kept and be supplied to NRC on request.

86	Drains and cut-offs constructed to divert stormwater must be capable of conveying stormwater during not less than the estimated 1 in 20-year rainfall event. All channels on grades greater than 2% must be protected to avoid erosion and scouring from occurring.
87	All offsite stormwater must, as far as is practicable, be directed away from earthworks areas, communities, adjoining properties, and sensitive receiving environments, and no drainage pathways must be constructed or permitted to flow over fill areas in a manner that creates erosion of the fill material.
88	All bare areas of land at the site beyond the reservoir footprint must be stabilised following the completion of earthworks.
89	All earthworks must be managed to minimise any discharge of debris, soil, silt, sediment, or sediment-laden water beyond the subject site to either land, stormwater drainage systems, watercourses or receiving waters. In the event that a discharge occurs, works must cease as soon as is practicable and the discharge must be mitigated and/or rectified.
90	The construction operations must not give rise to any discharge of contaminants at or beyond the property boundary, which is noxious, dangerous, offensive, or objectionable to such an extent that it has, or is likely to have, an adverse effect on the environment.
91	In the event of an accidental discovery of contamination during earthworks, the consent holder shall immediately cease the works in the immediate vicinity of the contamination and engage a Suitably Qualified and Experienced contaminated land Practitioner to assess the situation (including possible sampling). NRC and FNDC must be informed of the proposed management procedures to mitigate the effects of the contamination on human health and the environment. *Advice note:* *This consent does not authorise discharges from contaminated land. The consent holder is advised that resource consent may be required in the event of an accidental discovery of contamination.*
	Complaints Management
92	A record of any complaints received in respect of the Project shall be maintained during the Construction Works. The record shall include: (a) the name, phone number and address (if known) of the complainant (unless the complainant wishes to remain anonymous); (b) the nature of the complaint; (c) the date and time of the complaint, and the location, date and time of the alleged event giving rise to the complaint; (d) the weather conditions at the time of the complaint (as far as practicable), including wind direction and approximate wind speed if the complaint relates to air quality, odour, or noise and where weather conditions are relevant to the nature of the complaint;

	(e) any other activities in the area, unrelated to the Project, that may have contributed to the complaint, such as construction undertaken by other parties, fires, traffic accidents or any unusual conditions; (f) measures taken to respond to the complaint or confirmation of no action if deemed appropriate; (g) the outcome of the investigation into the complaint; and (h) a record of the response provided to the complainant.
93	The consent holder shall notify council of any complaint received that relates to the activities authorised by these resource consents as soon as reasonably practicable and no longer than two (2) working days after receiving the complaint.
94	The consent holder shall respond to any complainant as soon as reasonably practicable and within five (5) working days by advising council and complainant of the outcome of the consent holder's investigation and all measures taken, or proposed to be taken, to respond to the complaint.
95	The record of complaints shall be made available to council upon request.
	Construction noise
96	All Dam Construction Works must be limited to the following hours in Table 1 below: **Table 1: Restrictions on Construction Works**

<table>
<tr><th rowspan="2">Dam</th><th rowspan="2">Day of the Week</th><th colspan="4">Time period</th></tr>
<tr><th>0630 – 0730
Morning Shoulder</th><th>0730 – 1800
Daytime</th><th>1800 – 2000
Evening Shoulder</th><th>2000 – 0630
Night-time</th></tr>
<tr><td rowspan="3">Main Dam</td><td>Weekdays</td><td>Restricted Main works</td><td>Normal construction</td><td>Restricted Main works</td><td>No works</td></tr>
<tr><td>Saturdays</td><td>No works</td><td>Normal construction</td><td colspan="2">No works</td></tr>
<tr><td>Sundays and public holidays</td><td>No works</td><td>Restricted Main works</td><td colspan="2">No works</td></tr>
<tr><td rowspan="3">Saddle Dam</td><td>Weekdays</td><td colspan="3">Normal construction</td><td>Restricted Saddle works</td></tr>
<tr><td>Saturdays</td><td>Restricted Saddle works</td><td>Normal construction</td><td colspan="2">Restricted Saddle works</td></tr>
<tr><td>Sundays and public holidays</td><td>Restricted Saddle works</td><td>Normal construction</td><td colspan="2">Restricted Saddle works</td></tr>
</table>

In this Condition:

(a) 'Restricted Main Works' means that construction plant and truck movements at or near the Main Dam are restricted to borrow areas 1, 2 and 3 and disposal area 4. No works must occur on/to borrow area 5 and disposal area 3 during this time.
(b) 'Restricted Saddle Works' means that construction plant and truck movements at or near the Saddle Dam are restricted to borrow areas 1 and 4, and disposal

<table>
<tr><td></td><td>areas 1, 5 and 6. No works must occur on/to borrow areas 3 and 6, or disposal area 2 during this time.
(c) 'Normal Construction' means that there are no restrictions on plant and truck movements at either the Main or Saddle Dams.
(d) 'No Works' means no Construction Works must occur.</td></tr>
<tr><td>97</td><td>Subject to Condition 96, construction noise levels arising from Enabling Works and Construction Works must not exceed the following noise limits in Table 2 when measured 1m from the external façade of an occupied building while the construction is being carried out.

Table 1: Construction Noise Limits
<table><tr><td rowspan="2">Time of week</td><td rowspan="2">Time period</td><td colspan="2">Maximum noise level (dBA)</td></tr><tr><td>dB L_{Aeq}</td><td>dB L_{AFmax}</td></tr><tr><td rowspan="4">Weekdays</td><td>6:30am-7:30am</td><td>55</td><td>75</td></tr><tr><td>7:30am-6:00pm</td><td>70</td><td>85</td></tr><tr><td>6:00pm-8:00pm</td><td>65</td><td>80</td></tr><tr><td>8:00pm-6:30am</td><td>45</td><td>75</td></tr><tr><td rowspan="2">Saturdays</td><td>7:30am-6:00pm</td><td>70</td><td>85</td></tr><tr><td>6:00pm-6:30am</td><td>45</td><td>75</td></tr><tr><td rowspan="2">Sundays and public holidays</td><td>7:30am-6:00pm</td><td>55</td><td>85</td></tr><tr><td>6:00pm-6:30am</td><td>45</td><td>75</td></tr></table>
Advice note:
Condition 97 does not apply to any properties / persons who have provided written approval in respect to noise arising from Construction Works.</td></tr>
<tr><td>98</td><td>The noise from any construction activities must be measured and assessed in accordance with the requirements of New Zealand Standard NZS6803:1999 Acoustics – Construction Noise. Construction work is defined in New Zealand Standard NZS6803:1999 Acoustics – Construction noise.

Advice note:
Measurements in accordance with the requirements of NZS6803:1999 are subject to appropriate meteorological conditions.</td></tr>
<tr><td>99</td><td>The consent holder must engage a suitably qualified and experienced acoustic expert to carry out noise monitoring:

(a) at the commencement of night works for the Saddle Dam to confirm compliance with limits; and
(b) response to a complaint.</td></tr>
<tr><td>100</td><td>Should a noise complaint be received by FNDC or the consent holder, the consent holder must:
(a) contact the complainant within 24 hours to determine the nature of the complaint. If the complaint:</td></tr>
</table>

	(i) relates to a possible noise limit exceedance, the consent holder must engage a suitably qualified and experienced acoustic expert to investigate the complaint to confirm whether the noise limits set out in Conditions 97 have been exceeded as soon as reasonably practicable and within five (5) working days of receipt of the complaint. (ii) relates to a general noise matter (not an exceedance) the consent holder must identify appropriate measures to respond. These measures must be documented and discussed with the complainant. *Advice note:* *Please also refer to Condition 92, which details the information that needs to be captured by the consent holder in response to a compliant.*
101	If Conditions 99 and 100 determine that a noise limit has been exceeded: (a) the activities causing the exceedance must cease immediately when safe to do so; (b) an ASCNMP prepared by a suitably qualified and experience acoustic expert must be prepared that details: (i) the best practicable option(s) that will be implemented to manage the noise from the activity subject to the complaint so that the limits set out in Condition 97 are met; and (ii) the noise monitoring regime for this work; (c) the ASCNMP must be submitted to FNDC for certification that it meets the requirements set out in clause (b); and (d) the mitigation measures set out in the ASCNMP must be established and maintained on site.
102	Prior to the recommencement of the activity subject to the ASCNMP, all required noise mitigation measures must be implemented and carried out in accordance with the Certified ASCNMP.
	Accidental Discovery
103	In the event of accidental discovery of archaeological sites, including burials, human remains or kōiwi tangata, activities in the vicinity of the discovery must cease immediately and the consent holder must initiate the following procedures: (a) The contractor/works supervisor/consent holder must shut down all equipment within a 20-metre radius; (b) The contractor/works supervisor/consent holder must take immediate steps to secure the site (tape it off) to ensure the archaeological remains are undisturbed and the site is safe in terms of health and safety requirements. Work may continue outside of the 20-metre radius area; (c) The contractor/works supervisor/consent holder must notify the Northern Area Archaeologist of Heritage New Zealand - Pouhere Taonga, Taiāmai ki te Takutai Moana Resource Management Unit, Geometria Limited, FNDC and NRC; (d) If the material is confirmed as being archaeological, under the terms of the Heritage New Zealand Pouhere Taonga Act 2014, the consent holder must ensure that an archaeological assessment is carried out by a qualified

	archaeologist, and if appropriate, an archaeological authority is obtained from Heritage New Zealand - Pouhere Taonga before work resumes; (e) If burials, human remains/kōiwi tangata are uncovered, steps (a) to (c) above must be taken and the Northern Area Archaeologist of Heritage New Zealand - Pouhere Taonga, the New Zealand, Police, Geometria Limited and the Taiāmai ki te Takutai Moana Resource Management Unit must be contacted immediately. The area must be treated with discretion and respect and the kōiwi tangata/human remains dealt with according to law and tikanga; and (f) Works at the site area must not recommence until an archaeological assessment has been made, an archaeological authority granted by Heritage New Zealand Pouhere Taonga, and all archaeological material has been dealt with appropriately according to law and tikanga, and statutory requirements met. All parties will work towards work recommencement in the shortest possible time frame while ensuring that archaeological, cultural, and statutory requirements are complied with.
	Vegetation Removal Protocol
104	Vegetation clearance must be undertaken in accordance with the Vegetation Removal Protocol contained in Appendix D to these conditions.
	Works in Proximity to Top Energy lines
105	Excavation or other works on land adjacent to any structure supporting an overhead electric line where the work: (a) is at a greater depth than 300mm within 6m of the outer edge of the visible foundation of the structure; (b) is at a greater depth than 3m, between 6m and 12m of the visible foundation of the structure; or (c) creates an unstable batter– must comply with the NZECP34.
106	Should works occur in the areas identified in Condition 105, written confirmation from an appropriately qualified and experienced person must be provided to Top Energy confirming that the works comply with NZECP34 no less than twenty (20) working days prior to the commencement of works.
	Pavement Condition Survey
107	Subject to Condition 73, if road surfaces have been damaged by construction activity, the road surface must be repaired to the condition shown in the survey undertaken in accordance with Condition 73. Such repair must be at the expense of the consent holder.

	Network Utilities
108	The consent holder shall be responsible for repairs to underground network utilities damaged by Construction Works. Such repair must be at the expense of the consent holder.

Filling, Commissioning and Operation of the Reservoir

To be complied with prior to and following filling of the reservoir

	Reservoir filling
109	Prior to filling the reservoir, the consent holder shall determine the volume of the reservoir and then provide to NRC a water level to water volume relationship over the operating range of the reservoir. This relationship shall be in the form of a rating table and graph which plots water level against water volume.
110	Reservoir filling shall not commence until all of the following are met: (a) condition 111 has been complied with; (b) the operational EAP required by Condition 113 has been Certified; (c) the DSMS required by Condition 117 has been Certified; (d) the ORMP required by Condition 120 has been Certified; and (e) the LandMP required by Condition 123 has been Certified.
111	Prior to the initial filling of the reservoir, the footprint of the reservoir must be cleared of vegetation, or the potential for vegetation to adversely impact on water quality is otherwise reduced, to the extent possible, to assist with managing reservoir water quality.
112	At the initial filling of the reservoir, floating vegetative matter must be removed to the extent possible, to assist with managing reservoir water quality.
	Emergency Action Plan
113	Prior to the initial filling of the reservoir, an operational EAP must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
114	The Objectives of the EAP are to: (a) minimise the potential for dam failure, should a potential dam safety emergency arise, through preventative and emergency actions; and (b) limit the effects of the failure on people, property, and the environment downstream of the dam associated with uncontrolled or excessive flow releases from the dams in the event of a dam failure.

115	The EAP must be prepared by a Competent Engineer in accordance with the recommendations of the NZSOLD Guidelines and relevant New Zealand dam safety legislative requirements and be prepared in consultation with the Northland CDEM, Waka Kotahi, and the CLG.
116	A copy of the Certified EAP must be provided to: (a) the groups listed in Condition 115; (b) neighbouring and downstream property owners and occupiers listed in Appendix A to these conditions; (c) FNDC; and (d) NRC.
	Dam Safety Management System
117	Prior to the initial filling of the reservoir, a DSMS must be submitted to NRC for Certification in accordance with the process set out in Condition 32.
118	The objective of the DSMS is to provide a framework for completing dam safety management activities, risk-based decision making and addressing dam safety issues.
119	The DSMS must be prepared by a Competent Engineer and in accordance with the recommendations of the NZSOLD Guidelines and relevant New Zealand dam safety legislative requirements and: (a) include a dam safety policy, dam safety statement or dam standard; (b) include a description of the DSMS and its elements including dam safety management activities and resources for completing these activities; (c) identify responsibilities and procedures for implementing the DSMS; (d) identify procedures for checking and reviewing the performance of the dam and the DSMS; (e) identify procedures for identifying and addressing any dam safety issues, including deficiencies in the performance of the dam and the DSMS; (f) outline procedures for regular reporting on the performance of the dam and the adequacy of the DSMS to the owner and, where appropriate, NRC; and (g) identify appropriate supporting systems for management, staff training, communications, and information management.
	Operational Reservoir Management Plan
120	Prior to the initial filling of the reservoir an ORMP must be submitted NRC for Certification in accordance with the process set out in Condition 32.
121	The objective of the ORMP is to set out the methodologies, practices, and procedures to be adopted in order to manage the reservoir during operation.
122	The ORMP must be prepared by a suitably qualified and experience person and include: (a) an overview of the reservoir characteristics, construction, and features and where details about the construction can be found;

	(b) the as-built drawings; (c) the roles and responsibilities of the various parties associated with the operation of the OWSR; (d) the inspection forms for engineering, water monitoring and maintenance inspections; (e) design levels, flows, triggers, and telemetric monitoring requirements. (f) data management and information ownership; (g) maintenance functions and reporting requirements. (h) the maintenance and operation of fish and native eel passage structure(s) required by Condition 21, and associated performance monitoring, including any identified by Condition 37; (i) details of annual reporting requirements to NRC; and (j) details on the emergency use of the reservoir, including the provision of Firefighting Water and Emergency Water Supply to Ōhaeawai and monsoon bucket use from the date the OWSR is Successfully Commissioned as required by the WSMP.
	Landscape Management Plan
123	Prior to the initial filling of the reservoir, a LandMP must be submitted to FNDC for Certification in accordance with the process set out in Condition 32.
124	The objective of the LandMP is to integrate the OWSR into the surrounding landscape and topography, having regard to the local landscape character and contexts.
125	The ~~LMP~~ LandMP must be prepared by suitably qualified and experienced landscape architect and: (a) be prepared in consultation with: (i) neighbouring property owners and occupiers as listed in Appendix A to these conditions; and (ii) Taiāmai ki te Takutai Moana Resource Management Unit; (b) integrate the recommendations of the EOIP as it relates to the Project site; (c) identify opportunities to integrate pedestrian access to dam margins and features (e.g., interpretive signage relating to cultural heritage, and ecology, etc. within in the Project site); (d) identify whether features (such as interpretive signage) for the purpose of identifying and interpreting site features can be integrated into the landscape design; (e) set out the landscape design details, including: (i) landscaping treatments (landform and planting), including rehabilitation of all areas used for Construction Works (as applicable); (ii) pest removal, weed control and identification of vegetation to be retained; (iii) proposed planting and plant species (including consideration of native food-bearing species), mixes (canopy and succession species), spacing/densities and sizes (at the time of planting); and (iv) planting programme – the staging of planting in relation to the construction programme and the maintenance regime.

	Dam completion and inspection
126	Following completion of the Main Dam and Saddle Dam structures, annual inspections of the dams must be undertaken and reported on in accordance with the latest dam safety guidelines prepared by the NZSOLD Guidelines by a Competent Engineer. This inspection and assessment must cover the following: (a) the performance and maintenance of the dam in accordance with the NZSOLD Guidelines; (b) checks on works recommended previously ensuring that any remedial works recommended have been carried out; (c) normal deterioration; and (d) any dam safety (potential) deficiencies.
127	Any minimum requirements arising from the annual inspection report must indicate a timeframe in which follow-up actions are to be undertaken. Any recommended remedial works outlined in the yearly inspection report must be carried out in the timeframes indicated. The annual inspection report must be submitted to NRC by 1 May of each year.
128	In addition to the annual inspection reports required by Condition 126, a review of the safety and efficiency of the dam structure and ancillary equipment in accordance with the New Zealand Dam Safety Guidelines 2015 must be undertaken at five yearly intervals by a Competent Engineer. The review report must be for the preceding five-year period ending 30 June. A copy of the review report must be forwarded to NRC by the following 30 September. Any recommended remedial works must be carried out in accordance with the timeframe specified in the review report.
	Taking of Water, Continuation Flows and Spillway
129	When the natural flow in the unnamed tributary of the Waitangi River at the Main Dam: (a) is equal to or greater than 25 l/s abstraction of the flow above 25 l/s is permitted up to a maximum rate of abstraction of 172 l/s. (b) is below 25 l/s up to 2 l/s may be abstracted between 1 April and 31 October, provided the abstraction does not reduce the natural flow below 4.4 l/s.
130	Assessment of the natural flows at the points of abstraction must be made using either (a) a catchment flow model which relies on known rainfall records, flow records, evapotranspiration records, and catchment areas and topography for the area; or (b) a flow measuring device installed at or about the location of abstraction.
131	Water shall only be taken when the fish screen required by Condition 139 has been installed.
132	Outflows of water from the OWSR into the unnamed tributary of the Waitangi River immediately downstream of the main dam and flows through the spillway past the saddle dam must be effectively dissipated to minimise scouring and erosion.

	Measurement and Reporting of Water Use
133	Prior to the taking of water, the consent holder must: (a) install a water meter(s) that has an international accreditation or equivalent New Zealand calibration endorsement, and has pulse output, suitable for use with an electronic recording device, which will measure the rate and the volume of water taken to within an accuracy of plus or minus five percent at the following locations: (i) at a location that will measures the volume of water taken from the OWSR; and (ii) on or at the outlet of the Main Dam to measure flows released from the OWSR into the unnamed tributary of the Waitangi River; and (b) install a tamper-proof electronic recording device such as a data logger(s) that shall time stamp a pulse from the flow meter at least once every 15 minutes.
134	The recording device required by Condition 133(b) must: (a) be selected in consultation with NRC; (b) be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e., cyclic recording); (c) store the entire season's data in each 12-month period from 1 July to 30 June in the following year, which the consent holder shall then download and store in a commonly used format and provide to NRC upon request in a form and to a standard specified in writing by NRC; and (d) shall be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to NRC and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.
135	The flow measuring device must not be installed until the council's assigned monitoring officer has provided written certification that the flow measuring device can meet the requirements of Condition 134.
136	The water meter and recording device(s) must be: (a) accessible to NRC at all times for inspection and/or data retrieval; and (b) installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.
137	All practicable measures shall be taken to ensure that the water meter and recording device(s) are fully functional at all times.
138	The consent holder must verify that the meter required by Condition 133 is accurate. This verification must be undertaken prior to 30 June: (a) following the first taking of water; and (b) at least once in every five years thereafter.

	Each verification must be undertaken by a person, who in the opinion of the council's assigned monitoring officer, is suitably qualified. Written verification of the accuracy of the meter must be provided to the council's assigned monitoring officer NRC by 31 July following the date of each verification.
	Fish Screening
139	The water intake(s) from the reservoir must be screened to minimise harm to and prevent entrapment of indigenous fish. As a minimum, the screen(s) must: (a) limit the intake velocity across the screen(s) to less than 0.3 metres/second; and (b) have holes or slots with a minimum diameter of 3 millimetres; and (c) have no holes or slots with a diameter or width greater than 5 millimetres; and (d) have a smooth surface and openings on screening material (mesh, profile bars or other).
140	Within 20 working days of fish screen installation a certificate must be provided to NRC, by a person with experience in freshwater ecology and fish screening techniques, to certify that the fish screen has been installed in accordance with Condition 139.
141	The intake structure(s) and fish screen(s) must be maintained so that they are effective. A record must be kept of all the maintenance carried out and provided to NRC upon request.
	NESFM
142	Within 20 working days following the Successful Commissioning of the OWSR, the consent holder must submit to NRC the information required by the following regulations of the NESFM: (a) Regulation 62(3) Requirements for all activities: information about structures and passage of fish; (b) Regulation 66(3) Requirement for dam activities: information about dams; and (c) Regulation 68(1) and 68(2) Requirement for certain structure activities: information about aprons and ramps.
	Reservoir Water Quality Monitoring
143	At quarterly intervals following the Successful Commissioning of the OWSR, samples of water from the reservoir must be collected and analysed for the following: (a) Phytoplankton: chl-a (mg-chlorophyll-a/m^3); (b) Cyanobacteria biovolume (mm^3/L); (c) Total nitrogen (mg TN/L); and (d) Total phosphorus (mg TP/L).
144	All samples must: (a) be collected using standard procedures and in appropriate laboratory supplied containers;

	(b) be transported in accordance with standard procedures and under chain of custody to the laboratory; and (c) be analysed at a laboratory with registered quality assurance procedures, and all analyses are to be undertaken using standard methods, where applicable.
145	Any visible signs of an algal bloom within the OWSR must be reported to NRC within 24 hours of sighting.
	Stream Water Quality Monitoring
146	At quarterly intervals samples of water from the unnamed tributary of the Waitangi River below the main dam must be collected and analysed for the following: (a) temperature; (b) pH; (c) periphyton biomass: chlorophyll a (mg chl-a/m2[2]); (d) dissolved inorganic nitrogen (mg DIN/L); (e) dissolved inorganic phosphorus (mg DRP/L); (f) dissolved oxygen (mg/L); and (g) deposited sediment (% fine sediment cover).
147	All samples must: (a) be taken from a representative location downstream of the reservoir at a location agreed with NRC; (b) be collected using standard procedures and in appropriate laboratory supplied containers; (c) be transported in accordance with standard procedures and under chain of custody to the laboratory; and (d) be analysed at a laboratory with registered quality assurance procedures, and all analyses are to be undertaken using standard methods, where applicable.
	Flushing Flows Management Plan
148	Within twelve (12) months of the date of the Successful Commissioning of the OWSR, a FFMP must be submitted NRC for Certification in accordance with the process set out in Condition 32.
149	The objective of the FFMP is to establish a flushing flow protocol in the unnamed tributary of the Waitangi River below the main dam in the event that the reservoir is causing nuisance periphyton biomass or a significant change to stream substrate.
150	The FFMP must be prepared by a suitably qualified and experienced person and include: (a) the methodology (including frequency of sampling and location of sampling points) for monitoring periphyton biomass and changes to stream substrate; (b) the rate, volume, and duration of the flushing flow to be released should periphyton biomass exceed 200 mg chl-a/m2 (milligrams chlorophyll-a per square metre) at a representative site on the stream; (c) the trigger level for changes to fine sediment cover. The trigger level must:

	(i) be determined in consultation with NRC; and (ii) be reviewed no more than three (3) years after the date of Successfully Commissioning.
	## Water Supply Management Plan
151	Within twelve (12) months of the Successful Commissioning date of the OWSR, a Water WSMP must be submitted NRC for Certification in accordance with the process set out in Condition 32.
152	The objective of the WSMP is to identify the overall water supply strategies to ensure the efficient use of water by people who receive water from the reservoir under supply agreements, and to specify arrangements with respect to firefighting water and emergency use of water.
153	The WSMP must include: (a) a general policy on how decisions will be made to supply water to persons from the scheme; (b) identification of allocation quantities to persons as set out under Water Supply Agreements; (c) responsibilities of persons receiving the water to ensure water is conveyed and used efficiently, including the following considerations: (i) an assessment of the demonstrated need for water, including current and likely future demand; (ii) implementation of good management practices, taking into account the nature of the activity, to efficiently use water; and (iii) responsibilities of Northland CDEM during an emergency to ensure compliance with the Water Services Act 2021.
154	The WSMP must be reviewed annually from the date of first Certification by NRC to adjust operational practices as necessary to ensure compliance with consent conditions.
	## Water supply reticulation
155	Water supply reticulation from the OWSR must be maintained so that it always operates effectively and the loss of water from the reticulation network is minimised as far as is practicable.
156	The record of maintenance shall be made available to council upon request.
	## Provision of Firefighting Water and Emergency Water Supply to Ōhaeawai
157	A pipeline sufficiently sized for the purposes of supplying emergency firefighting water from the OWSR must be constructed and commissioned by the consent holder within 12 months of Successful Commissioning of the OWSR.

