

**IN THE ENVIRONMENT COURT
AT AUCKLAND**

**I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKĀURAU**

Decision [2023] NZEnvC 280

IN THE MATTER

of appeals under section 120 of the
Resource Management Act 1991

BETWEEN

TITIRANGI PROTECTION GROUP
INCORPORATED

(ENV-2021-AKL-093)

THE TREE COUNCIL (AUCKLAND)
INCORPORATED

(ENV-2021-AKL-094)

Appellants

AND

AUCKLAND COUNCIL

Respondent

AND

WATERCARE SERVICES LIMITED

Applicant

Court: Chief Environment Court Judge D A Kirkpatrick

Last case event: 20 December 2023

Date of Order: 21 December 2023

Date of Issue: 21 December 2023

CONSENT ORDER



- A: Under section 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that the appeals are allowed subject to the amended conditions of consent attached to this order as **Annexure 1** (marked up copy) and **Annexure 2** (clean copy):
- B: The appeals are otherwise dismissed.
- C: Under section 285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] On 30 June 2021 a panel of Independent Hearing Commissioners acting under delegated authority from Auckland Council issued a decision granting regional resource consents under the Auckland Unitary Plan Operative in Part (**AUP**) and a land use consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**NES Soil**) to Watercare Services Limited.

[2] The regional resource consents and land use consent relate to the earthworks, vegetation removal and associated activities required to establish the Huia Replacement Water Treatment Plant (**Huia WTP**) and two new treated water storage reservoirs. All other aspects of the Huia WTP are addressed by the Outline Plan of Works process as the land is designated for 'Water Supply purposes – water treatment plants and associated structures'.

[3] The key aspects of the regional and land use consents can be summarised as follows:

- (a) Vegetation alteration and removal over approximately 3.5 hectares;
- (b) Total earthworks of approximately 44,800m² (includes 118,000m³ within the Significant Ecological Area overlay);

- (c) Creation of a stream diversion channel around the perimeter of the Huia WTP works;
- (d) Construction of the reception shaft to provide for a connection to the new raw water intake tunnel;
- (e) Construction of the reception shaft and valve chamber for the North Harbour 2 (**NH2**) pipeline;
- (f) Construction of a new wing wall inlet structure at the existing off-specification discharge location;
- (g) Installation of underground pipework;
- (h) Temporary diversion and damming of surface water and the discharge of treated sediment laden water;
- (i) Disturbance of a small area of potentially contaminated soil (contaminated in respect of the AUP or NES standards);
- (j) Stream works in the Yorke Gully Stream and daylighting of the Armstrong Stream;
- (k) Groundwater diversion and dewatering on the reservoir site; and
- (l) Diversion and discharge of stormwater.

[4] The proposal also included conditions relating to establishment of a comprehensive mitigation and biodiversity compensation package offered by the Watercare Services Limited. The compensation package required in the conditions as granted by the Council included the establishment of the Waima Biodiversity Management Plan, which would seek to coordinate and improve community-based conservation efforts in the Little Muddy Creek catchment.

[5] Overall, the proposal was for a non-complying activity.

[6] On 21 July 2021, The Titirangi Protection Group Incorporated and the Tree Council (Auckland) Incorporated lodged appeals with the Environment Court against the decision.

[7] The Waitakere Ranges Protection Society, Royal Forest and Bird Protection Society of New Zealand Incorporated and the Tree Council (in relation to the Titirangi Protection Group Incorporated appeal) gave notice of their intention to join the appeals under s 274 of the RMA.

Agreement Reached

[8] The appeals have been the subject of Court-assisted mediation and further direct discussions between the parties.

[9] As outlined in the joint memorandum filed by the parties dated 20 December 2023, the parties have agreed that the consents can be granted subject to:

- (a) Agreed amended conditions of consent attached as **Annexure 1** (a version showing the agreed amendments) and **Annexure 2** (a clean version of the agreed amended conditions) ; and
- (b) Agreed revised draft Trust Deed for the Biodiversity Trust (as referred to in the Agreed amended conditions of consent) attached as **Annexure 3**.

[10] The substantive changes agreed to by the parties can be summarised as follows:

- (a) The Kauri Dieback Management Plan has been replaced by the *Phytophthora* Risk Management Plan (**PRMP**), which is subject to detailed requirements related to physical works, operations, and record keeping.
- (b) All management plans are required to be consistent with the PRMP;

- (c) A peer review panel is required to be established to review and comment on the PRMP and certain other related management plans, and to ensure the risk register is complete and that all activities in the management plans that have the potential to exacerbate the movement of *Phytophthora* species have been identified and addressed in the risk register and PRMP;
- (d) The Waima Biodiversity Management Plan has been replaced by the Pest Management Strategy for Biodiversity Restoration (**PMSBR**), and the Waima Biodiversity Trust has been replaced by the Biodiversity Trust.
- (e) Comprehensive biodiversity management targets and thresholds have been included in the ecological compensation conditions, along with a requirement that these be met for twenty-four consecutive years. Controls of pest species on both private and public land are included in the PMSBR.
- (f) A Further Biodiversity Works Plan is to be prepared where certain management thresholds have not been achieved to ensure the thresholds are met.
- (g) The conditions relating to the Biodiversity Trust specify an increased lump sum for establishment, as well as a minimum operation period of twenty-five years. The Trust must be established before physical works commence.
- (h) Changes have been made to the membership of the community liaison group to include the appellants, and several additional management plans are now to be subject of consultation with them. This includes the Heritage Management and Restoration Plan for the Nihotupu Filter Station.

- (i) Amendments have been made to construction traffic management conditions to restrict construction traffic in certain areas and on certain days and to require further monitoring.
- (j) Amendments have been made to the draft Trust Deed and condition 2 has been amended to refer to the draft deed.

Consideration

[11] In making these orders the Court has read and considered:

- (a) The notices of appeal;
- (b) The section 274 notices; and
- (c) The joint memorandum of counsel in support of the draft consent order dated 20 December 2023.

[12] The Court understands that:

- (a) All parties to the proceedings agree to the granting of the consent order; and
- (b) All parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction and satisfy the relevant considerations under the RMA and relevant statutory planning documents.

Orders

[13] Therefore, the Court orders by consent that:

- (a) The appeals by The Tree Council (Auckland) Incorporated and the Titirangi Protection Group Incorporated are disposed of in their

entirety, subject to the agreed amended conditions set out in **Annexure 1** and **Annexure 2** to this order.

[14] There is no order as to costs.



D A Kirkpatrick

Chief Environment Court Judge



Annexure 1

Conditions

Under section 108, the grant of these resource consents is subject to the following conditions:

Definitions

“ACM” means Asbestos Containing Material;

“AMP” means Adaptive Management Plan;

“ARI” means Annual Recurrence Interval;

“ASCNVMP” means Activity Specific Construction Noise and Vibration Management Plan;

“ASDDP” means Armstrong Stream Daylighting Design Plan;

“AUP(OP)” means the Auckland Unitary Plan (Operative in Part);

“CCP” means Construction Communication Plan;

“CMEP” means Cultural Management and Engagement Plan;

“ChTMP” means Chemical Treatment Management Plan;

“CLG” means the Community Liaison Group;

“CNVMP” means Construction Noise and Vibration Management Plan;

“Commencement of construction” means commencement of any construction works for the Project. For the avoidance of doubt, it excludes site investigations, fencing, and any activities that do not need resource consent and/or are permitted activities;

“Consent Holder” means Watercare Services Limited;

“Council” means the Auckland Council;

“CTMP” means Construction Traffic Management Plan;

“DoC” means the Department of Conservation;

“DSI” means Detailed Site Investigation;

“FBR” means Freshwater Baseline Report;

“EMP” means Ecological Management Plan;

“ESCP” means Erosion and Sediment Control Plan;

“GD01” means the Council's Guidance Document 001 '*Stormwater Management Devices in the Auckland Region*';

“GD05” means the Council's Guidance Document 005 '*Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*';

“GSMCP” means Groundwater and Settlement Monitoring and Contingency Plan;

“FMP” means Fauna Management Protocols;

“KCZ” means Kauri Contamination Zone;

~~“KDMP” means Draft Kauri Dieback Management Plan;~~

“MPI” means the Ministry for Primary Industries

“NES Soil” means the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, 2011;

“NHMRP” means Nihotupu Heritage Management and Restoration Plan;

“OMP” means Operation and Maintenance Plan;

“OSLR” means Optimised Site Layout Report;

“PIA” means Pavement Impact Assessment;

“PMSBR” means the Pest Management Strategy for Biodiversity Restoration; *[Replaces Waima Biodiversity Management Plan or ‘WBMP’ throughout the document and is not shown in track change];*

“PMSBR Area” means the area shown on Map 1 ‘Pest Management Proposal - Pest Management Areas’ of the RMSBR;

“PRMP” means *Phytophthora* Risk Management Plan *[Replaces ‘Kauri Dieback Management Plan or ‘KDMP’ throughout the document and is not shown in track change];*

“Project” means the proposal as described in the documents detailed at Condition 2;

“RMA” means the Resource Management Act 1991;

“SEA” means Significant Ecological Area;

“SEV” means Stream Ecological Value;

“SEVP” means Stream Ecological Valuation Plan;

“SMP” means Site Management Plan;

“SRP” means Stream Restoration Plan;

“SOP” means Standard Operating Procedures;

“Surficial soils” are soils that contain organics and soils within close proximity to organics (e.g., within 1 m).

“SVR” means Site Validation Report;

~~“WBMP” means Waima Biodiversity Management Plan;~~

“WTP” means Water Treatment Plant; and

“YSDDP” means Yorke Stream Diversion Design Plan.

A. General conditions

Commencement and duration

1. Pursuant to ss 123 and 125 of the RMA, the duration and lapse dates for the various resource consents shall be as set out in the table below:

Consent	Lapse Date	Duration (unless the consent has lapsed, been surrendered or cancelled at an earlier date)
Land use consents for land disturbance activities including earthworks, NES consent for disturbance of contaminated soils, and vegetation removal associated with replacement WTP and Reservoir 1.	10 years from commencement.	15 years from commencement.
Land use consents for land disturbance activities including earthworks, NES consent for disturbance of contaminated soils, and vegetation removal associated with Reservoir 2.	15 years from commencement.	20 years from commencement.
Land use consents for works in the bed of a watercourse including disturbance and construction and installation of structures.	10 years from commencement.	15 years from commencement.
Land use consents for reclamation and drainage in the bed of a watercourse.	10 years from commencement.	n/a
Consent to divert a river or stream to a new course.	10 years from commencement.	15 years from commencement.
Consents for diversion and discharge of stormwater.	10 years from commencement.	35 years from commencement.
Consents for diversion and discharge of groundwater.	10 years from commencement.	15 years from commencement.
Consent to discharge contaminants to land associated with the disturbance of potentially contaminated soil (WTP and Reservoirs 1 and 2).	10 years from commencement.	25 years from commencement.

Advice note: The consents lapse in accordance with the above lapse dates unless, prior to the lapse date:

- (a) The consent is given effect to; or
- (b) The Council extends the period after which the consent lapses.

Development in general accordance with plans

2. The activities authorised by this consent shall be undertaken in general accordance with the information provided with the application, and all referenced by the Council as consent number **BUN60339273** as follows:

(a) The information provided with the application as follows:

- Assessment of Environmental Effects report, titled "*Huia Replacement Water Treatment Plant (WTP) Project*", Version V1, prepared by Tonkin & Taylor Ltd ("**T+T**"), dated 22 July 2019;
- WTP Reservoirs Site Layout Development Report, prepared by GHD Ltd, dated May 2019;
- Reservoirs storage, location and layout assessment, prepared by Beca Ltd, dated 22 May 2019;
- Indicative design drawings, prepared by GHD Ltd, dated May 2019 (Rev 2);
- Indicative Construction Methodology Report, prepared by Alta, dated 23 May 2019 (Rev 5);
- Stormwater and Erosion and Sediment Control Report, prepared by Cook Costello, dated July 2019, Ref 14191;
- Groundwater and Settlement Report, prepared by T+T, dated 24 May 2019, Ref 30848.2000;
- Addendum to the Groundwater and Settlement Report, prepared by T+T, dated July 2019, Ref 30848.2000;
- Preliminary Land Stability Assessment, prepared by T+T, dated 24 May 2019, Ref 30848.2000;
- Addendum to the Preliminary Land Stability Assessment, prepared by T+T, dated July 2019, Ref 30848.2000;
- Site Management Plan for Ground Contamination, prepared by T+T, dated May 2019, Ref 30848.2000v2;
- Ecological Assessment, prepared by Boffa Miskell Ltd, dated 26 July 2019;
- Traffic and Transport Assessment, prepared by Beca Ltd, dated 10 July 2019 (Rev 3.0);
- Construction Noise and Vibration Assessment, prepared by Marshall Day Acoustics Ltd, dated 20 May 2019 (Rev 3); and
- ~~Draft Deed of Trust for the Waima Biodiversity Trust, prepared by Simpson Grierson, dated 23 May 2019.~~

(b) The additional information provided by the applicant set out in the letter prepared by T+T, dated 13 August 2019, and the following attachments:

- Appendix A – Stormwater Response, prepared by Cook Costello, dated 9 August 2019;
- Appendix B – Groundwater and Earthworks Response, prepared by T+T, dated 13 August 2019;

- Appendix C – Ecology Response, being a memorandum from the applicant's counsel regarding the Trust Deed dated 31 July 2019 and a memorandum from Boffa Miskell Ltd, dated 9 August 2019;
 - Appendix D – Arborist Response, prepared by GreensceneNZ Ltd, dated 9 August 2019; and
 - Appendix E – Transport Response, prepared by CH2M Beca Ltd, dated 9 August 2019.
- (c) The Preliminary Site Investigation, prepared by T+T, dated September 2019 (Version 1.1), Ref 30848.2000.
- (d) The additional information provided by the applicant set out in the letter prepared by T+T, dated 8 November 2019, and the following attachments:
- Attachment A – Regional stormwater and earthworks response, prepared by Cook Costello, dated 8 November 2019 and USLE calculations provided on 2 December 2019;
 - Attachment B – Streamworks, terrestrial ecology and kauri dieback response, prepared by Boffa Miskell Ltd, dated 20 October 2019;
 - Attachment C – Transportation response, prepared by CH2M Beca Ltd, dated 4 November 2019;
 - Attachment D – Road stability response, prepared by T+T, dated 8 November 2019; and
 - Attachment E – Social Impact Assessment response, prepared by Beca Ltd, dated 8 November 2019.
- (e) The Addendum to Stream Ecological Value Plan, prepared by Boffa Miskell Ltd, dated 26 November 2019.
- (f) The following draft management plans ~~provided with the applicant's evidence~~:
- Draft Groundwater and Settlement Monitoring and Contingency Plan (Rev 3), prepared by T+T, dated January 2020;
 - Draft Construction Noise and Vibration Management Plan (Rev O), prepared by Marshall Day Acoustics, dated 4 February 2020;
 - Draft Ecological Management Plan (Rev 1), prepared by Boffa Miskell Ltd, dated 4 February 2020;
 - ~~Kauri Dieback Management Plan, prepared by Boffa Miskell Ltd, dated 8 December 2020;~~
 - ~~Pest Management Strategy for the Waima BMP Area (Mitigation for Huia Water Treatment Plant Upgrade) (Rev 1), prepared by Boffa Miskell Ltd, dated 4 February 2020; and~~
 - Revised Pest Management Strategy for Biodiversity Restoration (mitigation for the Huia Water Treatment Plant Upgrade (Rev. 5), prepared by Boffa Miskell Ltd, dated 26 June 2023;

- Draft Construction Traffic Management Plan (Rev 4.0), prepared by CH2M Beca Ltd, dated 4 February 2020.
- (g) Huia Replacement Water Treatment Plant: Proposed Boundary Planting Plans, Drawing No A16055_000 to 003, 010, 011, 100 to 103 and 050, prepared by Boffa Miskell.
 - (h) Huia Replacement Water Treatment Plant: Planting Plan with Cross Section Locations, Proposed Planting Schedule, Site Photos, Section G and Section E, Rev 2, prepared by Boffa Miskell, 14 March 2021.
 - (i) Consideration of Potential Landscape Effects Arising from the Huia WTP Site Vegetation Clearance and Temporary Cleared Site. Boffa Miskell, 26 August 2020.
 - (j) Memorandum titled '*NPS-FW wetland evaluation for weedfield in Huia WTP site*' prepared by Boffa Miskell, dated 15 April 2021.
 - (k) Draft Deed of trust deed for the Biodiversity Trust, prepared by Simpson Grierson, dated July 2023. For the purpose of these conditions, 'draft trust deed' means the Draft Deed of Trust for the Biodiversity Trust, prepared by Simpson Grierson dated December 2023 and attached to these consent conditions
 - (l) Huia Replacement WTP Project - Indicative Lizard Release Site, Boffa Miskell, 13 September 2023.
3. No works provided for under these consents shall occur outside of the footprint of the replacement WTP, Reservoir 1 and Reservoir 2 identified on Hearing Plan A: Project Site Features dated 20 Feb. 2020 other than to achieve safe sight distances for site access and minor variations described in the Optimised Site Layout Report required by Conditions 12 to 14, and subject to complying with Condition 4.
 4. The maximum area of vegetation removal within the Significant Ecological Area provided for under these consents is set out as follows:
 - Replacement WTP: 2.50 ha
 - Reservoir 1: 0.60 ha
 - Reservoir 2: 0.40 ha

Advice notes: Conditions 3 and 4 are also subject to Conditions 12 to 14 below which require that the footprint of the replacement WTP and reservoirs is optimised through detailed design as far as practicable.

*If the optimised site layout report required by Conditions 10 to 12 below confirms a **reduced** area of vegetation removal within the SEA, then this shall prevail over the maximum area identified in Condition 4 above.*
 5. In the event of any conflict between the documents listed in Condition 2 above and the conditions of this consent, the conditions shall prevail. Documentation related to

earthworks, soil disturbing activities and associated erosion and sediment control measures contained in Condition 2 is superseded by the consent conditions.

Advice note: In the event that minor amendments to the approved plans and management plans are required, any such amendments should be limited to the scope of this consent. Any amendments which affect the performance of the proposed activity may require an application to be made in accordance with s127 of the RMA. Any minor amendments shall be provided to the Council prior to implementation to confirm that they are within the scope of this consent.

Section 128 review

6. The conditions of this consent may be reviewed by the Council pursuant to s128 of the RMA (with the costs of the review process being borne by the Consent Holder) by giving notice pursuant to s129 of the RMA, at one or more of the following times:

- At two yearly intervals from the date of granting of consent prior to the commencement of earthworks provided for under this consent; and
- Within one year of initiation of the earthworks provided for under this consent; and
- At two yearly intervals after that time.

In addition to the above, the conditions which relate to the diversion of groundwater set out in Section O of this consent may be reviewed at intervals of not less than one year following commencement of dewatering.

7. The purpose of the review may be for any of the following purposes, namely:
- (i) To deal with any adverse effect on the environment which may arise from the exercise of this consent or upon which the exercise of the consent may have an influence and which becomes apparent, or is found appropriate, to deal with at a later stage, and in particular but without limiting the ambit of this clause to:
 - a. Insert conditions, or modify existing conditions, to require the consent holder to identify the character or nature of any discharges authorised by this consent and to report the results of that monitoring to the Council; and/or
 - b. Insert conditions, or modify existing conditions to require the consent holder to monitor the effects of any activities authorised by this consent on the local receiving environment and to report the results of that monitoring to the Council;
 - c. Insert conditions, or modify existing conditions, requiring the consent holder to adopt the Best Practicable Option to remedy, mitigate or minimise any adverse effects on the environment which may arise from the exercise of these consents and which it is appropriate to deal with at a later stage.
 - (ii) To review and respond to refinements identified through the Optimised Site Layout Report required by Condition 13.

- (iii) To review the conditions set out in ‘*Section C – Ecological Management Plan*’ in light of monitoring and new methodologies to avoid, remedy or mitigate potential adverse effects on ecological values and biodiversity, including in particular the vegetation and fauna management protocols to minimise potential effects on flora and fauna.
- (iv) To review the management measures and hygiene protocols to avoid and minimise the risk of spreading *Phytophthora* species (~~*P. agathidicida*~~) set out in ‘*Section D – Earthworks and Vegetation removal*’ to take into account the most up-to-date research and information, including reviewing the monitoring and reporting requirements and the potential to treat captured surface water run off to eliminate *Phytophthora* species ~~*P. agathidicida*~~ prior to discharge.
- (v) To review the conditions of consent in relation to *Streamworks (Section E)* and *Groundwater diversion (Section O)* to respond to any updates to the National Policy Statement for Freshwater Management 2020 (NPS-FW) or to changes to the Auckland Unitary Plan (AUP) to give effect to the NPS-FW.
- (vi) To review the objectives and requirements of the Pest Management Strategy for Biodiversity Restoration (PMSBR) taking into account the results of monitoring required by Condition 118 and the additional controls and Further Biodiversity Works Plan required by Condition 119.
- (vii) In relation to the diversion of groundwater, to vary the monitoring and reporting requirements, and performance standards, in order to take account of information, including the results of previous monitoring and changed environmental knowledge on:
 - ground conditions;
 - aquifer parameters;
 - groundwater levels; and
 - ground surface movement.

Monitoring

8. The consent holder shall pay the Council an initial consent compliance monitoring charge of \$5,000 inclusive of GST, plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

Advice note: The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the Council issue a letter confirming compliance on request of the consent holder.

Archaeology

9. In the event of archaeological site evidence (e.g. shells, middens, hangi or ovens, pit depressions, defensive ditches, artefactual material or human bones) being uncovered during construction/earthworks, the Consent Holder shall ensure that operations shall cease in the vicinity of the discovery and that the Council and Te Kawerau ā Maki are contacted so that the appropriate action can be taken before any work may recommence there.

Should earthworks on the site result in the identification of any previously unknown archaeological site, the land disturbance – Regional Accidental Discovery rule [E11.6.1] set out in the AUP(OP) shall also be applied.

Advice note: *In the event of an Accidental Discovery, also refer to the Mana Whenua-directed procedures to be implemented in the event of an accidental discovery set out in the CMEP required under Condition 124.*

B. Pre-commencement

Site Meeting

10. Prior to the commencement of any construction activities or vegetation removal, the Consent Holder shall hold a pre-start meeting that:
- (a) is located on the subject site;
 - (b) is scheduled not less than 10 working days before the anticipated commencement of construction works or vegetation removal;
 - (c) includes Auckland Council officer(s), in particular staff experienced in kauri die back management;
 - (d) includes someone who has a thorough understanding of *Phytophthora* pathogen dynamics (e.g. a *Phytophthora* expert or an ecologist with appropriate expertise);
 - (e) includes representation from the contractors who will undertake and/or supervise and monitor the works; and
 - (f) includes the Site Hygiene Manager.

A representative from Te Kawerau a Maki shall also be provided the opportunity to attend the pre-start meeting.

The pre-start meeting is to ensure all relevant parties are aware of and familiar with the necessary conditions of these consents. At this pre-start meeting, the meeting shall discuss the following matters (not limited to):

- (i) Timeframes for key stages of the works authorised under these consents;
- (ii) Detailed run-through of the key aspects of the approved management plans, including specific details on the controls to minimise the spread of *Phytophthora* species the need to minimise vegetation removal and restrictions around transportation movements to and from the site; and
- (iii) Contact details of the site contractor(s) and other key consultants (including design consultants) involved in the works.

Advice note: To arrange the pre-start meeting please contact the Council on 09 301-0101. The conditions of consent are to be discussed at this meeting. All additional information required by the Council is to be provided two working days prior to the meeting.

Detailed engineering drawings and design

11. Following detailed design of the Project enabling works for each stage (or stages), and at least twenty (20) working days prior to commencement of these works (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing), the Consent Holder shall submit detailed engineering designs and drawings of earthworks for that stage (or stages) to the Council.