	Reporting and Monitoring
158	The consent holder must prepare an annual monitoring report for the operation of the OWSR and provide it to NRC by 31 July of each year.
159	The report required by condition 158 must include: (a) results of all monitoring undertaken and required by these conditions; (b) an interpretation of the results; (c) description of downstream effects to the unnamed stream; and (d) an analysis of pre- and post-reservoir construction monitoring data and the identification of any trends in the results.

Advice Notes:

1. The consent holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Wildlife Act 1953, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval.

2. The consent holder will be responsible for ensuring all necessary permits, such as Corridor Access Requests (CAR) permits for works in the road corridor, are obtained from FNDC.

3. All correspondence to FNDC should be directed to the Team Leader Monitoring (rcmonitoring@fndc.govt.nz).

Appendix A – List of Neighbouring and Downstream Property Owners and Occupiers

Neighbouring Property Owners and Occupiers

Neighbouring properties are those that are adjacent to the OWSR. This list is accurate at the time of drafting these conditions. The consent holder must check that the list is accurate prior to any Project information being distributed.

Table 2: List of Neighbouring Property Owners and Occupiers

Property address	Legal description	Record of Title	Registered owner	Note
No details available	Lot 1 Deposited Plan 209473	NA134D/854	Roseburn Farms Limited	The property is labelled 1 in Figure 1.
No details available	Section 8 Blk V Kawakawa SD	NA13C/206	Okokiwi Downs Limited	The property is labelled 2 in Figure 1.
No details available	Section 6 Blk V Kawakawa SD	NA277/73	Okokiwi Downs Limited	The property is labelled 3 in Figure 1.
No details available	Lot 1 Deposited Plan 173506	NA105B/130	Okokiwi Downs Limited	The property is labelled 4 in Figure 1.
No details available	Pt 3 Otawere Old Land Claim	NA501/36	Okokiwi Downs Limited	The property is labelled 5 in Figure 1.
1051 Te Ahu Ahu Road	Lot 2 Deposited Plan 388749	354870	Roger Francis Atkinson Parihaka Trustees (2009) Limited	The property is labelled 6 in Figure 1.
971 Te Ahu Ahu Road	Lot 1 Deposited Plan 38874	354869	Phillippa Roseanne Atkinson	The property is labelled 7 in Figure 1.
841 Te Ahu Ahu Road	Lot 1 Deposited Plan 199114	NA126B/272	Lecia Ellen Wrathall Nelson Pumipi Tahana	The property is labelled 8 in Figure 1.

Property address	Legal description	Record of Title	Registered owner	Note
839 Te Ahu Ahu Road	Lot 2 DP 208031	NA135D/350	Gregory John Moyle Tania Lee Rita Moyle	The Reservoir Site in Figure 1
839A Te Ahu Ahu Road	Lot 1 Deposited Plan 208031	NA135D/349	Cameron Jay Flude Natasha Marie Flude	The property is labelled 9 in Figure 1.
821 Te Ahu Ahu Road	Lot 1 Deposited Plan 371861	290681	Christina Maida Smith	The property is labelled 10 in Figure 1.
693 Te Ahu Ahu Road	Lot 1 Deposited Plan 479002	678202	Ryan Edward Taylor Teresa Natalie Taylor BOI Taxation Trustee Company Limited	The property is labelled 11 in Figure 1.

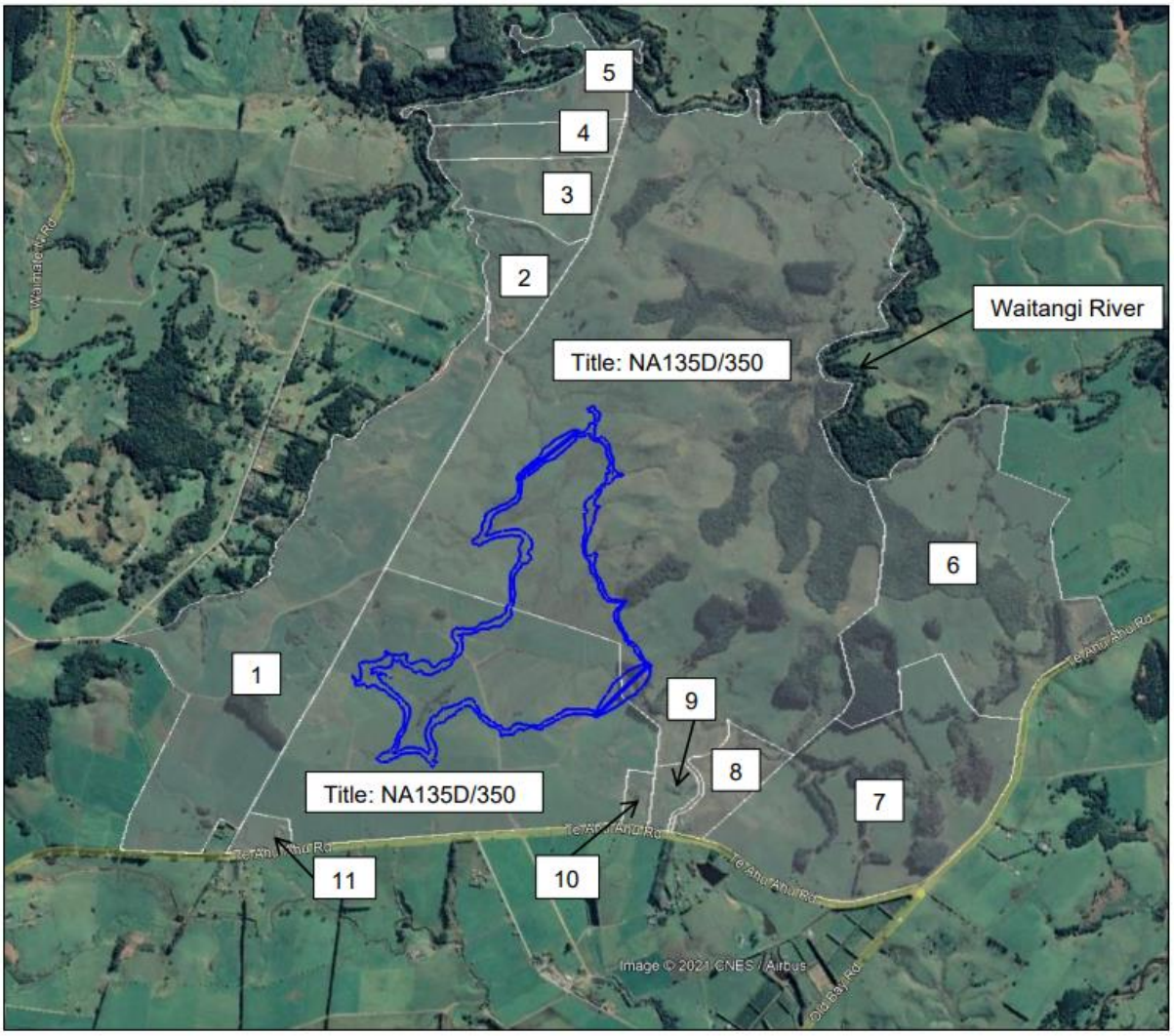


Figure 1: Neighbouring Owners and Occupiers

Downstream Property Owners and Occupiers

Downstream properties are those that are identified as being with the flood depths of the Dam Breach Flood Maps (Drawings 210038-300 to -339) and Inundation Maps (Drawings 210038-210 to -269). This list is accurate at the time of drafting these conditions. The consent holder must check that the list is accurate prior to any Project information being distributed.

Table 3: List of Downstream Property Owners and Occupiers

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Wakelin Dairy Limited Partnership	325 Wakelin Road, Kerikeri 0293	Lot 4 DP 28650	NA722/288
Wakelin Dairy Limited Partnership	325 Wakelin Road, Kerikeri 0293	Lot 3 DP 28650	NA722/288
Wakelin Dairy Limited Partnership	325 Wakelin Road, Kerikeri 0293	Lot 5 DP 28650	NA722/288
Wakelin Dairy Limited Partnership	325 Wakelin Road, Kerikeri 0293	Lot 2 DP 28650	NA722/288
Far North District Council	Lot 3 DP 142939, Puketona Road, Kerikeri 0293	Lot 3 DP 142939	MX-3315800
Stanley Maurice Martin, Beverley Caroline Dawn Martin	17 Puketutu Drive, Haruru 0204	Lot 1 DP 200554	NA129B/136
Far North District Council	Lot 11, Puketona Road, Kerikeri 0293	Lot 11 DP 161822	NA97C/330
Far North District Council	Lot 11, Puketona Road, Kerikeri 0293	Lot 3 DP 135867	MX-3315803
Anne Barton-Barry, Peter Graeme Barry, Lynette Maree Duncan	780B Puketona Road, Kerikeri 0293	Lot 3 DP 161822	NA97C/325
Graeme Allan Wykes, Annita Raewyn Wykes	3 Puketutu Drive, Haruru 0204	Lot 1 DP 174451	NA107A/471
Mark James Vezey	15 Puketutu Drive, Haruru 0204	Lot 1 DP 190345	NA120B/578
Far North District Council	Lot 14, Puketutu Drive, Haruru0204	Lot 14 DP 168352	NA102B/820
Stephen David Lymer, Ann Elizabeth Lymer	7 Puketutu Drive, Haruru 0204	Lot 7 DP 161822	NA97C/326
Alic Te Ati Tuwatea Kapua, Tamara Nicole Rebourgeon	10 Lily Pond Lane, Haruru 0204	Lot 2 DP 210462	NA138D/288
Far North District Council	Lot 3 DP 130210, Puketona Road, Kerikeri 0293	Lot 3 DP 130210	MX-3315818
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 4 DP 130210	MX-3315819
Far North District Council	Lot 10, Paihia Road, Paihia 0282	Section 29 Blk VII Kawakawa SD	MX-3315820
Far North District Council	Lot 10, Paihia Road, Paihia 0282	Section 28 Blk III Kawakawa SD	MX-3315820
Far North District Council	Lot 10, Paihia Road, Paihia 0282	Lot 10 DP 161822	NA97C/329
The Waitangi National Trust Board	Lot 3, Haruru Falls Road, Haruru 0204	Lot 3 DP 51155	NA9A/620
Waitangi National Trust Board	33 Bayly Road, Waitangi 0200	Pt Lot 1 DP 42597	MX-3315864
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Waitangi Bowling Club Incorporated	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	
Bay of Islands Yacht Club Incorporated	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Bay of Islands Yacht Club Incorporated	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	
Waitangi National Trust	Lot 1, Waitangi, Waitangi 0200	Lot 1 DP 326610	108096
Raewyn Jane Gordon, Donald Bruce Gordon, Errol James McIntyre	69 Yorke Road, Haruru 0204	Pt OLC 245	NA750/241
Karl Peter Brown, Sylvia Lorraine Brown	81 Yorke Road, Haruru 0204	Lot 1 DP 310949	43050
Far North District Council	Lot 4 DP 45719, Haruru Falls Road, Haruru 0204	Lot 4 DP 45719	GN-1958/879
David Leslie Rogers, Joanna Margaret Rogers	83C Yorke Road, Haruru 0204	Lot 6 DP 110299	NA62A/1099
Mark Ross Wagstaff, Jane Rosaline Hunter	83B Yorke Road, Haruru 0204	Lot 5 DP 110299	NA60D/990
Derek Van Rooyen, Denise Radford Van Rooyen, Van Rooyen Family Trustee Company Limited	97 Yorke Road, Haruru 0204	Lot 1 DP 76802	NA33B/412
Roderick Andrew Bray	105 Yorke Road, Haruru 0204	Lot 2 DP 166269	NA100D/647
Anthony Paul Gosse, Sonnia Lee Gosse	111 Yorke Road, Haruru 0204	Lot 2 DP 46802	NA1815/37
Roy Desmond Yorke	115 Yorke Road, Haruru 0204	Lot 3 DP 46802	NA1815/38
Far North District Council	Lot 4 DP 46802, Haruru Falls Road, Haruru 0204	Lot 4 DP 46802	MX-3316057
Far North District Council	32 Falls View Road, Haruru 0204	Lot 7 DP 111910	MX-3316058
Various	6 Old Wharf Road, Haruru 0204	Lot 3 DP 111910	NA63A/185
Double Pine Investment Limited	6A Old Wharf Road, Haruru 0204	Lot 3 DP 111910	NA105D/380
Double Pine Investment Limited	6AB Old Wharf Road, Haruru 0204	Lot 3 DP 111910	NA100B/950
Double Pine Investment Limited	6AD Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/952
Double Pine Investment Limited	6C Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/925
Double Pine Investment Limited	6E Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/927
Double Pine Investment Limited	6J Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/932
Double Pine Investment Limited	6K Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/933
Double Pine Investment Limited	6M Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/935
Double Pine Investment Limited	6P Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/938
Double Pine Investment Limited	6Q Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/939
Double Pine Investment Limited	6R Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/940
Double Pine Investment Limited	6S Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/941
Double Pine Investment Limited	6U Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA105D/381
Double Pine Investment Limited	6Y Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/947
Land Information New Zealand	Section 22 Blk IV Kawakawa SD, Haruru Falls Road, Haruru 0204	Section 22 Blk IV Kawakawa SD	MX-3316139
Far North District Council	Lot 8 DP 111910, Old Wharf Road, Haruru 0271	Lot 10 DP 111910	MX-3316140
Far North District Council	Lot 8 DP 111910, Old Wharf Road, Haruru 0271	Lot 8 DP 111910	MX-3316140
Far North District Council	Lot 8 DP 111910, Old Wharf Road, Haruru 0271	Lot 9 DP 111910	MX-3316140
Far North District Council	Lot 1, Haruru Falls Road, Haruru 0204	Lot 1 DP 17629	NA20C/209
Kenneth Michael Armishaw	39 Haruru Falls Road, Haruru 0204	Lot 1 DP 52193	NA3A/1001
Far North District Council	Lot 12 DP 52193, Haruru Falls Road, Haruru 0204	Lot 12 DP 52193	MX-3316165
Far North District Council	Lot 1, Haruru Falls Road, Haruru 0204	Lot 1 DP 63943	NA20A/859

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Jonathan James Sefton, Carla Anne Farrell	44 Haruru Falls Road, Haruru 0204	Lot 6 DP 153802	NA91C/971
Derek John Miller, Lucy Amanda Miller	46 Haruru Falls Road, Haruru 0204	Lot 5 DP 153802	NA91C/970
Mrs Nateele Howarth-Taylor, Janice May Howarth, Malcolm Edward Howarth	46 Haruru Falls Road, Haruru 0204	Lot 4 DP 153802	NA91C/969
Far North District Council	Lot 8, Haruru Falls Road, Haruru 0204	Lot 8 DP 153802	NA133C/794
Department Of Conservation	Pt Lot 3, State Highway 10, Kerikeri 0470	Allotment 33 PSH OF Waitangi	FN-3317343
Department Of Conservation	Pt Lot 3, State Highway 10, Kerikeri 0470	Pt Lot 3 DP 4977	FN-3317343
William Reynolds Young, Lois Young	800 State Highway 10, Kerikeri 0470	Pt Sec 5 Blk VI Kawakawa SD	NA385/50
Far North District Council	Stopped Road Survey Office Plan 55504, State Highway 10, Kerikeri 0470	Stopped Road Survey Office Plan 55504	MX-3317355
Nelson Pumipi Tahana, Lecia Ellen Wrathall	841 Te Ahu Ahu Road, Kerikeri 0293	Lot 1 DP 199114	NA126B/272
Kathryn McDonald	221 Okokako Road, Kerikeri 0293	Allotment 3 PSH OF Okokako	NA501/41
Maxine Dorothy Blake	596 Waimate North Road, Kerikeri 0293	Pt Lot 1 DP 166356	NA97B/576
Far North District Council	Lot 3, State Highway 10, Kerikeri 0293	Lot 3 DP 57817	NA13B/101
Far North District Council	Lot 3, Okokako Road, Kerikeri 0293	Lot 3 DP 166120	NA100D/194
Stuart Arnold Beaven	757B Waimate North Road, Kerikeri 0293	Lot 1 DP 166120	NA100D/192
Maukino Morgan Piripi	757A Waimate North Road, Kerikeri 0293	Lot 2 DP 166120	NA100D/193
The Owners	133 Okokako Road, Kerikeri 0293	Mangataraire	321582
Bill Ashby, Lucy Taurua Mason, Yvonne Joyce Menary, Geneva Proctor, Wiremu Leslie Tane, Audrey Merle Tipene, Phillipa Joanne Wynyard	470 State Highway 10, Oromahoe 0472	Pt Oromahoe 18R2B2B2	NA89C/805
Douglas Earl Bogardus, Janet Olive Bogardus	92 Porotu Road, Oromahoe 0472	Pt Oromahoe D5B	NA89C/33
Douglas Earl Bogardus, Janet Olive Bogardus	92 Porotu Road, Oromahoe 0472	Pt Oromahoe D4	NA89C/33
Douglas Earl Bogardus, Janet Olive Bogardus	92 Porotu Road, Oromahoe 0472	Pt Oromahoe D4	NA89C/33
Peter Bryan Jenkins	1422 Oromahoe Road, Oromahoe 0472	Lot 1 DP 177835	NA109C/859
Bryan Raymond Jenkins	Lot 1, Oromahoe Road, Oromahoe 0472	Lot 1 DP 49423	NA2050/18
Bryan Raymond Jenkins	Lot 1, Oromahoe Road, Oromahoe 0472	Lot 1 DP 185430	NA115D/99
John Eley Limited	658 State Highway 10, Kerikeri 0293	Lot 2 DP 173552	NA106B/839
Douglas Rodgers, Wanida Rodgers	704A State Highway 10, Kerikeri 0470	Lot 1 DP 173552	NA106B/838
Puketona Properties Limited	759 State Highway 10, Kerikeri 0470	Lot 1 DP 170731	NA104B/464
Puketona Properties Limited	759 State Highway 10, Kerikeri 0470	Lot 1 DP 170731	NA104B/464
Puketona Properties Limited	759 State Highway 10, Kerikeri 0470	Lot 1 DP 170731	NA104B/464
Rhonda Ann-Maree Gordon	743 State Highway 10, Kerikeri 0470	Lot 2 DP 170731	NA104B/465
Far North District Council	State Highway 10, Kerikeri 0470	Lot 4 DP 170731	NA104B/467
Far North District Council	Lot 3, State Highway 10, Kerikeri 0470	Lot 3 DP 167023	NA101B/580
Donna Patricia Mayes	1180 Te Ahu Ahu Road, Kerikeri 0293	Lot 2 DP 167023	NA101B/579

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Diane Christine Wohler, Lynne Elizabeth Templeton	1174 Te Ahu Ahu Road, Kerikeri 0293	Lot 1 DP 167023	NA101B/578
Shayne Thomas Stephens, Rochelle Dianne Stephens	1229 Puketona Road, Paihia 0271	Lot 1 DP 84663	NA41A/530
Stewartco Trust Services Limited, Bruce James Thompson	1254 Puketona Road, Kerikeri 0293	Lot 4 DP 321195	84257
Stewartco Trust Services Limited, Bruce James Thompson	1254 Puketona Road, Kerikeri 0293	Lot 2 DP 321195	84257
The Owners	Tupou Wahi Tapu, Puketona Road, Paihia 0271	Tupou Wahi Tapu	498534
Allwyn Unwin	725B Puketona Road, Kerikeri 0293	Lot 2 DP 210758	NA139A/122
Wendy Gaye Blakely, Robert Bruce Blakely	38 Retreat Road, Haruru 0204	Lot 1 DP 323888	96411
Roderrick David Leigh McCall, Evelyn Anne McCall	698B Puketona Road, Haruru 0204	Lot 2 DP 175259	NA107D/477
David Donald Morgan, Glennis Doreen Morgan	698A Puketona Road, Paihia 0271	Lot 1 DP 175259	NA107D/476
Daphne Elizabeth Langwell	17 Retreat Road, Haruru 0204	Lot 1 DP 185860	NA115D/237
Far North District Council	Lot 5 DP 150982, Puketona Road, Kerikeri 0293	Lot 5 DP 150982	MX-3317596
Department Of Conservation	Lot 10 DP 150982, Puketona Road, Kerikeri 0293	Lot 10 DP 150982	MX-3317597
Far North District Council	Lot 6 DP 150982, Puketona Road, Kerikeri 0293	Lot 8 DP 150982	MX-3317598
Far North District Council	Lot 6 DP 150982, Puketona Road, Kerikeri 0293	Lot 6 DP 150982	MX-3317598
Far North District Council	Lot 6 DP 150982, Puketona Road, Kerikeri 0293	Lot 9 DP 150982	MX-3317598
Lesley Catherine Schultz	646 Puketona Road, Haruru 0204	Lot 3 DP 150982	NA90A/269
Margaret Murray-Lee	642 Puketona Road, Haruru 0204	Lot 4 DP 150982	NA90A/270
Andrew Laurence Reynolds	681 Puketona Road, Haruru 0204	Lot 1 DP 186913	NA117A/865
Alfred James Whitehorn	651A Puketona Road, Haruru 0204	Lot 14 DP 155952	NA93A/753
Kelvin Brinsley Shepherd, Susan Elma Shepherd	625 Puketona Road, Paihia 0271	Lot 5 DP 149908	NA89B/190
Far North District Council	Puketona Road, Kerikeri 0293	Lot 4 DP 105356	MX-3317609
Far North District Council	Puketona Road, Kerikeri 0293	Lot 6 DP 105356	MX-3317609
Far North District Council	Puketona Road, Kerikeri 0293	Lot 11 DP 149908	MX-3317609
Far North District Council	Puketona Road, Kerikeri 0293	Lot 10 DP 149908	MX-3317609
Far North District Council	Puketona Road, Kerikeri 0293	Lot 5 DP 105356	MX-3317609
Mr Gregor Maurice Anthony Casey, Mrs Jeannie Christine Casey	610 Puketona Road, Haruru 0204	Lot 2 DP 199644	NA126B/629
Jack Peter Poutsma, Keith Frederick Ardern	594 Puketona Road, Haruru 0204	Lot 1 DP 170051	NA103D/71
Mark Alexander Blomfield	560A Puketona Road, Paihia 0271	Lot 2 DP 315236	60079
Mark Alexander Blomfield	560A Puketona Road, Paihia 0271	Lot 3 DP 315236	67354
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 3 DP 170051	NA103D/73
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 3 DP 199644	NA126B/630
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 4 DP 199644	NA126B/631
Far North District Council	Lot 4, Puketona Road, Kerikeri 0293	Lot 4 DP 170051	NA103D/74
Far North District Council	Lot 4, Puketona Road, Kerikeri 0293	Lot 6 DP 170051	NA103D/74
Christine Elizabeth Newton, Simon Peter Burney	6 Spinnaker Point, Haruru 0204	Lot 82 DP 182782	NA113D/654
David McCall, Leanne Justine McCall	8 Spinnaker Point, Haruru 0204	Lot 81 DP 182783	NA113D/675

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Far North District Council	Lot 141, Spinnaker Point, Haruru 0204	Lot 141 DP 182782	NA113D/781
Far North District Council	7 Spinnaker Point, Haruru 0204	Lot 163 DP 182782	NA113D/780
Far North District Council	Lot 140, Spinnaker Point, Haruru 0204	Lot 140 DP 182784	NA113D/681
Far North District Council	Lot 2 DP 122614, Haruru Falls Road, Haruru 0204	Lot 2 DP 76319	MX-3317647
Far North District Council	Lot 2 DP 122614, Haruru Falls Road, Haruru 0204	Lot 2 DP 122614	MX-3317647
Far North District Council	Lot 2 DP 122614, Haruru Falls Road, Haruru 0204	Lot 2 DP 52297	MX-3317647
Kerry Lyn Stanners	1356 Oromahoe Road, Oromahoe 0472	Lot 1 DP 175428	NA107D/964
Clive Robert Harman, Andrea Jane Harman, Horwath Trustee Services (Bay of Islands) Ltd	Tapapanui A5, Whakataha Road, Waimate North 0472	Tapapanui A1A	NA10D/648
Far North District Council	Lot 3 DP 102830, Waimate North Road, Waimate North 0472	Lot 4 DP 102830	MX-3324400
Far North District Council	Lot 3 DP 102830, Waimate North Road, Waimate North 0472	Lot 3 DP 102830	MX-3324400
Christine Ellen Timmins	Lot 3, Waimate North Road, Waimate North 0472	Lot 3 DP 310630	41808
Far North District Council	Lot 6 DP 151650, Waimate North Road, Waimate North 0472	Lot 6 DP 151650	MX-3324429
Lifestyle Holiday Parks Limited	678 Puketona Road, Haruru 0204	Lot 2 DP 189143	NA118D/946
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 3 DP 180759	NA111D/576
Val Ager, Christine Anne Ager, Ager Trustee Company Limited	838 Puketona Road, Kerikeri 0293	Lot 2 DP 197661	NA126A/356
Far North District Council	Lot 12, State Highway 10, Kerikeri 0470	Lot 12 DP 194419	NA123A/871
Neo Family Trustee Company Ltd	888C State Highway 10, Kerikeri 0230	Lot 10 DP 194419	NA123A/869
Neo Family Trustee Company Ltd	888D State Highway 10, Kerikeri 0470	Lot 11 DP 194419	NA123A/870
Ian Thomas Hamilton Blakeman, Debra Lynn Milner	888 State Highway 10, Kerikeri 0293	Lot 6 DP 210726	NA138C/232
Sonja Margaret Lunjevich, Julian Charles Rivett	610B Puketona Road, Haruru 0204	Lot 2 DP 203073	NA131A/333
Shane Shaw, Robyn Davidson	725D Puketona Road, Haruru 0252	Lot 1 DP 180759	NA111D/574
Andrew Michael Thorne	888B State Highway 10, Kerikeri 0230	Lot 9 DP 194419	NA123A/868
Annette Dawn Gibbs, Kerry Anne Cardoso, Robson John Clifton	741 State Highway 10, Kerikeri 0293	Lot 3 DP 170731	NA104B/466
Simon Christopher Berry	852 Waimate North Road, Waimate North 0472	Lot 2 DP 199121	NA126B/287
Robert Murray Atkin, Pendle Trustees Limited	19A Puketutu Drive, Haruru 0204	Lot 2 DP 200554	NA129B/137
Waitangi National Trust	Lot 1, Tau Henare Drive, Waitangi 0200	Lot 1 DP 326610	108096
Martin Wayne Brinck	624 Puketona Road, Haruru 0204	Lot 1 DP 203073	NA131A/332
Darryl Kenneth Going, Kim Going	93B Yorke Road, Haruru 0204	Lot 2 DP 186120	NA116C/543
Ann Margaret Truscott, Paul Andrew Truscott	19C Puketutu Drive, Haruru 0204	Lot 4 DP 200554	NA129B/139
Mark James Vezey	Lot 2, Puketutu Drive, Haruru 0204	Lot 2 DP 190345	NA120B/579
Robert Paul Edge, Tracy Anne Edge	19B Puketutu Drive, Haruru 0204	Lot 3 DP 200554	NA129B/138
Sarah Jane Morgan, David John Caswell	52A Retreat Road, Haruru 0204	Lot 4 DP 323888	96413
Russell Garth Wilson, Irene Mary Wilson	Lot 4, Puketona Road, Paihia 0271	Lot 4 DP 149908	NA93C/157
Robert John Carr	691A-691B State Highway 10, Kerikeri 0293	Lot 3 DP 201439	NA129B/586

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Kerry Manson Mair, Janice Marie Mair	691 State Highway 10, Kerikeri 0470	Lot 1 DP 177468	NA109B/794
Double Pine Investment Limited	6B Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA105D/382
Double Pine Investment Limited	6V Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA105D/379
Michael Leigh Howell, Raewyn Jane Howell	126A Montrose Road, Kerikeri 0295	Lot 4 DP 208697	NA136D/753
William George Roberts, Pamela June Roberts	725C Puketona Road, Haruru 0204	Lot 3 DP 210758	NA139A/123
Toni-Marie Tait	256B Wakelin Road, Kerikeri 0293	Lot 4 DP 210726	NA138C/230
Miles Vernon Pupich, Janine Gaye Pupich	256A Wakelin Road, Kerikeri 0293	Lot 5 DP 210726	NA138C/231
Far North District Council	Lot 7, Wakelin Road, Kerikeri 0293	Lot 7 DP 210726	NA138C/233
Smartwin International Trust & Investment Co Ltd	66 Haruru Falls Road, Haruru 0204	Lot 1 DP 153802	NA91C/966
Ian John Halliday	611 State Highway 10, Kaikohe 0472	Lot 1 DP 178086	NA109D/326
Double Pine Investment Limited	6G Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/929
Double Pine Investment Limited	6H Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/930
Mr Colin James Peddie	6F Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/928
Crowe Developers Limited (In Liquidation)	6HA Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/931
Double Pine Investment Limited	6NA Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/937
Double Pine Investment Limited	6W Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/945
Double Pine Investment Limited	6AA Old Wharf Road, Haruru 0204	Lot 3 DP 111910	NA100B/949
Double Pine Investment Limited	6X Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/946
Peter Gordon Langerak, Jeanette Aileen Langerak	560B Puketona Road, Paihia 0271	Lot 1 DP 315236	60078
Double Pine Investment Limited	6AE Old Wharf Road, Haruru 0271	Lot 3 DP 111910	NA100B/953
Ladygrove Company Limited	1264 Puketona Road, Kerikeri 0293	Lot 1 DP 321195	84256
Far North District Council	Lot 3, Puketona Road, Kerikeri 0293	Lot 3 DP 321195	84258
Mount Furniture Freight Limited	691C State Highway 10, Kerikeri 0470	Lot 2 DP 201439	NA129B/585
Far North District Council	Puketona Road, Paihia 0271	Sec 1 SO 324077	131437
Far North District Council	Puketona Road, Paihia 0271	Sec 2 SO 324077	131438
Benedict Francis Bergman, Johannes Werner Bergman	1231 Puketona Road, Kerikeri 0230	Lot 1 DP 180477	NA111C/486
Far North District Council	Lot 6, Yorke Road, Haruru 0204	Lot 6 DP 333811	138548
Peter Anthony Mills, Pauline Anne Mills	121 Haruru Falls Road, Haruru 0204	Lot 2 DP 336682	150108
Lance Richard Lane	22 Lily Pond Lane, Haruru 0204	Lot 1 DP 338422	158102
Clint Trevor Watson, Sylvia Jean Watson, Pamela Diane Sirett, Jacquelyn Diann Purdy	16 Lily Pond Lane, Haruru 0204	Lot 2 DP 338422	158104
Neil Robert Briscoe, Paula Emery	18 Lily Pond Lane, Haruru 0204	Lot 3 DP 338422	158105
Nadia Fern Sievers, Shaun Michael Banks	127A Montrose Road, Kerikeri 0295	Lot 4 DP 345394	186037
Zoe India Letica	127 Montrose Road, Kerikeri 0295	Lot 5 DP 345394	186038
James Peter Hargraves, Desiree Carlene Bernie Hargraves	688 Puketona Road, Haruru 0204	Lot 1 DP 348113	197551
Grant Eric Harnish, Harts Gauld Trustees Limited	680A Puketona Road, Haruru 0204	Lot 2 DP 348113	197552
John Horace Bayly, Jocelyn Diane Bayly	Lot 1, State Highway 10, Kerikeri 0293	Lot 1 DP 201439	NA129B/584

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
John Horace Bayly, Jocelyn Diane Bayly	Lot 1, State Highway 10, Kerikeri 0293	Lot 3 DP 37126	NA129B/584
Anita Mary Hyde	770 Puketona Road, Kerikeri 0293	Lot 2 DP 348071	197439
Linita Developments Limited	Lot 1, The Anchorage East, Haruru 0204	Lot 1 DP 360767	247128
Graham John Heron, Paula Margaret Heron	651F Puketona Road, Haruru 0204	Lot 1 DP 208608	285722
Qian Zhang	128A Montrose Road, Kerikeri 0295	Lot 3 DP 367587	274574
Wolfgang Hertner	100 Porotu Road, Oromahoe 0472	Lot 1 DP 354911	223957
Anne May Norm, Hare Tiatoa, Kahu Peri, Maureen Otene, Stephen Taurua	917 Waimate North Road, Kerikeri 0293	Rangaunu 2	498530
Anne May Norm, Hare Tiatoa, Kahu Peri, Maureen Otene, Stephen Taurua	Pt Rangaunu 2 Blk V Kawakawa SD, Waimate North Road, Kerikeri 0470	Rangaunu 2	498530
Te Aroha Tiatoa-Sionemale	Pt Rangaunu 2 Blk V Kawakawa SD, Waimate North Road, Kerikeri 0470	Rangaunu 2	498530
James Brian Nicholas Bailey, Delnine Chantelle Bailey, Matthew Henry Bailey Armstrong	124 Montrose Road, Kerikeri 0295	Lot 1 DP 358317	237549
Dayne Sharp, Brendon Richard Cunningham	115 Haruru Falls Road, Haruru 0204	Lot 1 DP 365712	266388
Mrs Grace Joanna Evers, Adam James Evers, Trustee Services (2007) Limited	95 Haruru Falls Road, Haruru 0204	Lot 2 DP 365712	266389
Richard Peter Franciscus Ghislain Van Poeteren, Jacquelien Van Poeteren	623A Puketona Road, Paihia 0271	Lot 3 DP 387828	351696
Raewyn Jane Gordon	69A Yorke Road, Haruru 0204	Pt OLC 245	
Raewyn Jane Gordon, Donald Bruce Gordon, Errol James McIntyre	69 Yorke Road, Haruru 0204	Pt OLC 245	
Far North District Council	8 Bosuns Way, Haruru 0204	Lot 45 DP 437469	538732
Far North District Council	Lot 47, Admiralty Drive, Haruru 0204	Lot 47 DP 437469	582935
Brutus 2020 Limited	8 Riverglen Drive, Haruru 0204	Lot 18 DP 411183	441829
Philippe George Barry Miller, Aroha Fransen Miller	6 Riverglen Drive, Haruru 0204	Lot 19 DP 411183	441830
Richard James Browning, Gina May Birchall	1381 Oromahoe Road, Oromahoe 0472	Lot 10 DP 402862	409330
Nicholas Alfred Bergman, Amanda Janet Robertson	1400 Oromahoe Road, Oromahoe 0472	Lot 11 DP 402862	409331
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 12 DP 402862	409332
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 13 DP 402862	409332
Waitangi National Trust Board	26 Tau Henare Drive, Waitangi 0200	Lot 1 DP 326610	108096
Mark Glynn Fell	890B Waimate North Road, Waimate North 0472	Lot 2 DP 451912	576783
Gary Denis Smith	15 Jameson Esplanade, Haruru 0271	Lot 5 DP 411622	443203
Michael Scott Champtaloup, Rachel Lynn Bray	Lot 6, Jameson Esplanade, Haruru 0271	Lot 6 DP 411622	443204
Terrence Neil Murphy, Lexus Trustee Limited	Lot 7, Jameson Esplanade, Haruru 0271	Lot 7 DP 411622	443205
Amy Kate Howse	95 Jameson Esplanade, Haruru 0271	Lot 13 DP 411622	443211
DLG Trustees Ltd, DLG Trustees No 2 Ltd, Donna Jayne Gifford	117 Jameson Esplanade, Haruru 0271	Lot 14 DP 411622	443212
Ponpong Chunhaviriyakul, Warawadee Chunhaviriyakul	129 Jameson Esplanade, Haruru 0271	Lot 15 DP 411622	443213

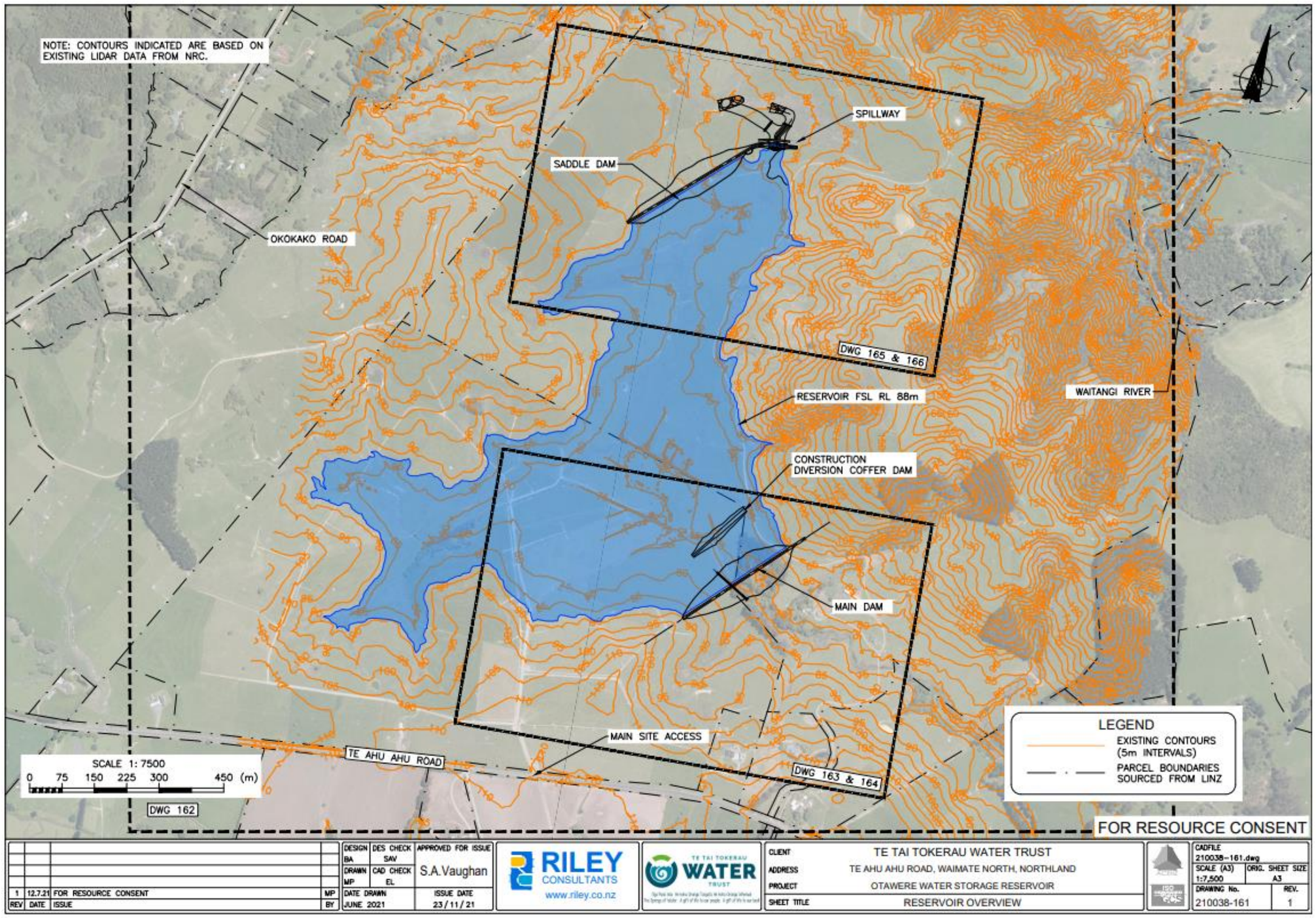
Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Clarks Garage Limited	Lot 16, Jameson Esplanade, Haruru 0271	Lot 16 DP 411622	443214
Far North District Council	Lot 17, Jameson Esplanade, Haruru 0271	Lot 17 DP 411622	476158
Far North District Council	Lot 33, Jameson Esplanade, Haruru 0271	Lot 33 DP 411622	476159
Wendy Elizabeth Atkinson	801 State Highway 10, Kerikeri 0470	Lot 5 DP 388749	354872
Wendy Elizabeth Atkinson	801 State Highway 10, Kerikeri 0470	Lot 4 DP 388749	354872
Roger Francis Atkinson, Parihaka Trustees (2009) Ltd	1051 Te Ahu Ahu Road, Kaikohe 0472	Lot 2 DP 388749	354870
Allison Joy Atkinson	1091 Te Ahu Ahu Road, Kerikeri 0470	Lot 3 DP 388749	354871
Christopher David Jennings, Elaine Beryl Jennings, Brian Gillespie Moyle	683F Puketona Road, Haruru 0204	Lot 2 DP 456848	591230
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 13 DP 402862	409332
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 12 DP 402862	409332
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 12 DP 402862	409332
Mahoe Farm 2009 Limited	514F State Highway 10, Oromahoe 0472	Lot 13 DP 402862	409332
Edward Taki Court, Anthony Phillip Piripo, David Court, John Alexander, Kyle Hoani, Tina Karipa, Titore Parangi	Waiare Road, Kerikeri 0230	Waimate North A & B	509737
Edward Taki Court, John Rameka Alexander, Matthew McGregor, Richard Kake, Te Maramatanga Napia	Whakataha Road, Waimate North 0472	Pt Whakataha Z1C	509399
Edward Taki Court, John Rameka Alexander, Matthew McGregor, Richard Kake, Te Maramatanga Napia	Whakataha Road, Waimate North 0472	Pt Whakataha Z1C	509399
Shane Shaw, Robyn Davidson	725D Puketona Road, Haruru 0252	Lot 1 DP 180759	NA111D/574
Shane Shaw, Robyn Davidson	725D Puketona Road, Haruru 0252	Lot 1 DP 180759	NA111D/574
Kevin Owen Baxter, Gillian Bethanne Baxter, JBL Trustee Limited	Lot 2, State Highway 10, Kerikeri 0470	Lot 2 DP 434982	531576
The Owners	Waimate North Road, Waimate North 0472	Rangaunu 4A	498484
Graham John Osborne, Elenir Alves Marins	8 Skippers Close, Haruru 0204	Lot 4 DP 456371	589717
Tasha Melanie Bentley, Troy David Bentley	830 Puketona Road, Kerikeri 0293	Sec 14 SO 449324	617803
Department Of Conservation	, State Highway 10, Kerikeri 0470	Sec 22 SO 456454	610865
Welcome Associates Limited	846 Puketona Road, Kerikeri 0293	Sec 12 SO 449324	610257
Nicola Cadenhead	19 Lily Pond Lane, Haruru 0204	Sec 22 SO 449324	610258
Russell Trevor Mitchell	2 Lily Pond Lane, Haruru 0204	Sec 28 SO 449324	610260
Strath Isla Limited	807 Puketona Road, Kerikeri 0293	Sec 33 SO 449324	643680
Roseburn Farms Limited	Lot 1, Waimate North Road, Kerikeri 0293	Lot 1 DP 209473	NA134D/854
Clipsham Limited	Lot 3, Waimate North Road, Kerikeri 0293	Lot 3 DP 467790	646066
Peter John Jarvis, Belinda Jane Ward, Bruce Edward Webster	7 Skippers Close, Haruru 0204	Lot 5 DP 489633	704873
Diane Carol Hawke	5 Skippers Close, Haruru 0204	Lot 6 DP 489633	704874
Newton Edward Ngamoki Holland, Philippa Jane Holland	12 Admiralty Drive, Haruru 0204	Lot 7 DP 489633	704875

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Jill Lentija Mantos, Krishna Shaman Jedi Pornasdoro Correa	14 Admiralty Drive, Haruru 0204	Lot 8 DP 489633	704876
David Peers Hayward, Glenda Anne Hayward	4 Bosuns Way, Haruru 0204	Lot 9 DP 489633	704877
Linita Developments Limited	3 Bosuns Way, Haruru 0204	Lot 10 DP 489633	704878
Kenneth Robert Teague, Lynette Audrey Shepstone	24 Admiralty Drive, Haruru 0204	Lot 11 DP 489633	704879
Kevin Donald Pugh	Lot 2, State Highway 10, Kerikeri 0470	Lot 1 DP 325964	105041
Phillippa Rosanne Atkinson	884 Te Ahu Ahu Road, Kerikeri 0293	Lot 1 DP 388749	354869
Ray Stephen Going, Carol May Going	930 Puketona Road, Kerikeri 0293	Lot 12 DP 468741	630299
Cherie Glennis Going	882 Puketona Road, Kerikeri 0293	Lot 3 DP 194229	NA123A/711
Marsden Limited Partnership	766 Te Ahu Ahu Road, Kerikeri 0293	Lot 2 DP 479002	678203
Jemma Louise Murray, Richard Paul Murray	680 Waimate North Road, Kerikeri 0293	Sec 11 SO 440211	583599
Jemma Louise Murray, Richard Paul Murray	Lot 2, Waimate North Road, Kerikeri 0293	Lot 2 DP 57817	NA13B/100
Richard Brinsley Sheridan, Donella Frances Sheridan, YHPJ Trustees (2013) Limited	18B Retreat Road, Haruru 0204	Lot 3 DP 506326	766825
Mark Robert Mitchell	6 Retreat Road, Haruru 0204	Lot 1 DP 506326	766823
Catherine Mary Donaldson, William John Donaldson	100B Montrose Road, Kerikeri 0295	Lot 3 DP 502661	753490
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Lot 1 DP 173506	NA105B/130
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Allotment 18 PSH OF Okokako	NA8D/629
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Allotment 19 PSH OF Okokako	NA13D/1093
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Pt Subdivision 3 Otawere Old Land Claim	NA501/36
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Sec 8 Blk V Kawakawa SD	NA13C/206
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Sec 6 Blk V Kawakawa SD	NA277/73
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Pt Allotment 5 PSH OF Okokako	NA105B/128
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Allotment 15 PSH OF Okokako	NA2D/481
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Pt Allotment 4 PSH OF Okokako	NA105B/128
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Pt Allotment 14 PSH OF Okokako	NA105B/128
Anna Maree Bill, Stephen Edward Bill	Allotment 18 PSH OF Okokako, Waimate North Road, Kerikeri 0293	Pt Allotment 6 PSH OF Okokako	NA105B/128
Graham Kenneth Lord, Neil Bain Miller, JWAL Trustees (2011) Limited	727 Waimate North Road, Kerikeri 0293	Sec 6 SO 440211	583598
Graham Kenneth Lord, Neil Bain Miller, JWAL Trustees (2011) Limited	727 Waimate North Road, Kerikeri 0293	Sec 13 SO 440211	583600