12. The Consent Holder shall ensure that the footprint of the replacement WTP and reservoirs is optimised through detailed design to ensure that, as far as practicable, the works provided for under this consent:
 - (a) Further reduce the extent of vegetation removal in the Significant Ecological Area (SEA); and
 - (b) Further reduce effects on individual trees of greatest significance that are located within the works footprint identified in the drawings referenced in Condition 2; and
 - (c) Further reduce effects on kauri trees that have rootzones within or extending into the works footprint identified in the drawings referenced in Condition 2 and as confirmed onsite by a suitably qualified arborist in accordance with Condition 23.
13. Prior to commencement of works, the Consent Holder shall submit an updated Optimised Site Layout Report (OSLR) and associated plan(s) for written approval by the Council in accordance with Condition 19 confirming the works footprint and setting out the measures to further minimise impacts on vegetation in the SEA and significant trees as required by Condition 12.
14. The OSLR required by Condition 13 shall:
 - (a) Report on optimisation of the footprint that has occurred through detailed design taking into account the matters in Condition 12 (a) to (c) above;
 - (b) Confirm the area of vegetation clearance (less than or up to the limits set out in Condition 4); and
 - (c) Include an assessment (including recommendation and supporting rationale) of:
 - (i) Removing part of the historic Huia Water Treatment Plant buildings (excluding the 1928/1947 Huia Filter Station building which is subject to heritage controls) to provide an alternative layout for Reservoir 2 and reduced vegetation clearance; and
 - (ii) Restrictions on uses of the site, including car parking and administrative functions, to those which are essential to the safe and efficient operation of the treatment plant; and
 - (iii) The option of moving the replacement WTP closer to the Woodlands Park Road frontage taking into account relevant considerations including landscape, ecological, arboricultural, and traffic and access effects. If this option is selected, a minimum landscape buffer of 5 m from the property boundary to Woodlands Park Road must be maintained and shall be accompanied by a reduction in footprint along the southern boundary that is at least commensurate in area.

An independent peer review of the conclusions and recommendations of the OSLR shall be undertaken and submitted to Council with the OSLR. The peer review shall be made publicly available including by providing a copy of the report at the Titirangi Public Library.

Community Liaison Group

15. The Consent Holder shall support the establishment and ongoing involvement of a Community Liaison Group (CLG) comprised of representatives of the local community and local businesses (including The Tree Council (Auckland) Incorporated and the Titirangi Protection Group Incorporated). The objectives of the CLG are to:
- (a) Provide a means for all parties to give and receive regular updates on progress with the Project;
 - (b) Provide a regular forum through which information about the Project can be provided to the community;
 - (c) Enable opportunities for concerns and issues to be reported to and responded to by the Consent Holder; and
 - (d) Provide feedback on the development of the Construction Communication Plan (CCP), Ecological Management Plan (EMP), ~~Waima Biodiversity Management Plan (WBMP)~~, Pest Management Strategy for Biodiversity Plan (PMSBR), Construction Noise and Vibration Management Plan (CNVMP), Construction Traffic Management Plan (CTMP), ~~Kauri Dieback Management Plan (KDMP)~~ *Phytophthora* Risk Management Plan (PRMP), Heritage Management and Restoration Plan for the Nihotupu Filter Station (NHMRP), plans to enhance local recreational facilities and the future re-use of the Nihotupu Filter Station and 1928/1947 Huia Filter Station building.
16. The Consent Holder shall:
- (a) Consult with the CLG on the development and content of the CCP, EMP, CNVMP, CTMP, PMSBR, NHMRP, plans to enhance local recreational facilities and the future re-use of the Nihotupu Filter Station and 1928/1947 Huia Filter Station building including provision of a space for use by the community within at least one of the heritage buildings;
 - (b) Provide reasonable administrative support for the CLG including:
 - Organising meetings at a local venue;
 - Inviting all members of the CLG;
 - Distributing an agenda to each CLG member no less than five working days prior to meetings; and
 - The taking and dissemination of meeting minutes,
 - (c) Provide an update at least every six months (or as otherwise agreed with the CLG) on compliance with consent conditions.
17. The Consent Holder shall endeavour to ensure that the CLG meets at least every three (3) months and more often as required during construction of the Project, and at least annually at other times, or as otherwise agreed with the CLG. The CLG shall continue for the duration of the construction period.
18. Prior to the commencement of works a Construction Communication Plan (CCP) shall be submitted to the Council for certification in accordance with Condition 19. The objective of the CCP is to set out a framework to ensure appropriate communication is undertaken with relevant stakeholders, including neighbours and local businesses

during the construction of the Project. The CCP shall set out how the Consent Holder will:

- 1) Inform the community of construction progress and future construction activities and constraints that could affect them;
- 2) Receive and respond to feedback on construction related matters; and
- 3) Provide information on key project milestones.

The CCP shall, as a minimum, include:

- a) A communications framework that details the consent holder's communication strategies, the accountabilities and timeframes for responding to inquiries and complaints, frequency of communications, the range of communication methods to be used (including any modern and relevant communication methods, newsletters or similar, advertising), and any other relevant communication matters;
- b) The Communication Liaison Manager for the Project including their contact details (phone, email and postal address);
- c) How the community, stakeholders, local business, and affected in proximity parties will be notified of the commencement of construction activities and works, the expected duration of the activities and works, and who to contact for any queries, concerns and complaints; and
- d) Methods for communicating in advance of proposed construction activities where there is the potential for noise/vibration effects (required by Condition 136), to surrounding relevant stakeholders and methods to record and deal with any concerns raised about such activities.

The CCP shall have regard to, and where appropriate implement, any relevant actions arising from the Community Liaison Group meetings (required by Conditions 15 and 16). The CCP shall be implemented and complied with for the duration of the construction of the Project.

Management Plans – General

19. The following are general provisions related to all management ~~(or control)~~ plans, reports or other plans identified in Table 1 below:
 - (a) Management Plans shall be submitted to the Council for certification or written approval (as determined by the relevant condition) as follows:
 - i. At least forty (40) working days prior to the intended start of the works, the Consent Holder shall provide Council with a schedule detailing the timing of all relevant Management Plans that will be provided to Council for

certification or written approval. The schedule should be updated and provided to Council prior to any new stage.

- ii. Management Plans shall be submitted at least twenty (20) working days prior to the Commencement of Construction unless otherwise specified in the conditions. The consent holder shall ensure that any changes to draft Management Plans are clearly identified.
- (b) Management Plans may be submitted in parts or in stages to address particular activities or to reflect a staged implementation of the Project, and when provided in part or for a stage shall be submitted at least twenty (20) working days prior to Commencement of Construction on that part or stage unless otherwise specified in the conditions. Management Plans submitted shall clearly show the linkage with plans for adjacent stages and interrelated activities.
- (c) The Council shall review and certify or approve (as applicable) management plans, reports or other plans (as identified in Table 1 below) using best endeavours to meet the following timeframes:
 - i. Certify a Management Plan, report or other plan submitted for certification within thirty (30) working days.
 - ii. Approve a Management Plan, report or other plan submitted for written approval within thirty (30) working days.

Where the above timeframes cannot be met, then the Council shall provide reasons for this and set out an alternative timeframe within twenty-five (25) working days of the Management Plan, report or other plan being submitted to Council.

- (c) Any approved or certified Management Plan may be amended if necessary to reflect any minor changes in design, construction methods or management of effects. Any amendments are to be provided to the Council for confirmation in writing prior to implementation of the change, unless the Council determines at its discretion that those amendments once implemented would result in a materially different outcome to that described in the original Management Plan.
- (d) Any changes to an approved or certified Management Plan involving a materially different outcome shall be submitted to the Council to certify that they comply with the applicable requirements of these conditions. Any material change must be consistent with the ~~purpose-objective~~ of the relevant Management Plan and the other requirements of the relevant conditions of these consents. Where a Management Plan was prepared in consultation with interested or affected parties, any material changes to that Plan shall be prepared in consultation with those same parties.
- (e) All works shall be carried out in accordance with the approved or certified Management Plans. No works shall commence until written approval or certification of all the relevant Management Plans for that stage have been received, unless otherwise approved in writing by the Council.

- (f) The *Phytophthora* Risk Management Plan (PRMP) required by Condition 26 sets out the management protocols and adaptive management approach to be implemented to avoid or minimise the risks of spreading *Phytophthora* species. All of the management plans identified in Table 1 below and in the respective conditions of consent shall be consistent with the applicable management protocols and approach set out in the PRMP.

Advice note: The summary table below outlines the management plans, reports and plans required to be provided to Council and timeframes.

Table 1: Summary of management (and other) plans required

<u>Management Plans / Reports / Plans</u>	<u>Con- dition</u>	<u>Prepared by</u>	<u>Consultation required in preparation of plan</u>	<u>Timeframes¹</u>	<u>Approved or Certified by Council</u>	<u>Additional matters</u>
<u>Detailed engineering drawings and design</u>	<u>11</u>	<u>Consent Holder</u>	<u>=</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>N/A</u>	<u>=</u>
<u>Optimised Site Layout Report (OSLR)</u>	<u>13</u>	<u>Consent holder</u>	<u>=</u>	<u>Prior to commencement</u>	<u>Written Approval</u>	<u>An independent peer review of the conclusions and recommendations of the OSLR shall be undertaken and submitted to Council with the OSLR.</u>
<u>Construction Communication Plan (CCP)</u>	<u>18</u>	<u>Consent holder</u>	<u>CLG</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Certification</u>	<u>=</u>
<u>Ecological Management Plan (EMP)</u> <u>Includes Fauna Management Protocols (FMP) and Revegetation Plan</u>	<u>20</u>	<u>Suitably qualified and experienced person with reference to relevant specialists as required</u>	<u>DoC, the Royal Forest and Bird Protection Society of New Zealand, Te Kawerau ā Maki and CLG</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Written Approval</u>	<u>Shall be provided to DoC for its review prior to being finalised.</u>

¹Conditions provide for staging. Some conditions specifically exclude site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing, etc.

<u>Management Plans / Reports / Plans</u>	<u>Con- dition</u>	<u>Prepared by</u>	<u>Consultation required in preparation of plan</u>	<u>Timeframes¹</u>	<u>Approved or Certified by Council</u>	<u>Additional matters</u>
<u>Phytophthora Risk Management Plan (PRMP)</u>	<u>26</u>	<u>Suitably qualified experts in erosion and sediment control, biosecurity, Phytophthora species, plant pathology and related disciplines</u>	<u>CLG</u>	<u>Draft PRMP circulated to the Panel no later than 60 WD before works are scheduled to commence.</u> <u>The expert peer review panel shall provide their written review comments within a 20-WD period.</u> <u>Final PRMP shall be submitted to Council at least 20 WD prior to the commencement of construction</u>	<u>Written Approval</u>	<u>Consent holder to engage an expert peer review panel ("the Panel") comprising appropriately qualified representatives.</u>
<u>Geotechnical investigation-specific PRMP</u>	<u>43</u>	<u>See PRMP above</u>	<u>CLG</u>	<u>See PRMP above</u>	<u>Written approval</u>	<u>See PRMP above</u>
<u>Erosion and Sediment Control Plan (ESCP)</u>	<u>66</u>	<u>See PRMP above.</u>	<u>:</u>	<u>See PRMP above.</u>	<u>Written Approval</u>	<u>See PRMP above.</u>
<u>Dewatering Plan</u>	<u>69</u>	<u>Consent holder</u>	<u>:</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Written Approval</u>	<u>:</u>
<u>Adaptive Management Plan (AMP)</u>	<u>79</u>	<u>Consent holder</u>	<u>Te Kawerau ā Maki.</u>	<u>At least 20 WD prior to the commencement of construction</u>	<u>Written Approval</u>	<u>:</u>
<u>Freshwater Baseline Report (FBR)</u>	<u>81</u>	<u>Consent holder</u>	<u>Te Kawerau ā Maki</u>	<u>Prior to any streamworks or earthworks commencing.</u>	<u>Written Approval</u>	<u>:</u>
<u>Chemical Treatment Management Plan (ChTMP)</u>	<u>86</u>	<u>See PRMP above.</u>	<u>:</u>	<u>See PRMP above.</u>	<u>Written Approval</u>	<u>See PRMP above.</u>

<u>Management Plans / Reports / Plans</u>	<u>Con- dition</u>	<u>Prepared by</u>	<u>Consultation required in preparation of plan</u>	<u>Timeframes¹</u>	<u>Approved or Certified by Council</u>	<u>Additional matters</u>
<u>Yorke Stream Diversion Design Plan (YSDDP)</u>	<u>89</u>	<u>Suitably qualified person</u>	<u>=</u>	<u>At least 20 WD prior to commencement of stream daylighting works</u>	<u>Certification</u>	<u>=</u>
<u>Armstrong Stream Daylighting Design Plan (ASDD)</u>	<u>92</u>	<u>Suitably qualified person</u>	<u>=</u>	<u>At least 20 WD prior to the commencement of stream diversion works</u>	<u>Certification</u>	<u>=</u>
<u>Stream Restoration Plan (SRP)</u> <u>Includes Offset and Compensation Reporting</u>	<u>95</u>	<u>Consent holder</u>	<u>Te Kawerau ā Maki</u>	<u>Prior to streamworks commencing.</u> <u>Offset and Compensation Report shall be provided to the Council within 30 WD of each stage of the offset and compensation work being completed.</u>	<u>Certification</u>	<u>Further Offset Works Plan required If monitoring shows that the SEV values of the mitigation streams and constructed stream channel have not reached the predicted value within ten years.</u>
<u>Pest Management Strategy for Biodiversity Restoration (PMSBR)</u>	<u>113</u>	<u>Suitably qualified and experienced ecologist</u>	<u>CLG</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Written Approval</u>	<u>May require a Further Biodiversity Works Plan</u>
<u>Nihotupu Heritage Management and Restoration Plan (NHMRP)</u>	<u>123</u>	<u>Suitably qualified and experienced person(s)</u>	<u>CLG, Auckland Council (Heritage Team) and Heritage New Zealand Pouhere Taonga (HNZ)</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Certification</u>	<u>Shall be provided to Auckland Council (Heritage Team) and HNZ for review prior to it being submitted to the Council.</u>
<u>Cultural Management and Engagement Plan (CMEP)</u>	<u>124</u>	<u>Consent holder in collaboration with Te Kawerau ā Maki</u>	<u>=</u>	<u>Not specified (at least 20 WD prior to the commencement of construction; or as agreed with Te</u>	<u>Certification</u>	<u>Final version provided to Te Kawerau ā Maki for review prior to it being</u>

<u>Management Plans / Reports / Plans</u>	<u>Con- dition</u>	<u>Prepared by</u>	<u>Consultation required in preparation of plan</u>	<u>Timeframes¹</u>	<u>Approved or Certified by Council</u>	<u>Additional matters</u>
				<u>Kawerau ā Maki</u>		<u>submitted to the Council.</u>
<u>Construction Traffic Management Plan (CTMP)</u>	<u>127</u>	<u>Consent holder</u>	<u>CLG, AT and schools</u>	<u>Submit the CTMP for each stage of construction to the Council at least 20 WD prior to the commencement of construction</u>	<u>Certification</u>	<u>Input from schools located along HV routes: include Titirangi Primary School, Kaurilands School, Woodlands Park School, Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School.</u>
<u>Pavement Impact Assessment (PIA)</u> <u>Includes monitoring plan requirement.</u>	<u>131</u>	<u>Suitably qualified pavement engineer</u>	<u>=</u>	<u>At least 20 WD prior to commencement of construction</u>	<u>Certification</u>	<u>Consent holder to arrange meeting with the Council and AT's Asset Roding Manager to discuss the findings of the PIA.</u>
<u>Construction Noise and Vibration Management Plan (CNVMP)</u>	<u>136</u>	<u>Suitably qualified acoustic specialist</u>	<u>CLG</u>	<u>At least 20 WD prior to works</u>	<u>Certification</u>	<u>=</u>
<u>Activity Specific Construction Noise and Vibration Management Plan (ASCNVMP)</u>	<u>137</u>	<u>Suitably qualified acoustic specialist</u>	<u>=</u>	<u>At least 20 WD prior to works</u>	<u>Written Approval</u>	<u>=</u>
<u>Certification of stormwater management</u>	<u>152</u>	<u>suitable qualified</u>	<u>=</u>	<u>5 WD prior to the post-</u>	<u>Certification</u>	<u>Post construction certification may be</u>

<u>Management Plans / Reports / Plans</u>	<u>Con- dition</u>	<u>Prepared by</u>	<u>Consultation required in preparation of plan</u>	<u>Timeframes¹</u>	<u>Approved or Certified by Council</u>	<u>Additional matters</u>
<u>works (As-Built Plans)</u>		<u>registered surveyor</u>		<u>construction meeting</u>		<u>undertaken in stages to allow for staged completion of the stormwater management works associated with the replacement WTP, Reservoir 1 and Reservoir 2.</u>
<u>Operation and Maintenance Plan (OMP)</u>	<u>154</u>	<u>Consent holder</u>	<u>:</u>	<u>5 WD prior to the post-construction meeting</u>	<u>Certification</u>	
<u>Maintenance Report (MR)</u>	<u>159</u>	<u>Consent holder</u>	<u>:</u>	<u>Provided on request</u>	<u>N/A</u>	
<u>Site Management Plan (SMP)</u>	<u>160</u>	<u>Consent holder</u>	<u>:</u>	<u>Works in accordance with existing SMP.</u> <u>Updated SMP and/or RAP (If required) at least 10 WD before earthworks commence.</u>	<u>N/A</u>	<u>Requires additional soil investigations and asbestos survey.</u>
<u>Detailed Site Investigation (DSI)</u>	<u>160</u>	<u>SQEP</u>	<u>:</u>	<u>At least 10 WD prior to commencement of earthworks</u>	<u>Acceptance of Council</u>	<u>:</u>
<u>Site Validation Report (SVR)</u>	<u>172</u>	<u>Consent holder</u>	<u>:</u>	<u>Within 3 months of completion of the earthworks</u>	<u>Acceptance of Council</u>	<u>Only if investigations show this is required.</u>
<u>Groundwater and Settlement Monitoring and Contingency Plan (GSMCP)</u>	<u>180</u>	<u>SQEP</u>	<u>:</u>	<u>At least 20 WD prior to the commencement of dewatering</u>	<u>Written approval</u>	<u>Close-out report also required.</u>

C. Ecological Management Plan

20. The Consent Holder shall prepare a final Ecological Management Plan (EMP) for the Project Site. The objective of the EMP is to identify how the Project will avoid, remedy and mitigate potential adverse effects on the ecological values and biodiversity of the land within the Project Site, as well as a methodology for pre- and post-works monitoring.
21. The EMP shall be prepared in accordance with the Draft EMP and shall address how the Project will avoid, remedy and mitigate actual and potential adverse effects on ecological values including:
- 1) individual large trees close to the works footprint;
 - 2) herpetofauna (lizards and frogs);
 - 3) kauri snails;
 - 4) bats;
 - 5) avifauna (birds); and
 - 6) vegetation / habitat.

Advice note: For avoidance of doubt, the EMP sets out the vegetation and fauna management protocols to be undertaken at all stages of the works to minimise potential effects on flora and fauna. This includes protocols to be undertaken prior to, and during, the initial site preparation works including geotechnical investigations, vegetation clearance, ~~and~~ topsoil and surficial soil disturbance, clearance and disposal phases, along with the subsequent bulk earthworks phase.

22. The protocols to manage the risk of introducing or spreading *Phytophthora* species within or off the Project Site are to be set out in the *Phytophthora* Risk Management Plan (PRMP) required under Condition 26. The EMP shall be implemented in accordance with the relevant PRMP protocols, Traffic Light System and in accordance with Conditions 36 to 62 '*Staging of Works*'.
23. The EMP shall provide detail on site-specific ecological management and mitigation measures that will be implemented on the Project Site which shall include:
- (a) Vegetation protection and clearance protocols, including surveying and demarcation of the works area and other protocols for minimising accidental encroachment and damage to individual trees and vegetation outside of the works footprint for the duration of earthworks and construction activities. These shall include, but not be limited to:
 - A tree protection methodology for works within the Tree Protection Zone (TPZ) (note: Kauri Containment Zones (KCZ) identified in accordance with Condition 28(f) represent the TPZ for works within the vicinity of kauri trees). This shall include:
 - (i) Arborist supervision to monitor, supervise and direct all works within the TPZ of identified trees near the perimeter of the construction footprint;

- (ii) Tree protection measures and protection plans, including fencing, for trees where works are to occur within the TPZ.
- A tree risk register;
- Root pruning and remediation methodology;
- Protocols for concrete deliveries and pours within the vicinity of trees and within the TPZ;
- On-going monitoring of tree protection measures by a suitably qualified arborist for the duration of construction works.

In addition to the above:

- Any tree pruning or removal required to facilitate the works must be undertaken by an Auckland Council approved arborist.
 - Within the seepage range of any TPZ there shall be no refueling of equipment or machinery and no storage of fuel or any other substance detrimental to tree health.
- (b) Management measures and protocols to avoid, remedy or mitigate the impact of activities (vegetation clearance, earthworks and construction) on flora and fauna within the Project Site, including:
- (i) Fauna Management Protocols (FMP) prepared by a suitably qualified ecologist holding the appropriate Wildlife Act Authority (incl. in the case of herpetofauna, a Department of Conservation (DoC) approved herpetologist) to handle fauna. The FMP shall specify kauri snail, lizard and Hochstetter's frog surveys, capture, salvage and relocation programmes. The FMP are to be implemented within the delineated earthworks footprint agreed by the ecologist and the DoC approved herpetologist immediately prior to and during any vegetation clearance.

The FMP shall include (in order of preference):

- Visual inspection and destructive searching of potential habitat features (including trees and ground cover habitats). Inspection methods are to include search techniques suitable for lizards and kauri snails.
- Supervised felling where high-quality lizard habitat cannot be adequately searched (e.g. tall, dense tree species), felling should be supervised to allow a herpetologist to search through fallen trees for resident lizards.
- ~~Passive dispersal – placing the felled vegetation outside of the works footprint to allow lizards to disperse. This method is not preferred as a standalone lizard management tool but may be suitable in some instances such as lower quality potential habitat or following hand searching if trees must be felled out of season.~~

The FMP shall also set out the procedures to be followed in the event Hochstetter's frogs are encountered. These procedures are to be developed in consultation with the DoC's Frog Recovery Group.

- (ii) Subject to obtaining the necessary landowner approvals, Clarks Bush (south-east of the Project Site) Spragg's Track (the bush adjoining Parau Sludge Disposal Site to the west and east of Lower Nihotupu Reservoir) is the preferred location to release relocated fauna. This area is shown in the Huia Replacement WTP Project – Indicative Lizard Release Site. Intensive Pest control (in accordance with Condition 118 Table 2) and habitat enhancement is required in and around release site(s) prior to relocation of any target fauna. These measures are to enhance relocation success for native fauna. Where relocated fauna is released at this location, pest control shall be undertaken for a duration of 10 years post-release.
- (iii) Native bat management procedures prepared by a suitably qualified and experienced field ecologist holding a permit from DoC certifying the holder as competent for bat research and management skills. The bat management procedures shall detail:
- Pre-vegetation removal bat survey methodology including a native bat survey monitoring programme;
 - Procedures if no bat activity is recorded;
 - Procedures to be followed if bat activity is recorded;
 - Procedures in the event of finding dead or injured bats.

Where applicable, the native bat management procedures shall be in general accordance with the most recent DoC guidelines "*Tree removal protocols for areas where bats are present*".

- (iv) A detailed schedule of seasonal constraints and optimal work intervals shall be included in the final EMP to ensure that vegetation clearance is carried out with consideration for bird, lizard, bat, frog and kauri snail seasonal constraints.

Advice note: For the avoidance of doubt, vegetation clearance within the works footprint does not have to be completed in a single season. Vegetation clearance can be staged to be spread across different seasons recognising various seasonal ecological constraints. Vegetation clearance within each of the project footprints (being the Replacement WTP, Reservoir 1 and Reservoir 2) should, as far as practicable, be completed in a single season and outside of winter months. For the avoidance of doubt, this applies separately to each of the project footprints (i.e., it is anticipated that vegetation clearance within each of these areas will occur at different stages of construction).