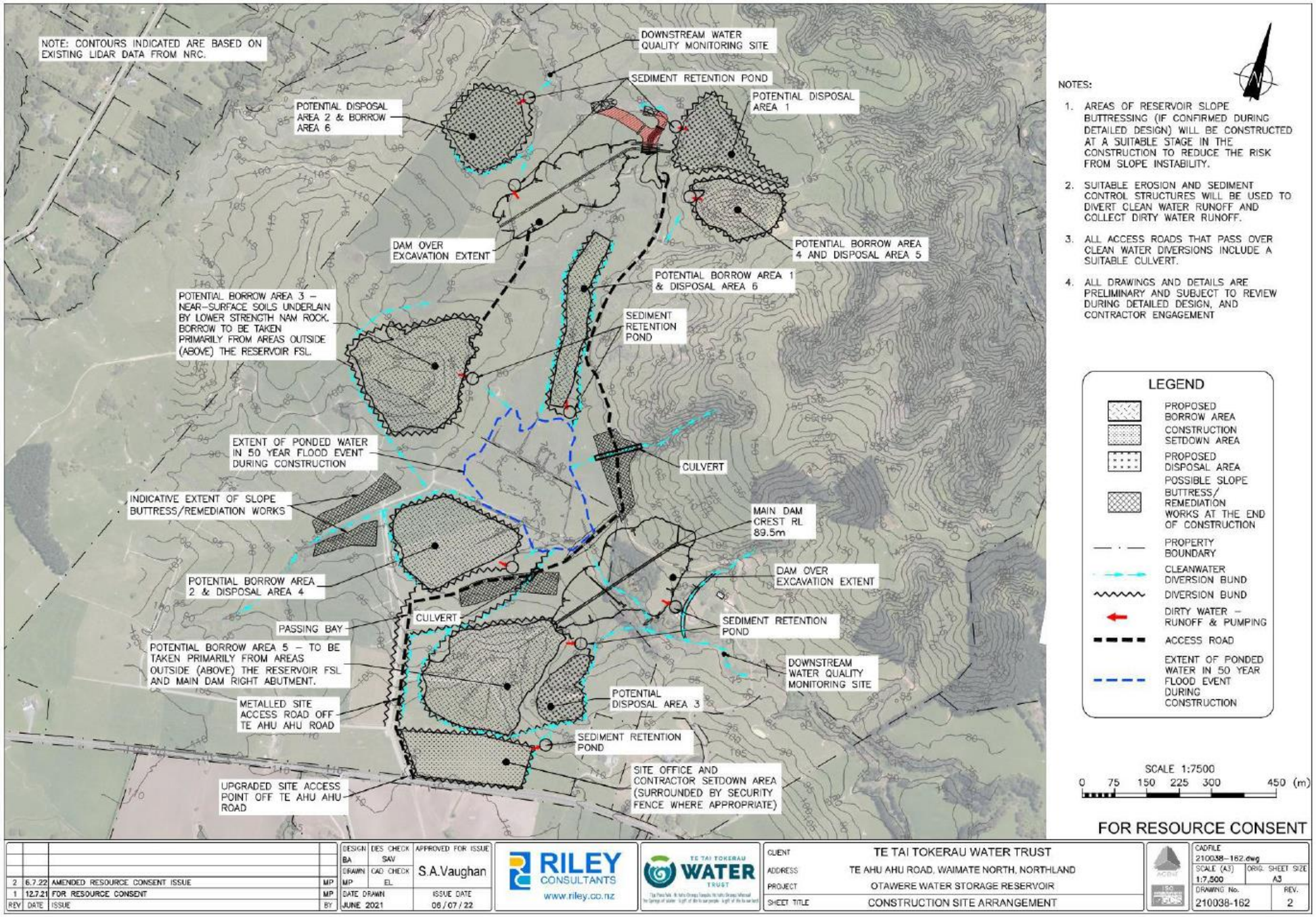
Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Raewyn Margaret Price	264 Okokako Road, Kerikeri 0293	Lot 2 DP 517434	824688
Raewyn Margaret Price	264 Okokako Road, Kerikeri 0293	Lot 2 DP 405430	824688
Graham Kenneth Lord, Neil Bain Miller, JWAL Trustees 2011 Limited	445 Puketona Road, Paihia 0271	Lot 1 DP 174418	NA105B/62
Marion Neville Walsh, Ian John Halliday	1522 Oromahoe Road, Oromahoe 0472	Lot 4 DP 200560	880091
Marion Neville Walsh, Ian John Halliday	1522 Oromahoe Road, Oromahoe 0472	Lot 2 DP 534270	880091
Marion Neville Walsh, Ian John Halliday	1522 Oromahoe Road, Oromahoe 0472	Lot 3 DP 200560	880091
Marion Neville Walsh, Ian John Halliday	1522 Oromahoe Road, Oromahoe 0472	Lot 2 DP 200560	880091
River Edge Properties Limited	514 Puketona Road, Paihia 0271	Lot 1 DP 531141	866167
Linita Developments Limited	Lot 2, Puketona Road, Paihia 0271	Lot 44 DP 489633	866168
Linita Developments Limited	Lot 2, Puketona Road, Paihia 0271	Lot 2 DP 531141	866168
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 4 DP 517734	809847
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 2 DP 517734	809848
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 1 DP 517734	809847
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 4 DP 517734	809847
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 1 DP 517734	809847
Puketona Farms Limited	1143 Puketona Road, Kerikeri 0293	Lot 2 DP 517734	809848
Samantha Beth Hawke, Ethan William Parris	11B Walnut Lane, Haruru 0293	Lot 2 DP 533770	877979
Amy Joanne Weston, Darrell Shaun Weston, GQ Trustees 2012 Limited	930 Puketona Road, Kerikeri 0293	Lot 1 DP 533770	877978
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Lot 1 DP 545937	928269
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Lot 2 DP 464878	618008
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Rangaunu 7A	NA19D/336
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Rangaunu 8A2	NA18B/686
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Whakataha 2A2A	NA377/279
Old Oak Farms Limited	Lot 1, Cooks Lane, Waimate North 0472	Whakataha 1A3	618008
Steincaster Farms Limited	19 Cooks Lane, Waimate North 0472	Lot 2 DP 545937	928270
Steincaster Farms Limited	19 Cooks Lane, Waimate North 0472	Lot 3 DP 545937	928270
Steincaster Farms Limited	19 Cooks Lane, Waimate North 0472	Lot 1 DP 330972	127156
Steincaster Farms Limited	19 Cooks Lane, Waimate North 0472	Pt OLC 48	NA60D/191
Kevin Owen Baxter, Gillian Bethanne Baxter, J B L Trustee Limited	501 Waimate North Road, Kerikeri 0230	Lot 7 DP 345394	186040
Kevin Owen Baxter, Gillian Bethanne Baxter, J B L Trustee Limited	501 Waimate North Road, Kerikeri 0293	Lot 7 DP 345394	186040
Kevin Owen Baxter, Gillian Bethanne Baxter, J B L Trustee Limited	501 Waimate North Road, Kerikeri 0293	Lot 7 DP 345394	186040
Bryce Alan Carson	236 Whakataha Road, Waimate North 0472	Lot 5 DP 541978	911737

Ratepayer name	Property location	Legal description (Appellation)	LINZ Title
Bryce Alan Carson	236 Whakataha Road, Waimate North 0472	Lot 4 DP 541978	911737
Bryce Alan Carson	236 Whakataha Road, Waimate North 0472	Lot 2 DP 541978	911737
Bryce Alan Carson	236 Whakataha Road, Waimate North 0472	Lot 3 DP 541978	911737
Johnsen Farms Limited	939 State Highway 10, Kerikeri 0470	Allot 34 Psh of Waitangi	924942
Johnsen Farms Limited	939 State Highway 10, Kerikeri 0470	Lot 2 DP 545067	924942
Rochelle Kathleen Evers, Todd David Evers	14 Riverglen Drive, Haruru 0204	Lot 1 DP 559405	984750
Michelle Louise White, Robert Colin Field	1 Puketutu Drive, Haruru 0204	Lot 2 DP 310997	990247
Suzanne Elizabeth Woolston, Trevor James Woolston, Michael G Stuart Trustee Co Ltd	19 River Palms Lane, Haruru 0204	Lot 1 DP 552961	958494
Jason Dean Tolley, Angela Maria Margaret Woolston	3 River Palms Lane, Haruru 0204	Lot 2 DP 552961	958495
Roger Gavin Kendall, Roger Gavin Trustee Limited	5 River Palms Lane, Haruru 0204	Lot 3 DP 552961	958496
Trevor James Woolston, Suzanne Elizabeth Woolston, Michael G Stuart Trustee Co Ltd	7 River Palms Lane, Haruru 0204	Lot 4 DP 552961	958497
Colin John Dravitski, Bonita Maree Blake	15 River Palms Lane, Haruru 0204	Lot 5 DP 552961	958498
Michael Ian Douglas, Sandra Jane Douglas, GB Trustee 2016 Limited	17 River Palms Lane, Haruru 0204	Lot 6 DP 552961	958499
Suzanne Elizabeth Woolston, Trevor James Woolston, Michael G Stuart Trustee Co Ltd	11 River Palms Lane, Haruru 0204	Lot 7 DP 552961	958500
Andrew Raymond Goodin, Cleuza Maria Goodin	9 River Palms Lane, Haruru 0204	Lot 8 DP 552961	958501
Aroona Group Limited	797C Waimate North Road, Kerikeri 0293	Lot 2 DP 566421	1013518

Appendix B – Saddle and Main dam locations



Appendix C – Borrow and Disposal areas plan



Appendix D – Vegetation Removal Protocol

The following protocol applies to all trees to be felled. These protocols follow industry best practice following both the Bat Management Framework set out by Waka Kotahi New Zealand Transport Agency (Smith et al., 2017) and the Department of Conservation's (DOC's) best practice manual of conservation techniques (Sedgeley et al., 2012).

The protocols aim to provide clear, concise procedures that are to be followed prior to the removal of all trees in the proposed area of vegetation clearance, with the goal of avoiding mortality or injury to long-tailed bats during clearance activities.

There are three protocols that will be used:

Protocol A: Identification of potential bat roost habitat;

Protocol B: Pre-felling procedures;

Protocol C: Felling procedures; and

Protocol D: Bat Injury or Mortality.

Protocol A: Identification of potential bat roost habitat

Prior to undertaking this protocol, ensure the Project site has been visually delineated using flagging tape or boundary pegs, to ensure all trees that are required for removal are assessed appropriately. This also ensures that no more vegetation than necessary is removed.

All vegetation that might be disturbed and/ or removed for construction must first be assessed by a competent ecologist (Class C2) as either High-Risk or Low-Risk regarding the presence of potential bat roost features.

High-Risk vegetation is defined as those possessing suitable features to host roosting bats. This vegetation[1] is identified as being >15 cm Diameter at Breast Height (DBH) and possess one or more of the following features:

Cracks, crevices, cavities and/or fractured limbs large enough to support roosting bat(s);
Sections of loose flaking bark large enough to support roosting bat(s);
A hollow trunk, stem or branch;
Deadwood in canopy or stem of sufficient size to support roost cavities or hollows; and
Bat droppings, grease marks and/or urine staining around cavities.

Low-Risk roosting trees include all trees < 15 cm DBH and any trees > 15 cm DBH that lack the characteristic features of a bat roost. These trees can be felled immediately without requiring further acoustic or visual monitoring. However, any vegetation that demonstrates evidence of roosting bats (e.g roost features, droppings, grease marks, urine staining) should be treated as a potential roost tree and investigated accordingly.

] All High-Risk trees shall be subjected to pre-felling monitoring as per Protocol B. Pre-felling vegetation assessments using acoustic or visual methods (see Protocol B for details) shall be undertaken only by an appropriately certified (by DOC) bat ecologist with proven competency in the particular method. Appendix A details activities able to be carried out by each competency class.

] Roosts tend to be observed in mature trees that are >15cm DBH; however, native bats have also been observed in tree ferns, cabbage trees and epiphytes, therefore this vegetation should also be considered as High-Risk.

2 No trees or vegetation identified as potential roosts can be felled or cleared without the approval of the project bat ecologist.

Protocol B: Pre-felling procedures

Once potential roosts have been identified using Protocol A, occupancy will be confirmed using one or a combination of methods outlined below, immediately prior to vegetation clearance. The most effective method will be determined by the Project Bat Ecologist on a case-by-case basis.

Acoustic surveys will be used in the first instance to determine occupancy of potential roost trees, as activity in the Project site is predictably low and uncommon. However, if occupancy is not able to be ruled out solely using this method, then visual surveys by way of arborist inspection and/or dusk emergence watches will be carried out.

Acoustic Monitoring via Automated Bat Detectors

1 The identified potential roost trees will be acoustically monitored for a minimum of two consecutive nights immediately prior to felling. Monitors will be programmed to detect activity from one hour before dusk until one hour after dawn.

2 Ideally monitoring shall occur between 1 October and 30 April when bats are more active and less likely to be in torpor.

3 The following weather parameters must be met to ensure a valid night where bat activity is likely:
   (a) Dusk temperatures must remain between 10-17°C.
   (b) Rainfall must remain below 2.5 mm in the first two hours after dusk.
   (c) Monitoring shall take place outside of a full moon and one night either side.

4 Where a night of monitoring is lost due to adverse weather or presence of a full moon, further monitoring must occur until two consecutive nights are achieved, with no bats detected.

5 The ABM(s) should be placed so that detection of bats is likely if they are using the potential roosts.

6 ABM data will be analysed the morning of felling to indicate occupancy of potential roosts. If the bat ecologist can confirm there is no evidence (e.g. no activity indicating roosting) for the two consecutive nights prior to felling, the tree can then be felled with the bat ecologist present. However, if bat activity patterns suggest the possibility of bats roosting in the vicinity of the ABM, then visual inspections (see 2.2.2) will be necessary to confirm if it is an occupied roost.

7 Results of acoustic surveys will be clearly relayed to the clearance supervisor as soon as possible on the day of felling. The clearance supervisor will be either be given approval to fell the vegetation if the bat ecologist is confident no bats are present, otherwise the bat ecologist will communicate what further monitoring is necessary and associated timelines for this work.

Visual inspections

This method can be used in areas of common or expected bat activity and where arborists are able to reach all areas of the tree. It should be used as the next step if roosting is not able to be ruled out by ABMs. The project ecologist will inspect the roost feature if it is low enough on the tree to inspect from the ground. However, most features are usually higher and require inspection by an arborist or trained climber.

1 All vegetation identified as a potential roost may be inspected to confirm occupancy by roosting bats.

2 An arborist may undertake a visual inspection of vegetation by climbing (under guidance and supervision of the bat ecologist) and relaying any potential evidence of bats (e.g. urine staining, cavities, droppings) by way of live audio-visual equipment and/or photographs for review of the bat ecologist. This must be undertaken immediately prior to (same day) removal. The arborist will also check for signs

of roosting bats using a handheld bat detector (to detect social and echolocation calls from roosting bats).

3 Arborists may carefully inspect and check the extents of split branches, and if necessary, use and endoscopic camera to inspect cavities for presence of roosting bats.

4 If potential roosts are located within tree ferns or other 'delicate' vegetation, climbing will only be undertaken if it is safe to do so for the climber and if this will not damage the roost or disturb potentially roosting bats at the time of inspection. All climbing must take place under the careful supervision of the bat ecologist to prevent roost damage or disturbance/injury to roosting bats.

5 If no bat activity or evidence of roosting bats at the potential roost trees is identified and the project bat ecologist determines the vegetation can be removed, this information should be relayed to the contractors in sufficient time to allow contractors to clear vegetation prior to dusk the same day.

Dusk/Dawn Roost Watches

This method should be used if potential roosts cannot be ruled out using acoustic monitoring and/or visual inspection techniques (e.g. high bat activity areas, vegetation that is unsuitable for climbing). In this instance, the following methodology should be implemented.

1 Observations should begin before sunset. Bats begin to leave their roosts while there is still light outside therefore there is potential to observe bats without the aid of cameras or video equipment.

2 Ambient temperature should be >10°C and there should be no precipitation (otherwise bats may not emerge).

3 Observations shall be carried out close to potential roost sites where flying bats are backlit against the sky (where possible). It may be useful to have more than one person observing potential roost sites from different angles to determine precise trees or vegetation and exit holes.

4 Hand-held bat detectors should be used to alert the ecologist(s) to the presence of bats nearby, narrowing down the potential roost site locations and allowing roosts to be confirmed.

5 This method should be repeated at dusk and dawn (return observations) for two consecutive nights prior to felling.

6 If no bat activity at the potential roost trees is identified and the project bat ecologist determines the vegetation can be removed, this information should be relayed to the contractors in sufficient time to allow contractors to clear vegetation prior to dusk the same day.

Protocol C: Felling Protocol

1 If bats are confirmed, via either of the methods detailed above, to be roosting within the tree, it must not be felled. The following actions will be taken:

Roost trees should be clearly marked, and all relevant staff briefed to ensure the tree is not removed. DOC will be informed by email with relevant information such as photos, GPS co-ordinates.

Felling around the roost must not occur within a tree length of the roost and disturbance minimised, particularly around dusk/dawn.

Further acoustic and/or visual monitoring must continue until the bat ecologist can confirm that no bats are roosting within the vegetation in question.

If bats are confirmed to be still roosting within the vegetation after seven days of monitoring, then a meeting between all stakeholders as well as a council representative and DOC staff will be held to decide an appropriate way forward. This will be a risk assessment-based approach dependent on the type of roost identified.

The project bat ecologist should be onsite to supervise all potential vegetation clearance operations to advise staff should bats be detected (leaving trees or injured) and to inspect each felled tree or vegetation for signs of bats. Removal must occur on the same day as per the pre-felling procedures listed in Protocol B.

2 If bats are detected while felling is in progress, felling must stop long enough to allow any uninjured bats to escape (if it is safe to do so). Every effort should be made to relocate the section of the trunk/branch where the bats were roosting before felling may recommence.

3 Attempts should be made to capture any observed bats by the on-site bat ecologist for injury assessment.

4 Uninjured bats will be released immediately and if any injured or deceased bats are salvaged, Protocol D shall be implemented

5 All High-Risk trees shall be thoroughly inspected immediately after felling with the aid of a handheld detector by the bat ecologist, to check for any roosting bats remaining within the tree.

6 If any injured bats are observed during/after vegetation clearance, then Protocol D must be implemented.

Protocol D: Bat Injury or Mortality

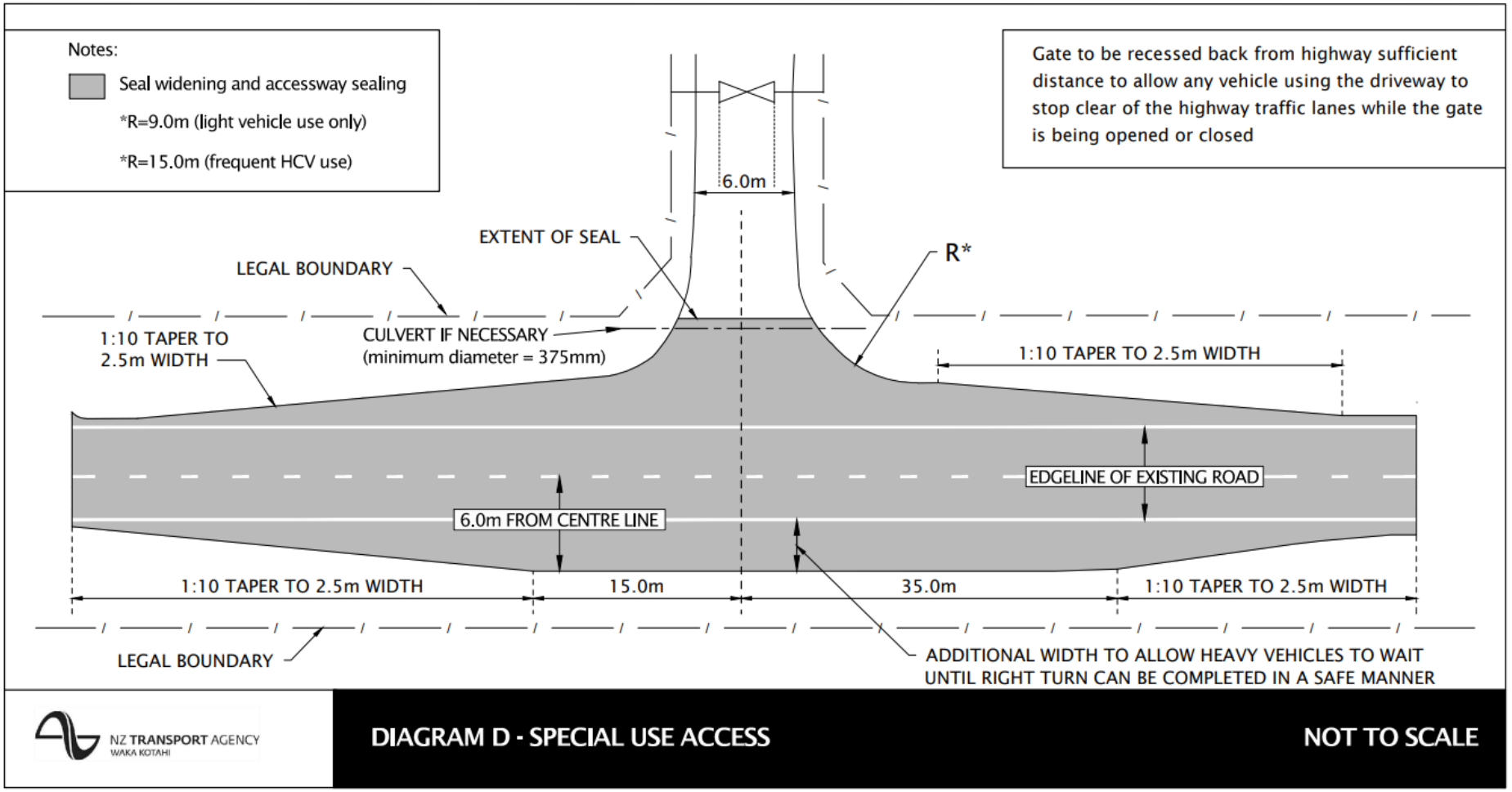
In the event of finding a dead or injured bat(s) the following procedures will be implemented:

1 Injured bats will be placed in a dark material-lined bag by the bat ecologist (Class D) to ensure the bat is handled appropriately.

2 Injured bats will be taken immediately to the nearest available veterinarian for assessment/treatment. The vet will make a decision whether to euthanise the bat or not (this does not require DOC approval. If the vet decides that the bat can be rehabilitated, the vet will contact DOC on the emergency hotline (0800 362 468)

3 If the bat is dead or has been euthanised by the vet, it will be taken to the local DOC office as soon as practicable (required under the Wildlife Act). The bat(s) must be stored in a fridge at less than 4°C.