- (c) Vegetation clearance within the works footprints shall, as far as practicable, take place outside the native bird breeding season (August-February inclusive). If vegetation clearance is undertaken during the main breeding season, a bird and nest survey shall be undertaken by an appropriately qualified and experienced field ornithologist ("Project Ornithologist"). The Project Ornithologist shall undertake all avifauna work including the sighting and deployment of acoustic recorders, analysis of sound files and nest surveys. The bird and nest survey protocol is as follows:
- Any vegetation scheduled for removal shall be surveyed for any native bird nests within 24 hours prior to clearance.
 - If an active native bird nest is identified during the visual inspection, all vegetation removal within 20m of the nest shall cease until the Project Ornithologist has confirmed that the nest has failed, or the chicks have fledged. This area shall be clearly demarcated to ensure the vegetation is not accidentally felled.
 - Once an area of vegetation has been confirmed clear of active native bird nests, vegetation clearance shall be initiated as soon as possible to prevent birds establishing further nests.
- (d) ~~A Revegetation Plan using plant material eco-sourced from the Waitakere Ecological district with a 10-year maintenance period shall be prepared for all parts of the Project Site that are outside the Project development area. This shall include riparian planting and mitigation and restoration planting such as:~~ A Revegetation Plan with a 10-year maintenance period shall be prepared for all parts of the Project Site that are outside the Project development area. This shall utilise plant material eco-sourced from the Waitakere Ecological District for riparian planting, mitigation planting and restoration planting such as:
- a) Exposed bush edges, old tracks and open areas shall be revegetated with fast growing forest edge species to buffer the forest interior, inhibit weed encroachment and accelerate regeneration. These new edges shall be planted with low-growing, lizard-friendly species such as pohuehue and shrubby *Coprosma* species to enhance these areas as habitat for lizards; and
 - b) Riparian buffer zones adjacent to watercourses within the Project Site shall be planted with species to buffer and enhance the watercourse and adjacent forest areas with a minimum width of 10m for the true right bank of the Armstrong-Manuka Stream.
24. The EMP shall be prepared in consultation with DoC, the Royal Forest and Bird Protection Society of New Zealand ('Forest and Bird'), Te Kawerau ā Maki and the CLG. The EMP shall be provided to DoC for its review, prior to the EMP being finalised. If comments are provided by DoC within 20 working days, the Suitably Qualified and Experienced Person who prepared the EMP shall amend the EMP where appropriate, noting why DoC's recommendations were or were not adopted.

The amended EMP shall be provided to the Council for written approval in accordance with Condition 19.

25. The Consent Holder shall submit the final EMP to the Council at least twenty (20) working days prior to the commencement of works (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing) for written approval that the EMP complies with the requirements of Conditions 20 to 23, as applicable. The EMP shall be prepared by a suitably qualified person with reference to relevant specialists as required. No works shall commence until the EMP, or the EMP for that stage of works, has been approved by Council.

D. Earthworks and Vegetation removal

~~Part I: Site preparation earthworks and vegetation removal~~

~~Advice Note: The conditions in Section D: Part I below apply to the initial site preparation works only, including geotechnical investigations, vegetation clearance and the removal and disposal of organic material (including topsoil). For the avoidance of doubt, they do not apply to the bulk earthworks phase of works once the site preparation earthworks and vegetation removal is complete. Bulk earthworks conditions are set out in Section D: Part II.~~

Kauri Dieback Management Plan

Phytophthora Risk Management Plan Requirements

26. The Consent Holder shall submit a *Phytophthora* Risk Management Plan (PRMP) to the Council for written approval in accordance with the timeframes set out in Condition 19. The PRMP shall be prepared by suitably qualified experts in erosion and sediment control, biosecurity, *Phytophthora* species, plant pathology and related disciplines and shall be prepared in accordance with the Draft KDMP. ~~The KDMP shall be prepared in consultation with DoC, the Royal Forest and Bird Society of New Zealand, the Auckland Conservation Board and Te Kawerau ā Maki.~~
27. ~~The overall intent~~ objective of the PRMP is to ensure that the works do not exacerbate further the movement of *Phytophthora* species by creating or intensifying routes of dispersal within or from the Project Site beyond that which currently occurs through passive runoff. The purpose of the PRMP is to provide a comprehensive document that sets out the management protocols and adaptive management approach, and monitoring measures to be implemented to avoid or minimise the risks of spreading *Phytophthora* species.
Advice note: For the avoidance of doubt, the PRMP and Traffic Light System must follow best practice in order to avoid or minimise the risk of spreading *Phytophthora* beyond the Project Site. Principles such as minimising the time of vegetation clearance and earthworks, containment and treatment of water will be applied to all activities
28. The PRMP shall, as a minimum, stipulate or include:
 - (a) The *Phytophthora* species hygiene protocols to be followed by all staff, contractors and visitors to the site including during flora and fauna surveys, vegetation clearance, riparian and revegetation planting activities, earthworks and construction. These protocols shall meet or exceed the Auckland Council kauri hygiene SOP and Biosecurity (National PA Pest Management Plan) Order 2022. Site wide hygiene protocols are to include, but are not limited to:
 - i. ~~Washdown facilities~~ Site hygiene stations (vehicles, machinery and personnel) at all entry and exit points on the Project Site and between traffic light areas (as specified in Condition 37) with separate boot and equipment wash facilities at all KCZ entry points.

- ii. Wastewater collected and contained onsite until it can be sterilised onsite or disposed of offsite at an approved facility.
 - iii. Clear delineation of earthworks / native vegetation boundary. This shall include mapping of earthwork boundaries overlaid with placement of site hygiene facilities, site entrance points and any kauri root zones.
 - iv. Design details for site hygiene stations, the description and placement of consistent *Phytophthora* species hygiene signage, and the disposal of hygiene station water and Sterigene run-off.
- (b) Measures to ensure How run-off from washdown facilities will be managed to avoid:
- i. Re-contaminating equipment and vehicles etc., as they leave the facility and between 'traffic light areas'.
 - ii. Creating wet or muddy conditions in the site that pose a risk of contaminating other equipment, or creating conditions such as standing puddles that allow *Phytophthora* species to propagate.
 - iii. Run-off leaving the washdown facility without containment; and
 - iv. Creating any further biosecurity risks or ecological impact.
- (c) Details of the ongoing on-site training and induction sessions to be updated regularly to ensure that all plant operators, site staff and visitors are informed of the relevant PRMP and Traffic Light System (Condition 37) upon their first entry to the site, and the general content of training on *Phytophthora* species management that will be delivered to all plant operators, site staff and visitors that will access the site during the course of the works. In addition, weekly toolbox meetings on hygiene protocols for all operational staff shall be recorded, minuted and retained onsite and made available for audit. Training to be performed by an independent specialist and experienced *Phytophthora* species contractors.
- (d) Measures that will be put in place during site establishment (including establishing erosion and sediment control devices) to prevent the spread of *Phytophthora* species.
- ~~(e) How works will be planned and sequenced such that plant, vehicles and materials will be able to remain on site for the duration of the works for which they are required.~~
- ~~(f) How works will be staged to restrict vegetation clearance across the site at any one time. Note: In accordance with the draft KDMP, the maximum staged area is 1,500m² unless a different area is set out in the approved KDMP.~~
- ~~(g) How works will be staged to limit areas of soil disturbance during the topsoil removal phase. Note: In accordance with the draft KDMP, the maximum staged area is 3,000m² unless a different area is set out in the approved KDMP.~~

- ~~(i) Controls to reduce soil and sediment loss and mitigate surface water run-off. Unless otherwise set out in the approved KDMP, as far as practicable a two-stage process shall apply to all catchments with a primary device sized based on a 3% catchment area storage volume and a secondary device to capture all surface flows in storms up to, as a minimum, the 1 in 10-year storm event from the specific catchment.~~

Advice Note:

~~The intention of this condition is for the primary device to consider the “at source” capture and settlement of sediment, while secondary treatment shall be sized for all flow from the maximum sized open catchment in a 1 in 10-year storm event. The secondary device shall afford an opportunity for “treatment” of captured surface water run-off prior to discharge to the downstream environment (refer Condition 29 below).~~

- ~~(k) How erosion and sediment control devices designed to capture surface run-off from exposed areas have been designed to ensure sediment treatment of captured water prior to discharge.~~
- ~~(n) Procedures to determine if material is suitable for reuse onsite in lieu of off-site disposal. Where material is not to be reused onsite, how material removed from the Project Site will be contained, transported and disposed of in a manner that poses minimal risk of spreading *P. agathidicida*.~~
- (e) Measures to ensure surface run off from bulk earthwork catchments is discharged without cross contamination of run off from the surficial soil (including topsoil) clearance and disposal catchment(s).
- (f) Run-off management (including any treatment) placement and design specifications. This shall include:
- i. Details of on-site detention including pond size and the basis for this.
 - ii. Design of the water detention and treatment system which must incorporate the following risk minimisation actions:
 - Minimise the duration of vegetation felling, surficial soil excavation and earthworks.
 - Maximise the capture of runoff from the site for treatment prior to discharge to achieve a minimum of a 1 in 20-year storm unless demonstrated that it can be reduced by evidence that includes the efficacy of the treatment process and a residual risk assessment.
 - Separate runoff from the ‘red and orange areas’ and detain/treat this runoff separately from other areas (*Advice note: for the avoidance of doubt, this provides for runoff from red and orange areas to be detained and treated together, separately from other areas*).
 - Provide details of the efficacy of the water treatment process including the ChTMP and response mechanisms when the water is

too turbid to treat (e.g., returned to holding pond for further treatment or increased time under UV).

- Incorporation of multiple treatment stages in the treatment train approach.
 - UV treatment of the pond/storage discharge, including testing to comply with the agreed pathogen removal standard under the PRMP.
 - Identify deposition zones and required flow rate at which deposition does not occur between the site and marine environment.
 - Management procedures, such as the physical cover of exposed work site, will be implemented when rainfall events are forecast that may impact the efficacy of the treatment process as determined by the Site Hygiene Manager or otherwise set out in the PRMP.
- iii. The residual risk of *Phytophthora* species discharging to the receiving environment.
- iv. The design shall also take into consideration those requirements set out in the Traffic Light system (Condition 37).

Advice note: All practicable steps shall be taken to detain and treat water as set out in the PRMP. The brief periods where there may not be sufficient capacity to detain water in a high-volume rainfall event shall be identified and addressed in the risk register required by Condition 28(i) e.g., establishment and decommissioning of the pond detention/storage requirements and/or commencement of deep excavations, noting that as far as practicable these activities shall be scheduled to be undertaken in dry weather conditions.

- (g) Additional requirements in relation to Kauri Containment Zones (KCZ), ~~identified in accordance with Condition 28~~ within the Project Site including:
- i. How the KCZ will be protected from access, identified and signposted to clearly communicate the delineation and protocols required in relation to the KCZ.
 - ii. How works within KCZ will be carried out in a manner that minimises the impact on the kauri and the risk of introducing or spreading *Phytophthora* species within, from or between KCZ.
 - iii. Identification of the suitably qualified and experienced person who will supervise works within KCZ.
 - iv. The design and construction methodology that will be employed in establishing and maintaining accessways that intersect KCZ such that vehicles, plant and machinery will have separation from bare soil or kauri roots adequate to avoid damaging or compacting kauri roots and avoid tracking of material into, within or out of the KCZ.
 - v. Methods used to remove all soil from, and decontaminate vehicles, equipment, personnel, footwear etc when entering and exiting the KCZ, and how run-off from this activity will be contained and disposed of in a manner that poses minimal risk of spreading *Phytophthora* species.

- (h) A list of activities and associated risk register and matrix, and detailed mitigation and controls for those activities.
- (i) The collection, maintenance and reporting of records pertaining to:
 - i. Hygiene facility maintenance.
 - ii. Training and inductions.
 - iii. Vehicle and equipment hygiene at each traffic light area boundary location.
 - iv. Maintenance and auditing of water treatment train process approach and performance.
 - v. Soil and vegetation removal and transport hygiene off-site.
 - vi. Hygiene protocols for all riparian and revegetation planting.
 - vii. Spillages or other incidents that may enable pathogen movement.
- (j) Auditing processes and the planned response for non-compliance with any of the requirements in the PRMP or where treatment inadequacies are identified.
- (k) Specification of the responsibilities of the Site Hygiene Manager, reporting and contact procedures. Responsibilities must include the ability for the Site Hygiene Manager to make minor changes to site hygiene protocols and site management in relation to *Phytophthora* species deemed necessary to address risk factors or operational changes, and to respond to issues identified in the weekly toolbox meetings to ensure that any issues are addressed immediately. Any amendments are to be notified to the Council within five (5) days of the change. Records of all changes are to be documented and held onsite by the Site Hygiene Manager for the duration of the Project.
- (l) Protocols for the movement of soils and soil-contaminated equipment, personnel and vehicles between staging areas on-site and protocols for off-site movement, including transport vehicle hygiene, all transport routes, accidental spillage response, and the covering and sealing of trucks to prevent escape of soil and dust.
- (m) ~~How~~ Protocols to prevent the introduction of *Phytophthora* species to the site in regard to sourcing of brought-in materials, vehicles, equipment, plant stock, personnel, personal equipment or other risk goods (water, soil and organic material).
- (n) Measures to collect and dispose of sediment from sediment and erosion control devices post completion of the topsoil removal phase (and prior to the bulk earthworks phase commencing) to an approved facility.
- (o) Details on how drainage, run-off, or other water discharges from the site will be directed away from kauri and their rootzones.
- (p) Procedures to monitor sediment tracking or deposition (including dust and dirt) outside of the Project site and how this will be responded to and remediated in a timely manner.

29. Key principles of the PRMP must be displayed prominently at key locations, including clear signage noting the presence of PA on site and the requirement for *Phytophthora* hygiene measures at the site entry/exit and all traffic light boundaries. A master copy of the PRMP and Traffic Light System (Condition 37) must be held at the site office and be accessible to all staff and contractors.
30. Access to the site will be controlled through designated entry and exit points.
26. ~~The KDMP shall specify a soil sampling regime in relation to *P. agathidicida* which shall be undertaken at the same time as the geotechnical investigation phase of works. The soil sampling should be undertaken in areas where the previous Kauri Dieback testing has shown a positive result, in low lying areas (e.g. surface water flow paths) and within the tree root zone of kauri and large trees in the Project Site, or as otherwise determined by Condition 27 below.~~
27. ~~The *P. agathidicida* sampling regime and methodology for collection of samples must be developed by an appropriately qualified plant pathologist, with advice from a geotechnical engineer and qualified arborist, and as a minimum shall include testing for *P. agathidicida* at:~~
- ~~(a) the surface;~~
 - ~~(b) the maximum depth of the organic soil layer;~~
 - ~~(c) a minimum depth of 50cm further below the maximum depth of the organic soil layer;~~
 - ~~(d) at further depths as required to indicate the depth at which kauri dieback occurs across the site.~~
28. ~~The *P. agathidicida* testing results shall inform the appropriate depth of excavation to ensure all soil to the depth determined in accordance with Condition 27, including organic material and surface subsoil (immediately below topsoil), is disposed of to an appropriate facility to receive *P. agathidicida* (in accordance with Condition 59C). The depth shall be agreed by an appropriately qualified plant pathologist, arborist and geotechnical engineer.~~
- 28A ~~The KDMP shall specify a *P. agathidicida* sampling regime, developed by an appropriately qualified pathologist, the contractor and an Erosion and Sediment Control (ESC) specialist to audit all specified hygiene and containment measures to ensure their effectiveness. The methodology for collection of samples, including location and frequency, shall be determined based on the advice of the qualified plant pathologist, contractor and ESC specialist.~~
29. ~~The KDMP should be reviewed and updated to reflect the best practice for the prevention and treatment of kauri dieback, to ensure that when works commence, the most up to date and appropriate controls are in place to manage the spread of kauri dieback disease. This shall include potential methodologies to treat captured water to eliminate *P. agathidicida* prior to discharge.~~

Peer review panel

31. The Consent Holder shall engage, at its own cost, a Peer Review Panel ("the Panel"). The Consent Holder shall invite the following parties to identify appropriately qualified representatives on the Panel:

- (i) Te Kawerau ā Maki representative
- (ii) The Tree Council Incorporated (up to two representatives)
- (iii) The Titirangi Protection Group (up to two representatives).

The Panel may also comprise additional independent experts as agreed by the Consent Holder, the Tree Council and the Titirangi Protection Group.

32. The draft PRMP, Traffic Light System (Condition 37) and any substantial amendments not provided for under Condition 28(k) (and associated SOP) shall be circulated to the Panel for review and comment prior to being submitted to Council for approval. The draft PRMP shall be provided to the Panel no later than 60 working days before works are scheduled to commence, or in the case of a staged PRMP 60 working days prior to works on that stage commencing. The Panel shall provide their written review comments within a 20-working day period.

32B. The Panel shall be provided with the Management Plans (required under Condition 19) for the purpose of ensuring the risk register required under Condition 28 is complete and that all activities in these Management Plans that have the potential to exacerbate the movement of *Phytophthora* species have been identified and addressed in the risk register and PRMP. Any required additions to the risk register and PRMP shall be identified within a 20-working day period.

33. The draft PRMP shall be amended in accordance with the review comments received from the Panel. Where the Consent Holder does not update the draft PRMP in accordance with the review comments, the reasons for this shall be provided to the Panel and to the Council when submitting the final PRMP for approval.

Approval and implementation of the PRMP

34. The Consent Holder shall submit the final PRMP and any substantial amendments not provided for under Condition 28(k) to the Council for approval at least twenty (20) working days prior to the commencement of works for written approval that the PRMP complies with the objective and the requirements of Conditions 26 to 30, as applicable. No works shall commence until the final PRMP, or the final PRMP for that stage of works, has been approved by Council.

35. All works shall be undertaken in accordance with the Auckland Council approved final PRMP and Traffic Light System. The Consent Holder shall follow the relevant protocols and procedures included in the final PRMP and Traffic Light System at all times.

~~25(p) That the applicant will follow the protocols and procedures included in the KDMP at all times, except under the express circumstances (if any) where an exemption to any of the above might apply.~~

Management of kauri dieback – During works

- ~~30. There shall be no deposition of earth, mud, dirt, sludge or slurry or other debris that might contain *P. agathidicida* on any road or footpath resulting from earthworks or transport activity on or from the subject site or associated sites such as landfill disposal facilities utilised in the course of the works. In the event that such deposition does occur, it shall immediately be removed.~~
- ~~31. Under no circumstances is any soil from the site preparation earthworks to be deposited within the site but outside the delineated sub-catchment earthworks areas.~~
- ~~32. Sediment control devices, drains, and perimeter controls treating or controlling run-off shall direct run-off away from kauri and their KCZ. Vehicle washdown facilities shall not be located within or allow run-off or splash to enter any KCZ.~~
- ~~33. Where material is suitable for reuse onsite this shall be prioritised in lieu of off-site disposal.~~
- ~~34. Fill, soil, aggregate, organic material (or other substances or goods that may harbour *P. agathidicida*) brought into the Project Site shall be sourced from areas free, as established by inspection and diagnostic testing (where relevant), of kauri dieback disease and without kauri in the source site.~~
- ~~35. Planting stock species lists used for planting associated with the project shall not include *Agathis* species, or species identified as hosts or carriers of *P. agathidicida* according to current scientific knowledge at the time of planting.~~
- ~~36. Any sludge and sediment removed from sediment control devices shall be disposed of at an approved landfill facility.~~
- ~~37. A KCZ shall be established around all kauri on the Project Site, with the area being defined by three times the canopy dripline radius of the tree in question or as otherwise specifically determined onsite for each kauri by a suitably qualified arborist. This shall include kauri with trunks outside of the Project Site but with rootzones extending into the Project Site. The additional KCZ requirements under Condition 25(e) shall be in place for the duration of the works.~~

Staging of works

36. Staging of vegetation clearance, topsoil and surficial soil removal, bulk earthworks and associated standard operating procedures (SOP) and limitations shall, as a minimum, include the measures set out below in relation to:
 - (i) Traffic-light system
 - (ii) Geotechnical investigations
 - (iii) Vegetation clearance
 - (iv) Surficial soils
 - (v) Bulk earthworks
 - (vi) Building stage

Traffic-light system

37. Staging of works shall include the implementation of an SOP traffic light system or similar to manage the spread of *Phytophthora* species as follows:
- (i) Red: Areas of removal, disturbance and stockpile of surficial soils, organic materials, water and any other high *Phytophthora* risk materials (as identified by a *Phytophthora* expert or an ecologist with appropriate expertise).
 - (ii) Orange: Bulk earthworks activities beyond surficial soil removal provided for in 'red' above.
 - (iii) Yellow: Areas with stabilised hardfill and measures in place to avoid cross contamination of run off from red or orange areas. Localised excavations can occur within stabilised areas across the Project footprint (e.g., localised excavations that are required to form building foundations and excavations, utility and drainage services, etc).
 - (iv) Green: Areas located outside the subject site and after any machinery, equipment and personnel have been decontaminated.
38. Machinery can only freely progress through the traffic light system from lower to higher risk areas. Movement of machinery and equipment from higher risk to lower risk areas shall be minimised. To go from a higher to a lower risk area, the machinery, equipment and/or personnel must be decontaminated as set out in the PRMP.
39. As far as is practicable, machinery should remain on site until completion of the staging.
40. Different traffic light areas are to be appropriately flagged on the ground and adjusted as circumstances change. The traffic light system shall also apply to any stockpiling of material.
41. All works shall be conducted in a sequential and staged manner in accordance with the traffic light system, staging plans and SOP to be finalised following completion of the Replacement WTP design.
42. Except for the creation of the detention pond, works shall generally proceed from a higher elevation (lower risk) to a lower elevation (higher risk) in accordance with the traffic light system.

Geotechnical investigations

43. A geotechnical investigation-specific PRMP shall be developed as a standalone plan to manage geotechnical investigations to inform future works and submitted to the Council for approval in accordance with Condition 19. The geotechnical investigation-specific PRMP is subject to the Panel process set out in Conditions 31 to 33 above. The objective of the geotechnical investigation-specific PRMP is to ensure that geotechnical investigations do not exacerbate the movement of *Phytophthora* species by creating or intensifying routes of dispersal within or from the Project Site beyond that which currently occurs through passive runoff.

Advice note: For avoidance of doubt, the geotechnical PRMP only requires a subset of management measures appropriate to the limited extent of physical works to be undertaken on site.

44. The clearance of vegetation and soil disturbance shall be limited to that required to undertake the investigations (which includes access).
45. No vegetation, earth or soil (except core samples) shall leave the site.
46. An SOP shall be developed for the handling and disposal of core samples.
47. All equipment, vehicles, personnel etc. shall be decontaminated prior to leaving site.

Vegetation clearance

48. No vegetation shall be transported off site. Stumps shall remain in situ to be removed with surficial soils to an MPI approved facility.
49. The first stage of vegetation clearance is limited to that required for the establishment of the run-off detention pond, chemical treatment, filtration and UV treatment process (the Treatment Train). The detention pond, chemical treatment, filtration and UV treatment process must then be established and fully functioning to design specifications prior to further vegetation clearance commencing.
50. Vegetation clearance shall be limited to the areas set out in the approved PRMP.
51. All works shall be conducted in a sequential and staged manner in accordance with staging plans and SOP to be prepared following completion of the Replacement WTP design.

Advice note: Vegetation clearance within each of the project footprints (being the Replacement WTP, Reservoir 1 and Reservoir 2) should, as far as practicable, be completed in a single season and outside of winter months. For the avoidance of doubt, this applies separately to each of the project footprints (i.e., it is anticipated that vegetation clearance within each of these areas will occur at different stages of construction).