Appendix E – Waka Kotahi Diagram D



APPENDIX 2: LIST OF KEY DATES

Otawere Water Storage Reservoir – Key Dates	
Application Lodged	01 February 2022
Completeness End Date	09 February 2022
Panel Appointed	16 March 2022
First Information Request Issued	22 March 2022
Initial Invitations to Comment Issued	23 March 2022
Site Visit	8 April 2022
Decision on Extension	12 April 2022
Second Information Request Issued	12 April 2022
Close of Initial Comments Period	13 April 2022
Additional Invitations to Comment Issued	22 April 2022
Third Information Request Issued	5 May 2022
Close of Additional Comments Period	13 May 2022
Fourth Information Request Issued	2 May 2022
Draft Conditions Circulated	2 June 2022
Comments Closed	14 June 2022
Date Application Suspended	23 June 2022
Date Application Processing Resumed	15 July 2022
Extended Decision Deadline	18 July 2022
Date of Decision	**18 July 2022**
Appeal Deadline	**8 August 2022**

APPENDIX 3: SUMMARY OF COMMENTS RECEIVED

Name	Summary of comments	Response
Initial Invitees		
Okokiwi Downs Ltd / Stephen and Anna Bill	- Support as water supply will be of benefit to many surrounding landowners. Application should be fast tracked so it is not held up any further.	- Support noted. Decision regarding fast-tracking was made by Minister.
Greg Moyle	– Support as will lower the carbon footprint of the land it serves, provide water security, and take the pressure off the catchment area during intense rainfall events and from the use of ground water.	– Support noted.
Sharon Remkes	– Wants to know whether property will be connected to the water supply and if not why.	– Operational question for the Applicant.
Forest & Bird	<u>Use of water</u> – Effects/benefits of future water use cannot be considered in this proposal as use of water is not part of the proposal. – Panel cannot impose consent conditions in relation to future use as they would not address an adverse effect of this proposal. <u>Adverse effects</u> – Impacts on flora and fauna and how these are to be addressed is unclear. – Conditions need to include clear and adequate measures to address loss of indigenous vegetation and habitat values including requirements to: ▪ revegetate the area above the reservoir waterline to the ridges in native forest using seeds eco-sourced locally (including from trees removed as part of proposal); ▪ subject to ecological advice, plant wetland species around the edge/margin of the reservoir to provide habitat for bittern; ▪ provide a high level of fish passage (seamless migration) for long and short-fin eels and banded kōkopu; ▪ detail matters to be included in the lizard management plan such as relocation, potential return post completion, and involvement of hapū/kaitiaki, DOC, and relevant landowners in the plan. <u>NESFW</u> – Pipelines needed for the lifeline utility service are not part of this Application and nor is the supply or use.	– There is sufficient causal nexus to consider end use albeit quantum of those benefits is speculative. – Effects of future use will be subject to separate consent process. – We consider we sufficient information to make a decision. We have imposed conditions to manage impacts on flora and fauna, including an EOIP, requirements for fish passage, and an LMP. Provision has also been made for tangata whenua and DOC consultation for these plans. – The pipeline is a permitted activity. We have imposed a condition requiring provision for

Name	Summary of comments	Response
	– Primary purpose is not for lifeline utility. – Cannot be considered as specified infrastructure and is a prohibited activity.	the lifeline utility use. We disagree that the activity has a prohibited activity status for reasons set out in **Part 4**.
Heritage New Zealand	– Agree with the recommendation in the archaeological report and strongly recommend that the Applicant apply for an archaeological authority to avoid delays in the future if archaeological material is discovered.	– Advice note added to clarify likely need for archaeological authority.
George MacDonald	– Wants to be informed in person of any adverse effects on 693 Te Ahu Ahu Road as he is not a benefactor of the Project. – Concerned about ground saturation and extent, insects/mosquitos, noise effects from bird life (ducks, swans, gulls etc) and frogs, construction effects (noise, dust, traffic).	– Provision made for CLG to enable engagement. – We have imposed conditions to ensure these effects are appropriately managed.
Phillipa Atkinson	– Seeks that Project is not fast tracked. – Main concerns include lack of consultation (requests community meeting prior to commencement), safety and issues relating to potential dam breaches (loss life, stock property, environmental degradation, property values and compensation, impacts on future water takes below the dam, discharges above the natural flow which could be hazardous around culverts and crossings and to activities downstream.	– Minister made the fast-track decision and we are not able to revisit that. – CLG condition imposed to provide for engagement. Suite of conditions imposed to address potential effects of the Project.
Minister of Arts, Culture and Heritage	– Support intent of the Project. – Notes the comments of Heritage NZ.	– Noted.
N R Farming Limited (Neville Rule)	– No negative view. – People offended by lack of proper process, wish to be kept informed.	– Noted. – CLG condition included.
Far North District Council	<u>Proposed conditions:</u> – Requirement for CTMP and road pavement assessment to be submitted to FNDC for approval prior to earthworks or construction commencing. – Requirement for post-construction pavement assessment and repairs at consent holder cost with FNDC able to request bond for costs of road remediation. – Consent holder to be responsible for ongoing repairs and maintenance of public road infrastructure and costs of the same, for the duration of the works including cleaning road carriageways of dirt, debris, gravel from site.	We have addressed all of these matters in conditions.

Name	Summary of comments	Response
	– Consent holder responsible for repairs to any underground utilities damaged during construction/earthworks. – Access to the Site via an upgraded vehicle crossing off Te Ahu Ahu Road with the crossing to be maintained for the duration of the works. – A vehicle crossing permit and approved TMP/CAR application required for each new or upgraded crossing prior to works commencing. – No on-street parking machinery/vehicles without approval from FNDC. – Requirement to complete and operate water supply for firefighting (hydrants) and emergency community supply be included. – Need clear conditions setting out responsibilities of FNDC and NRC. FNDC still has responsibility for some erosion and sediment measures and land use effects, lighting, machinery etc. – Requirement to identify existing fill route for road construction. – Requirement for assessment of hydraulic water flows and catchment flows post construction i.e., changes to NRC flood data and downstream catchment flows. <u>Road infrastructure</u> – Need for an assessment of suitability of existing roading infrastructure to take the additional heavy traffic volume and whether reinforcement or upgrading necessary due to heavy traffic. <u>Downstream development</u> – May leverage off the dam for stormwater catchment. – Effects need to be clearly identified for the entire catchment. <u>Highly versatile soils</u> – Reservoir has potential to enable intensive productive use of land containing highly versatile soils (and higher economic potential and value for the land). – Policy 5.1.1 of the RPS seeks more targeted use of such soils. <u>Heritage</u> – Broader heritage values exist in potentially future serviced areas. – Some of potential effects of intensive horticulture use (e.g., visual) may conflict with some of the heritage values. – The draft National Policy Statement for Highly Productive Land (**NPSHPL**) may offer some further guidance soon.	– This was addressed in the transport assessment. – Noted. Applicant assessment took whole of catchment approach. – Noted. – Noted. Effects of future uses will be assessed in separate consent processes against any relevant RMA plans and policies in place at that time. – The NPSHPL is not yet in force.

Name	Summary of comments	Response
Taiāmai ki te Takutai Moana	<u>Otawere is a site of significance to local Māori</u> – As noted in the archaeological assessment attached to the CIA.	– Noted.
	<u>Water take resource consent for the Otawere reservoir</u> – Concerns around lack of medium flow data for Waiaruheiti stream take as noted in the CIA prepared for that application (and attached to Taiāmai comments for this application). – Concerns around land banking of water for commercial use for the Waitangi water take consent with no returns to the community and environment (as noted in report attached to Taiāmai comments).	– Effects of that take considered through separate consenting process. – Determining who receives water is a commercial matter for the Applicant. However condition imposed to ensure community supply for firefighting and emergency purposes.
	– Need to consider NPSFM Te Mana o Te Wai particularly 3.7 to 3.20.	– Te Mana o Te Wai considered in **Part 7** above.
	<u>Environmental effects within Otawere</u> – Effects as noted in the Otawere CIA (Appendix M to the Application). – Concern re instability of soil for the amount of water being planned.	– Assessed effects in **Part 6** above. Conditions imposed to ensure review of key dam milestones.
	<u>Ongoing engagement with tangata whenua</u> – Concerns as noted in the Otawere CIA (Appendix M to the Application). – Applicant needs to engage more with local hapū and iwi as they stopped the mid north advisory group which is where the majority of hapū were getting information from about the milestones and deliverables for each Project. – Hapū and iwi are concerned that the reservoir may be for private investment interests only.	– Conditions imposed to ensure ongoing engagement as noted in **Part 5.** Reservoir required to make water available for firefighting and emergency supply.
	<u>Environmental benefits for community</u> – Concerns as mentioned in Otawere CIA (Appendix M to the Application). – Project needs more environmental benefits as noted in Tonkin and Taylor report.	– Requirement for EOIP in local area and provision for tangata whenua consultation about EOIP.

Name	Summary of comments	Response
	– Offsetting plans/areas need to include community benefits that support localised developments within the Waitangi catchment area, environmental restoration and local hapū and community engagement. Also attached CIA for Te Ruaotehauhau Water Reservoir proposal	– Noted.
Bruce Thompson	– Property owner at 1254 Puketona Road. – Concerned for tenants increased risk and potential exposure to flooding and would like some assurance around management of those risks. – Do not want any further interruption/risk to Top Energy operations.	– Conditions imposed for dam safety purposes, EAP, notification and insurance.
Waka Kotahi	Construction traffic and emergency action plan – Supports inclusion of CTMP and EAP and seeks suitable conditions imposed to ensure they are implemented. Potential impacts to the state highway network from a dam breach – Damage/destruction to two bridges/culverts on SH10. – SH10 provides access to Kerikeri Waipapa, Kāeo and Doubtless Bay and is a key detour/alternative route for SH1. – Reviewed risk assessment and satisfied any failure event can be appropriately managed. – Dam owners should have appropriate insurance in place to cover failures – including damage to SH10 (although not sought as condition consent).	– Conditions requiring implementation included. – Noted. Insurance requirement imposed.
Department of Conservation	Separate legal requirements will apply – Wildlife Act approvals will be required to catch or kill protected fauna. – Freshwater Fisheries Regulations 1983 will apply to structures within waterways. Lack of information – Uncertainty regarding fauna within/using the site. – Lack of provision of draft management plans. – No protection mechanisms for proposed biodiversity offset measures. – No measures to avoid/offset loss wetlands. – Inadequate information to understand effects of the proposal. NPSFM 2020 – Key policies are 3, 6, 9 and part 3.22. – Substantial weight must be placed on ensuring any loss of wetland or river extent or values is avoided where practical and offset or compensated where not.	– Noted. Advice notes and provision for consultation with DOC added. – The Panel is satisfied it has sufficient information. Detailed management plan conditions have been imposed to manage effects including EOIP and requirement for offset in perpetuity. – Noted. We have considered these policies in our evaluation, and have included specific requirements to offset losses.

Name	Summary of comments	Response
	<u>Ecological assessment</u> – 5.425 ha wetlands and 1.5 ha forest/scrub vegetation will be lost, and pre-mitigation effects on long-tailed bats, kiwi, pipit, kūkupa and geckos will be very high/high. – Mitigation detail left to a Fauna Management Plan not yet prepared. – Condition wording "*as far as practicable*" limit objectives of Management Plan and provide no direction/hierarchy for how avoid/remedy/mitigate is applied. – Residual effects (effects not avoided/remedied/mitigated) addressed through offsetting – need to be protected for as long as residual effects continue/in perpetuity. – Without certainty planting will be protected in perpetuity it cannot be considered as offsetting. – No new wetlands are proposed so wetland loss will be permanent. <u>Freshwater ecology</u> – Limitations of stream ecological assessment is at a survey point in time, and historical wetland designations noted. – Assessment of the water take consent will only be able to be considered once specific information about the nature of the take, intake structures and dam design are completed. – Determination of environmental/flushing flows and impacts on wider in-stream habitat need to be considered. – Fish relocation plans and passage need to be assessed and mitigation measures need to apply best practice standards. – Details of freshwater ecology measures are uncertain as left to management plans. – Erosion and sediment controls will need to be complied with to minimise impact instream habitat. <u>Management plans</u> – Need clear and effects-based objectives and performance standards. – Require ongoing implementation, monitoring and reporting. – Set intervention thresholds to allow review and intervention if objectives are not being met and provide for adaptive management where appropriate. – Need to be enforceable.	– Conditions included to address effects flora and fauna. – As far as practicable wording removed. – Requirement included for offset in perpetuity. – While no new wetlands are proposed 6.5 ha of degraded wetlands will be restored. – Effects have been considered and conditions imposed to limit takes, require riparian planting, manage sediment and erosion, and address fish passage. – Objectives included for all management plans along with conditions setting out key provisions. DOC required to be consulted for all ecological management plans, and a

Name	Summary of comments	Response
	– Conditions should provide an opportunity for DOC input into all ecological management plans before they are finalised.	review condition has been included.
Roger Atkinson	– Not been given an opportunity to consult despite being a downstream owner and having a legal right. Wishes to be advised when he will be given opportunity.	– Invited to comment by the Panel. Provision for CLG included.
Northland Regional Council	– Application comprehensive and covers matters relevant to NRC functions. – There is an issue of allocation limits for both the reach and catchment in which dam is located. – Unclear whether hydrology assessment is consistent with the values provided by NRC and does not appear to use the long-term recorder site at the bottom of the Waitangi River to validate its model.	– Limits for take included in the consent. – The Panel was not provided with any further information about the recorder site. However, the Panel is satisfied that hydrology has been appropriately assessed for the reasons set out in **Part 6**.
Roseburn Farms Ltd (Alex Hansen)	– Overflow will be into only reliable water supply for lot 1. – Possible fertiliser restrictions as lot 1 is part of the catchment area. – Construction noise. – Waterfowl population increase will make cropping and re-grassing more difficult/expensive and will increase fouling of pasture making it less palatable to stock. – Seepage to lot 1 given proximity (80m) causing pastureland to be soft to graze over winter.	– Effects on water supply, and surrounding land assessed in the Application. – Construction noise conditions imposed. – Run-off is already subject to RMA rules. – CLG condition imposed to enable raising any other issues that may arise.
Cameron Flude (late)	– Concerned re impacts on health and safety, property value, and quality of life. – Noise, sight, air pollution (including dust in water supply) during Project. – Potential disasters associated with dam structure after the Project has been completed from earthquakes and impacts on local ecosystem and wildlife. – Project will impact peaceful outlook/space and affect ability to destress.	– LandMP condition imposed with a requirement for consultation with near neighbours. – Conditions controlling effects – particularly construction works - and dam safety imposed.

Name	Summary of comments	Response
Christina Smith (late)	– Wishes local contractors to be awarded any tenders associated with reservoir construction.	– Matter for Applicant.
Additional Invitees		
Pukeawa Trust (Raewyn Gordon)	– Main concern is warning in the event of a breach and the potential effects of sediment on the Waitangi River estuary and kaimoana there. – Otherwise in favour of well-managed water storage.	– EAP condition and water quality monitoring conditions imposed.
Puketona Properties (Bruce Thompson)	– Concerned about flooding in the event of a dam breach for their rental property, and do not want any risk/interruption to Top Energy operations.	– EAP and dam safety design conditions imposed.
Allison Atkinson	– Concerned re use of fast-track process and lack of consultation to date, potential impacts of a breach of the dam, and wishes to ensure no change to water access to sustain farming operations into the future.	– Minister made decision re fast-track process. – CLG condition imposed to enable engagement. – Dam safety conditions and water monitoring conditions imposed.
Edward Court	– Provided it does not affect the flow of Waitangi River head, ok with the Project.	– Noted.
Wendy Atkinson (x2 submissions)	– Seeks full compensation in the event of any flooding causing damage or loss to property, stock, pasture and trees. – Concerned re fast-track process and lack of consultation to date, potential impacts of a breach of the dam, and wishes to ensure no change to water access to sustain farming operations into the future.	– Insurance condition imposed. – Minister made decision re fast-track process. – CLG condition imposed to enable engagement. – Dam safety conditions and water monitoring conditions imposed.
Roseburn Farms (Alexander Hansen)	– Concerns re dam breach scenario and would like to be kept informed to reduce the risk/damage.	– Dam safety and EAP conditions imposed and CLG included to enable engagement.
Jane Hunter & Mark Wagstaff	– Concerned about potential dam breach and requests all potentially affected properties be insured by the Applicant.	– Dam safety and insurance conditions imposed.
Christine Ager	– Considers it will be beneficial and hopes it will reduce flooding to garden. – Seeks info about when the Project will commence and how long it will take to complete.	– Noted.

Name	Summary of comments	Response
		– CLG condition will enable engagement regarding project commencement and progress.

APPENDIX 4: SUMMARY OF COMMENTS ON CONDITIONS

Notes:

- Where no specific reason is given in the Panel Response column and the Panel has made the change requested, the Panel adopts the reasoning provided by the person providing comment (Applicant or submitter).
- Condition numbers in the summary of comments refer to the condition numbers in the draft conditions circulated not the final conditions we imposed in Appendix 1. There are variations between condition numbers given the changes we made post receipt of the comments.

Name	Summary of comments	Panel Response
Forest & Bird	General – Remove Forest & Bird from list of consultees in conditions as it does not have resourcing to commit to this and consultation after grant does not address its concerns. – All management plan conditions should include reference to authorisations under the Wildlife Act. – Timing of surveys before works needs to be specified. – Objectives of management plans and outcomes to be achieved are unclear. – References in management plans to minimising impacts as far as practicable are not enforceable conditions. – Relying on conditions to address adverse effects on indigenous biodiversity is uncertain. – Draft management plans may assist to demonstrate that measures are achievable before grant of consent.	– References to Forest & Bird removed. – Amendments made to improve clarity and enforceability of management plans. Conditions contain criteria to be met and the evidence before Panel is that those criteria and plans are sufficient to address effects. The Panel does not consider draft management plans for all areas are required given the criteria have been set in conditions.
FNDC	General – Useful to have FNDC and NRC conditions separated out for monitoring purposes. – 20 wd time frame is tight so FNDC would need to be consulted first before accepting plans. – Need to include standard advice note about obtaining a corridor access request (**CAR**) for all works prior to commencing. Compliance Monitoring officer	– Index included to make it clear which council has responsibility for which conditions. – Applicant can elect to submit a draft if it chooses to. – Advice note for CARs added.

Name	Summary of comments	Panel Response
	– Request use FNDC contact rcmonitoring@fndc.govt.nz and ken.ward@fndc.govt.nz (Team Leader Monitoring)	– Advice note added to clarify appropriate contact. Name of officer not included in case of staffing changes.
NRC	General – Concern re certification process and timing and potential conflict regarding supply and certification of management plan versus commencement of enabling / construction work. – Conditions need to require certification before works can commence. Amend wording to state "*must be submitted to and certified in accordance with the process set out in condition 31*". – 20 wd is a long time at the start construction – look at wording so can commence earlier if certified earlier. – Inconsistency in terminology used, prior to the start of construction, prior to commencement of earthworks/works, prior to commencement of enabling works, a finalised plan, constructed in accordance with certified plan or latest version of certified plan (conditions 6, 18, 21, 28, 31, 36, 39, 43, 46, 49, 52, 58, 60, 62, 61, 66, 70, 72(e)(i), 74, 73, 84, 92, 96, 98) – Is the clearing of vegetation and topsoil earthworks? – Similar issues arose in *Matawii* where the conditions were similarly worded. A management plan is not 'finalised' until it has been certified. – Certainty is important for compliance monitoring and enforcement purposes.	– Changes made to clarify what is included in construction/site works, that certification is required prior to works commencing, to ensure consistent use of terminology.
Applicant	Definitions – Delete definitions for "*ANZG*", "*CRI*", "*DGV*" as not appropriate to impose water quality standards.	– Agree for reasons given by Applicant and changes made.
Applicant	Condition 1 – Insert reference to the draft CEMP 210038-OTA-G.	– Deleted specific references to most plans as they are already covered by reference to the application and further information. However, included reference to the borrow and disposal areas plan as that is attached as Appendix C. – No change. Reference to "general accordance" provides sufficient flexibility.

Name	Summary of comments	Panel Response
	– Insert new condition following condition 1 to allow revised design drawings to be substituted at detailed design and provided they do not result in any additional (more than de minimus) effects.	
Applicant	Conditions 4 and 5 – Amalgamate and replace with wording to confirm consent holder responsible for all administration, monitoring and supervision charges under s.36 RMA.	– Agree. Change made.
NRC	Conditions 4 and 5 – No processing costs for NRC before consent can be exercised so condition 4 unnecessary. Condition 4(b) reference should be 36(5). – Condition 5 – should reference to s.36(1).	– Condition amended as per above.
FNDC	Condition 6 – Please use FNDC contact rcmonitoring@fndc.govt.nz cc ken.ward@fndc.govt.nz (Team Leader Monitoring) for all correspondence to FNDC.	– Advice note added.
NRC	Condition 8 – Should the reference here be to s.123 RMA (duration of consent). Could also include reference to s.116 about when consent commences.	– Corrected.
NRC	Condition 10 – BPO applies only to discharge permits. – Add new ground "*review the allocation of the resource*".	– Agree as per s.128(1)(a)(ii) RMA. Change made to (a) to include "*resulting from the discharge*". – Disagree. There are already separate conditions requiring a Water Supply Management Plan and provision for that plan to be reviewed annually.
NRC	Conditions 15 and 16 – Annual review of bond is too frequent. Suggest setting and then allowing consent holder to apply to reduce providing reasons for request – e.g., post commissioning. Bond should be in place until all offsetting has been completed.	– Agree changes made to set bond, to allow the consent holder to apply for a variation (with reasons) and to require the bond to be in place before the start of construction and to continue until the completion of offsetting measures.
DOC	Condition 16	– Agree as noted above.

Name	Summary of comments	Panel Response
	– Where effects management will continue post commissioning (e.g., ecological offsets) the consent should provide for the continuation or retention of the relevant portion of the bond.	
Forest & Bird	Condition 16 – Require the bond to be in place before the start of construction and to include the period for offset and compensation.	– Agree as noted above.
NRC	Condition 19 – Amend wording to delete reference to word 'designed'.	– Disagree. Design is covered in the NZ SOLD guidelines.
NRC	Condition 20 – NRC doesn't need to get this info as deleted its function under Building Act to Waikato Regional Council (**EW**).	– It is still appropriate for the information to be sent to NRC. It can on-forward to EW.
NRC	Condition 21 – Consent holder should provide comparison of building consent design against documents in condition 1, or specify documents so compliance is clear.	– Agree. Amendment made.
Forest & Bird	Condition 22 – Need to be include fish passage in any design and construction requirements as per 3.26 of the NPSFM. – Also need to provide for long and short fin eels as well as banded kōkopu to ensure habitats are protected (policy 9 NPSFM).	– Amended to cover all fish.
NRC	Condition 22 – DOC should also be consulted. – Could also reference NIWA design documents to meet NPSFM.	– Disagree. This is a technical review by a Competent Engineer rather than a certification process.
NRC	Condition 23 – Query double up with building consent process.	– Important for RMA effects management purposes that this occurs.
NRC	Condition 24 – Dam design reviews should also be forwarded to FNDC.	– Addition made.
Applicant	Condition 25	– While appointment by consent holder would be the default, change made for clarity.

Name	Summary of comments	Panel Response
	– Seek amendments so that Project liaison person is appointed by the consent holder and to add the word "*reasonable*" so that Project liaison person must be available at all reasonable times.	– Do not agree with insertion of "reasonable" as if there is an emergency or significant issue with night works the Project Liaison person needs to be available. – The definition of Project Liaison person makes it clear it can be a person or persons.
FNDC	<u>Condition 29</u> – FNDC representative on CLG will be Team Leader Monitoring (Ken Ward).	– Advice note added referencing job title.
Applicant	<u>Condition 30 advice note</u> – Amend to add text to confirm the consent holder is not responsible for travel costs of CLG attendees.	– Agree – attendance is voluntary, and change provides clarification.
NRC	<u>Condition 30</u> – CLG meeting every 3 months is too often – 6 months would be better.	– Reference to frequency deleted and left to CLG to decide.
FNDC	<u>Condition 31</u> Requirements must be subject to receipt of notification.	– Wording clarified.
Forest & Bird	<u>Condition 31</u> – Reword to require management plans to achieve their objectives and meet the conditions of consent and add a clause setting out a dispute resolution process should council not be able to certify a management plan.	– Changes made to clarify obligations. Reference to dispute resolution process not included as matter for consent holder and council to determine. General legal remedies such as judicial review would continue to apply.
NRC	<u>Condition 31</u> – Delete (b) and second sentence of (c)(ii). Council cannot delegate its compliance responsibility.	– Disagree. Similar conditions were imposed in *Matawii*.
Forest & Bird	<u>Condition 32</u> – Adds uncertainty. If retained an updated plan must be supplied to council to ensure compliance monitoring can be undertaken.	– Condition retained for administrative efficiency reasons but requirement for updated plan included.
Applicant	<u>Condition 37</u> – Delete word "*agreed*" and refer to the CMP setting out recommended cultural monitoring rather than agreed.	– Deleted word "*agreed*".