Surficial soils

52. All works shall be conducted in a sequential and staged manner in accordance with staging plans, PRMP, Traffic Light System and SOP to be finalised following completion of the Replacement WTP design. Where a higher standard as outlined in the PRMP or other specific conditions does not apply, the principles of Auckland Council's 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) shall be adhered to as a minimum standard.
53. The earthworks disturbance areas shall be limited to 3,000 m² unless a different area is specified as set out in the approved PRMP.
54. Decanting earth bunds shall be sized to at least 3% of that catchment area from which flows shall be conveyed to a detention pond/storage.
55. Surface run-off will be managed through the use of:
 - (i) Clean water diversions bunds shall divert flows away from the works area. Bund formation shall not exacerbate the potential for the spread of *Phytophthora* species.

- (ii) Bunds shall be covered by a geotechnical fabric that will prevent contact and potential contamination of clean water with *Phytophthora* infected soils.
 - (iii) Water collected from areas that have been cleared of vegetation shall be conveyed to the detention pond.
 - (iv) Potentially *Phytophthora* contaminated water diversion bunds shall convey water from disturbed areas (surficial soils) initially to a decanting earth bund which shall then discharge to the detention pond/storage.
 - (v) All materials and risk goods (water, soil, or organic material) that leave the site shall be either decontaminated in accordance with the PRMP or be disposed of to an MPI approved disposal facility.
- 55B All perimeter controls shall be operational before earthworks commence. All 'cleanwater' runoff from stabilised surfaces including catchment areas above the Project Site shall be diverted away from earthworks areas via a stabilised system so as to prevent surface erosion.

Bulk earthworks

56. All works shall be conducted in a sequential and staged manner in accordance with staging plans and relevant PRMP measures, Traffic Light System and SOP to be finalised following completion of the replacement WTP design. Where a higher standard as outlined in the PRMP or other specific conditions does not apply, the principles of Auckland Council's Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05) shall be adhered to as a minimum standard.
57. The earthworks disturbance areas shall be limited to 3,000m² unless a different area is specified as set out in the approved PRMP (noting this is for *Phytophthora* species management purposes and at the bulk earthworks stage more than one such area may be open at any one time).
58. Decanting earth bunds (DEB) shall be sized to at least 3% of that catchment area, from which flows shall be conveyed to the detention pond, or as otherwise determined by the PRMP.
59. Upon completion of the bulk earthworks, exposed surface(s) shall be stabilised (covered with hardfill) and only then can surface run-off from the stabilised catchment be conveyed directly to the receiving environment unless otherwise specified in the PRMP and only where these areas are classed as Yellow under the Traffic Light System.

Advice note: Following the completion of surficial soil removal and bulk earthworks platform formation across the development footprint, all earthworks areas will be stabilised (covered with hardfill). Localised excavations may then occur (e.g. localised excavations that are required to form building foundations and excavations, utility and drainage services, etc-as part of the Building Phase.

Building phase

61. The traffic light system is to remain in place for the duration of the works, including during the construction of the Replacement WTP, associated infrastructure and structures.
62. Appropriate site hygiene (including site hygiene stations for vehicles, machinery and personnel), and ESC in accordance with Auckland Council's GD05) shall remain in place for the duration of any construction activities occurring on the site.

Audit and ongoing compliance with the PRMP

63. The Consent Holder is responsible to engage an independent auditor to audit the performance of the implementation of the PRMP and Traffic Light System, including monitoring results and records.
64. Audit is to be undertaken on a frequency determined by the Site Hygiene Manager and no less than that specified in the PRMP. The results of the audit shall be provided to the Peer Review Panel.
65. Any non-compliances are to be remediated as soon as practicable. All non-compliances and the management response shall be reported to Auckland Council within two (2) days.

Part II: Bulk earthworks

~~Advice Note: The conditions set out in Section D: Part II below, including the ESCP required by Condition 66, apply to the bulk earthworks phase of the works only. The bulk earthworks conditions apply once all topsoil and has been removed from site in accordance with the conditions set out above.~~

~~— The depth at which excavations are to be deemed bulk earthworks shall be confirmed in accordance with Conditions X to X above.~~

General earthworks conditions

~~Advice Note: The conditions set out below apply to all earthworks activities on the Project Site.~~

Erosion and Sediment Control Plan

66. Prior to the commencement of bulk earthworks activity for each stage, finalised Erosion and Sediment Control Plans (ESCP) shall be prepared in accordance with Auckland Council's Guidance Document 005 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) and the preliminary erosion and sediment control plans provided in the application, except where a higher standard is detailed in the documents referred to in the conditions above, in particular Condition 28 ~~(Part I 'Site preparation earthworks and vegetation removal')~~, in which case the higher standard shall apply.
66. The ESCP shall include the following information:
- (a) Timing and duration of construction and operation of control works;
 - (b) Specific erosion and sediment control works (location, dimensions, capacity) in accordance with GD05, including staging details and stage-specific erosion and sediment controls. Erosion and sediment controls are to include:
 - i. established entrance ways;
 - ii. sediment retention ponds;
 - iii. silt fences and super silt fences;
 - iv. decanting earth bunds; and
 - v. clean and dirty water diversion bunds.
 - (c) Details relating to the management of exposed areas (e.g. grassing, mulching);
 - ~~(d) *Phytophthora* species hygiene protocols, in accordance with Condition 28 above, to be established at each construction site entrance and exit;~~
 - ~~(e) Specify measures to collect and dispose of sediment from sediment and erosion control devices to an approved facility;~~

- ~~(f) Establishment of washdown facilities at vehicle entry and exit points on the Replacement Huia WTP and Reservoir 1 sites; and~~
 - ~~(x) Measures to ensure surface run-off from bulk earthwork catchments is discharged without cross contamination of run off from the topsoil clearance and disposal catchment(s);~~
 - (g) Supporting calculations and design drawings;
 - (h) Details of construction methods;
 - (i) Catchment boundaries and contour information; and
 - (j) Cut and fill isopach plan.
 - ~~(k) earthworks activity on the subject site shall commence until the ESCP has been approved.~~
67. ~~All perimeter controls shall be operational before bulk earthworks commence. All 'cleanwater' runoff from stabilised surfaces including catchment areas above the Project Site shall be diverted away from earthworks areas via a stabilised system, so as to prevent surface erosion.~~
68. The ESCP shall be submitted to the Council for approval in accordance with Condition 19. No earthworks activity on the subject site shall commence until the ESCP has been approved. For the avoidance of doubt, the ESCP can be prepared as a standalone plan or as part of the PRMP.

Dewatering Plan

69. Prior to the commencement of bulk earthworks activity on the subject site a Dewatering Plan shall be prepared for dewatering any surface water and/or groundwater that becomes impounded in the excavation pits.

The objectives of the Dewatering Plan are:

- i. to set out the measures to ensure excavations are not inundated by surface and/or groundwater; and
- ii. to ensure all dewatering discharges are treated and disposed of appropriately, and in accordance with any requirements in the PRMP.

The Dewatering Plan shall include, but not be limited to:

- (a) Dewatering methodology;
- (b) Pump size and specifications;
- (c) Treatment train approach;
- (d) Discharge locations; and
- (e) Impounded water treatment methodologies in accordance with the approved Chemical Treatment Management Plan (required under Condition 86).

The Dewatering Plan shall be submitted to the Council for written approval in accordance with Condition 19. No bulk earthworks activity on the subject site shall commence until the plan has been certified.

Erosion and Sediment Management

70. All water in the sediment retention ponds and decanting earth bunds shall be chemically treated in accordance with the approved Chemical Treatment Management Plan (ChTMP).
71. Prior to each stage of earthworks commencing, including any streamworks, an as-built certificate signed by a suitably qualified and experienced person shall be submitted to the Council, to certify that the erosion and sediment controls specific to that stage have been constructed in accordance with the approved erosion and sediment control plans and GD05.
72. Certified controls shall include the stabilised entrance ways, sediment retention ponds, super silt fences, silt fences, decanting earth bunds and clean and dirty water diversion bunds. The certification for these measures shall be supplied immediately upon completion of their construction. Information supplied, if applicable, shall include:
 - (a) Contributing catchment area;
 - (b) Shape and volume of structure (dimensions of structure);
 - (c) Position of inlets/outlets; and
 - (d) Stabilisation of the structure.
73. Erosion and sediment control measures shall be constructed and maintained in accordance with GD05, and any amendments to this document, except where a higher standard is detailed in the documents referred to in conditions above, in which case the higher standard shall apply.
74. There shall be no deposition of earth, mud, dirt or other debris on any road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed in accordance with the protocols specified in the PRMP. In no instance shall roads or footpaths be washed down with water without appropriate *Phytophthora* species hygiene and erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

Advice note: In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted in addition to those specified in the PRMP to prevent or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces ~~using street sweepers~~*
- *silt and sediment traps*

- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned.

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Council for more details.

~~Alternatively, please refer to GD05.~~

75. Upon completion or abandonment of earthworks on the subject site all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Council.

Advice note: Should the earthworks be completed or abandoned, bare areas of earth shall be permanently stabilised against erosion. ~~Measures may include:~~

- ~~• the use of mulching;~~*
- ~~• top soiling, grassing and mulching of otherwise bare areas of earth;~~*
- ~~• aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.~~*

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Council for more details. Alternatively, please refer to GD05.

76. The operational effectiveness and efficiency of all erosion and sediment controls and associated measures specifically required as a condition of resource consent or by the earthworks methodology shall be maintained throughout the duration of earthworks, or until the site is permanently stabilised against erosion.
77. The sediment and erosion controls shall be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record shall be maintained of the date, time and any maintenance undertaken in association with this condition which shall be forward to the Council on request. Actions must be taken to prevent under performance of the erosion and sediment controls and the treatment train prior to predicted storm events as required by the PRMP.

Seasonal Restrictions

78. No earthworks or streamworks on the site shall be undertaken between 1 May and 30 September in any year, without the prior written approval of the Council. Revegetation/stabilisation is to be completed by 30 April in accordance with measures detailed in GD05 and any amendments to this document, and in accordance with relevant requirements set out in the PRMP and Traffic Light System.

Advice note: Any 'Request for winter works' submitted in accordance with Condition 78 will be assessed against criteria in line with the information

required to assess a comprehensive application. Principally that will focus on the level of risk, the propensity to manage that risk with contingency planning and a 'track record' of good compliance with consent conditions. Each 'Request for winter works' submitted, should include the following:

- *Description of works proposed to be undertaken between 1 May and 30 September and the duration of those works;*
- *Details of proposed measures to maintain *Phytophthora* species hygiene and to prevent sediment discharge from these specific works, particularly during periods of heavy rainfall;*
- *Details of area(s) already stabilised;*
- *Revised erosion and sediment control plan detailing stabilisation to date and time-line/staging boundaries showing proposed progression of stabilisation;*
- *Contact details for contractor who will undertake stabilisation of the site including date(s) expected on site;*
- *Alternatives/contingencies proposed if the contractor referred to above becomes unavailable;*
- *Details of site responsibilities, specifically who is responsible for *Phytophthora* species hygiene and erosion and sediment controls and stabilisation processes over the specified period.*

Baseline Monitoring and Adaptive Management

79. Prior to commencement of earthworks activity on the site an Adaptive Management Plan (AMP) shall be submitted to the Council for written approval in accordance with Condition 19. The AMP shall be prepared in consultation with Te Kawerau ā Maki.

The objective of the AMP is to set out a monitoring and reporting programme for the erosion and sediment control devices and downstream receiving environment, and to set specific trigger levels for management actions if specified limits are exceeded.

The AMP shall include, but is not limited to:

- (a) Baseline testing;
- (b) Trigger levels;
- (c) Weather monitoring (rainfall, forecasting);
- (d) Freshwater monitoring (water quality, MCI, sediment deposition, *Phytophthora*);
- (e) Erosion and Sediment control device monitoring (including outlet turbidity) and maintenance requirements (either provided here or in the PRMP as required by Condition 28);
- (f) Treatment train efficacy and performance in eliminating *Phytophthora* from water (either provided here or in the PRMP as required by Condition 28);
- (g) Reporting requirements (exceedance, quarterly, annual); and

- (h) Management actions.
80. The requirements of the AMP under Condition 79 and any subsequent revisions shall be implemented throughout the duration of the earthworks activity on the sites.
81. A Freshwater Baseline Report (FBR) containing the pre-construction in-stream monitoring required under Condition 79 shall be provided to the Council for written approval in accordance with Condition 19. prior to any earthworks or streamworks commencing. The FBR shall be prepared in consultation with Te Kawerau ā Maki. The minimum requirements of this report shall be:
- (a) Freshwater Monitoring sites shall be located both upstream and downstream of each earthworks site on both the Yorke Stream and Armstrong Stream. The locations of these monitoring sites will allow water quality to be tested as freshwater flows into the site and downstream of the site.
 - (b) The pre-construction environmental conditions shall be represented by:
 - (i) Water quality (turbidity, pH);
 - (ii) Sediment deposition over a transect; and
 - (iii) MCI sampling.
82. Pre-rain forecast inspections as defined within the AMP must be undertaken at a minimum of 24 hours prior to the forecasted event. If the forecast is not made available within 24 hours of the proposed event, all reasonable attempts shall be made to inspect the site prior to the proposed event.
83. An earthworks catchment which has been stabilised as a result of a trigger level exceedance as defined and required by the AMP may only be re-opened on the written approval of the Council.
84. Any proposed revisions to the AMP must be submitted to the Council for written approval prior to formalising and implementing the revised AMP.
85. If in the Council's opinion, there are changes required to be made to the AMP as a result of observing inefficiencies on site or identified within the site reporting, the Council may request that the AMP be updated to address these inefficiencies. If a request is made, the revised plan shall be submitted to the Council within five working days of the request for certification prior to implementation.

Chemical Treatment Management Plan

86. Prior to the commencement of earthworks at the site, a Chemical Treatment Management Plan (ChTMP) shall be submitted to the Council for written approval in accordance with Condition 19. The objective of the ChTMP is to set out management methods, controls and reporting standards to be implemented relating to the chemical treatment of the sediment control devices required by the ~~ESCP~~ PRMP.

The ChTMP shall include, but not be limited to:

- (a) Specific design details of the chemical treatment system based on a rainfall activated dosing methodology for the site's sediment retention ponds and batch dosing methodology for dewatering the excavation pits;
- (b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
- (c) Details of optimum dosage (including assumptions);
- (d) Results of initial chemical treatment trial;
- (e) A spill contingency plan; and
- (f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.

For the avoidance of doubt, the ChTMP can be prepared as a standalone plan or as part of the ESCP or PRMP. ~~required by Condition 26 above.~~

Disposal of soil

87. Organic material and surface ~~subsoil~~ surficial soil (immediately below topsoil) shall be disposed of to an appropriate facility approved to receive ~~*P. agathidicida*~~ *Phytophthora* infected material.

All excavated bulk fill material shall be reused on site wherever possible, and otherwise disposed of to an MPI approved ~~appropriate~~ facility approved to receive ~~*P. agathidicida*~~ *Phytophthora* infected material.

The disposal location(s) shall be determined in collaboration with Te Kawerau ā Maki, and subject to gaining the necessary approvals shall be within the local area. Where this is not possible, then an alternate disposal location shall be determined in collaboration with Te Kawerau ā Maki.

Advice note: *Watercare's existing Parau sludge disposal site has been identified as a potential preferred location for disposal of organic material and surficial soil (immediately below topsoil) and for bulk earthworks material that cannot otherwise be retained or reused on site. Watercare shall undertake best endeavours to seek the necessary statutory approvals to authorise the Parau site as an approved facility in collaboration with Te Kawerau ā Maki.*

E. Streamworks

88. The protocols to manage the risk of introducing or spreading *Phytophthora* species within or off the Project Site are to be set out in the *Phytophthora* species PRMP required under Condition 26 - 30. Streamworks shall be undertaken in accordance with the relevant PRMP protocols and in accordance with Conditions 36 - 42 (Staging of works and Traffic Light System) ~~Management of Kauri dieback - During works~~.

Yorke Stream Diversion Design Plan

89. The Consent Holder shall prepare a Yorke Stream Diversion Design Plan (YSDDP) for the Project. The YSDDP shall be in accordance with the recommendations and Yorke Stream SEVm-P assumptions detailed in the Addendum to Stream Ecological Value Plan by Boffa Miskell, dated 26 November 2019. The objectives of the YSDDP are to ensure the proposed diversion channel:
- (a) Mimics, where practicable, the existing stream morphology for Yorke Stream and intermittent nature of the stream (including a minimum intermittent length of 70 m); and
 - (b) Achieves a Stream Ecological Value (SEV) of at least 0.65.
90. The YSDDP shall include:
- (a) Detailed design for the new length of stream, including typical long-sections and cross-sections;
 - (b) Design of features that enhance instream ecology values;
 - (c) A Riparian Planting Plan that aims to enhance the ecological function of the riparian zone adjacent to the diversion channel;
 - (d) A programme to monitor scour and erosion at the downstream extent of the diversion channel. If monitoring identifies new erosion that is attributable to the Project by a suitable qualified engineer, the Consent Holder shall implement remedial action in the form of stream stabilisation measures;
 - (e) Detailed design of any energy-reducing engineered structures required to minimise scour and erosion within the diversion channel, and at the downstream extent of the diversion channel should monitoring indicate this is required; and
 - (f) An ecological monitoring programme of the diversion channel to demonstrate it provides ecological benefit.
91. The Consent Holder shall submit the YSDDP to the Council in accordance with Condition 19 at least twenty (20) working days prior to the commencement of stream diversion works for certification that the YSDDP complies with the requirements in Conditions 89 and 90, as applicable. The YSDDP shall be prepared by a suitably qualified person.

Armstrong Stream Daylighting Design Plan

92. The Consent Holder shall prepare an Armstrong Stream Daylighting Design Plan (ASDDP) for the Project. The ASDDP shall be in accordance with the recommendations and Armstrong Stream SEVm-P assumptions detailed in the Addendum to Stream Ecological Value Plan by Boffa Miskell, dated 26 November 2019. The objectives of the ASDDP are to ensure the proposed diversion channel:
- (a) Mimics, where practicable, the existing stream morphology for Armstrong Stream and intermittent nature of the stream; and
 - (b) Achieves a Stream Ecological Value (SEV) of at least 0.74 for the upper section and 0.58 for the lower section.
93. The ASDDP shall include:
- (a) Detailed design for the new length of stream, including typical long-sections and cross-sections;
 - (b) Design of features that enhance instream ecology values;
 - (c) Design of engineered structures to provide access and passage for climbing fish;
 - (d) A Riparian Planting Plan that aims to enhance the ecological function of the riparian zone adjacent to the daylighted channel; and
 - (e) Detailed design of any energy-reducing engineered structures required to minimise scour and erosion within the daylighted channel, and at the downstream extent of the daylighted channel should monitoring indicate this is required.
94. The Consent Holder shall submit the ASDDP to the Council in accordance with Condition 19 at least twenty (20) working days prior to the commencement of stream daylighting works for certification that the ASDDP complies with the requirements in Conditions 92 and 93, as applicable. The ASDDP shall be prepared by a suitably qualified person.

Stream Restoration Plan

95. Prior to streamworks commencing a Stream Restoration Plan (SRP) shall be prepared in consultation with Te Kawerau ā Maki and submitted to the Council for certification in accordance with Condition 19.. The SRP shall incorporate all recommendations from the Addendum to the Stream Ecological Valuation Plan (Boffa Miskell, November 2019), including the SEVm-P assumptions for the diversion channel and daylighting sections. The SRP shall consist of the following:
- (a) Yorke intermittent stream diversion channel design including stream bank grades;
 - (b) Armstrong Stream daylighting channel design including stream bank grades;
 - (c) Long and cross sections of the stream channels demonstrating habitat heterogeneity in accordance with SEVm-P assumptions (including a minimum length of 70m for the Yorke stream diversion channel);

- (d) All Riparian Planting, true right and left bank riparian widths are to be in accordance with SEVm-P assumptions;
- (e) Plans identifying riparian planting zones (all measurements must be clearly depicted on the plans);
- (f) Appropriate species list of eco-sourced plants including planting densities to be applied across new planting areas and any infill planting areas;
- (g) All riparian planting shall be in accordance with the Auckland Regional Council Riparian Zone Management Strategy for the Auckland Region, Technical Publication 148, June 2001 (TP148);
- (h) A monitoring and maintenance plan for a period of no less than ten years to ensure that a 90% survival rate and canopy closure is achieved;
- (i) A weed management plan to ensure that the planting areas remain weed free for the length of the monitoring and maintenance period of ten (10) years; and
- (j) A programme to monitor scour and erosion at the downstream extent of the proposed Yorke Stream diversion channel. If monitoring identifies new erosion that is attributable to the Project by a suitably qualified engineer, the Consent Holder shall implement remedial action in the form of stream stabilisation measures or similar.

96. The Stream Restoration Plan shall be completed within the following timeframes:

- (a) The Armstrong Stream daylighting shall be undertaken during the first earthworks season of land disturbance associated with the construction of Reservoir 2 having commenced with riparian enhancement undertaken the following planting season.
- (b) The Yorke Stream diversion channel shall be created either before, or at the same time, as the loss of the existing section of Yorke intermittent stream on the replacement WTP site.
- (c) Enhancement of riparian planting along the length of the Yorke Stream diversion channel shall be undertaken, as far as practicable, immediately after completion of the diversion channel or during the following planting season. To the extent that it is not practicable to complete the enhancement planting at that time, or if further enhancement planting is required, this must be undertaken the following planting season upon completion of the construction works on the replacement WTP site.
- (d) All plantings shall be carried out between the months of May to August. Written confirmation in the form of a planting completion report shall be provided to the Council, within 30 working days of the stream planting works being completed. This report shall confirm the species and number of plants planted and that the planting has been completed in accordance with the approved plans.

97. The Consent Holder shall ensure that all machinery operates from the stream banks at all times and in accordance with relevant PRMP requirements and the Traffic Light System. No machinery shall enter the wetted cross section of the watercourses at any time.

98. All machinery shall be operated in a way which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during stabilisation and machinery servicing and maintenance. Refuelling and lubrication activities shall be carried out away from any water body such that any spillage can be contained so it does not enter the watercourse associated with this consent. The use of grouts and concrete products shall also be limited adjacent to the watercourse with all mixing of products carried out outside the 100-year floodplain area such that any spillage can be contained so it does not enter the Yorke Gully and Armstrong Streams.
99. Written confirmation in the form of an Offset and Compensation Report shall be provided to the Council, within 30 working days of each stage of the offset and compensation work being implemented and completed, confirming that the works have been completed in accordance with the approved Stream Restoration Plan.
100. Plant maintenance in accordance with the Stream Restoration Plan shall occur for 10 years. The 10-year period shall commence once all the naturalisation works for each respective stream have been completed. The Council shall be notified once the naturalisation planting has been completed.

Advice note: The ten year period can only commence once all planting has been completed to the satisfaction of the Council.

101. The Consent Holder shall monitor the SEV of the mitigation sites and the constructed stream channels at three (3), five (5) and ten (10) years after completion of the Armstrong stream daylighting and Yorke stream diversion channel creation respectively, or until the monitoring shows that the offsetting site or constructed stream channels have achieved the predicted SEV values (Table 1 and Appendix 2 of 'Addendum to Stream Ecological Valuation Plan', prepared by Boffa Miskell, dated 26 November 2019), whichever time period is the lesser. Monitoring shall be undertaken at times that avoid transient conditions, such as flood events.
102. Within two months of each round of monitoring being completed, the Consent Holder shall provide the SEV assessments and associated calculations used for monitoring the sites required by Condition 101 to the Council for written approval and comparison against the SEV values required to be met in Condition 103.
103. Where the monitoring concludes that the SEV values of the mitigation streams and constructed stream channel have not reached the predicted SEV value within ten (10) years of completion, a Further Offset Works Plan shall be prepared and submitted to the Council for approval. The Further Offset Works Plan shall include, but not be limited to the repair or improvement of mitigation works along the existing offset stream reaches to meet the predicted SEV values and further monitoring until such time that the requirements of the Further Offset Works Plan are achieved.