Name	Summary of comments	Panel Response
Applicant	Condition 38 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Amend (b) to add "*and details of the monitoring measures*" to be consistent with the conditions for other plans	– Deleted. – Agree improves consistency.
Applicant	Condition 41 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity.	– Deleted.
FNDC	Condition 42 – Request use FNDC contact rcmonitoring@fndc.govt.nz and ken.ward@fndc.govt.nz (Team Leader Monitoring).	– Advice note added.
FNDC	Condition 43 – FNDC should also receive a copy of the finalised plans.	– Requirement added.
Applicant	Condition 45 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Delete clauses (k) (copy of agreed cultural monitoring requirements) and (o) (commissioning sequence for the reservoir) as these do not relate to the objective of the CEMP.	– Deleted. – Disagree to deleting (k) and (o) as both are relevant to know at time of construction.
FNDC	Condition 46 – FNDC should also receive a copy of the finalised plans.	– Requirement added.
Applicant	Condition 48 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity	– Deleted.
Applicant	Condition 51 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity.	– Deleted.
Forest & Bird	Condition 52 – Relocation sites need to be determined now not post grant of consent. – Amend so requirement is prior to any vegetation clearance.	– Disagree – management plans provide criteria which enable certification post grant. – Requirements amended so the plan needs to be in place prior to vegetation clearance.
DOC	Condition 52(c)	

Name	Summary of comments	Panel Response
	– Add DOC to list of parties to whom scouting/surveying sent.	– Agree and also added FNDC.
Forest & Bird	Condition 53 – Amend to specify extent or minimum number of sites to be surveyed e.g., at least 50 sites over Project footprint.	– No change. The project footprint is the extent.
NRC	Condition 53 – Scouting and survey data should be sent to FNDC too.	– Agree. Added.
Forest & Bird	Condition 54 – Include requirement to be in accordance with the Wildlife Act.	– Advice note added at the end of the conditions.
DOC	Conditions 54 – Add advice note regarding Wildlife Act requirements.	– As above.
Forest & Bird	Condition 55 – Include a requirement for the LMP to be prepared by a suitably qualified expert and certified by or on the advice of an independent qualified expert. – The conditions should specify the timing for salvage to occur ahead of other activities. Also include a requirement for a wildlife permit.	– The requirement for a suitably qualified expert is already included in the condition set. – Disagree with imposing a requirement for certification by an independent expert. That inappropriately imposes a cost on NRC when they may have that resource available in-house. – Advice note added regarding Wildlife Act requirements at the end of the condition set.
NRC	Condition 55 – NRC more appropriate certifier.	– Change made.
DOC	Condition 57 – Add another clause regarding details of monitoring reporting and response actions when the relevant management plan objectives are not met for consistency with *Matawii* and because not all measures may be effective.	– Amended to reference contingency measures.
Applicant	Condition 57 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity – Delete the reference to Forest & Bird as consultation with DOC is adequate	– Change made. – Agree and Forest & Bird has also requested deletion.

Name	Summary of comments	Panel Response
Forest & Bird	Condition 57 – Amend to remove reference to Forest & Bird and amend (g) to require personnel being qualified to undertake the work.	– Reference to Forest & Bird removed. – Requirement added for qualified personnel.
NRC	Condition 57 – Pest control at relocation site and requirement to report to NRC when work is underway and completed are needed.	– Condition amended to refer to pest control in the LMP.
NRC	Condition 58 – Relocation will require DOC approval. May be better to require that prior to construction.	– Advice note added at the end of the condition set.
DOC	Condition 59 – Amend wording for consistency with the way in which objectives for other management plans are worded i.e., to minimise construction impacts on at risk species.	– Agree. Changes made.
Applicant	Condition 60 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Delete the reference to Forest & Bird in (a) as consultation with DOC is adequate. – Delete the reference to NRC in (a) as NRC is the certifier. – Delete the reference to FNDC in (c) as FNDC is not responsible for managing freshwater ecology.	– Deleted. – Agree and Forest & Bird has also requested deletion. – Deleted. – Deleted.
DOC	Condition 60 – Add another clause regarding details of monitoring reporting and response actions when the relevant management plan objectives are not met for consistency with *Matawii* and because not all measures may be effective.	– Amended to reference contingency measures.
FNDC	Condition 60	– Advice note added.

Name	Summary of comments	Panel Response
	– Request use FNDC contact rcmonitoring@fndc.govt.nz and ken.ward@fndc.govt.nz (Team Leader Monitoring)	
Forest & Bird	Condition 61 – Amend so that certification occurs prior to any vegetation clearance and start of construction.	– Amended to require certification prior to the start of construction.
NRC	Condition 61 – NRC more appropriate certifier.	– Amendment made.
Forest & Bird	Condition 62 – Reword objective to make more focused and to ensure conditions require vegetation clearance and construction to be undertaken in accordance with the management plan.	– Disagree with change to objective. Plan applies to more than just setbacks. – Requirement for compliance with management plan clarified.
Applicant	Condition 63 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Delete the reference to Forest & Bird in (a) as consultation with DOC is adequate. – Delete the reference to FNDC in (a) as FNDC is the certifier. – Delete the reference to NRC in (c).	– Deleted. – Agree and Forest & Bird has also requested deletion. – Deleted. – Deleted.
DOC	Conditions 63 – Add advice note regarding Wildlife Act requirements. – Add another clause regarding details of monitoring, reporting, and response actions when the relevant management plan objectives are not met for consistency with *Matawii* and because not all measures may be effective,	– Advice note added at the end of the conditions. – Amended to reference contingency measures.
Applicant	Condition 64	– Agree. Change made.

Name	Summary of comments	Panel Response
	– Amend (c) so that it also provides for any other good practice method to prevent kiwi entering construction zones.	
Applicant	<u>Condition 66</u> – Replace FNDC with NRC because the EOIP concerns wetlands and streams.	– Agree. Change made.
NRC	<u>Condition 66</u> – NRC more appropriate certifier. – Reference to guidelines for off-setting should be referred to.	– Agree. Change made. – Any relevant guidelines in force can be raised through comments by consultees on plan.
Applicant	<u>Condition 68</u> – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Delete the reference to Forest & Bird in (a) as consultation with DOC is adequate. – Delete the reference to FNDC in (a).	– Deleted. – Agree and Forest & Bird has also requested deletion. – Deleted.
DOC	<u>Condition 68</u> – Add another clause regarding details of monitoring, reporting, and response actions when the relevant management plan objectives are not met for consistency with *Matawii* and because not all measures may be effective.	– Amended to include reference to contingency measures.
Forest & Bird	<u>Condition 68</u> – The EOIP also needs to include measures for mānuka, kānuka and native bush retirement, and revegetation and enhancement of the catchment above the water storage to offset the loss of vegetation. – Conditions need to be amended to provide greater certainty that offsets can be achieved – inclusion of a map would assist with provision to amend to equivalent locations during finalisation of EOIP. – Delete the word 'any' in (f). – (h) demonstrates uncertainty and need for bond.	– Changes made to the condition – noting the draft environmental offset strategy provided included such measures. – Map already provided as part of draft strategy. – Deleted. – Bond imposed.
NRC	<u>Condition 70</u> – NRC more appropriate certifier.	– Change made.

Name	Summary of comments	Panel Response
	– LandMP should not be required prior to commencement of construction as not required until after construction.	– Agree. Change made.
Applicant	<u>Conditions 70 - 72</u> – Condition 70 amend acronym to LandMP – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity. – Delete the reference to FNDC in (a) as FNDC is the certifier.	– Agree minor correction and made to all LandMP conditions. – Deleted. – Change made.
FNDC	<u>Condition 73</u> – Pavement survey should include intersection with Old Bay and Waimate North Road.	– Change made to include both major intersections, Old Bay Road and Te Ahu Ahu Road, and Waimate North Road and Te Ahu Ahu Road.
Applicant	<u>Condition 76</u> – Amend (a) to refer to 693-821 to reflect the new access to the road as shown on drawings 210038-162 and 210038-163 in AEE Appendix C.	– Change made.
C Flude	<u>Condition 76</u> – Object to (a) as it affects his driveway (839A), and he has not been approached for consent.	– Address of site entrance was incorrect. Amended to refer to 693 – 821 Te Ahu Ahu Road.
FNDC	<u>Condition 78</u> – CAR approval required.	– Advice note added at the end of the conditions.
C Flude	<u>Condition 79</u> – Seeks amendment to the condition to detail how this will be monitored to ensure the condition is met. – Seeks clarification of penalties applying for any breach of this condition and that financial penalties should go to families affected not FNDC.	– We consider this concern is already adequately addressed in the conditions we have imposed. The consent holder is required to investigate any complaint, notify the council and to respond to the complainant of the outcome of the complaint. Any issues could also be raised through the CLG forum. – The RMA sets out the consequences of any breach of conditions. The relevant council has a discretion as to which route to take, ranging from warnings, abatement notices, enforcement

Name	Summary of comments	Panel Response
		orders, to prosecution. The Panel does not have the ability to impose a condition requiring the council to take a particular action or to require fines to be paid to any person.
Applicant	Condition 80 – Delete requirement for wheel washing as internal access track will be metalled.	– Disagree. Requirement for metaling only applies to the first 300 m of access tracks. Retained to address dust issues.
C Flude	Condition 87 – Seeks clarification of penalties applying for any breach of this condition and that financial penalties should go to families affected not FNDC.	– See our response to condition 79 above.
Applicant	Condition 88 – Amend by adding words "*where practicable*" after the word "*stabilised*".	– Not accepted. It is important that bare areas are stabilised.
C Flude	Condition 96 – Seeks clarification of penalties applying for any breach of these conditions and that financial penalties should go to families affected not FNDC. – Seeks amendment to prevent work: ▪ between 530pm and 8am due to sleep disturbance concerns associated with having a baby and young child in the home; ▪ on Saturdays, Sundays and public holidays; and ▪ at night on either dam.	– See our response to condition 79 above. – The FNDP permits activities to occur during these times provided there is compliance with the relevant noise standards. The Noise Assessment sets out how compliance will be achieved, and conditions have been put in place to enable FNDC to require monitoring in response to a complaint. – To further mitigate the effects of the main dam we have limited works during weekdays in the evening shoulder period (1800-2000) to restricted main works only.
C Flude	Condition 97 – Seek clarification of how construction noise levels will be monitored, who will monitor and pay for monitoring, and seeks reduction of level to 60dBA.	– No change. The conditions already require the consent holder to be responsible for any monitoring, require compliance with the relevant noise standard (which sets out the process for and location of monitoring) and require

Name	Summary of comments	Panel Response
		monitoring at the commencement of the night works, and if requested by FNDC in response to any complaint.
C Flude	Condition 99 – Queries how it is practical for a noisy worksite to effectively monitor noise with respect to neighbouring properties that they have no right to access and seeks automated noise monitors 1 m from each neighbours' house.	– No change. Refer to our response to conditions 96-97 above. Further, the Panel understands that access to private properties for noise monitoring is generally not required.
Heritage NZ	Condition 103 – Request an advice note be added that the Applicant needs to apply to Heritage NZ for an archaeological authority before work starts.	– Advice note added.
Forest & Bird	Condition 104 – Add another clause that vegetation clearance cannot occur until the requirements for fauna surveys, and salvage and relocation strips have been met.	– Amendments to other conditions addresses this concern.
FNDC	Condition 107 – Pavement survey should include intersection with Old Bay and Waimate North Road.	– Amendment to condition 73 addresses this.
C Flude	Condition 107 – Seek amendment to place a time limit on actioning the repair and that any damage to vehicles as a result of roading damage be met by the Applicant.	– The conditions already include a requirement for repairing damage caused to the road. Any claim for damage to a private vehicle is a private matter and goes beyond the types of effects the Panel is able to impose conditions in relation to.
Applicant	Condition 109 – CCC normally obtained after a reservoir is commissioned. So (b) may be difficult to achieve.	– Requirement deleted.
Applicant	Condition 118 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity	– Deleted.
Applicant	Condition 121 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity.	– Deleted.

Name	Summary of comments	Panel Response
NRC	Condition 121 – The ORMP should give effect to condition 22 (fish passage).	– Agree. Amended to clarify.
Applicant	Condition 122 – Remove the words "*must not be limited to*" from the start of this condition to remove ambiguity.	– Amended.
Applicant	Condition 126 – Amend so that an assessment of the flow must be made using either a catchment flow model or a flow measuring device installed at or about the location of the take.	– Agree and made minor change to wording.
NRC	Condition 126 – Delete this condition and tie flow to a council telemetered recorded site. Reliance on model is not adequate for compliance purposes.	– No change. No information provided about an appropriate telemetered site. Change made to condition 126 enables a flow measuring device or a model.
Applicant	Condition 129 – Delete (a)(i) because it is redundant and is already covered by (a)(ii) and (a)(iii).	– Agree. Deleted.
Applicant	Condition 131 – Amend to replace the words "*water level*" with "*water flow*" as the requirements relate to a flow measuring device not level measurement.	– Agree. Change made.
DOC	Condition 135 – Amend the diameter of the holes/slots of the screen to 3mm given the presence of eels and galaxiids to align with NZ guidelines.	– Agree. Change made.
Applicant	Condition 139 – Delete (e) (ammonia) as it is not relevant.	– Deleted.
NRC	Condition 139 – Suggest escherichia coli be added to the parameters for monitoring.	– Disagree. Consider the existing parameters are sufficient, particularly given the purpose of the reservoir (water supply as opposed to recreation).
Applicant	Conditions 140 and 141 – Delete clause (d), the water quality standards table and condition 141 in its entirety as there is no planning basis for imposing water quality	– Agree for the reasons stated by the Applicant. Deletion made.

Name	Summary of comments	Panel Response
	standards. The PRP only includes such standards in relation to discharge permits. The quality of the water in the reservoir will largely be beyond the control of the consent holder – it will be a function of run-off and leaching of nutrients, fine sediments and microorganisms from the surrounding catchment, which is not owned by the consent holder, and from the Waitangi and Waiaruheiti stream which drain neighbouring catchments. – The standards in the table are also based on standards in the PRP for natural lakes and only apply to discharges of contaminants into water. The standards relating to phytoplankton appear to be incorrect due to a transcription error between versions of the PRP which NRC has acknowledged. – Further the flushing flows management plan purpose is to address nuisance periphyton or significant changes to stream substrates.	
Applicant	<u>Condition 143</u> – Delete references to: ▪ nitrate (toxicity) (and (b) ammonia (toxicity); ▪ (f) temperature change and (h) visual clarity change as these are only relevant to measuring point source discharges; ▪ (g) toxicants, metals and metalloids as the reservoir is in a rural catchment with no industrial activities. – The purpose of the monitoring is to assist with understanding the drivers of any potential future effects on downstream habitat as a consequence of changes to the flow regime i.e., impacts on physical habitat and dissolved oxygen levels. Understanding DIN and DRP concentrations may assist with determining the causes of any future nuisance periphyton biomass. This is consistent with the recommendation in the ecological report.	– Accept, for the reasons given by the Applicant.
Applicant	<u>Conditions 144 and 145</u> – Delete clause (e), the table containing the standards and condition 145 in its entirety for the reasons given in response to conditions 140-143.	– Agree. Changes made.
NRC	<u>Condition 146</u> – The flushing flows management plan should be reviewed by a suitably qualified ecologist prior to certification.	– Disagree. The plan is already required to be prepared by a suitably qualified expert.

Name	Summary of comments	Panel Response
Applicant	Condition 148 – Replace thew words "s*tream substrate*" with "*fine sediment cover*".	– Agree.
Applicant	Condition 150 – Delete the words "*as a minimum*" as the contents of the plans should be clear, and these words create ambiguity.	– Deleted.
Forest & Bird	Condition 151 – Separating take from use is problematic given Te Mana o Te Wai. Add a new clause to require the impacts and effects of use to be monitored.	– Disagree. Effects of end use of water will be subject to separate consent processes. Monitoring and measuring conditions imposed for water taken/discharged from the reservoir.
Forest & Bird	Condition 153 – Include a requirement for recording and providing information on any water loss to the council.	– Disagree. Condition already requires minimisation of water loss. Reporting may be difficult and expensive to measure, and there are already measuring requirements for the take.
FNDC	Condition 155 – Query who is to maintain this pipe. Not FNDC.	– Amended to clarify pipe maintenance is consent holder responsibility.
Applicant	Condition 157 – Amend (a) so that is specific about what monitoring is to be the subject of the report.	– Agree – clarifying amendments made.
Applicant	Appendix B – Replace with most recent drawing 210038-161 in Appendix C to the AEE.	– Agree – minor update.
Applicant	Appendix C – Replace with most recent drawing 210038-162 in Appendix C to the AEE.	– Disagree for the reasons given earlier in the decision.

APPENDIX 5: SUMMARY OF CIA RECOMMENDATIONS AND PANEL RESPONSE

Topic	Taiāmai recommendation	Panel Response
Te Mana o Te Wai	– Te Mana o Te Wai to be implemented.	– We are satisfied the Project appropriately implements the requirements of Te Mana o Te Wai for the reasons set out in **Part 7** of this decision.
Operational Reservoir Management Plan (**ORMP**)	– ORMP to be required and certified by NRC and Taiāmai prior to operation. – ORMP to include details of reservoir, as-built drawing, parties' roles and responsibilities, inspection forms, design levels, flows, triggers and monitoring requirements, data management and ownership information, maintenance and reporting information and an emergency action and response plan.	– We are not able to provide a certification role for Taiāmai in the absence of it having been formally delegated such functions by the relevant council. We have however, provided for Taiāmai to be consulted when the ORMP is being prepared. – The conditions include provision for all of these matters - noting that the operational emergency action plan has been included as a separate condition.
Construction Management Plan (**CMP**)	– CMP to be prepared by suitably qualified person and approved by NRC and Taiāmai prior to construction.	– We have imposed a condition requiring the CEMP to be prepared and certified by NRC prior to construction. We are not able to delegate an approval or certification role for Taiāmai. We have however provided for Taiāmai to be consulted when the CEMP is being prepared.
ESCMP	– ESCMP to be prepared (in accordance with other management plan processes) and provide for monitoring by Taiāmai. – ESCP to contain details of stream diversion works, measures to prevent, contain and clean up any contaminant spills, measures to manage effects sediment/dust on neighbouring properties.	– The ESCMP conditions we have imposed require certification by NRC prior to construction starting, consultation with Taiāmai and cover all of the technical matters raised by Taiāmai. In terms of monitoring this is provided for under the cultural monitoring plan condition we have included.
Fauna plans	– FFSRP and other fauna plans for avifauna, bats and lizards to be prepared by a suitably qualified person, include nationally recognised and accepted methods, be certified by FNDC and apply to all parts of the site that will be developed.	– We have imposed conditions which include these requirements.
Offset and compensation plan (EOIP)	– Requirement for offsetting agreement with Taiāmai which covers 11 ha of wetland and 16 kms and 40 m wide riparian planting.	– We do not have the power to require the Applicant to enter into an offsetting agreement with Taiāmai. We have however required Taiāmai be consulted in

Topic	Taiāmai recommendation	Panel Response
	– EOIP to be prepared by a suitably qualified person and certified by NRC prior to construction. EOIP to contain planting proposals for streams, measures to complement natural vegetation, terrestrial offset and compensation package identifying restoration sites and pest plant/animal measures, and requirements for monitoring and reporting.	the preparation of the EOIP and for a cultural monitoring plan to be prepared. – We have imposed conditions which address the other matters raised.
Works completion report	– Works completion report to be prepared within 3 months of completion of earthworks and submitted to NRC, FNDC and Taiāmai for certification. WCR to contain details of works undertaken and records of any unexpected contamination encountered.	– We have not imposed a requirement for a works completion report but there are reporting requirements for each stage and a condition which sets out procedures to be followed in the event of contamination being encountered.
Review condition	– Impose a condition allowing Taiāmai to review the conditions of consent to deal with adverse effects arising or to require the adoption of the best practicable option to remove or reduce effects.	– The RMA restricts the right of review to a council. We have included a review condition which includes these triggers.
Hydrology	1. Hapū review of final hydrology and hydraulics assessment. 2. Ecological assessment of the effect of a dam failure on the natural environment. 3. Consent to require reinstatement of the habitat lost by dam failure. 4. Require insurance to cover downstream losses in event dam breach. 5. Peer review of the preliminary hydrology assessment. 6. Adherence to SOLD Guidelines and include consideration of climate change in the hydrology assessment. 7. A minimum water level should be defined by the ecologists to prevent nuisance growths and protect fish within the reservoir.	1. We have included provision for Taiāmai to be consulted on the ORMP. 2. In the event of a dam failure there will be significant effects on the river channel for some distance downstream. However, we do not consider a detailed ecological evaluation is necessary given the risk is very small, and any such assessment would be highly fact dependent and therefore speculative. 3. We have included a requirement to reinstate planting/habitat lost in the event of a failure. 4. Insurance cover has been required. 5. The AEE as submitted included a peer review of hydrology (Appendix Y) and the conditions we have imposed require for a peer review of the dam design. 6. The conditions require compliance with the SOLD guidelines. 7. Pest management measures are required to be included in the LMP.

Topic	Taiāmai recommendation	Panel Response
	8. Reservoir buffer zone of 30 m minimum width to maintain water quality from sediment and nutrient runoff. 9. Use of locally sourced riprap and grass in spillway design. 10. Ecologist to advise on connecting spillway to receiving waters to minimise damage to habitat. 11. The FFSRP should be implemented prior to diversion of watercourses. 12. Requiring an ESCMP. 13. Adhere to PRP regarding intake screens and ensure intake velocities are < 0.12m/s. 14. Hapū to be involved in the design and approval of the proposed fish passage mechanism and methodology.	8. The extent of planting around the edge of the reservoir will be detailed in the LMP. 9. These matters can be addressed in the LMP. 10. This can be addressed through the relevant ecological plan. 11. The FFSRP addresses these matters. 12. An ESCMP is required. 13. Intake screen conditions have been included which are consistent with ecological recommendations and good practice. 14. We have included a requirement for consultation with Taiāmai in the preparation of relevant plans as well as a cultural monitoring condition.
Geotechnical	1. Hapū wish to be involved in all future site investigations. 2. Bore test full results be shared with hapū. 3. Hapū to be involved in and final sign-off on the fish passage design. 4. Hapū wish to be present when the archaeological site (P05/270) is destroyed and in the Site scrape, clearing of vegetation and breaking of new ground. Wetlands were used as implement storage areas in the past.	1. We have included a cultural monitoring condition, as well as conditions enabling participation in ecological surveys and monitoring. 2. We have not included this as a requirement. However, this information could be requested through the CLG. 3. We have included a requirement for consultation on fish passage. 4. We have included a cultural monitoring condition as well as amended the accidental discovery condition to provide for tikanga.
Landscape and visual	1. Dam structures and spillway swales to be planted in low native species like grasses. 2. Riprap to be sourced from local rock to blend and planted where possible to break up the effect. 3. Native revegetation of slopes and gullies, links with existing vegetation, creation wetlands and revegetation in upper reaches including use of rocks. 4. Sympathetic contouring and immediate restoration vegetative cover to borrow sites.	1. This request can be considered by the Applicant in the LMP process which Taiāmai will be consulted about. 2. As for (1) above. 3. As for (1) above. 4. As for (1) above and we have included a condition requiring bare areas of land beyond the reservoir

Topic	Taiāmai recommendation	Panel Response
		footprint to be stabilised following the completion of earthworks.
	5. 30 m riparian margin.	5. As for (1) above.
	6. Pest management programme for plants and animals with hapū input.	6. As for (1) above.
	7. Consideration of effects of land use change enabled by water and mitigation measures to address these effects.	7. Any such land use effects are beyond the scope of what we are able to consider. Any future land use changes will however still need to comply with the relevant FNDP standards or seek resource consent.
	8. Landscape and visual mitigation plan be required with input from neighbouring properties and hapū.	8. Requirement included.
	9. Enable access to the site for hapū to practice mahinga kai by harvesting of tuna, and replating local plants for cultural harvesting purposes.	9. We have included a condition requiring a cultural monitoring plan. The request for access for mahinga kai, planting or other purposes are matters for the Applicant and could be raised by Taiāmai through the relevant management plan processes.
	10. Enable access to the site for recreation, swimming, cycling, and walks.	10. As for (1) above.
Ecological	1. Endorse recommendations of Puhoi Stour and seek involvement in preparation management plans and actions.	1. Requirement for consultation with Taiāmai on management plans included.
	2. Require plans for erosion and sediment control, freshwater fauna salvage and relocation, bats, avifauna, lizards, invertebrates, eel migration (including fish passage), an offset plan (which includes off-set sites near to reservoir protected in perpetuity).	2. The conditions include requirements for ecological plans, fish passage, and offsets. We have not required an invertebrates plan as it was not identified as being necessary by the ecological assessment.
Charitable purposes	– The Applicant agree to support a charitable purposes partnership with Taiāmai to improve water quality within the Waitangi catchment and address disparities of Māori freehold land access to water. This includes supporting Ko Waitangi Te Awa Trust Projects, hapū vision for Te Mana o Te Wai, and the Ministry of Environmental framework for stormwater.	– We are not able to impose conditions which require the Applicant to take steps unrelated to the exercise of this consent and go beyond addressing environmental effects.
Designated gift and specific purposes	– Hapū agree to permit usage over its historical site on terms to be agreed with Taiāmai. If agreement is not reached Taiāmai will remove support for the reservoir due to the historical land status.	– As for charitable purposes above.