The SEV values to be met are:

Yorke Stream Diversion	Upper Armstrong Daylighting	Lower Armstrong Daylighting
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0.65	0.74	0.58
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Advice note: *In the event that a suitably qualified freshwater ecologist determines that the predicted SEV values when planted vegetation matures are unlikely to be met, offsite mitigation works may be required. The Future Offset Works Plan can address this and must ensure no net loss of ecological function based on the SEV values of the stream reach that have been lost.*

104. Where required by Condition 103, the Consent Holder shall provide the Further Offset Works Plan within six (6) months of monitoring, and shall implement the Further Offset Works Plan within six months of approval of the plan by the Council or during the next planting season (whichever is appropriate to the measures adopted).

F. Protective covenant or encumbrance

105. On completion of the works authorised under these consents, the Consent Holder shall enter into a covenant or encumbrance to:

- (a) Protect the Armstrong Stream restoration areas on the existing Huia WTP site;
- (b) Protect the high value SEA vegetation on the existing Huia WTP site; and
- (c) Protect the high value SEA vegetation in the south west corner of the replacement WTP site and the vegetation outside of the Replacement WTP footprint; and
- (d) Protect the Yorke Stream diversion channel and associated riparian planting.

Advice note: Those areas to be protected via a covenant or encumbrance are generally shown on Hearing Plan B: Overview: Site Protection, dated 21 February 2020 (attached). The final areas to be protected will be confirmed at the detailed design stage.

The covenant or encumbrance shall:

- (i) Secure the protection in perpetuity of these areas from future development;
- (ii) Require the Consent Holder to take measures to ensure that the area is maintained free of pest animals, noxious weeds, exotics and environmental pest plants; and
- (iii) Require that the Consent Holder should, as far as practicable, refrain from doing anything within the covenanted area that could prejudice the health or ecological value of the areas of native bush to be protected, its long-term viability and/or sustainability.

G. The Biodiversity Trust

~~Waima Biodiversity Trust~~

106. As soon as practicable after the grant of this consent and in any event prior to commencement of works being undertaken under this consent (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing), the Consent Holder shall establish a charitable trust ("The Biodiversity Trust") on the terms set out in Conditions 107 - 110, by finalising, executing and proceeding in accordance with the draft trust deed for the Trust referenced in Condition 2.
107. The resource management purposes of the Trust, as set out in the trust deed, shall be to ~~mitigate or~~ compensate for residual adverse ecological effects from the construction of the Replacement Water Treatment Plant and Reservoirs within an area of significant ecological vegetation.
108. The terms of the Trust Deed must, as set out in the draft trust deed, provide for the Trust to:
- (a) Be established as an accountable administrative structure committed to implementing the projects and achieving the targets ~~set out in the Waima Biodiversity Management Plan (WBMP) for the 380 ha Pest Management Area set out in Map 1 'Pest Management Proposal – Pest Management Areas' (PMSBR Area) of the PMSBR required by Condition 113.~~
 - (b) Provide an appropriate mechanism through which the following objectives of the PMSBR can be achieved:
 - i. To coordinate and increase conservation efforts to protect and restore viability to populations of native flora and fauna within the PMSBR Area by: Undertaking multi-species vertebrate pest management and German and common wasp control throughout the PMSBR Area to suppress pests below target thresholds, by contributing funding to an appropriate organisation or engaging suitably qualified contractors;
 - ~~Undertaking weed management throughout land owned by the Consent Holder, public reserve land and private properties (where landowner consent has been obtained), by contributing funding to an appropriate organisation or engaging suitably qualified contractors; and~~
 - ~~Monitoring of Argentine ants and effective eradication of localised populations (where assessed as viable);~~
 - ii. To repair and strengthen connective linkages throughout the PMSBR Area through enhancing native forest regeneration and long-term viability;
 - iii. To increase community-wide engagement in stewardship and sustainable environmental management of the PMSBR Area by seeking acceptance

of landowners and residents within the area for the Trust's activities on their properties.

~~v. To undertake biodiversity monitoring within the Waima BMP area by using key indicator species/guilds.~~

(c) Facilitate setting priorities and allocating funding for projects within the PMSBR Area to achieve these objectives; and

(d) Have measurable targets that the Trust is required to meet in order to achieve the objectives set out in (b) above ~~for~~.

~~i. Multi-species vertebrate pest management throughout the Waima BMP area;~~

~~ii. Weed management throughout land owned by the consent holder and public reserve land as required;~~

~~iii. 'Kauri Rescue' procedures;~~

~~iv. Monitoring and control of Argentine ants;~~

~~v. Biodiversity monitoring using key indicator species/guilds; and~~

~~vi. Other measures as determined by the Trust to be necessary or appropriate following each annual report.~~

109. At least three months prior to the commencement of construction, the Consent Holder shall provide a lump sum of ~~\$5,000,000~~ \$8,250,000 to the Trust. For the avoidance of doubt, the Trust shall have the ability to access additional funding from other sources in addition to the Consent Holder's contribution (including from the Consent Holder itself).

110. The terms of the Trust Deed shall also, as set out in the draft Trust Deed:

(a) Require the trustees of the Trust, in relation to their appointment of additional or replacement trustees, to invite and act upon the following nominations:

i. One representative trustee from the Consent Holder;

ii. One representative trustee from the Council;

iii. One representative trustee from the CLG (established under Condition 15);

iv. One representative trustee from the Waitākere Ranges Local Board;

v. Two community representative trustees connected with local community-led conservation projects; and

vi. One mana whenua representative trustee from Te Kawerau ā Maki.

(b) Provide for the trustees of the Trust to appoint at least one additional, appropriately qualified trustee to be responsible for overseeing the Trust's financial reporting.

(c) Prescribe the basic procedures for the trustees of the Trust to govern the Trust and otherwise provide the trustees with the power to regulate their own procedures, provided that:

- i. No change may be made which would alter the charitable nature of the Trust or the funding the consent holder is required to provide in Condition 109 above;
 - ii. The Trust is to operate for a minimum period of ~~ten~~ twenty-five years following the grant of resource consent; and
 - iii. No change may be made to the objectives set out in Condition 108(b).
- (d) Provide for the appointment of a person to hold the position of operations manager / project coordinator and to be responsible for:
 - i. Strategic and operational planning;
 - ii. Implementation of project initiatives; and
 - iii. Ongoing evaluation against the measurable targets.
- (e) Require annual reporting regarding the distribution of the trust fund and reporting against the measurable pest reduction targets to:
 - i. The Consent Holder;
 - ii. Auckland Council; and
 - iii. The CLG (established under Condition 15).

Advice note: For the avoidance of doubt, the role of the Council trustee identified in Condition 110(a)(ii) is completely separate from and unrelated to Council's regulatory functions regarding the conditions of this consent.

- 111. Provided the Trust has sufficient funds budgeted in any year to meet the requirements of Condition 108 a) to d) above and the pest reduction targets in Tables 2 and 3 within the 380 ha Pest Management Area, it may then direct any surplus funds from its annual budget to support community-based pest management programmes with funding and/or expertise within the broader 990 ha Waima Catchment (refer Revised Pest Management Proposal - Map 1, 26 April 2023).
- 112. The Biodiversity Trust does not absolve the Consent Holder of accountability for meeting the consent conditions. Compliance with the conditions of consent including the achievement of consent Conditions 113 to 122 below, is the responsibility of the Consent Holder, no matter the existence or otherwise of the Trust.

H. Pest Management Strategy for Biodiversity Restoration

Waima Biodiversity Management Plan

113. Prior to the commencement of any vegetation removal works the Consent Holder shall submit a ~~Waima Biodiversity Management Plan (WBMP)~~ final Pest Management Strategy for Biodiversity Restoration (PMSBR) prepared by a suitably qualified and experienced ecologist to the Council for approval in accordance with Condition 19 and in accordance with the Assessment of Ecological Effects report, prepared by Boffa Miskell Ltd for Watercare Services, dated 21 May 2019. No vegetation clearance provided for under this consent shall commence until written approval from the Council is obtained that the PMSBR has been prepared in accordance with Conditions 114 to 118 to the satisfaction of the Council.
114. The PMSBR shall be prepared in accordance with the management targets and thresholds set out in Condition 118.
86. ~~The WBMP shall be prepared in accordance with the Draft WBMP and the Draft Pest Management Strategy for the Waima BMP Area and shall include as a minimum:~~
- ~~(a) Ecological enhancement works to be carried out within the Waima BMP Area in the little Muddy Creek catchment; and~~
 - ~~(b) Control of weeds consistent with Auckland Council weed priorities; and~~
 - ~~(c) Control of vertebrate animal pests (rats, possums, mustelids); and~~
 - ~~(d) Undertaking of other activities that contribute to an improvement in ecological health, or the management of ecological risk (e.g. identification of kauri dieback disease areas, eradication of localised Argentine ant infestations, public education and advocacy as may be needed to achieve the stated goals of the WBMP); and~~
 - ~~(e) Monitoring and reporting on the results and outcomes of the WBMP to Auckland Council.~~
115. The objectives of the PMSBR shall include, but not be limited to, achieving the agreement of the owners of at least ~~400~~340 private properties or 80 ha of privately owned land, appropriately dispersed across the whole of the PMSBR Area, to secure access for vertebrate pest control (rats, possums, mustelids); ~~and progressive recruitment of the owners of private properties containing native forest to secure access for weed control.~~
87. ~~The requirements for the WBMP shall include, but not be limited to:~~
- ~~(a) Control of rats, possums and mustelids over the 400 private properties to the management targets and threshold control levels for 'Years 3 and beyond' set out in Table 1 below or as otherwise determined by the Trust in accordance with Condition 89 (averaged over 400 properties, on an annual basis), for a period of no less than eight consecutive years; and~~
 - ~~(b) Suppression of target weed species to the extent that no mature plants exist.~~

~~The WBMP shall also encourage and facilitate an integrated approach to ecological enhancement works, including weed and animal pest control, within the Waima BMP Area across publicly owned and private land.~~

116. The requirements for the PMSBR shall include, but not be limited to:
- i. Control of rats, possums and mustelids over the 340 private properties or 80ha of privately owned land to the management targets and threshold control levels for 'Year 1 (*Baseline monitoring to obtain initial population abundance estimates*), Years 2 to 11, and Year 12 and beyond' set out in Tables 1, 2 and 3 below or as otherwise determined by the Trust in accordance with Condition 118, for a period of no less than 24 consecutive years; and
 - ii. Control of mice, rats, possums, mustelids, feral cats and ungulates over public land to the management targets and threshold control levels for 'Year 1 (*Baseline monitoring to obtain initial population abundance estimates*), Years 2 to 11, and Year 12 and beyond' set out in Tables 1, 2 and 3 below or as otherwise determined by the Trust in accordance with Condition 118, for a period of no less than 24 consecutive years; and
 - iii. Suppression of German and common wasps via a target to reduce at least 80% of the wasp numbers on public land. Control shall occur between late-January and late February. If high wasp activity persists, control must be repeated annually (or, if necessary, twice annually to include control in early April or four weeks after first application).
 - iv. The PMSBR shall also encourage and facilitate an integrated approach to ecological enhancement works, including weed and animal pest control, within the PMSBR Area across publicly owned and private land.
117. The Consent Holder shall ensure that the pest control management targets and management thresholds for ~~'Years 3 and beyond' set out in Table 1 below~~ 'Years 2 to 11 and Years 12 and beyond' set out in Tables 2 and 3 below, or as otherwise determined by the Trust in accordance with Condition 118, are met and sustained for a minimum duration of ~~eight (8)~~ twenty-four (24) consecutive years across the PMSBR Area.
118. The management targets and the management thresholds for initiating additional controls set out in ~~Table 1~~ Tables 2 and 3 below shall be reflected in the PMSBR, except that the Biodiversity Trust can review and ~~lower~~ make these management targets and thresholds more stringent and ~~can alter the monitoring frequency for year 2 and years 3 and beyond set out in Table 1.~~

~~Table 1: Pest control levels~~

<i>Pest Species</i>	<i>Management target</i>	<i>Management threshold for initiating additional control</i>	<i>Monitoring frequency</i>
<i>Year 1 (baseline monitoring within the Waima BMP area)</i>			
<i>Rats</i>	Obtain initial population abundance estimates. In areas where toxic baiting is undertaken, rat populations controlled to below 5% CCI or TTI.	Chew Card Index (CCI) or Tracking Tunnel Index (TTI) > 10%, in areas where toxic baiting has occurred	Three times within the first year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations.
<i>Possums</i>	Obtain initial population abundance estimates. In areas where toxic baiting is undertaken, possum population controlled to below 5% CCI.	CCI > 10%, in areas where toxic baiting has occurred.	Three times within the first year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations.
<i>Mustelids</i>	Obtain baseline population abundance estimates.	n/a	Three times within the first year within the entire Waima BMP Area.
<i>Year 2</i>			
<i>Rats</i>	Rat populations controlled to below 5% CCI or TTI, in areas where control infrastructure has been installed.	CCI or TTI > 10%, in areas where control infrastructure has been installed.	Three times per year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations (additional monitoring if thresholds exceeded).
<i>Possums</i>	Possum population controlled to below 5% CCI, in areas where control infrastructure has been installed.	CCI > 10%, in areas where control infrastructure has been installed.	Three times per year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations (additional monitoring if thresholds exceeded).
<i>Mustelids</i>	Mustelid species controlled to below 5% TTI, in areas where	TTI > 10%, in areas where control	Three times per year within the entire Waima BMP Area.

<i>Pest Species</i>	<i>Management target</i>	<i>Management threshold for initiating additional control</i>	<i>Monitoring frequency</i>
	control infrastructure has been installed.	infrastructure has been installed.	
<i>Years 3 and beyond</i>			
<i>Rats</i>	Rat populations controlled to below 5% CCI or TTI.	CCI or TTI > 10%	Three times per year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations (additional monitoring if thresholds exceeded).
<i>Possums</i>	Possum population controlled to below 5% CCI.	CCI > 10%	Three times per year within the entire Waima BMP Area. Pre and post population monitoring following any toxic baiting operations (additional monitoring if thresholds exceeded).
<i>Mustelids</i>	Mustelid species controlled to below 5% TTI.	TTI > 10%	Three times per year within the entire Waima BMP Area.

Advice Notes:

- ~~1. The management target in the first year is to obtain a population abundance estimate within the Waima BMP area as control infrastructure is being deployed.~~
- ~~2. For the avoidance of doubt, the provision in Condition 118 for the Waima Biodiversity Trust to review and **lower** the management targets and thresholds in Table 1 means that the Trust can make the management targets and thresholds **more stringent**, but not less stringent.~~
- ~~3. Monitoring in areas where toxic baiting is undertaken shall generally occur within 25m of toxic bait stations for rats and within 50m of toxic bait stations for possums. Monitoring in areas where control infrastructure has been installed shall generally occur within 25m of control infrastructure for rats and within 50m of control infrastructure for possums.~~

Table 1: Baseline mammalian pest monitoring in Year 1 - CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

<u>Pest Species</u>	<u>Management Target</u>	<u>Threshold</u>	<u>Monitoring frequency</u>
<u>On all land</u>			
<u>Mice</u>	<u>Obtain initial population abundance estimates.</u>	<u>n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)</u>	<u>Four monitors in Year 1 in February, May, August, and November</u>
<u>Rats</u>	<u>Obtain initial population abundance estimates.</u>	<u>n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)</u>	
<u>Possums</u>	<u>Obtain initial population abundance estimates.</u>	<u>n/a - Baseline Chew Card (CCI) index.</u>	
<u>Mustelids</u>	<u>Obtain initial population abundance estimates.</u>	<u>n/a - Baseline population estimate via CCH</u>	
<u>Feral cats</u>	<u>Obtain initial population abundance estimates.</u>	<u>n/a - Baseline population estimate via CCH</u>	

Table 2: Pest management targets and thresholds for Years 2 - 11 on public and private land within the 380 ha proposed pest management area - CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol. Wasp population reduction as per the standard Wasp Nest Flight Count Monitoring Method (DOC-2597036).

<u>Pest Species</u>	<u>Management Target</u>	<u>Threshold</u>	<u>Monitoring frequency</u>
<u>On public land</u>			
<u>Mice</u>	<u><15% CCI or TTI</u>	<u>>15% CCI or TTI</u>	<u>Before and after toxic control, four monitors per year in February, May, August, and November</u>
<u>Rats</u>	<u><5% CCI (year round)</u>	<u>≥10% (year round)</u>	
<u>Possums</u>	<u><5% CCI</u>	<u>≥10% CCI</u>	
<u>Stoats</u>	<u>2 detections per 2000 CH¹</u>	<u>3 detections per 2000 CH¹</u>	
<u>Ferrets</u>	<u>2 detections per 2000 CH</u>	<u>3 detections per 2000 CH</u>	
<u>Weasels</u>	<u>2 detections per 2000 CH</u>	<u>3 detections per 2000 CH</u>	
<u>Feral cats</u>	<u>3 detections per 2000 CH</u>	<u>>5 individual cat detections per 2000 CH</u>	

<u>Ungulates</u>	<u>Zero density</u>	<u>Any observation (incl. sign)</u>	
<u>Common and German wasps</u>	<u>Population reduction of 80%</u>	<u>>80%</u>	<u>Control between late-January and late February annually.</u>
<u>On private land</u>			
<u>Rats</u>	<u><5% CCI (Sep – Feb), <10% CCI (Mar – Aug)</u>	<u>≥10% CCI (Sep – Feb), <15% CCI (Mar – Aug)</u>	<u>Four monitors per year in February, May, August, and November</u>
<u>Possums</u>	<u><5% CCI</u>	<u>≥10% CCI</u>	
<u>All mustelid species</u>	<u>2 detections per 2000 CH</u>	<u>3 detections per 2000 CH</u>	

Table 3: Pest management targets and thresholds for Years 12 and beyond on public and private land within the 380 ha proposed project - CCI is a chew-card index, TTI/ Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

<u>Pest Species</u>	<u>Management Target</u>	<u>Threshold</u>	<u>Monitoring frequency</u>
<u>On public land</u>			
<u>Rats</u>	<u><5% CCI (Sep – Feb), <15% CCI (Mar – Aug)</u>	<u>≥10% CCI (Sep – Feb), <20% CCI (Mar – Aug)</u>	<u>Four monitors per year in February, May, August, and November</u>
<u>Possums</u>	<u><5% CCI</u>	<u>≥10% CCI</u>	
<u>Mustelids</u>	<u>3 detections per 2000 CH¹</u>	<u>5 detections per 2000 CH¹</u>	
<u>Feral cats</u>	<u>3 detections per 2000 CH¹</u>	<u>>5 individual cat detections per 2000 CH¹</u>	
<u>Common and German wasps</u>	<u>Population reduction of 80%</u>	<u>>80%</u>	<u>Control between late-January and late February annually.</u>
<u>On private land</u>			
<u>Rats</u>	<u><5% CCI (Sep – Jan)</u>	<u>≥10% CCI (Sep – Jan)</u>	<u>Two monitors per year in August and December.</u>

Advice notes:

1. The management target in the first year is to obtain a population abundance estimate within the PMSBR area as control infrastructure is being deployed.
2. Monitoring in areas where toxic baiting is undertaken shall generally occur within 25m of toxic bait stations for rats and within 50m of toxic bait stations for possums. Monitoring in areas where control infrastructure has been installed shall generally occur within 25m of control infrastructure for rats and within 50m of control infrastructure for possums.

119. Monitoring and reporting on the results and outcomes of the PMSBR shall be provided to Auckland Council in accordance with the timeframes set out in the PMSBR.

~~91. Where monitoring required under Condition 86 indicates that the management thresholds set out in Table 1 above are being regularly exceeded as set out below, the Consent Holder shall prepare a Further Biodiversity Works Plan.~~

~~For the purpose of this condition, the management thresholds are considered to be exceeded where the monitoring results indicate pest populations in controlled areas:~~

- ~~i. Exceed the management threshold required in multiple successive periods (i.e. are exceeded more than twice per year when monitoring operations are undertaken at least 2 to 3 months apart); and/or~~
- ~~ii. Have not been suppressed significantly more than pest populations monitored in the uncontrolled areas.~~

~~*Note: It is acknowledged that seasonal variations may cause management thresholds to occasionally be exceeded. To account for this the results of monitoring will be considered based on an overall trend as opposed to a smaller seasonal window.*~~

120. Where pest population monitoring following any toxic baiting operations indicates that the management thresholds set out in Tables 2 and 3 have not been achieved, additional controls as set out in a further Biodiversity Works Plan shall be implemented to ensure the thresholds are met. The Consent Holder shall prepare a Further Biodiversity Works Plan where:

- i) The required number or area of private landowners involved is not met after two successive years; or
- ii) Monitoring required under Condition 116 indicates that the management thresholds set out in Tables 2 and 3 above are being regularly exceeded as set out below.

The management thresholds are considered to be regularly exceeded where the monitoring results indicate pest populations in controlled areas exceed the management threshold required in successive periods (e.g. are exceeded more than twice per year when monitoring operations are undertaken at least 2 to 3 months apart).

121. Where a Further Biodiversity Works Plan is required under Condition 119, this shall include, but not be limited to, further measures to ensure the protection, restoration and enhancement of native flora and fauna and ecosystems in the Waima Catchment Waitakere Ranges Ecological District with priority given to land within the 990ha Waima Catchment (refer Revised Pest Management Proposal - Map 1, 26 April 2023):

~~The objective of the Further Biodiversity Works Plan is to ensure that the biodiversity benefits are at least equivalent to those that would have been achieved through meeting the management targets set out above. The Further Biodiversity Works Plan~~

~~shall therefore identify additional measures to address any shortfall in biodiversity benefits.~~

- a. In instance 120(i), the works area for the PMSBR may be extended on public land where it is permissible to use pesticides to reduce pest numbers to below target requirements.
- b. In instances where 120(ii) is not met, the objective of the Further Biodiversity Works Plan is to ensure that the specified targets are achieved, for example in a different location in the Waitakere Ranges Ecological District with priority given to land within the 990ha Waima Catchment, or through varying the methodology so that biodiversity benefits are at least equivalent to those that would have been achieved through meeting the management targets set out above. The Further Biodiversity Works Plan shall therefore identify additional measures to address any shortfall in biodiversity benefits.

122. The Further Biodiversity Works Plan shall be prepared and submitted to the Council for written approval.

I. Heritage Management

Restoration of Nihotupu Filter Station

123. The Consent Holder shall commission a suitably qualified and experienced person(s) to prepare a Heritage Management and Restoration Plan for the Nihotupu Filter Station (NHMRP). The Nihotupu Heritage Management and Restoration Plan (NHMRP) shall:
- (a) Identify the heritage values of the filter station; and
 - (b) Identify measures to appropriately maintain, repair and restore the heritage values of the filter station in accordance with good practice conservation principles and methods; and
 - (c) Identify the required actions to maintain, repair and restore the filter station to ensure the building is safe and structurally sound; and
 - (d) Enable the use, development and adaptation of the filter station in a manner which protects heritage values and is undertaken in accordance with good practice conservation principles and methods.

The NHMRP shall include a programme for implementation of the plan such that works identified at (b) and (c) above are completed no later than 5 years after the commencement of consent.

The NHMRP shall be developed in consultation with the CLG, Auckland Council (Heritage Team) and Heritage New Zealand Pouhere Taonga (HNZ), and shall be provided to Auckland Council (Heritage Team) and HNZ for review prior to it being submitted to the Council for certification. The NHMRP shall be amended to reflect any review comments where appropriate, noting where or why the CLG's, Auckland Council's (Heritage Team) and HNZ's recommendations were or were not adopted.

The updated NHRMP shall be provided to Council for certification in accordance with Condition 19.

Advice notes: *The Building Act 2004 requirements may also apply.*

Heritage Management re-uses at 123(d) to be considered shall include a publicly available meeting space, a community hub, or some other community-focused use.