MARSHALL DAY Acoustics

OTAWERE WATER STORAGE RESERVOIR ASSESSMENT OF NOISE COMPLIANCE

Rp 001 20210594 | 3 August 2021

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Report No.: **Rp 001 20210594**

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TABLE OF CONTENTS

1.0 INTRODUCTION

Marshall Day Acoustics (MDA) has been engaged by Te Tai Tokerau Water Trust to assess construction noise emissions for the Otawere Water Storage Reservoir construction at *Lot 2 DP 208031* located off Te Ahu Ahu Road, Waimate, in the Far North District. The reservoir will be a key component of the Mid-North Water Scheme, which will comprise four distributed water storage reservoirs and associated distribution pipe networks.

This assessment report is intended to aid the resource consent application under the COVID-19 Recovery (Fast-track Consenting) Act 2020. It identifies the construction performance standards for the project and determines the acoustic effects of the earthworks and construction activities on nearby sensitive receivers. In particular, it addresses the possibility of undertaking night and Sunday works within the lower NZS6803:1999 construction noise limits. It also provides recommendations for engagement and monitoring.

A glossary of terminology is included in Appendix A.

2.0 PROJECT DESCRIPTION

2.1 Site and Surrounds

The project is the Otawere Water Storage Reservoir construction at *Lot 2 DP 208031* in Waimate (Figure 1 overleaf). The applicant intends to construct a water storage reservoir though the construction of a dam. The reservoir site plans including construction plans have been included in Appendix B.

The application site is situated on land zoned *Rural Production* in the Far North District Plan – Operative Version (District Plan), as are all surrounding sites. All nearest receivers are residential dwellings.

The site and surrounds are rural in character with most surrounding land being used for productive farming. Small lifestyle properties are located sporadically along Waimate North Road and Te Ahu Ahu Road transport corridors.

2.2 Construction Methodology

The dam will require two dam structures. The proposal is for a Main Dam (south-eastern dam), and Saddle Dam (northern dam) near the primary spillway. Both dams will be approximately 300m long.

The works involve conventional earthworks including hauling material from a borrow area, placing and compacting fill and disposal of unwanted material. Potential borrow and disposal areas are located near and between both dams.

We have assumed similar construction methodology to the Redhill Water Storage Reservoir[1]. We have reviewed a plant list for the project based on our observation of the Redhill Stage 1 works. Based on this, we have determined a list of plant that we expect to be used on site in each area of works and determined sound power levels suitable for noise modelling. This is set out in Table 1.

[1] MDA also assisted Te Tai Tokerau Water Trust in preparing an assessment of noise compliance for the Redhill Water Storage Project, which is also part of the Mid North Water Scheme.

Figure 1: Project location and nearby sensitive receivers

Table 1: Plant List for Noise Modelling

Area of Work	Total Sound Power Level (dB L_{wA})	Plant Item	Example	Notes
Base Excavation	116*	20 - 45 tonne hydraulic excavator	Komatsu PC 450 LC	*Base excavation refers to the digging of peat and sand from the base of the dam bowl as well as loadout of material to haul trucks*
		Swamp dozer	Komatsu D61 or D85	
		Groundwater pump (diesel generator)		
Dam Works	113*	Roller / spreader	CAT 825G	*Dam works refer to the compaction and dumping of soil at the dam face*
		Water truck	Off road type	
		Concrete truck and pump (26 tonne capacity)		
Haul trucks	113	40 tonne articulated type (3 to 5 trucks operating)	CAT 740 CAT D350	*Haul trucks hauling material between excavation, dam and spoil areas*
Spoil Works	112*	45 tonne hydraulic excavator (and dumping of material from trucks)	Komatsu PC450	*Deposit and moving of spoil works*
Ancillary Plant	111 – 114	Bulldozer	Komatsu D61 or D85	*Ancillary plant may be used on site occasionally, typically in place of other plant (e.g. motor scrapers instead of multiple trucks).*
	114 – 117	Motorscraper	Terex TS14	
	<105	4 x 4 fuel truck	Mercedes type	

* Items marked with asterisk represent group sound power levels, unasterisked items represent individual item sound power levels. Sound power levels based on noted operation time on site including wait times between loads / movements.

3.0 PERFORMANCE STANDARDS

A resource consent application for construction of the dam is to be submitted under the COVID-19 Recovery (Fast-track Consenting) Act 2020. The purpose of this report is to determine whether noise from the activities can comply with the relevant construction noise limits.

3.1 Far North District Council Noise Rules

The site is located in the *Rural Production* zone of the Far North District and a review of the relevant permitted standards is given below.

The Far North District Plan states that construction noise should meet the limits recommended in and be measured and assessed in accordance with NZS 6803P:1984 *'The Measurement and Assessment of Noise from Construction, Maintenance and Demolition Work'*. This is a provisional release of the standard which has since been superseded by the current NZS6803:1999 version. We typically recommend to FNDC that the criteria of the 1999 version be substituted and applied to construction projects.

In most cases, compliance with the NZS6803:1999 standard will typically result in compliance with NZS6803:1984P as the criteria are very similar. It is considered that compliance with the 1999 version of the standard should be considered to represent compliance with the FNDC permitted standard for *Rural Production* construction noise.

3.2 Noise Performance Standards

The relevant construction noise limits from NZS 6803:1999 are summarised in Table 2. The noise limits apply at 1m from external façades of occupied buildings. Construction is expected to be undertaken over two summer earthworks seasons (2021/2022 and 2022/2023), so the long-term duration noise limits apply.

Table 2: Construction noise levels for activities sensitive to noise[2] (e.g. occupied dwellings)

Time of week	Time period	Long-term duration[3]	
		dB L_{Aeq}	dB L_{AFmax}
Weekdays	0630 – 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 – 0630	45	75
Saturdays	0730 – 1800	70	85
	1800 – 0630	45	75
Sundays and public holidays	0730 – 1800	55	85
	1800 – 0630	45	75

Noise levels of up to 45 dB L_{Aeq} in a rural environment may be audible. However, this level is typically considered acceptable for construction projects. The standard notes that *"as noise from construction projects is generally of a limited duration, people and communities will usually tolerate a higher noise levels provided it is no louder than necessary…"*.

The purpose of this report is to determine whether noise from the activity can comply with the NZS6803:1999 noise limits (including those outside the hours of Monday – Saturday 6.30am – 8pm, and Sunday 7.00am – 5.00pm). This report considers whether night-time operation can comply with the most restrictive NZS6803:1999 guideline of 45 dB L_{Aeq}.

[2] Activities sensitive to noise are defined as '*Any dwelling, visitor accommodations, boarding house, marae, Papakainga, integrated residential development, retirement village, supported residential care, care centres, lecture theatres in tertiary education facilities, classrooms in education facilities and healthcare facilities with an overnight stay facility*'.

[3] Construction work at any one location with a duration exceeding 20 weeks

4.0 NOISE COMPLIANCE ASSESSMENT

4.1 Scenarios and Assumptions

We have calculated noise from the site that will be emitted during dam construction. As activity will move around the site, noise emissions will likely vary from month to month. We have calculated noise from the following representative "highest" noise emission scenarios:

Table 3: Noise modelling scenarios

Scenario	Construction Plan	Details
MAIN DAM	Appendix B3	Located to the south-west of the site, earthworks, foundation preparation, and main dam construction. Utilising potential borrow areas 1, 2, 3 and 5, and potential disposal area 3.
SADDLE DAM	Appendix B4	Located to the north of the site, earthworks, foundation preparation, and main dam construction. Utilising potential borrow areas 1, 3, 4 and 6, and potential disposal areas 1 and 2.
FULL RESERVOIR	Appendix B2	Construction activities in both dam areas simultaneously

Site access is assumed to be from the south-west of the site on the unsealed road between the properties 839A and 841 Te Ahu Ahu Road. We have assumed an average vehicle speed of 20 km/h, in relation to the proposed 30 km/h speed limit as proposed in the *Draft CEMP*[4] prepared by Riley Consultants.

We have assumed 90% acoustically soft ground in our calculations.

4.2 Calculation Methodology

NZS6803:1999 provides a methodology for predicting construction noise levels at distance. The method tends to be more conservative at large distances than using more detailed methods such as *ISO 9613-2:1996 "Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation".* ISO9613-2 is intended to calculate noise levels during typical worst case meteorological conditions (i.e. conditions that enhance sound propagation from source to receiver) and calculations made using the algorithm are considered to be most accurate. ISO9613-2 has been used for the analysis to determine if activity will comply with the NZS6803:1999 noise rules.

Our calculations for this site have used line source / moving point source calculations for haul trucks, an area source for base excavation and point sources for spoil and dam construction works.

[4] *Draft Construction Environmental Management Plan – Otawere Water Storage Reservoir, Northland (Interim)* dated 15 July 2021

4.3 Assessment Results and Discussion

As discussed above, we have modelled the construction activities using the ISO 9613-2:1996 predictive algorithm. A summary of the predicted noise levels for the nearby sensitive receivers is provided in Table 4.

Table 4: List of nearest receivers and predicted noise levels (includes façade correction)

Address	Scenario 1: MAIN DAM		Scenario 2: SADDLE DAM		Scenario 3: FULL RESERVOIR	
	Predicted noise levels (dB L_{Aeq})		Predicted noise levels (dB L_{Aeq})		Predicted noise levels (dB L_{Aeq})	
	Full operation	Restricted operation[5]	Full operation	Restricted operation[5]	Full operation	Restricted operation[5]
133 Okokako Road	43	41	43	40	45	44
157 Okokako Road	41	40	42	39	44	42
160 Okokako Road	44	43	45	42	47	45
174 Okokako Road	45	43	46	42	47	46
195 Okokako Road	34	32	37	34	38	36
200 Okokako Road	44	43	47	43	48	46
211 Okokako Road	44	43	46	43	48	46
216 Okokako Road	44	43	49	45	50	47
221 Okokako Road	39	38	41	38	42	41
223 Okokako Road	39	38	45	41	45	43
230 Okokako Road	42	41	48	44	48	46
264 Okokako Road	44	43	51	46	51	48
274 Okokako Road	42	41	47	44	48	45

[5] Refer to Table 6: Recommended restrictions on construction activities to enable compliance outside of the daytime periodTable 6 in *Section 4.4: Results Summary* in conjunction with the discussion below for the definition of the recommended restrictions.

Address	Scenario 1: MAIN DAM		Scenario 2: SADDLE DAM		Scenario 3: FULL RESERVOIR	
	Predicted noise levels (dB L_{Aeq})		Predicted noise levels (dB L_{Aeq})		Predicted noise levels (dB L_{Aeq})	
	Full operation	Restricted operation[5]	Full operation	Restricted operation[5]	Full operation	Restricted operation[5]
220 Okokako Road	44	43	49	46	50	48
407 Te Ahu Ahu Road	42	39	38	36	43	40
667 Te Ahu Ahu Road	44	42	41	38	45	43
672 Te Ahu Ahu Road	43	41	40	38	44	43
693 Te Ahu Ahu Road	45	44	42	39	46	45
766 Te Ahu Ahu Road	48	46	44	40	49	47
768B Te Ahu Ahu Road	47	43	41	39	48	44
768C Te Ahu Ahu Road	46	43	41	38	47	44
821 Te Ahu Ahu Road	62	53	48	45	62	53
839 Te Ahu Ahu Road [a]	62	60	49	44	62	60
839A Te Ahu Ahu Road	60	53	48	44	60	53
840 Te Ahu Ahu Road	50	45	43	40	50	46
841 Te Ahu Ahu Road	55	50	46	43	56	50
842 Te Ahu Ahu Road	49	45	42	40	50	46

Notes:

Blue indicates predicted compliance with the noise limits at all times
Green indicates predicted compliance with daytime and Sunday noise limits, but not night-time noise limits
Yellow indicates predicted compliance with daytime limits ONLY

[a] Dwelling is located on site grounds

We calculate full compliance with the **daytime noise limit** of 70 dB L_{Aeq}, as well as the **weekday evening shoulder period limit** of 65 dB L_{Aeq}, with appropriate construction noise management techniques.

Main Dam

We calculate exceedance of the **Sunday and public holidays and morning shoulder limit** of 55 dB L_{Aeq} at three dwellings if construction activities are occurring at or near the Main Dam[6]. To enable compliance with the 55 dB L_{Aeq} limit, we recommend that:

- construction plant and truck movements be restricted to the north of the dam (e.g. borrow areas 1, 2, 3, 4 and 6, and disposal areas 1 and 2).
- if construction works on the Main Dam utilising borrow area 5 and disposal area 3 are required on Sundays, we recommend that written approval be obtained from the occupants of 821 and 839A Te Ahu Ahu Road prior to the commencement of works.

Construction activities at or near the Main Dam is not recommended during the **night-time period**. We calculate that any operation of proposed plant at the Main Dam is likely to exceed the 45 dB L_{Aeq} limit if any significant plant is used.

Saddle Dam

Noise from construction at or near the Saddle Dam is calculated to comply with the **Sunday and public holidays and morning shoulder limit** 55 dB L_{Aeq} limit at all residential dwellings.

We calculate an exceedance of the **night-time noise limit** of 45 dB L_{Aeq} at twelve dwellings if construction activities are occurring at or near the Saddle Dam. To enable compliance, we recommend the following at night:

- construction plant and truck movements at or near the Saddle Dam to be restricted to the east and south of the dam (e.g., borrow areas 1 and 4, and disposal area 1) and away from the Main Dam
- noise monitoring should be conducted at the commencement of night works to confirm compliance with the noise levels

Noise levels would readily comply with the L_{AFmax} maximum noise level for all times for the proposed activities with appropriate construction noise management techniques.

Refer to Appendix C for noise contours from the model.

[6] We note that the highest risk of noise exceedance is at 839 Te Ahu Ahu Road which is located on the project site and will not be used for residential purposes during the construction period.

4.4 Results Summary

The results in Table 4 show that compliance with the NZS6803:1999 construction noise limits can be complied with at all dwellings during the daytime and weekday evening shoulder period. Compliance with the limits outside of the daytime period may be enabled by restricting construction activities to certain areas, and adopting appropriate noise management techniques. We recommend restricting night works to the Saddle Dam only (if required).

We have identified and recommended restrictions on construction activities for each dam to enable compliance with the noise limits for each construction period in Table 5. The proposed restrictions for each dam are summarised in Table 6.

Table 5: Timeline of work allowance and restrictions for each dam

Dam	Day of the Week	Time period			
		0630 – 0730 Morning shoulder	0730 – 1800 Daytime	1800 – 2000 Evening Shoulder	2000 – 0630 Night-time
Main Dam	Weekdays	Restricted Main works	Normal construction		No works
	Saturdays	No works	Normal construction	No works	
	Sundays and public holidays	No works	Restricted Main works	No works	
Saddle Dam	Weekdays	Normal construction			Restricted Saddle works
	Saturdays	Restricted Saddle works	Normal construction	Restricted Saddle works	
	Sundays and public holidays	Restricted Saddle works	Normal construction	Restricted Saddle works	

Table 6: Recommended restrictions on construction activities to enable compliance outside of the daytime period

Dam	Relevant noise limit	Allowed areas of work	Restricted areas of work
Main Dam	55 dB L_{Aeq} Sundays and public holidays, morning shoulder	Plant and truck movements to the North-west only, utilising: • borrow areas 1, 2, 3, 4 and 6 • disposal areas 1 and 2	No works on/to: • borrow area 5 • disposal area 3 for "Restricted Main Works"
Saddle Dam	45 dB L_{Aeq} Night-time	Plant and truck movements to the South-east only, utilising: • borrow areas 1 and 4 • and disposal area 1	No works on/to: • borrow areas 2, 3, 5 and 6 • disposal areas 2 and 3 for "Restricted Saddle Works"

Note that:

- sunday and public holiday daytime; and
- weekday morning shoulder periods

are the only time periods that allows construction works on both dams simultaneously (outside of the weekday daytime limits). The recommended restrictions will reduce cumulative noise levels from simultaneous works on both dams.

The existing environment is rural in nature and is likely to have night-time ambient levels of around 30-40 dB L_{Aeq}. This means that construction noise which is compliant with the night-time limits may be audible at the dwellings. However, the levels are likely to be generally acceptable and the impact on sleep will likely be limited.

4.5 Noise Management Recommendations

Although not required to achieve compliance, general noise management measures follow:

- Avoid tonal reversing or warning alarms (suitable alternatives may include flashing lights, broadband audible alarms or reversing cameras inside vehicles)
- Undertake noise monitoring at the beginning of night works to confirm compliance
- Undertake noise monitoring in response to any reasonable complaint

4.6 Vibration

We conducted on-site observations during noise measurements at Redhill Water Storage Reservoir for similar construction activities. Based on this, we do not consider there is any risk of vibration amenity or structural issues arising as a result of these work at any of the dwellings, as these are at considerable distance from the proposed works.

5.0 PROPOSED CONDITIONS OF CONSENT

Our assessment shows that NZS 6803:1999 can be complied with. The resource consent conditions could allow for works outside the daytime period.

Based on the results of our assessment we recommend that the consent conditions are as follows[7]:

46. *All earthworks' activities on the subject site shall be carried out to comply with New Zealand Standard NZS 6803:1999 "Acoustics – Construction Noise" at all times, except in relation to the properties/persons identified as having provided written approval in XXXX*

47. *Upon receipt of complaint of an adverse noise emission under Condition XXXX of this consent, the Consent Holder shall arrange for measurement of construction noise to take place as soon as practicable and within ten (10) working days. Measurement and reporting shall be undertaken in accordance with the requirements of New Zealand Standard NZS 6803:1999 "Acoustics – Construction Noise" by a suitably qualified and experienced specialist (e.g. Member of the Acoustical Society of New Zealand);*

48. *If construction noise does not comply with the limits in NZS 6803:1999, the report shall provide recommendations to mitigate and manage the adverse effects and the Consent Holder shall implement all recommendations.*

49. *Within five (5) working days of the report required under Condition 4 of this consent being completed, results and remedial actions taken shall be submitted to the Council's Team Leader, Monitoring and Compliance.*

6.0 CONCLUSIONS

Marshall Day Acoustics (MDA) assessed construction noise emissions for the Otawere Water Storage Reservoir construction at *Lot 2 DP 208031* located off Te Ahu Ahu Road, Waimate, in the Far North District.

Noise modelling shows that construction works can comply with the *New Zealand Standard NZS 6803: 1999 "Acoustics – Construction Noise"* guidelines at all surrounding dwellings, with appropriate restrictions and construction noise management techniques. Construction operation may occur outside the weekday daytime period while complying with the NZS6803:1999 District Plan noise limits.

A set of recommended restrictions have been provided to enable compliance with the various noise limits. A list of recommended conditions of consent have been provided.

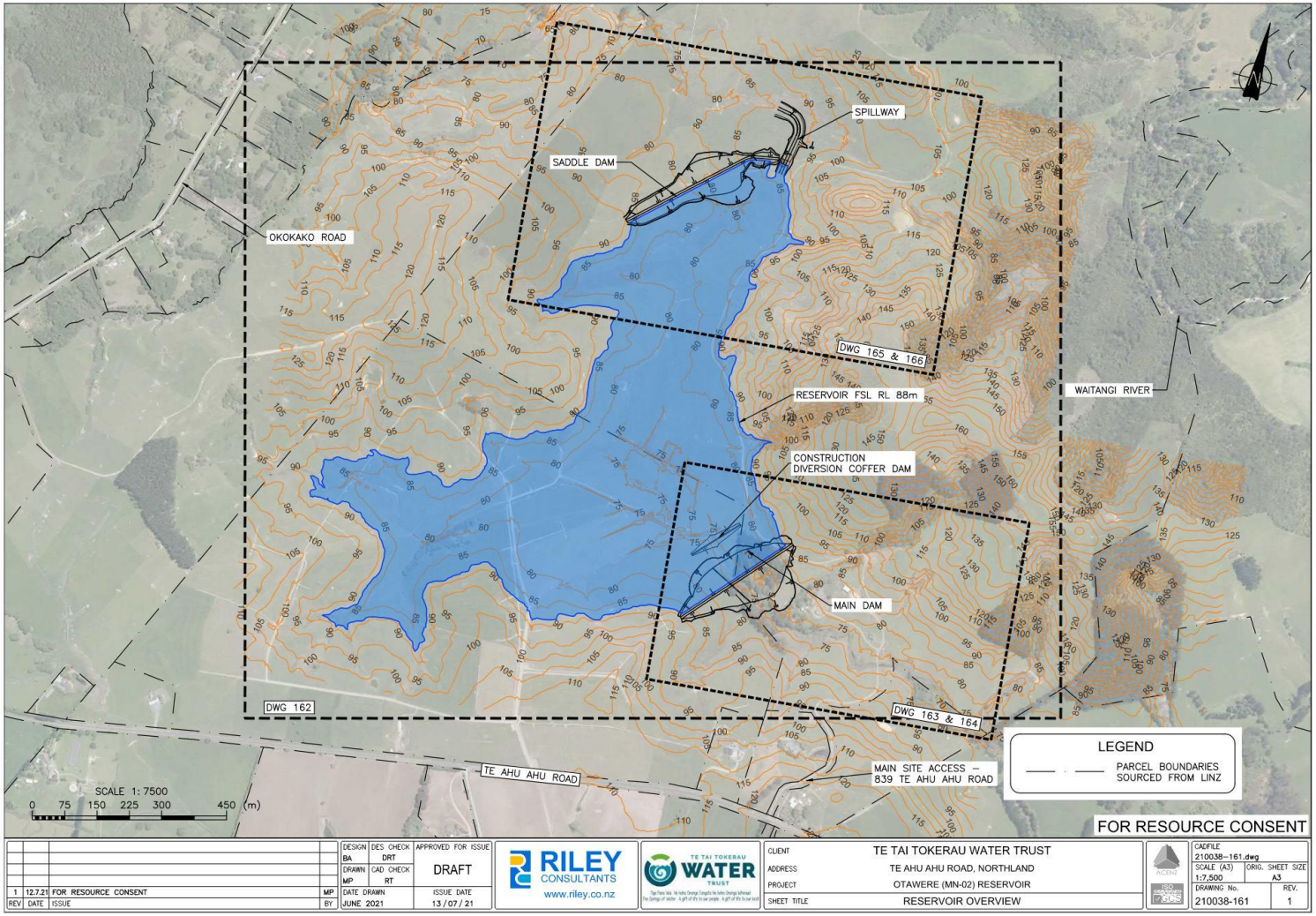
[7] These proposed conditions of consent have come from previous consents for similar projects.