J. Cultural Management and Engagement Plan

124. The consent holder in collaboration with Te Kawerau ā Maki shall prepare a Cultural Management and Engagement Plan (CMEP). The objective of the CMEP is to ensure ongoing engagement with Te Kawerau ā Maki during detailed design and construction of the Project. To achieve this objective, the CMEP shall:
- (a) Identify proposed cultural monitoring of topsoil removal;
 - (b) Identify Mana Whenua-directed procedures to be implemented in the event of an accidental discovery;
 - (c) Specify tree related protocols for the repurposing of felled trees that cannot be reused onsite;
 - (d) Specifically provide for Te Kawerau ā Maki input into the preparation and implementation of the EMP, PRMP, AMP, FBR and SRP;
 - (e) Specifically provide for Te Kawerau ā Maki input into selecting a preferred disposal facility to receive fill material that cannot otherwise be retained onsite (as set out in Condition 87);
 - (f) Specifically provide for Te Kawerau ā Maki input into the monitoring of freshwater ecology; and
 - (g) Identify opportunities for additional mitigation and offsetting measures taking into account those measures identified in Table 3 of the Cultural Impact Assessment (CIA). This includes, but is not limited to, input into:
 - (i) Stormwater treatment and design;
 - (ii) Interpretive panels and cultural markers; and
 - (iii) Incorporation of cultural design elements into built design.
125. The CMEP shall be developed in collaboration with Te Kawerau ā Maki with the final version provided to Te Kawerau ā Maki for review prior to it being submitted to the Council for certification in accordance with Condition 19. The CMEP shall be amended to reflect any review comments where appropriate, noting where and why Te Kawerau ā Maki's recommendations were or were not adopted.

Advice note: The CMEP shall be a 'living document' and shall be regularly revisited and updated as the project progresses.

K. Traffic and transportation

Construction Traffic Management Plan

126. The Consent Holder shall prepare a Construction Traffic Management Plan (CTMP) in accordance with the Council's requirements for CTMPs and the New Zealand Transport Authority's Code of Practice for Temporary Traffic Management for each stage of the Project. The CTMP shall be in general accordance with the Draft CTMP provided as part of the application documents and shall address the management of construction traffic from the site enabling works.
127. The Consent Holder shall submit the CTMP for each stage of construction to the Council for certification in accordance with Condition 19 at least twenty (20) working days prior to the Commencement of Construction. The purpose of the CTMP is to provide a comprehensive document that sets out the management procedures and construction methods to be implemented to avoid, remedy or mitigate potential adverse effects on the environment arising from construction activities and shall be consistent with the information provided in the Assessment of Environmental Effects and further information provided as part of the application. No construction activity shall commence until certification is provided from the Council that the CTMP satisfactorily gives effect to the objectives in Condition 128 and complies with the requirements in Conditions 129 and 130, as applicable to the particular stage of construction, the Council's requirements for CTMPs and New Zealand Transport Authority's Code of Practice for Temporary Traffic Management, and all measures identified in the CTMP as needing to be put in place prior to commencement of works have been put in place.
128. The objectives of the CTMP are to:
- 1) Limit and manage the number of construction traffic movements on the transport network;
 - 2) Provide for the safety of everyone at all times;
 - 3) Maintain pedestrian and vehicle access at all times to / from properties;
 - 4) Minimise disruption from construction traffic on the travelling public and road users along the identified sections of the construction routes;
 - 5) Seek to avoid full road closures and minimise any partial or managed closures;
 - 6) Manage integration with other construction projects and Auckland Transport projects;
 - 7) Manage the condition of roading assets to ensure road user safety and accessibility is maintained;
 - 8) Provide for prior engagement with relevant stakeholders, including:
 - (i) when public access, particularly to properties, will be affected by construction traffic; and
 - (ii) with the Principals of Schools located along identified heavy vehicle routes (Titirangi Primary School, Kaurilands School, Woodlands Park School and Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School),

- 9) Provide a mechanism for addressing queries and responding to complaints (including through the CLG or similar).

129. The CTMP shall include:

- (a) The traffic management measures that will be required to be implemented, including in the vicinity of the site access points and at the Woodlands Park Road / Scenic Drive intersection;
- (b) A mechanism and nominated stakeholder manager responsible for receiving, addressing and monitoring queries and responding to complaints in relation to the construction works;
- (c) Provision of appropriate ingress and egress routes to/from the sites for the construction vehicles, including confirmation of appropriate heavy vehicles layover areas and over-dimensional vehicle routes;
- (d) For each Project stage, confirmation of typical numbers of heavy vehicle movements throughout the day for heavy vehicle access routes;
- (e) Coordination with Auckland Transport regarding other construction sites and road works;
- (f) Restricted parking for workers on construction sites, with parking prioritised for minor trades (i.e. those needing to bring tools for specialist activities), car / van pooling, staff working outside standard hours and mobility impaired staff / visitors;
- (g) A site parking plan, including measures to restrict construction vehicles associated with this consent from parking on Woodlands Park Road, Manuka Road and Scenic Drive;
- (h) Location of any shuttle bus interchange and operation of this (or similar) service to transport workers to and from the site;
- (i) Location and operation of any works staging site;
- (j) The Titirangi Road route as the preferred ingress and egress route to/from the sites for the construction vehicles, instead of the Atkinson Road (South), Kaurilands Road, Glendale Road, Godley Road, Golf Road and Portage Road, whenever possible unless otherwise agreed with Auckland Transport;
- (k) No heavy vehicle movements, other than vehicle movements associated with concrete pours, to and from the construction sites on the Titirangi Road route during the following periods:
 - (i) during morning and afternoon drop-off/pick-up periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays).
Note: this restriction does not apply on ~~public holidays and school holidays~~; and
 - (ii) after 13:00 on Saturdays; and
 - (iii) on Sundays and public holidays.
- (l) No heavy vehicle movements, other than vehicles associated with concrete pours, to and from the construction sites on the Atkinson Road (South), Kaurilands Road and Glendale Road route during morning and afternoon pick-up/drop-off periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays ~~excluding public holidays and school holidays~~), and on Sundays and public holidays, unless approved via the CTMP;

- (m) No heavy vehicle movements on the Woodlands Park Road / Huia Road route (associated with any use of the Parau landfill site) during morning and afternoon drop-off/pick-up periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays excluding ~~public holidays and~~ school holidays), and on Sundays and public holidays, unless approved via the CTMP;
- (n) No construction traffic on Waima Crescent.
- (o) Monitoring of pavements located on haulage routes and remediation of any damage resulting from Project construction traffic in accordance with Conditions 131 to 134;
- (p) Provision of heavy vehicle tracking on the proposed haulage route(s), and measures to address any conflicts, including potential removal of on-street parking as identified in the CH2M Beca Report dated 9 August 2019 (reference 6513515/s92/BUN60339273 NZ1-16354770-3);
- (q) Measures to address the restricted visibility for heavy vehicles turning right out from Woodlands Park Road into Scenic Drive, in the instance that permanent improvements have not been undertaken;
- (r) Specific measures to ensure safety is maintained while providing continuous access to bus stops, a continuous footpath and cycling network, and to minimise detours and additional crossing points for pedestrians and cyclists;
- (s) The provision of construction traffic management staff to assist any construction trucks reversing into or out of the construction site;
- (t) Monitoring of and cleaning of spillage from construction trucks onto roads or footpaths in accordance with Condition 74;
- (u) Vegetation trimming or removal within the site to achieve sufficient sight lines from site accesses;
- (v) Educating construction staff of the safety needs of pedestrians and people cycling;
- (w) Provisions to ensure the ongoing ability of road pavements to withstand the proposed loading from heavy vehicles without affecting safety or behaviour of other road users;
- (x) Monitoring of traffic volumes at Titirangi Road roundabout to identify any impact of construction activities on the operation of the roundabout and associated queueing times, and any mitigation measures should these be required; and
- (y) Processes for monitoring, review and amendments to the CTMP, in particular in response to changes in the roading network including any change in the condition of roading assets.

130. The CTMP shall be prepared in consultation with the CLG in accordance with Condition 15, and in consultation with Auckland Transport and schools located along identified heavy vehicle routes (Titirangi Primary School, Kaurilands School, Woodlands Park School, ~~and~~ Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School).

Advice notes:

The CTMP is required to address the management of construction traffic from

the site enabling works (including earthworks and vegetation clearance). Overall traffic management, including for enabling works and construction of the Water Treatment Plant (WTP) and reservoirs, will be addressed by the separate Outline Plan of Works (OPW) process and does not form part of this consent.

The heavy vehicle tracking assessment undertaken by CH2M Beca on 9 August 2019 (reference 6513515/s92/BUN60339273 NZ1-16354770-3) is sufficient to address the requirements in Conditions 129(p) unless there have been changes to the road network that affect the conclusion of that assessment.

It is the responsibility of the consent holder to seek approval for the TMP from Auckland Transport. Contact Auckland Transport on (09) 355 3553.

All applications for temporary use of the road reserve during construction, including temporary removal of any on-street parking, must be submitted to Auckland Transport as a Corridor Access Request (CAR). The CAR application should be submitted to Auckland Transport at least 12 weeks prior to the scheduled commencement of works.

Works within the Auckland Transport road reserve will require a Works Access Permit and Engineering Plan Approval from Auckland Transport.

Pavement Impact Assessment

131. Prior to the activity approved in this consent and to the satisfaction of the Council, the Consent Holder shall provide a Pavement Impact Assessment (PIA) undertaken by a suitably qualified pavement engineer to determine the current condition of the pavement on Woodlands Park Road between the sites access(es) and Scenic Drive and other sections of haulage routes. The PIA shall include the following sections of road (where they are used as haulage routes):

- (a) Woodlands Park Road, between the site access(es) and Scenic Drive;
- (b) Scenic Drive, between Woodlands Park Road and Titirangi Road;
- (c) Atkinson Road, for a distance of 100m from the intersection with Titirangi Road;
- (d) Titirangi Road, for a distance of 100m from the intersection with Atkinson Road;
- (e) Woodlands Park Road, between the site access(es) and Huia Road (in the instance of the Parau fill site being used); and
- (f) Huia Road, between Woodlands Park Road and the Parau fill site (in the instance of the Parau fill site being used).

132. The Consent Holder shall arrange a site meeting with the Council and Auckland Transport's Asset Roading Manager to discuss the findings of the PIA and to agree on the existing condition of Auckland Transport assets on the haulage routes.
133. As part of the PIA, the Consent Holder shall include a monitoring plan to monitor and report on any damage to public roads, footpaths, berms, curbs or drains, along the haulage routes identified in Condition 131, as a result of the enabling earthworks activities. The PIA and associated monitoring plan shall be provided to Council for certification in accordance with Condition 19.
134. Should the monitoring plan required by Condition 133 show that damage has occurred, Auckland Council shall be notified within 24 hours of its discovery (or immediately where the damage presents a safety hazard). The costs of rectifying such damage and restoring the asset to its original condition will be met by the Consent Holder.

Woodland Park Road / Scenic Drive intersection upgrade

135. The Consent Holder shall upgrade the intersection of Woodlands Park Road and Scenic Drive, and upgrade the Exhibition Drive walkway carpark, subject to obtaining all necessary approvals.

The Consent Holder shall ensure the upgraded carpark provides at least the same number of car parks currently provided and shall undertake best endeavours to increase the number of car park spaces available. Where the number of parking spaces within the car park cannot be increased, then the Consent Holder shall work with Auckland Council to provide additional parking within proximity to the entrance to the Exhibition Drive walkway.

This work shall be undertaken in general accordance with the draft Scenic Drive Intersection plan prepared by Beca and Boffa Miskell, dated 27 February 2018, as updated and finalised through consultation with Auckland Transport. The final design shall be provided to Council for written approval in accordance with Condition 19.

The Consent Holder shall take all reasonably practicable steps to implement the final design such that the works are completed no later than 5 years after the commencement of consent. This work shall be undertaken at the Consent Holder's cost and in accordance with the draft Scenic Drive Intersection plan prepared by Beca and Boffa Miskell, dated 27 February 2018, as updated and finalised through consultation with Auckland Transport. The final design shall be provided to Council for certification in accordance with Condition 19.

Advice note: The consent holder shall be responsible for meeting CAR and other requirements that may apply.

L. Construction Noise and Vibration

Construction Noise and Vibration Management Plan

136. The Consent Holder shall prepare a Construction Noise and Vibration Management Plan (CNVMP) for each stage of the Project that addresses the management of construction noise and vibration from the site enabling works. The CNVMP shall be submitted to the Council in accordance with Condition 19 no less than twenty (20) working days prior to works on that stage commencing (excluding site investigations and establishment of site entrances and fencing) for certification that the CNVMP complies with the requirements of Conditions 137 to 145, as applicable. The CNVMP shall be prepared by a suitably qualified person and in accordance with the Draft CNVMP.
137. An Activity Specific Construction Noise and Vibration Management Plan (ASCNVMP) shall be prepared for any night-time works or works predicted to exceed the project construction noise limits and shall be appended to the main CNVMP. An ASCNVMP shall be submitted to the Council in accordance with Condition 19 no less than twenty (20) working days prior to works on that stage commencing for written approval that the ASCNVMP complies with the requirements of Conditions 137 to 145, as applicable.
138. Noise from activities shall where practicable comply with the limits contained in Table E25.6.27(1) of the AUP(OP) as modified by Standard E25.6.27(4).
139. Earthworks and associated construction activities (i.e. which involve heavy machinery or high noise-producing equipment) shall be limited to 7:30 am – 6:00 pm Monday to Friday and 8:00 am – 5:00 pm Saturdays except as provided for through an ASCNVMP. Construction activities which do not involve the use of heavy machinery or other high noise-producing equipment are permitted outside these hours provided they comply with the relevant AUP limits or are supported by an ASCNVMP.
140. Noise from construction work activity shall be measured and assessed in accordance with the requirements of New Zealand Standard NZS 6803:1999 Acoustics – Construction noise.
141. Tonal reverse alarms on vehicles shall not be used on the site. Broadband reverse alarms are permitted.
142. Vibration levels arising from construction work activity of more than three days in a given location shall comply with Standard E25.6.30(1A)(b), Table E25.6.30.1, of the AUP(OP) or limits otherwise approved through an ASCNVMP.
143. Vibration levels arising from construction work activity of three days or less in a given location shall comply with the limits stipulated in Standard E25.6.30(1A)(a) of the AUP(OP), as set out in German Industrial Standard DIN 4150-3 (1999) Structural Vibration – Part 3 Effects of Vibration on Structures, when measured in accordance with that standard.

144. The Consent Holder shall engage a suitably qualified acoustic specialist to prepare the CNVMP and ASCNVMPs (where required) to identify how Conditions 138, 142 and 143 will be met. The objective of the CNVMP / ASCNVMP is to identify the best practicable option for management and mitigation of all construction noise and vibration, including where full compliance with the levels in Conditions 138, 142 and 143 cannot be achieved at all times.

The CNVMP / ASCNVMP shall as a minimum include, but not be limited to, the following information:

- (a) Construction noise/vibration criteria;
- (b) Identification of the most affected premises where there exists the potential for noise/vibration effects and the methodology for communication and consultation with these stakeholders;
- (c) Description and duration of the works, anticipated equipment and the processes to be undertaken including general acoustic management and mitigation measures proposed to be implemented throughout the course of the Project consistent with best practice;
- (d) Hours of operation, including specific times and days when construction activities causing noise/vibration would occur;
- (e) Mitigation options where noise/vibration levels are predicted or demonstrated to approach or exceed the relevant limits. Specific noise/vibration mitigation measures must be implemented which may include, but are not limited to, acoustic screening, time management procedures and alternative excavation / construction / piling method technologies;
- (f) Identification of the nearest sensitive receptors and approach to pre- and post-construction building condition surveys at these locations where vibration limits in Condition 143 will be exceeded and where agreed to with the owners of adjacent sites;
- (g) The erection of temporary construction noise barriers, enclosures or other mitigation measures where appropriate;
- (h) Schedule and methods for monitoring and reporting on construction noise/vibration;
- (i) Details of noise/vibration monitoring to be undertaken in the event of any complaints received. The results of such monitoring shall be submitted to the Council within one week of receiving the complaint;
- (j) Implementation of a complaint management system with contact numbers for key construction staff responsible for the implementation of the CNVMP and complaint investigation. This system should include procedures for maintaining contact with stakeholders, notifying of proposed construction activities and handling of noise/vibration complaints;

- (k) Notification shall be provided to the owners and occupiers of adjacent buildings prior to construction activities commencing on the site; and
 - (l) Training procedures for construction personnel.
145. The CNVMP shall be prepared in consultation with the CLG in accordance with Condition 15.

Advice note: The CNVMP required by Condition 136 is required to address the management of construction noise and vibration from the site enabling works (including earthworks and vegetation clearance), and not construction of the WTP and reservoirs which is addressed by the separate OPW process and does not form part of this consent.

M. Stormwater

Stormwater diversion and discharge – permanent structures

146. The detailed design, including drawings, specification, design report and calculations for permanent stormwater management devices for each stage (or stages) of the Project shall be submitted to the Council for certification in accordance with Condition 19 and at least 20 working days prior to initiation of construction of the devices for that stage / stages.
147. The Consent Holder shall ensure (through detailed design) that stormwater management devices are designed in accordance with the Council's guidance document GD01 '*Stormwater Management Devices in the Auckland Region*'. The detailed design shall be constructed for the following catchment areas and design requirements, and shall be completed prior to discharges commencing from the site:

Works to be undertaken	Catchment Area (ha)	Design Requirements
Existing Dry Detention Pond	3.139	<p>Retention of 5mm runoff depth from impervious areas.</p> <p>Detention of the 95th percentile storm (SMAF1) and slow release over a 24-hour period minus any retention volume that is achieved from impervious areas, with the remaining volume which cannot be achieved substituted as additional detention.</p> <p>Peak flow attenuation of the 10 year ARI storm event to predevelopment levels.</p> <p>Peak flow attenuation of the 100 year event to pre-development level.</p>
Proposed Permanent___Dry Pond	1.224	<p>Retention of 5mm runoff depth from impervious areas.</p> <p>Detention of the 95th percentile storm (SMAF1) and slow release over a 24-hour period minus any retention volume that is achieved from impervious area, with the remaining retention volume which cannot be achieved substituted as additional detention.</p> <p>Peak flow attenuation of the 10 year ARI storm event to predevelopment levels.</p>

		Peak flow attenuation of the 100 year event to predevelopment levels
Roof material	All	Inert materials only and no exposed unpainted metal surfaces.
Stormwater outfalls	Varies	Erosion protection measures in accordance with TR2013_018 or higher standard
Proprietary devices or equivalent water quality solution in accordance with GD01	Varies	Water Quality treatment of all trafficable impervious areas in accordance with manufacturers specifications or GD01 (or higher standard).

148. A final site plan with stormwater management features and supporting calculations shall be provided to the Council for certification prior to the commencement of works. The final site plan must give due consideration to additional stormwater treatment measures that achieve stormwater quality benefits for the Project Site. Consideration shall be given to providing living roofs on one or both of the reservoirs in accordance with the Council's Guidance Document GD01.
149. In the event that any modifications to the stormwater management system are required, the following information shall be provided:
- (a) Plans and drawings outlining the details of the modifications; and
 - (b) Supporting information that details how the proposal does not affect the capacity or performance of the stormwater management system. All information shall be submitted to the Council for certification prior to implementation.
150. For stormwater flows in excess of the capacity of the primary drainage systems, overland flow paths shall be provided and maintained to allow surplus stormwater from critical storms, up to the 100 year Annual Recurrence Interval (ARI) event, to discharge with the minimum of nuisance and damage to properties. Overland flow paths shall be kept free of all obstructions.

Stormwater Management – post construction

151. A post-construction site meeting shall be held by the consent holder, within 20 working days of completion of the stormwater management works, that:
- (a) Includes representation from the Council; and
 - (b) Includes representation from the site stormwater engineer, contractors who have undertaken the works and any other relevant parties.

Advice note: To arrange the construction meetings required by this consent, please contact the Council on 09 301 0101. ~~or monitoring@aucklandcouncil.govt.~~

Certification of stormwater management works (As-Built Plans)

152. As-built certification and plans of the stormwater management works, which are certified (signed) by a suitable qualified registered surveyor as a true record of the stormwater management system, shall be provided to the Council in accordance with Condition 19 for certification 5 working days prior to the post-construction meeting required by this consent.
153. The as-built plans shall display the entirety of the stormwater management system and shall include:
- (a) The surveyed location (to the nearest 0.1m) and level (to the nearest 0.01m) of the stormwater management devices, with co-ordinates expressed in terms of NZTM and LINZ datum;
 - (b) Plans and cross sections of all stormwater management devices, including confirmation of any storage volumes and levels of any outflow control structure;
 - (c) Documentation of any discrepancies between the design plans and the As-Built plans approved by the Modifications Approval condition.

Advice note: Post construction certification may be undertaken in stages to allow for staged completion of the stormwater management works associated with the replacement WTP, Reservoir 1 and Reservoir 2.

Operation and Maintenance Plan

154. An Operation and Maintenance Plan shall be submitted to Council for certification in accordance with Condition 19 5 working days prior to the post-construction meeting required by this consent.
155. The Operation and Maintenance Plan shall set out how the stormwater management system is to be operated and maintained to ensure that adverse environmental effects are minimised. The plan shall include:
- (a) Details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process;
 - (b) A programme for regular maintenance and inspection of the stormwater management system;
 - (c) A programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices;
 - (d) A programme for post storm inspection and maintenance;

- (e) General inspection checklists for all aspects of the stormwater management system, including visual checks; and
 - (f) A copy of any current maintenance contract.
- 156. The stormwater management system shall be managed in accordance with the certified Operation and Maintenance Plan. Any amendments or alterations to the Operation and Maintenance Plan shall be submitted to, and certified by Council in writing prior to implementation.
- 157. The Operation and Maintenance Plan shall be updated and submitted to Council for certification, on request.

Specialist Maintenance Contract

- 158. Where applicable, a written maintenance contract for the on-going maintenance of the proprietary device(s) shall be entered into with an appropriate stormwater management system operator, prior to the operation of the proprietary stormwater management device(s). A written maintenance contract shall be in place and maintained for the duration of the consent. A signed copy of the maintenance contract for the first three (3) years of operation shall be forwarded to the Council a minimum of 5 working days prior to the post-construction meeting required by this consent. A copy of the current maintenance contract shall be provided to the Council upon request throughout the duration of the consent.

Advice note: Due to the nature of the surrounding contributing area, being a dense bush catchment, a higher than typically anticipated maintenance frequency is expected. The maintenance frequency of the propriety devices shall be determined by the device loading and as recommended by the specialist maintenance provider.

Maintenance Report

- 159. Details of all inspections and maintenance for the stormwater management system, for the preceding three (3) years, shall be retained. A maintenance report shall be provided to the Council on request. The maintenance report shall include the following information:
 - (a) Details of who is responsible for maintenance of the stormwater management system and the organisational structure supporting this process;
 - (b) Details of any maintenance undertaken; and
 - (c) Details of any inspections completed.