APPENDIX A GLOSSARY OF TERMINOLOGY

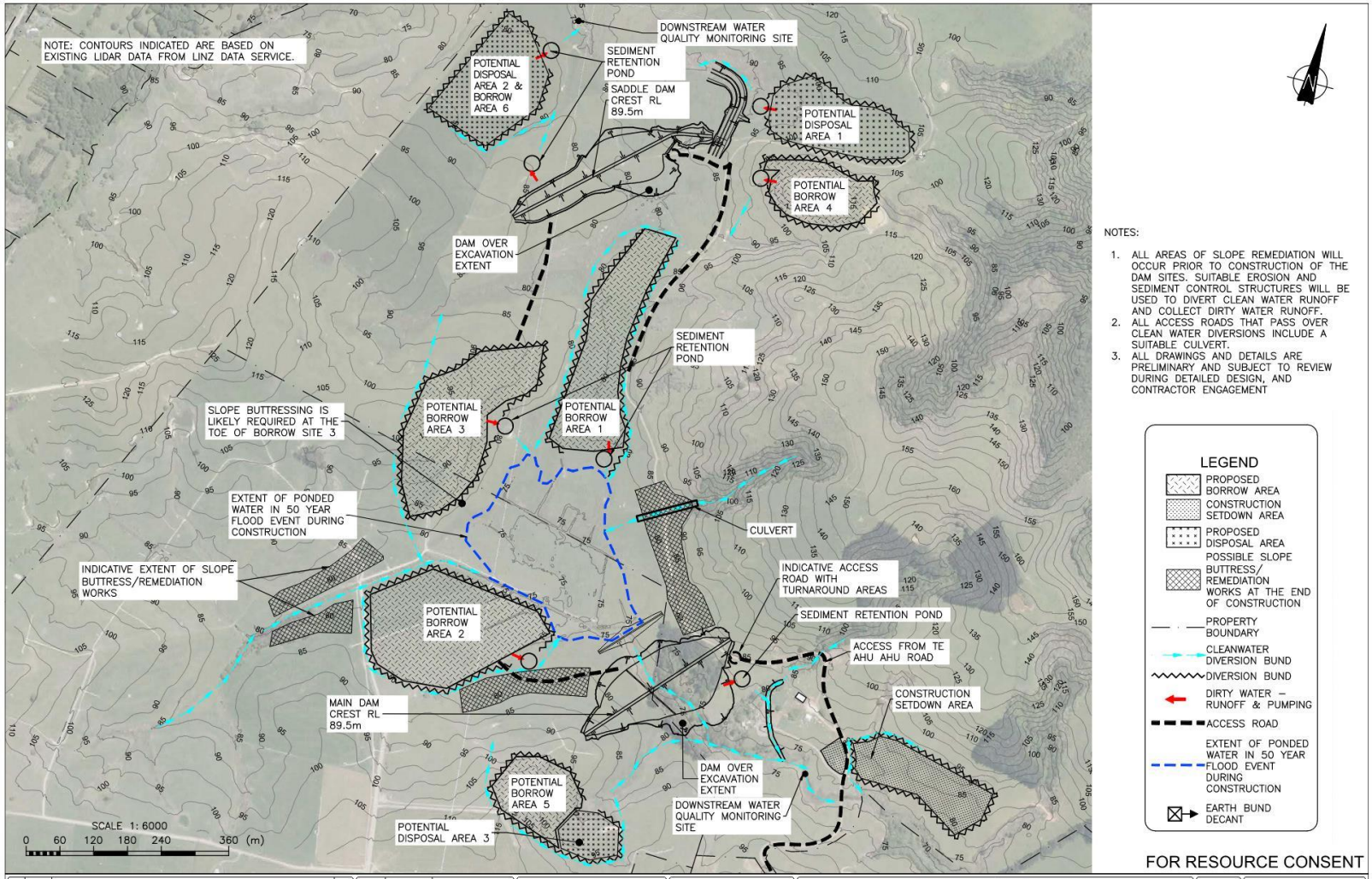
Frequency	The number of pressure fluctuation cycles per second of a sound wave. Measured in units of Hertz (Hz).
Hertz (Hz)	Hertz is the unit of frequency. One hertz is one cycle per second. One thousand hertz is a kilohertz (kHz).
Octave Band	A range of frequencies where the highest frequency included is twice the lowest frequency. Octave bands are referred to by their logarithmic centre frequencies, these being 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, and 16 kHz for the audible range of sound.
Noise	A sound that is unwanted by, or distracting to, the receiver.
Ambient	The ambient noise level is the noise level measured in the absence of the intrusive noise or the noise requiring control. Ambient noise levels are frequently measured to determine the situation prior to the addition of a new noise source.
SPL or L_P	Sound Pressure Level A logarithmic ratio of a sound pressure measured at distance, relative to the threshold of hearing (20 µPa RMS) and expressed in decibels.
SWL or L_W	Sound Power Level A logarithmic ratio of the acoustic power output of a source relative to 10^{-12} watts and expressed in decibels. Sound power level is calculated from measured sound pressure levels and represents the level of total sound power radiated by a sound source.
dB	Decibel The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of Pr=20 µPa i.e. dB = 20 x log(P/Pr)
dBA	The unit of sound level which has its frequency characteristics modified by a filter (A-weighted) so as to more closely approximate the frequency bias of the human ear.
A-weighting	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.
$L_{Aeq\,(t)}$	The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.
L_{AFmax}	The A-weighted maximum noise level. The highest noise level which occurs during the measurement period.

APPENDIX B SITE PLANS

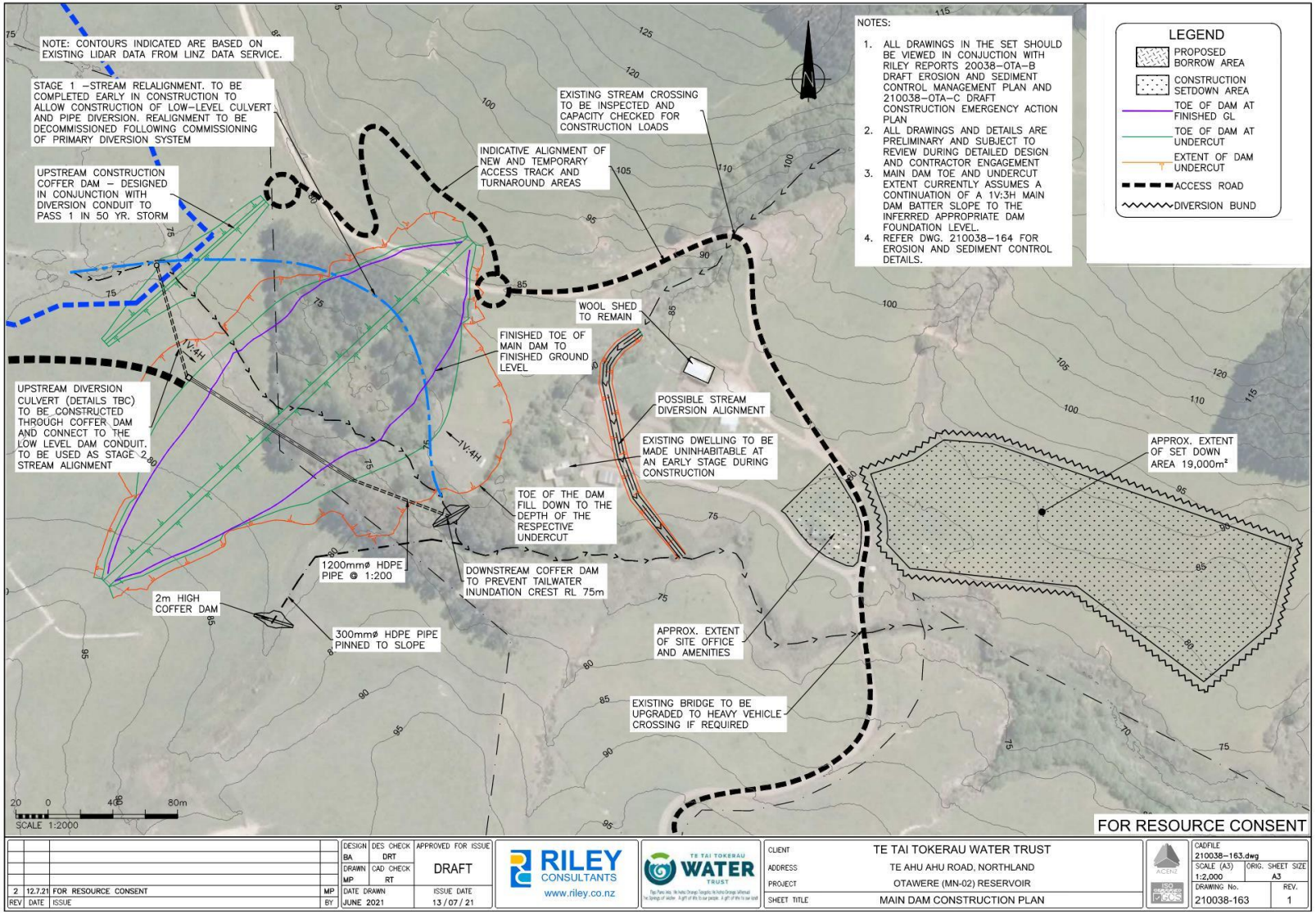
B1 Reservoir Overview



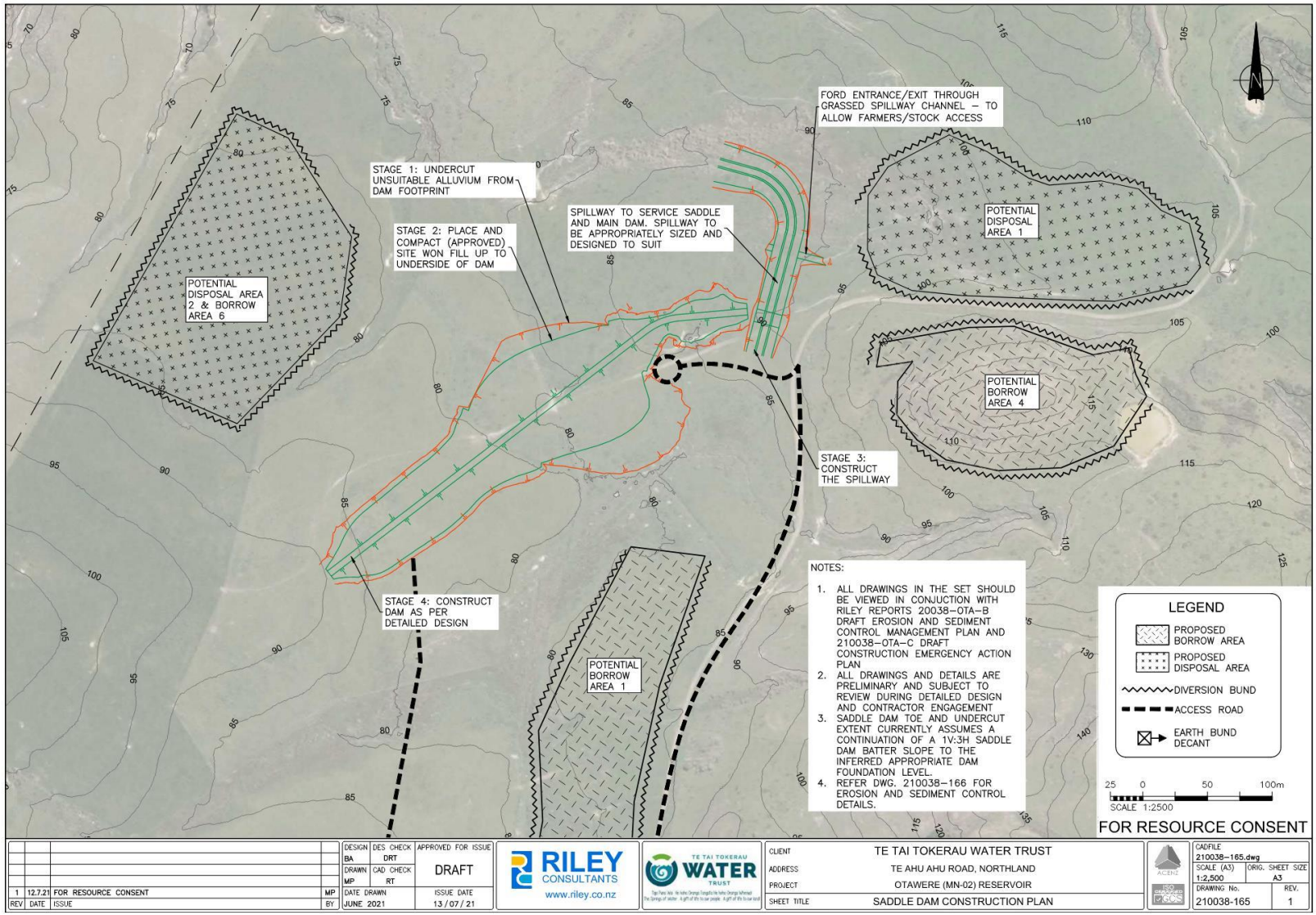
B2 Construction Site Arrangement



B3 Main Dam Construction Plan



B4 Saddle Dam Construction Plan



APPENDIX C PREDICTED NOISE LEVEL CONTOURS

Figure 2: Calculated noise contours for the proposed full construction fleet (note that the scale applies to the sheet at A4 size)

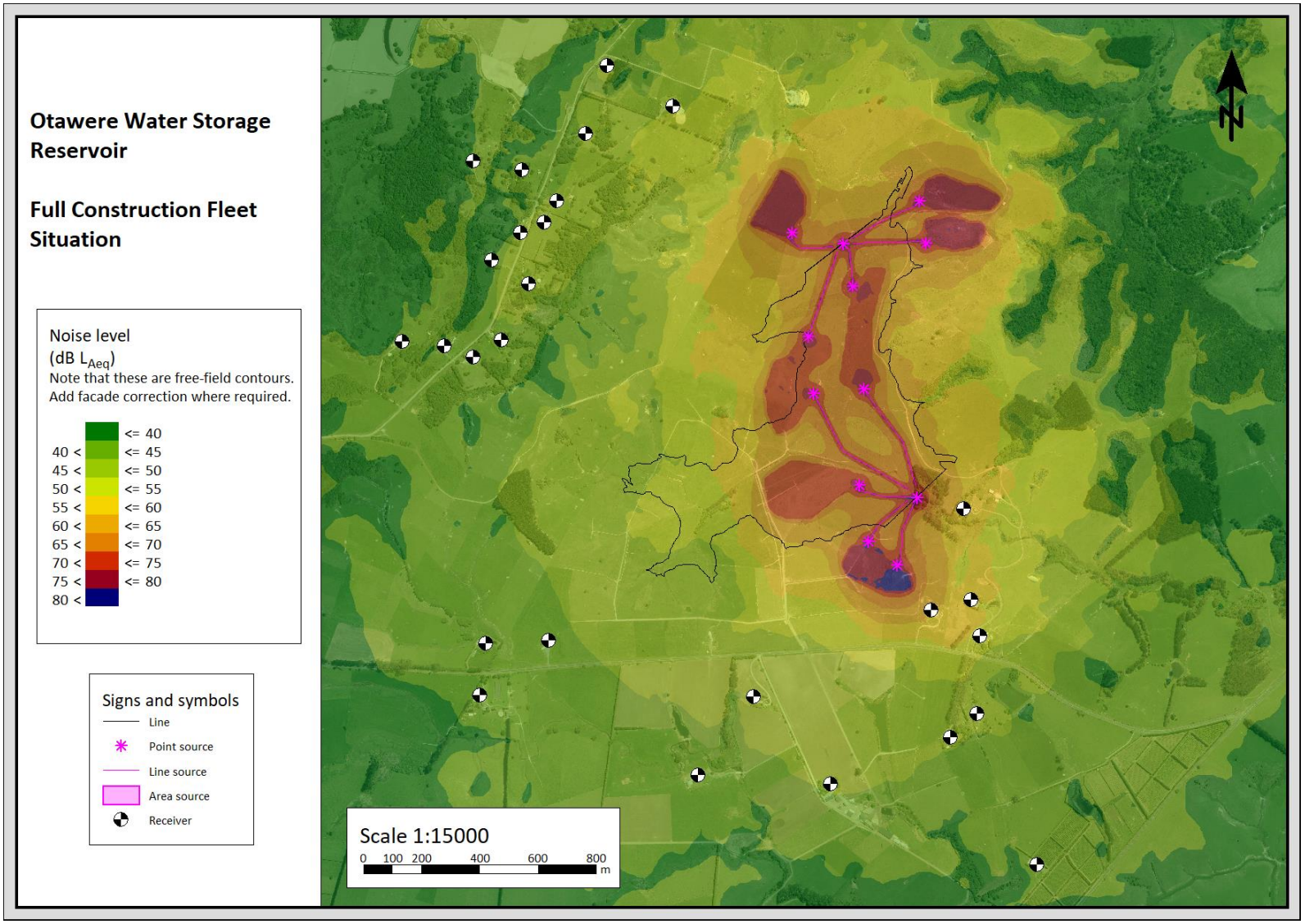
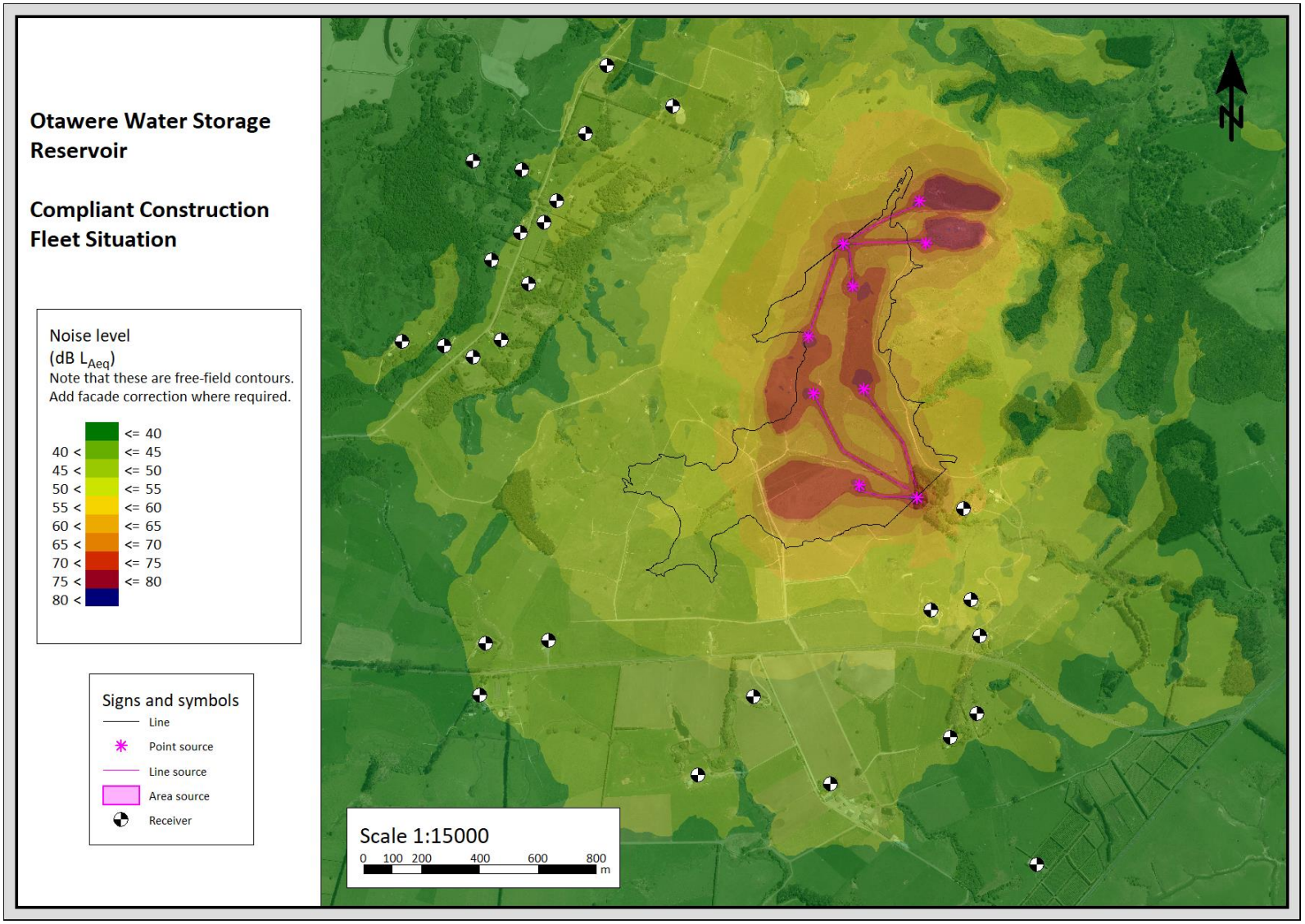


Figure 3: Calculated noise contours for the restricted compliant construction fleet (note that the scale applies to the sheet at A4 size)



APPENDIX D GENERAL NOISE MITIGATION AND MANAGEMENT

D1 Equipment Selection

When selecting construction equipment, where practicable:

- Avoid tonal reversing or warning alarms (suitable alternatives may include flashing lights, broadband audible alarms or reversing cameras inside vehicles)
- Prioritise quieter construction methodologies
- Prioritise electric motors over diesel engines
- Prioritise rubber tracked equipment over steel tracked equipment
- Equipment should be suitably sized for the proposed task
- Equipment should be maintained and fitted with exhaust silencers and engine covers

D2 Scheduling

Where practicable, noisy works should be programmed to avoid sleep disturbance. Note that people tend to be less disturbed by low frequency, continuous engine noise, than intermittent noise or activities with special audible character (e.g. reversing beepers, whistling, banging tailgates or shouting).

D3 General Measures

Complaints can arise whether or not noise levels comply with the Project limits. To avoid complaints, general mitigation and management measures include, but are not be limited to, the following:

- Avoid unnecessary noise, such as shouting, the use of horns, loud site radios, rough handling of material and equipment, and banging or shaking excavator buckets
- Avoid steel on steel contact such as during the loading of scaffolding on trucks
- Avoid high engine revs through appropriate equipment selection and turn engines off when idle
- Maintain site accessways to avoid potholes and corrugations
- Mitigate track squeal from tracked equipment, such as excavators (may include tensioning and watering or lubricating the tracks regularly)

D4 Complaints Response and Monitoring

D5 Complaints Response

All construction noise complaints should be recorded in a complaints file that is available to Council on request. For each complaint, an investigation should be undertaken involving the following steps as soon as practicable:

- Acknowledge receipt of the concern or complaint within 24 hours and record:
  - Time and date the complaint was received and who received it
  - Time and date of the activity subject to the complaint (estimated where not known)
  - The name, address and contact details of the complainant (unless they elect not to provide)
  - The complainant's description of the activity and its resulting effects
  - Any relief sought by the complainant (e.g. scheduling of the activity)
- Identify the relevant activity and the nature of the works at the time of the complaint
- Review the activity noise levels to at the complainants building. Consider addended monitoring to verify the underlying reference level assumptions.
- Review the mitigation and management measures in to ensure the activity represents the BPO. Review the relief sought by the complainant. Adopt further mitigation and management measures as appropriate.
- Report the findings and recommendations to the Project Manager and implement changes
- Report the outcomes of the investigation to the complainant, identifying where the relief sought by the complainant has been adopted or the reason(s) otherwise.

In most cases, ceasing the activity would provide immediate relief. In some cases, this may not be practicable for safety or other reasons. The complainant shall be kept updated regularly during the time it takes to resolve the matter.

D6 Noise Monitoring

Construction noise levels should be monitored:

- In response to a reasonable noise complaint
- At 1m from the most affected building façade, or proxy position and adjusted for distance and façade reflections where appropriate
- By a suitably qualified and experienced specialist (e.g. Member of the Acoustical Society of New Zealand) in accordance with the requirements of New Zealand Standard NZS 6803: 1999 *"Acoustics - Construction Noise"*
- For a representative duration, reported with the measured level (e.g. 65 dB $L_{Aeq\ (30min)}$)

A noise monitoring flowchart is presented in **Error! Reference source not found.**.

Figure 4: Noise Monitoring Flow Chart