N. Contaminated land

Contaminated soil disturbance

160. The Consent Holder shall engage a suitably qualified and experienced practitioner to undertake soil investigations in accordance to Section 4 of the *Site Management Plan for Ground Contamination* (Tonkin & Taylor, May 2019) (SMP), and in accordance with the PRMP and Traffic Light System, and at least 10 working days prior to commencement of earthworks, provide to the acceptance of the Council a Detailed Site Investigation report (DSI) confirming the site soil contamination status.
161. The consent holder shall include additional soil investigation within the former workshop and chemical store area into the sampling plan in the SMP and engage a suitably qualified and experienced practitioner to undertake soil sampling and testing following the demolition of the existing chlorine building within the Reservoir 2 area, and include any test results into the DSI required by Condition 160 (or as a later update or addendum to the DSI).
162. The Consent Holder shall engage an asbestos surveyor to carry out an inspection of that part of the existing Huia WTP building to be demolished prior to demolition commencing. This shall be to confirm and identify the presence of lead-based paint and any (potential) asbestos containing material (ACM) within the building structures proposed to be demolished. The survey results shall be included into the DSI required by Condition 160 or as a latter update or addendum to that DSI.
163. If the survey required by Condition 162 demonstrates there is the potential of soil contamination from lead-based paint and/asbestos/ACM, the Consent Holder shall include the soil investigation of the existing WTP site into the sampling plan proposed in the SMP, and include the test results in the DSI required by Condition 160 (or as later updates or addendums to the SMP and DSI);
164. If the DSI required by Condition 160 shows the level of soil contamination present at the site requires additional controls, the Consent Holder shall at least 10 working days prior to commencement of earthworks provide an updated SMP or a combined Remedial Action Plan/SMP (when required) for certification to the Council.

Management of contaminated soil – during earthworks

165. The Consent Holder shall carry out earthworks and implement the control measures in accordance with an approved Site Management Plan (SMP). Any changes to the SMP shall be certified by the Council.

*Advice note: Due to the presence of *Phytophthora* species, earthworks and the disturbance of soil shall be undertaken in compliance with the PRMP and Traffic Light System.*

166. Excavated soil or waste from areas where a DSI (or later update or addendum to the DSI) identifies that contamination exceeds the applicable health and environmental criteria shall be managed on site in accordance with the updated Site Management Plan or shall be disposed of at a disposal site, which is authorised by the Council to

accept the relevant levels of contamination. If the Parau Landfill is chosen as an alternative disposal site, written confirmation shall be provided to the Monitoring Team Leader to confirm that Parau Landfill has appropriate consent, at least five working days prior to the disposal commencing. Copies of the disposal dockets for any contaminated material removed from the sites shall be retained.

167. The Consent Holder shall not undertake activities that result in any airborne and deposited dust beyond the property boundary of the site that is determined to be noxious, objectionable or offensive. Good practice measures, such as those described the *Good Practice Guide for Assessing and Managing Dust* (Ministry for the Environment 2016) shall be adopted at all times.
168. If evidence of contamination, which has not been previously identified is discovered during any excavation at the site, the Consent Holder shall immediately cease the works in the vicinity of the material and notify the Council and agree on appropriate remediation and validation actions.
169. The Consent Holder shall ensure that the contamination level of any imported soil complies with the definition of 'Cleanfill material', as per the AUP(OP). Any imported material shall be solid material of an inert nature and must not contain *Phytophthora* species, hazardous substances or contaminants above natural background levels of the receiving site. Imported soils shall be tested at a rate of 1 per 1,000m³ of material imported to the site except that sampling is not required for hard-fill material sourced from a commercial quarry.
170. All land disturbance works shall be managed to minimise any discharge of debris, soil, silt, sediment or sediment-laden water from beyond the subject site to either land, stormwater drainage systems, watercourses or receiving waters in accordance with the PRMP and Traffic Light System.
171. Any perched groundwater or surface water encountered within the excavation area, where the DSI and any later update or addendum to the DSI shows that the concentrations of soil contaminants exceed the permitted activity soil acceptance criteria specified in Table E30.6.1.4.1 or E30.6.1.4.2 of Chapter E30 of the AUP(OP), requiring removal shall be considered potentially contaminated and shall be:
 - (a) disposed of by a licenced liquid waste contractor; or
 - (b) pumped to sewer, providing the relevant permits are obtained; or
 - (c) discharged to the site's stormwater system or surface waters provided:
 - testing demonstrates compliance with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)* for the protection of 80 percent of species, except for benzene where 95 percent of species shall apply; and
 - any discharge is in accordance with the relevant requirements of the PRMP;
 - (d) free from petroleum hydrocarbons.

Advice note: All testing and analysis should be undertaken in a laboratory with suitable experience and ability to carry out the analysis. For more details on how to confirm the suitability of the laboratory please refer to Part 4: Laboratory Analysis, of Contaminated Land Management Guidelines No.5.

Site Validation Report – Post-completion

172. The Consent Holder shall, within three months following the completion of the earthworks from areas where a DSI and a later update or addendum to the DSI identifies that contamination exceeds the applicable human health and environmental criteria, provide to the acceptance of the Council a Site Validation Report (SVR). The Site SVR shall include, but not be limited to:
- (a) confirmation of performance of earthworks, remediation (if required) conducted in accordance with approved plans and consent conditions;
 - (b) details and tabulated results of testing undertaken including testing of soil, water, vapour, and interpretation of the results in the context of the National Environmental Standard for Assessing the Managing Contaminants to Soil to Protect Human Health (NES Soil) and Chapter E30 of the AUP(OP);
 - (c) any unexpected contamination identified during excavation on the site and response actions;
 - (d) volume of soil excavated from the site, disposed off-site and landfill receipts; and
 - (e) any complaints received and response during remediation works.

Advice note: Site validation reporting may be undertaken in stages to allow for staged completion of the disturbance works within contaminated land.

O. Groundwater diversion

Groundwater definitions

Words in the ground dewatering (take) and groundwater diversion consent conditions below have specific meanings as outlined in the table below.

Alarm Level	Specific levels at which actions are required as described in the relevant conditions.
Alert Level	Specific levels at which actions are required as described in the relevant conditions.
Completion of Dewatering	Means, in the case of a tanked building or structure construction, the stage when all the external base slab and walls are essentially watertight, the structures internal support mechanisms, including basement floors have been completed any temporary retention removed and no further groundwater is being taken for the construction of the basement.
Commencement of Excavation	Means commencement of Bulk Excavation or excavation below the water table.
Completion of Construction	Means when the Code Compliance Certificate (CCC) is issued by Auckland Council
Completion of Excavation	Means the stage when all Bulk Excavation has been completed and all foundation/footing excavations within 10 meters of the perimeter retaining wall have been completed.
Condition Survey	Means an external visual inspection or a detailed condition survey (as defined in the relevant conditions).
Damage	Includes Aesthetic, Serviceability, Stability, but does not include Negligible Damage. Damage as described in the table below.
External visual inspection	A condition survey undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage. Includes as a minimum a visual inspection of the exterior and a dated photographic record of all observable exterior Damage.
GSMCP Monitoring Station	Means Groundwater and Settlement Monitoring and Contingency Plan Means any monitoring instrument including a ground or building deformation station, inclinometer, groundwater monitoring bore, retaining wall deflection station, or other monitoring device required by this consent.
RL	Means Reduced Level.
Seasonal Low Groundwater Level	Means the annual lowest groundwater level – which typically occurs in summer.
Services	Include fibre optic cables, sanitary drainage, stormwater drainage, gas and water mains, power and telephone installations and infrastructure, road infrastructure assets such as footpaths, curbs, catch-pits, pavements and street furniture.
SQEP	Means Suitably Qualified Engineering Professional
SQBS	Means Suitably Qualified Building Surveyor

Table 2: Building Damage Classification

Category of Damage	Normal Degree of Severity	Description of Typical Damage	General Category
0	Negligible	Hairline cracks.	Aesthetic Damage
1	Very Slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection. Typical crack widths up to 1mm.	
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repainting may be required for weather-tightness. Doors and windows may stick slightly. Typically crack widths up to 5mm.	
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Brick pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired. Typical crack widths are 5mm to 15mm or several greater than 3mm.	Serviceability Damage
4	Severe	Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted. Typical crack widths are 15mm to 25mm but also depend on the number of cracks.	
5	Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion. Danger of instability. Typical crack widths are greater than 25mm but depend on the number of cracks.	Stability Damage

Note: In the table above the column headed “Description of Typical Damage” applies to masonry buildings only and the column headed “General Category” applies to all buildings.

Notice of Commencement of Dewatering

173. The Council shall be advised in writing at least 10 working days prior to the date of the Commencement of Dewatering.

Design of Excavations and Retaining Systems

174. The design and construction of the excavations, shafts, fill platform, retaining walls and permanent drainage system shall be undertaken in general accordance with the specifications contained in the groundwater and settlement reports referenced in Condition 2.

Excavation Limit

175. The Bulk Excavation shall not extend below a depth demonstrated through detailed investigations and analysis to result in groundwater and settlement effects greater than predicted in the information submitted with the Application referred to in Condition 2. This shall be demonstrated in the Geotechnical Interpretive / Design Report required under Condition 183.

Performance Standards

Damage avoidance

176. All excavation, dewatering systems, retaining structures and works associated with the diversion or taking of groundwater, shall be designed, constructed and maintained so as to avoid Damage to buildings, structures and Services on the site or adjacent properties, outside that considered as part of the application process unless otherwise agreed in writing with the asset owner.

Alert and alarm levels

177. The activity shall not cause any settlement or movement greater than the Alarm Level thresholds specified in Schedule A below. Alert and Alarm Levels are triggered when the following Alert and Alarm Trigger thresholds are exceeded:

Schedule A: Alarm and Alert Levels			
Movement		Trigger Thresholds (+/-)	
		Alert	Alarm
a)	Differential vertical settlement between any two Ground Surface Deformation Stations (the Differential Ground Surface Settlement Alarm or Alert Level): <ul style="list-style-type: none"> GS1 to GS18 	1:750	1:550
b)	Total vertical settlement from the pre-excavation baseline level at any Ground Surface Deformation Station (the Total Ground Surface Settlement Alarm or Alert Level): <ul style="list-style-type: none"> G1, G2, G10, G11, G12, G14, G15, G16, G17 and G18 G13 G3, G4, G8 and G9 G5, G6 and G7 	7 mm 20 mm 40 mm 80 mm	10 mm 25 mm 50 mm 95 mm
c)	Total lateral deflection from the pre-excavation baseline level at any retaining wall deflection station (the Retaining Wall Deflection Alarm or Alert Level): <ul style="list-style-type: none"> RW1 to RW5 	32 mm	40 mm
d)	Distance below the pre-dewatering Seasonal Low Groundwater Level and any subsequent groundwater reading at any groundwater monitoring bore (the Groundwater Alert Levels 1 & 2):	n/a	(1) 80% of calculated (2) 100% of calculated

Advice note:

The locations of the Monitoring Stations listed in Schedule A are shown on the drawing entitled "Proposed monitoring points" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019.

These levels may be amended subject to approval by the Council as part of the Groundwater Settlement Monitoring and Contingency Plan (GSMCP) approval process, and, after the receipt of pre-dewatering monitoring data, condition surveys and recommendations from a suitably qualified engineering professional (SQEP), but only to the extent that avoidance of Damage to building, structures and Services can still be achieved.

There are conditions below that must be complied with when the Alert and Alarm Level triggers are exceeded. These include actions that must be taken immediately including seeking the advice of a SQEP.

Alert level actions

178. In the event of any Alert Level being exceeded the Consent Holder shall:

- (a) Notify the Council within 24 hours.
- (b) Re-measure all Monitoring Stations within 50m of the affected monitoring location(s) to confirm the extent of apparent movement.

- (c) Ensure the data is reviewed, and advice provided, by a SQEP on the need for mitigation measures or other actions necessary to avoid further deformation. Where mitigation measures or other actions are recommended those measures shall be implemented.
- (d) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council within five working days of Alert Level exceedance. The report shall provide an analysis of all monitoring data (including wall deflection) relating to the exceedance, actions taken to date to address the issue, recommendations for additional monitoring (i.e. the need for increased frequency or repeat condition survey(s) of building or structures) and recommendations for future remedial actions necessary to prevent Alarm Levels being exceeded.
- (e) Measure and record all Monitoring Stations within 50m of the location of any Alert Level exceedance every two days until such time the written report referred to above has been submitted to the Council.

Alarm level actions

179. In the event of any Alarm Level being exceeded at any ground deformation pin, building deformation pin, retaining wall deflection pin or inclinometer Monitoring Station required by this consent, the Consent Holder shall:
- (a) Immediately halt construction activity, including excavation, dewatering or any other works that may result in increased deformation, unless halting the activity is considered by a SQEP to be likely to be more harmful (in terms of effects on the environment) than continuing to carry out the activity.
 - (b) Notify the Council within 24 hours of the Alarm Level exceedance being detected and provide details of the measurements taken.
 - (c) Undertake a condition survey (this could comprise either a detailed condition survey or an external visual inspection at the discretion of the SQEP responsible for overseeing the monitoring) by a SQEP or suitably qualified building surveyor (SQBS) of any building or structure located adjacent to any Monitoring Station where the Alarm Level has been exceeded.
 - (d) Take advice from the author of the Alert Level exceedance report (if there was one) on actions required to avoid, remedy or mitigate adverse effects on ground, buildings or structures that may occur as a result of the exceedance.
 - (e) Not resume construction activities (or any associated activities), halted in accordance with (a) above, until any mitigation measures (recommended in accordance with (d) above) have been implemented to the satisfaction of a SQEP.
 - (f) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council, on the results of the condition survey(s), the mitigation

measures implemented and any remedial works and/or agreements with affected parties within five working days of recommencement of works.

Groundwater and Settlement Monitoring and Contingency Plan (GSMCP)

180. At least twenty (20) working days prior to the Commencement of Dewatering, a final Groundwater and Settlement Monitoring and Contingency Plan (GSMCP) prepared by a SQEP and in accordance with the Draft GSMCP, shall be submitted to the Council for written approval in accordance with Condition 19. No dewatering activities shall commence on site until written approval is provided from the Council that the GSMCP meets the conditions of consent.

The overall objective of the GSMCP shall be to set out the practices and procedures to be adopted to ensure compliance with the consent conditions and shall include, at a minimum, the following information:

- (a) A monitoring location plan, showing the location and type of all Monitoring Stations including groundwater monitoring bores, ground and building deformation pins and retaining wall deflection pins. The monitoring plan should be based on the drawing entitled "*Proposed monitoring points*" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019. In any case where the location of a Monitoring Station differs substantively from that shown on the drawing entitled "*Proposed monitoring points*" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, a written explanation for the difference shall be provided at the same time that the final GSMCP is provided.
- (b) Final completed Schedules B to E (as per the conditions below) for monitoring of groundwater drawdown, and, ground surface, building and retaining wall deformation (including any proposed changes to the monitoring frequency) as required by conditions below.
- (c) All monitoring data, the identification of Services susceptible to Damage and all building/Service condition surveys undertaken to date and required by conditions below.
- (d) A bar chart or a schedule, showing the timing and frequency of condition surveys, visual inspections and all other monitoring required by this consent, and a sample report template for the required two monthly monitoring.
- (e) All Alert and Alarm Level Triggers (including reasons if changes to such are proposed, for example as a result of recommendations in the building condition surveys or data obtained from pre-dewatering monitoring).
- (f) Details of the contingency actions to be implemented if Alert or Alarm Levels are exceeded.

The consent holder may request amendments to the GSMCP in writing to the Council for approval at least 10 working days prior to any changes taking effect. Any changes

to the GSMCP shall remain consistent with the overall intent of the GSMCP and shall be consistent with the requirements of the relevant conditions of these consents. No changes shall take effect without the prior approval of the Council.

181. All construction, dewatering, monitoring and contingency actions shall be carried out in accordance with the approved GSMCP.

Additional geotechnical investigations

182. Prior to the submission of the GSMCP, additional investigations as shown on the drawing titled "*Indicative Geotechnical Investigation Plan*" appended to the s92 response letter dated 15 July 2019 are to be undertaken as set out below, and in accordance with the geotechnical investigation-specific PRMP required by Condition 43:

- I. A minimum of two boreholes shall be drilled to 50m depth to investigate large-scale instability within the rock mass.
- II. A nested or piezometer pair (PZW1 and PZW2) shall be installed immediately adjacent to, and a stilling well (SW1) shall be installed within, the Kahikatea wetland along the western boundary of the reservoir 1 site.
The stilling well shall be monitored to determine surface water level in the wetland. The piezometer shall include one shallow piezometer at the same level as the wetland and a deeper piezometer screened in the expected upper groundwater level.
The stilling well and piezometer shall be monitored for a minimum of 12 months to determine vertical gradients in the vicinity of the wetland and if there is any groundwater – surface water connection.

183. The results of the investigation are to be summarised in a Geotechnical Interpretive / Design report and reporting shall include: confirmation sufficient investigation has been undertaken to address uncertainties and confirm the ground model (including deep-seated instability, geotechnical and hydrogeological parameters, and groundwater-surface water connection), confirmation of groundwater levels across the site(s), updated assessments of global stability, a summary of detailed design analyses undertaken and an updated assessment of environmental effects where different to that presented at the time of consenting, and detail any residual geotechnical risks that may not be fully addressed by the design.

Pre-Dewatering Building and Structure Survey

184. The Consent Holder shall undertake a risk assessment to identify existing buildings and structures at risk of damage due to settlement caused by the project. The risk assessment process and results shall be set out in the GSMCP required by Condition 180 and shall be based upon the additional site investigation and analyses, and final design and construction methodology. The risk assessment shall include:
- (a) Identification of the zone of settlement or ground movement influence;

- (b) Identification of the building types in this zone, and their susceptibility to ground movement induced damage;
 - (c) Identification of the buildings and structures at risk of damage due to the project works and requirements for monitoring; and
185. Where the risk assessment required by Condition 184 above identifies existing buildings and structures at risk of damage due to settlement caused by the project, a detailed condition survey of those buildings and structures shall be undertaken by a SQEP or SQBS and a written report shall be prepared and reviewed by the SQEP responsible for overseeing the monitoring. The report shall be submitted for certification by the Council.

The detailed condition survey shall include:

- (a) Confirmation of the installation of any required building deformation stations;
- (b) A description of the type of foundations;
- (c) A description of existing levels of Damage considered to be of an aesthetic or superficial nature;
- (d) A description of existing levels of Damage considered to affect the serviceability of the building where visually apparent without recourse to intrusive or destructive investigation;
- (e) An assessment as to whether existing Damage may or may not be associated with actual structural Damage and an assessment of the susceptibility of buildings/structures to further movement and Damage;
- (f) Photographic evidence of existing observable Damage;
- (g) A review of proposed Alarm and Alert Levels to confirm they are appropriately set and confirmation that any ground settlement less than the Alarm Level will not cause Damage;
- (h) An assessment of whether the monitoring frequency is appropriate; and
- (i) An assessment of whether the locations and density of existing ground and building deformation stations are adequate and appropriate for the effective detection of change to building and structure condition.

This condition does not apply where written evidence is provided to the Council that the owner of a property has confirmed they do not require a detailed condition survey.

Pre-Dewatering Services Condition Survey

186. Prior to the Commencement of Dewatering, a condition survey of potentially affected stormwater services shall be undertaken in consultation with the relevant service provider.

This condition does not apply to any service where written evidence is provided to the Council that the owner of that service has confirmed they do not require a condition survey.

External Visual Inspections during Dewatering

187. External visual inspections of the surrounding ground (including Scenic Drive, Woodlands Park Road and Manuka Road) and any neighbouring buildings and structures identified through the risk assessment required by Conditions 184 and 185 shall be undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage.

Inspections are to be carried out weekly from the Commencement to Completion of Dewatering. A photographic record is to be kept, including time and date, of each inspection and all observations made during the inspection, and should be of a quality that is fit for purpose.

The results of the external visual inspections and an assessment of the results are to be reviewed by the SQEP responsible for overseeing the monitoring and included in the bimonthly monitoring report for the relevant monitoring period.

Completion of Dewatering - Building, Structure and Service Condition Surveys

188. Between six and twelve months after Completion of Dewatering a detailed condition survey of all previously surveyed buildings, structures and stormwater Services, shall be undertaken by a SQEP or SQBS and a written report shall be prepared. The report is to be reviewed by the SQEP responsible for overseeing the monitoring and then submitted to the Council, within one month of completion of the survey.

The condition survey report shall make specific comment on those matters identified in the pre-dewatering condition survey. It shall also identify any new Damage that has occurred since the pre-dewatering condition survey was undertaken and provide an assessment of the likely cause of any such Damage.

This condition does not apply to any building, structure or Service where written evidence is provided to the Council confirming that the owner of that building, structure, or Service does not require a condition survey to be undertaken.

Additional surveys

189. Additional condition surveys of any building, structure, or Service within the area defined by the extent of groundwater drawdown or ground movement (as defined in the reports titled "Addendum to the Groundwater and Settlement Report, prepared by T+T, dated July 2019, Ref 30848.2000") shall be undertaken, if requested by the Council, for the purpose of investigating any Damage potentially caused by ground movement resulting from dewatering or retaining wall deflection. A written report of the results of the survey shall be prepared and/or reviewed by the SQEP responsible for overseeing the monitoring. The report shall be submitted to the Council.

190. The requirement for any such additional condition survey will cease six months after the Completion of Dewatering unless ground settlement or building deformation monitoring indicates movement is still occurring at a level that may result in Damage to buildings, structures, or Services. In such circumstances the period where additional condition surveys may be required will be extended until monitoring shows that movement has stabilised and the risk of Damage to buildings, structures and Services as a result of the dewatering is no longer present.

Groundwater monitoring

191. Groundwater monitoring is to be undertaken at the groundwater monitoring bore locations shown on the drawing entitled “*Proposed monitoring points*” prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, or in the approved GSMCP. Water level monitoring shall also be undertaken in and adjacent to the Kahikatea wetland. Groundwater level monitoring is to be undertaken in accordance with Schedule C below:

Schedule C: Groundwater Monitoring Frequency					
Bore Name	Location		Groundwater level monitoring frequency (to an accuracy of 10mm)		
	Easting (m E)	Northing (m N)	From bore construction until one month before Commencement of Dewatering	One month before Commencement of Dewatering to Completion of Dewatering	From Completion of Dewatering until 3 months later
PZ1	tbc	tbc	Monthly (with a minimum of three (3) monthly readings)	Weekly	Monthly
PZ2	tbc	tbc			
PZ3	tbc	tbc			
PZ4	tbc	tbc			
PZ5	tbc	tbc			
PZ6	tbc	tbc			
SW1	tbc	tbc	Monthly for 12 months	Weekly	Monthly
PZW1	tbc	tbc			
PZw2	tbc	tbc			

The monitoring frequency may be changed if approved by the Council. Any change shall be specified in the GSMCP. In addition, the three-month monitoring period post Completion of Dewatering may be extended by the Council, if measured groundwater levels are not consistent with inferred seasonal trends or predicted groundwater movement.

Advice note: If groundwater level measurements show an inconsistent pattern immediately prior to the Commencement of Dewatering (for example varying more than +/-200mm during a month), then further readings may be required to ensure that an accurate groundwater level baseline is established before dewatering commences.

Ground Surface and Building Deformation Monitoring

192. Ground Surface Deformation Monitoring Stations (and Building Deformation Monitoring Stations, if required) shall be established and maintained at the approximate locations shown on the drawing entitled “*Proposed monitoring points*” prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, or in the approved GSMCP. The Monitoring Stations will be monitored at the frequency set out in Schedule D. The purpose of the Monitoring Stations is to record any vertical or horizontal movement. Benchmark positions shall be established no less than 50m away from the excavated area.

Schedule D: Ground Surface and Building Monitoring			
Monitoring Station and type	Frequency		
	Pre-Commencement of Dewatering	Commencement to Completion of Dewatering	Post- Completion of Dewatering
Ground markers G1 to G18	Twice to a vertical accuracy of +/-2mm (achieved by precise levelling)	Weekly	Monthly for 6 months
Building markers (if identified as required by the risk assessment in condition 155)	Twice to a vertical accuracy of +/-2mm (achieved by precise levelling)	Weekly	Monthly for 6 months

The monitoring frequency may be changed, if approved by the Council.

Retaining Wall Monitoring

193. Five retaining wall deflection stations (RW1 to RW5), for the measurement of lateral wall movement shall be installed along the top of the southern Reservoir 1 retaining wall. Monitoring of the retaining wall deflection stations shall be undertaken and recorded in accordance with Schedule E below and shall be carried out using precise levelling.

Schedule E: Retaining Wall Monitoring
Frequency

Pre-Commencement of Dewatering	Commencement of Dewatering to one month after Completion of Excavation	One month after Completion of Excavation to Completion of Dewatering
Twice to a horizontal and vertical accuracy of +/-2mm	Once for every 2 metres depth (on average) of excavation, and, in any case, at a minimum of once weekly.	Fortnightly

The monitoring frequency may be changed, if approved by the Council, through the GSMCP.

Access to third party property

194. Where any monitoring, inspection or condition survey in this consent requires access to property/ies owned by a third party, and access is declined or subject to what the consent holder considers to be unreasonable terms, the Consent Holder shall provide a report to the Council prepared by a SQEP identifying an alternative monitoring programme. The report shall describe how the monitoring will provide sufficient early detection of deformation to enable measures to be implemented to prevent Damage to buildings, structures or Services. Written approval from the Council shall be obtained before an alternative monitoring option is implemented.

Contingency actions

195. If the consent holder becomes aware of any Damage to buildings, structures or Services potentially caused wholly, or in part, by the exercise of this consent, the Consent Holder shall:
- (a) Notify the Council and the asset owner within two working days of the consent holder becoming aware of the Damage.
 - (b) Provide a report prepared by a SQEP (engaged by the Consent Holder at their cost) that describes the Damage; identifies the cause of the Damage; identifies methods to remedy and/or mitigate the Damage that has been caused; identifies the potential for further Damage to occur, and, describes actions that will be taken to avoid further Damage.
 - (c) Provide a copy of the report prepared under (b) above, to the Council and the asset owner within 10 working days of notification under (a) above.

Advice note: It is anticipated the Consent Holder will seek the permission of the damaged asset to access the property and asset to enable the inspection/investigation. It is understood that if access is denied the report will be of limited extent.

Building, Structure, and Services Surveys and Inspections

196. A copy of all pre-dewatering building, structure condition surveys, and Service condition surveys and photographic records of external visual inspections required by this consent shall be submitted to the Council with the GSMCP. All other condition surveys and photographic records required by this consent shall be provided to the Council upon request.
197. At two monthly intervals from commencement of dewatering until completion of dewatering, or as otherwise set out in the GSMCP, a report containing all monitoring data required by conditions of this consent shall be submitted to the Council. This report shall include a construction progress timeline, the monitoring data (including the results of condition surveys) recorded in that period, and, a comparison of that data with previously recorded data and with the Alert and Alarm Levels for each Monitoring Station.

Upon Completion of dewatering, one electronic data file (excel workbook) containing digital data for all groundwater monitoring bores shall be provided to the Council. Data should include the monitoring bore name, type, location (NZTM easting / northing and elevation), screened depth for groundwater monitoring bores, absolute and relative readings (and their units of measure) and the date / time of each reading. The worksheets should contain data values only (no formulas, circular references or links to other sheets).

Requirement for Close-out Report

198. The final post-construction report shall constitute a close-out report and present a summary of overall trends observed on the project and confirmation that monitored readings post-construction (groundwater level, and / or ground and building movement) have reached steady state conditions (accounting for seasonal variation).

Notice of completion

199. The Council shall be advised in writing within 10 working days of when excavation and dewatering has been completed.

Permanent drainage

200. After Completion of Construction, any permanent backfill or drainage systems installed behind retaining walls or below base slabs shall not cause groundwater levels adjacent to the site to be reduced below pre-existing seasonal low levels, or, to rise above seasonal high levels (as measured during pre-construction monitoring) or in accordance with any subsequent monitoring.

Advice note: The Consent Holder is advised that the discharge of pumped groundwater to a stormwater system or waterbody will need to comply with any other regulations, bylaws or discharge rules that may apply.

Advice notes:

General

1. Any reference to number of days within this decision refers to working days as defined in s2 of the RMA.
2. For more information on the resource consent process with Auckland Council see the Council's website www.aucklandcouncil.govt.nz. General information on resource consents, including making an application to vary or cancel consent conditions can be found on the Ministry for the Environment's website: www.mfe.govt.nz.
3. If you disagree with the additional charges relating to the processing of the application, you have a right of objection pursuant to s357B of the RMA. Any objection must be made in writing to the Council within 15 working days of notification of the decision.
4. 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 in Employment Act 1992), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval.
5. The Consent Holder shall obtain a Corridor Access Request from Auckland Transport prior to the commencement of any works within the legal road.
6. Compliance with the consent conditions will be monitored by the Council in accordance with s35(d) of the RMA. This will typically include site visits to verify compliance (or non-compliance) and documentation (site notes and photographs) of the activity established under the consents. In order to recover actual and reasonable costs, inspections will be charged at the relevant hourly rate applicable at the time.
7. The Consent Holder is advised that the proposed works will be subject to an Outline Plan of Works process pursuant to s176A of the RMA.
8. The unwanted organism *P. agathidicida* has been confirmed to exist on site. The movement of soil, water or material containing the organism offsite is covered by the Biosecurity Act 1993. The consent holder is responsible for obtaining the necessary exemptions relevant to the Biosecurity Act (and other relevant consents and permits) prior to the works commencing on site.

Annexure 2

Conditions

Under section 108, the grant of these resource consents is subject to the following conditions:

Definitions

“ACM” means Asbestos Containing Material;

“AMP” means Adaptive Management Plan;

“ARI” means Annual Recurrence Interval;

“ASCNVMP” means Activity Specific Construction Noise and Vibration Management Plan;

“ASDDP” means Armstrong Stream Daylighting Design Plan;

“AUP(OP)” means the Auckland Unitary Plan (Operative in Part);

“CCP” means Construction Communication Plan;

“CMEP” means Cultural Management and Engagement Plan;

“ChTMP” means Chemical Treatment Management Plan;

“CLG” means the Community Liaison Group;

“CNVMP” means Construction Noise and Vibration Management Plan;

“Commencement of construction” means commencement of any construction works for the Project. For the avoidance of doubt, it excludes site investigations, fencing, and any activities that do not need resource consent and/or are permitted activities;

“Consent Holder” means Watercare Services Limited;

“Council” means the Auckland Council;

“CTMP” means Construction Traffic Management Plan;

“DoC” means the Department of Conservation;

“DSI” means Detailed Site Investigation;

“FBR” means Freshwater Baseline Report;

“EMP” means Ecological Management Plan;

“ESCP” means Erosion and Sediment Control Plan;

“GD01” means the Council’s Guidance Document 001 ‘*Stormwater Management Devices in the Auckland Region*’;

“GD05” means the Council’s Guidance Document 005 ‘*Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*’;

“GSMCP” means Groundwater and Settlement Monitoring and Contingency Plan;

“FMP” means Fauna Management Protocols;

“KCZ” means Kauri Contamination Zone;

“MPI” means the Ministry for Primary Industries

“NES Soil” means the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, 2011;

“NHMRP” means Nihotupu Heritage Management and Restoration Plan;

“OMP” means Operation and Maintenance Plan;

“OSLR” means Optimised Site Layout Report;

“PIA” means Pavement Impact Assessment;

“PMSBR” means the Pest Management Strategy for Biodiversity Restoration;

“PMSBR Area” means the area shown on Map 1 ‘Pest Management Proposal - Pest Management Areas’ of the RMSBR;

“PRMP” means *Phytophthora* Risk Management Plan;

“Project” means the proposal as described in the documents detailed at Condition 2;

“RMA” means the Resource Management Act 1991;

“SEA” means Significant Ecological Area;

“SEV” means Stream Ecological Value;

“SEVP” means Stream Ecological Valuation Plan;

“SMP” means Site Management Plan;

“SRP” means Stream Restoration Plan;

“SOP” means Standard Operating Procedures;

“Surficial soils” are soils that contain organics and soils within close proximity to organics (e.g., within 1 m).

“SVR” means Site Validation Report;

“WTP” means Water Treatment Plant; and

“YSDDP” means Yorke Stream Diversion Design Plan.

A. General conditions

Commencement and duration

1. Pursuant to ss 123 and 125 of the RMA, the duration and lapse dates for the various resource consents shall be as set out in the table below:

Consent	Lapse Date	Duration (unless the consent has lapsed, been surrendered or cancelled at an earlier date)
Land use consents for land disturbance activities including earthworks, NES consent for disturbance of contaminated soils, and vegetation removal associated with replacement WTP and Reservoir 1.	10 years from commencement.	15 years from commencement.
Land use consents for land disturbance activities including earthworks, NES consent for disturbance of contaminated soils, and vegetation removal associated with Reservoir 2.	15 years from commencement.	20 years from commencement.
Land use consents for works in the bed of a watercourse including disturbance and construction and installation of structures.	10 years from commencement.	15 years from commencement.
Land use consents for reclamation and drainage in the bed of a watercourse.	10 years from commencement.	n/a
Consent to divert a river or stream to a new course.	10 years from commencement.	15 years from commencement.
Consents for diversion and discharge of stormwater.	10 years from commencement.	35 years from commencement.
Consents for diversion and discharge of groundwater.	10 years from commencement.	15 years from commencement.
Consent to discharge contaminants to land associated with the disturbance of potentially contaminated soil (WTP and Reservoirs 1 and 2).	10 years from commencement.	25 years from commencement.

Advice note: The consents lapse in accordance with the above lapse dates unless, prior to the lapse date:

- (a) The consent is given effect to; or
- (b) The Council extends the period after which the consent lapses.

Development in general accordance with plans

2. The activities authorised by this consent shall be undertaken in general accordance with the information provided with the application, and all referenced by the Council as consent number **BUN60339273** as follows:

(a) The information provided with the application as follows:

- Assessment of Environmental Effects report, titled “*Huia Replacement Water Treatment Plant (WTP) Project*”, Version V1, prepared by Tonkin & Taylor Ltd (“**T+T**”), dated 22 July 2019;
- WTP Reservoirs Site Layout Development Report, prepared by GHD Ltd, dated May 2019;
- Reservoirs storage, location and layout assessment, prepared by Beca Ltd, dated 22 May 2019;
- Indicative design drawings, prepared by GHD Ltd, dated May 2019 (Rev 2);
- Indicative Construction Methodology Report, prepared by Alta, dated 23 May 2019 (Rev 5);
- Stormwater and Erosion and Sediment Control Report, prepared by Cook Costello, dated July 2019, Ref 14191;
- Groundwater and Settlement Report, prepared by T+T, dated 24 May 2019, Ref 30848.2000;
- Addendum to the Groundwater and Settlement Report, prepared by T+T, dated July 2019, Ref 30848.2000;
- Preliminary Land Stability Assessment, prepared by T+T, dated 24 May 2019, Ref 30848.2000;
- Addendum to the Preliminary Land Stability Assessment, prepared by T+T, dated July 2019, Ref 30848.2000;
- Site Management Plan for Ground Contamination, prepared by T+T, dated May 2019, Ref 30848.2000v2;
- Ecological Assessment, prepared by Boffa Miskell Ltd, dated 26 July 2019;
- Traffic and Transport Assessment, prepared by Beca Ltd, dated 10 July 2019 (Rev 3.0);
- Construction Noise and Vibration Assessment, prepared by Marshall Day Acoustics Ltd, dated 20 May 2019 (Rev 3); and

(b) The additional information provided by the applicant set out in the letter prepared by T+T, dated 13 August 2019, and the following attachments:

- Appendix A – Stormwater Response, prepared by Cook Costello, dated 9 August 2019;
- Appendix B – Groundwater and Earthworks Response, prepared by T+T, dated 13 August 2019;

- Appendix C – Ecology Response, being a memorandum from the applicant's counsel regarding the Trust Deed dated 31 July 2019 and a memorandum from Boffa Miskell Ltd, dated 9 August 2019;
 - Appendix D – Arborist Response, prepared by GreensceneNZ Ltd, dated 9 August 2019; and
 - Appendix E – Transport Response, prepared by CH2M Beca Ltd, dated 9 August 2019.
- (c) The Preliminary Site Investigation, prepared by T+T, dated September 2019 (Version 1.1), Ref 30848.2000.
- (d) The additional information provided by the applicant set out in the letter prepared by T+T, dated 8 November 2019, and the following attachments:
- Attachment A – Regional stormwater and earthworks response, prepared by Cook Costello, dated 8 November 2019 and USLE calculations provided on 2 December 2019;
 - Attachment B – Streamworks, terrestrial ecology and kauri dieback response, prepared by Boffa Miskell Ltd, dated 20 October 2019;
 - Attachment C – Transportation response, prepared by CH2M Beca Ltd, dated 4 November 2019;
 - Attachment D – Road stability response, prepared by T+T, dated 8 November 2019; and
 - Attachment E – Social Impact Assessment response, prepared by Beca Ltd, dated 8 November 2019.
- (e) The Addendum to Stream Ecological Value Plan, prepared by Boffa Miskell Ltd, dated 26 November 2019.
- (f) The following draft management plans:
- Draft Groundwater and Settlement Monitoring and Contingency Plan (Rev 3), prepared by T+T, dated January 2020;
 - Draft Construction Noise and Vibration Management Plan (Rev O), prepared by Marshall Day Acoustics, dated 4 February 2020;
 - Draft Ecological Management Plan (Rev 1), prepared by Boffa Miskell Ltd, dated 4 February 2020;
 - Revised Pest Management Strategy for Biodiversity Restoration (mitigation for the Huia Water Treatment Plant Upgrade (Rev. 5), prepared by Boffa Miskell Ltd, dated 26 June 2023;
 - Draft Construction Traffic Management Plan (Rev 4.0), prepared by CH2M Beca Ltd, dated 4 February 2020.
- (g) Huia Replacement Water Treatment Plant: Proposed Boundary Planting Plans, Drawing No A16055_000 to 003, 010, 011, 100 to 103 and 050, prepared by Boffa Miskell.

- (h) Huia Replacement Water Treatment Plant: Planting Plan with Cross Section Locations, Proposed Planting Schedule, Site Photos, Section G and Section E, Rev 2, prepared by Boffa Miskell, 14 March 2021.
 - (i) Consideration of Potential Landscape Effects Arising from the Huia WTP Site Vegetation Clearance and Temporary Cleared Site. Boffa Miskell, 26 August 2020.
 - (j) Memorandum titled '*NPS-FW wetland evaluation for weedfield in Huia WTP site*' prepared by Boffa Miskell, dated 15 April 2021.
 - (k) Draft trust deed for the Biodiversity Trust. For the purpose of these conditions, 'draft trust deed' means the Draft Deed of Trust for the Biodiversity Trust, prepared by Simpson Grierson dated December 2023 and attached to these consent conditions
 - (l) Huia Replacement WTP Project - Indicative Lizard Release Site, Boffa Miskell, 13 September 2023.
3. No works provided for under these consents shall occur outside of the footprint of the replacement WTP, Reservoir 1 and Reservoir 2 identified on Hearing Plan A: Project Site Features dated 20 Feb. 2020 other than to achieve safe sight distances for site access and minor variations described in the Optimised Site Layout Report required by Conditions 12 to 14, and subject to complying with Condition 4.
4. The maximum area of vegetation removal within the Significant Ecological Area provided for under these consents is set out as follows:
- Replacement WTP: 2.50 ha
 - Reservoir 1: 0.60 ha
 - Reservoir 2: 0.40 ha

Advice notes: Conditions 3 and 4 are also subject to Conditions 12 to 14 below which require that the footprint of the replacement WTP and reservoirs is optimised through detailed design as far as practicable.

*If the optimised site layout report required by Conditions 10 to 12 below confirms a **reduced** area of vegetation removal within the SEA, then this shall prevail over the maximum area identified in Condition 4 above.*

5. In the event of any conflict between the documents listed in Condition 2 above and the conditions of this consent, the conditions shall prevail. Documentation related to earthworks, soil disturbing activities and associated erosion and sediment control measures contained in Condition 2 is superseded by the consent conditions.

Advice note: In the event that minor amendments to the approved plans and management plans are required, any such amendments should be limited to the scope of this consent. Any amendments which affect the performance of the proposed activity may require an application to be made in accordance with s127 of the RMA. Any minor amendments shall be provided to the Council prior to implementation to confirm that they are within the scope of this consent.

Section 128 review

6. The conditions of this consent may be reviewed by the Council pursuant to s128 of the RMA (with the costs of the review process being borne by the Consent Holder) by giving notice pursuant to s129 of the RMA, at one or more of the following times:

- At two yearly intervals from the date of granting of consent prior to the commencement of earthworks provided for under this consent; and
- Within one year of initiation of the earthworks provided for under this consent; and
- At two yearly intervals after that time.

In addition to the above, the conditions which relate to the diversion of groundwater set out in Section O of this consent may be reviewed at intervals of not less than one year following commencement of dewatering.

7. The purpose of the review may be for any of the following purposes, namely:

- (i) To deal with any adverse effect on the environment which may arise from the exercise of this consent or upon which the exercise of the consent may have an influence and which becomes apparent, or is found appropriate, to deal with at a later stage, and in particular but without limiting the ambit of this clause to:
 - a. Insert conditions, or modify existing conditions, to require the consent holder to identify the character or nature of any discharges authorised by this consent and to report the results of that monitoring to the Council; and/or
 - b. Insert conditions, or modify existing conditions to require the consent holder to monitor the effects of any activities authorised by this consent on the local receiving environment and to report the results of that monitoring to the Council;
 - c. Insert conditions, or modify existing conditions, requiring the consent holder to adopt the Best Practicable Option to remedy, mitigate or minimise any adverse effects on the environment which may arise from the exercise of these consents and which it is appropriate to deal with at a later stage.
- (ii) To review and respond to refinements identified through the Optimised Site Layout Report required by Condition 13.
- (iii) To review the conditions set out in '*Section C – Ecological Management Plan*' in light of monitoring and new methodologies to avoid, remedy or mitigate potential adverse effects on ecological values and biodiversity, including in particular the vegetation and fauna management protocols to minimise potential effects on flora and fauna.
- (iv) To review the management measures and hygiene protocols to avoid and minimise the risk of spreading *Phytophthora* species set out in '*Section D – Earthworks and Vegetation removal*' to take into account the most up-to-date

research and information, including reviewing the monitoring and reporting requirements and the potential to treat captured surface water run off to eliminate *Phytophthora* species prior to discharge.

- (v) To review the conditions of consent in relation to *Streamworks (Section E)* and *Groundwater diversion (Section O)* to respond to any updates to the National Policy Statement for Freshwater Management 2020 (NPS-FW) or to changes to the Auckland Unitary Plan (AUP) to give effect to the NPS-FW.
- (vi) To review the objectives and requirements of the Pest Management Strategy for Biodiversity Restoration (PMSBR) taking into account the results of monitoring required by Condition 118 and the additional controls and Further Biodiversity Works Plan required by Condition 119.
- (vii) In relation to the diversion of groundwater, to vary the monitoring and reporting requirements, and performance standards, in order to take account of information, including the results of previous monitoring and changed environmental knowledge on:
 - ground conditions;
 - aquifer parameters;
 - groundwater levels; and
 - ground surface movement.

Monitoring

8. The consent holder shall pay the Council an initial consent compliance monitoring charge of \$5,000 inclusive of GST, plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

Advice note: The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the Council issue a letter confirming compliance on request of the consent holder.

Archaeology

9. In the event of archaeological site evidence (e.g. shells, middens, hangi or ovens, pit depressions, defensive ditches, artefactual material or human bones) being uncovered during construction/earthworks, the Consent Holder shall ensure that operations shall cease in the vicinity of the discovery and that the Council and Te Kawerau ā Maki are contacted so that the appropriate action can be taken before any work may recommence there.

Should earthworks on the site result in the identification of any previously unknown archaeological site, the land disturbance – Regional Accidental Discovery rule [E11.6.1] set out in the AUP(OP) shall also be applied.

Advice note: In the event of an Accidental Discovery, also refer to the Mana Whenua-directed procedures to be implemented in the event of an accidental discovery set out in the CMEP required under Condition 124.

B. Pre-commencement

Site Meeting

10. Prior to the commencement of any construction activities or vegetation removal, the Consent Holder shall hold a pre-start meeting that:
- (a) is located on the subject site;
 - (b) is scheduled not less than 10 working days before the anticipated commencement of construction works or vegetation removal;
 - (c) includes Auckland Council officer(s), in particular staff experienced in kauri die back management;
 - (d) includes someone who has a thorough understanding of *Phytophthora* pathogen dynamics (e.g. a *Phytophthora* expert or an ecologist with appropriate expertise);
 - (e) includes representation from the contractors who will undertake and/or supervise and monitor the works; and
 - (f) includes the Site Hygiene Manager.

A representative from Te Kawerau a Maki shall also be provided the opportunity to attend the pre-start meeting.

The pre-start meeting is to ensure all relevant parties are aware of and familiar with the necessary conditions of these consents. At this pre-start meeting, the meeting shall discuss the following matters (not limited to):

- (i) Timeframes for key stages of the works authorised under these consents;
- (ii) Detailed run-through of the key aspects of the approved management plans, including specific details on the controls to minimise the spread of *Phytophthora* species the need to minimise vegetation removal and restrictions around transportation movements to and from the site; and
- (iii) Contact details of the site contractor(s) and other key consultants (including design consultants) involved in the works.

Advice note: To arrange the pre-start meeting please contact the Council on 09 301-0101. The conditions of consent are to be discussed at this meeting. All additional information required by the Council is to be provided two working days prior to the meeting.

Detailed engineering drawings and design

11. Following detailed design of the Project enabling works for each stage (or stages), and at least twenty (20) working days prior to commencement of these works (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing), the Consent Holder shall submit detailed engineering designs and drawings of earthworks for that stage (or stages) to the Council.

12. The Consent Holder shall ensure that the footprint of the replacement WTP and reservoirs is optimised through detailed design to ensure that, as far as practicable, the works provided for under this consent:
 - (a) Further reduce the extent of vegetation removal in the Significant Ecological Area (SEA); and
 - (b) Further reduce effects on individual trees of greatest significance that are located within the works footprint identified in the drawings referenced in Condition 2; and
 - (c) Further reduce effects on kauri trees that have rootzones within or extending into the works footprint identified in the drawings referenced in Condition 2 and as confirmed onsite by a suitably qualified arborist in accordance with Condition 23.
13. Prior to commencement of works, the Consent Holder shall submit an updated Optimised Site Layout Report (OSLR) and associated plan(s) for written approval by the Council in accordance with Condition 19 confirming the works footprint and setting out the measures to further minimise impacts on vegetation in the SEA and significant trees as required by Condition 12.
14. The OSLR required by Condition 13 shall:
 - (a) Report on optimisation of the footprint that has occurred through detailed design taking into account the matters in Condition 12 (a) to (c) above;
 - (b) Confirm the area of vegetation clearance (less than or up to the limits set out in Condition 4); and
 - (c) Include an assessment (including recommendation and supporting rationale) of:
 - (i) Removing part of the Huia Water Treatment Plant buildings (excluding the 1928/1947 Huia Filter Station building which is subject to heritage controls) to provide an alternative layout for Reservoir 2 and reduced vegetation clearance; and
 - (ii) Restrictions on uses of the site, including car parking and administrative functions, to those which are essential to the safe and efficient operation of the treatment plant; and
 - (iii) The option of moving the replacement WTP closer to the Woodlands Park Road frontage taking into account relevant considerations including landscape, ecological, arboricultural, and traffic and access effects. If this option is selected, a minimum landscape buffer of 5 m from the property boundary to Woodlands Park Road must be maintained and shall be accompanied by a reduction in footprint along the southern boundary that is at least commensurate in area.

An independent peer review of the conclusions and recommendations of the OSLR shall be undertaken and submitted to Council with the OSLR. The peer review shall be made publicly available including by providing a copy of the report at the Titirangi Public Library.

Community Liaison Group

15. The Consent Holder shall support the establishment and ongoing involvement of a Community Liaison Group (CLG) comprised of representatives of the local community and local businesses (including The Tree Council (Auckland) Incorporated and the Titirangi Protection Group Incorporated). The objectives of the CLG are to:
 - (a) Provide a means for all parties to give and receive regular updates on progress with the Project;
 - (b) Provide a regular forum through which information about the Project can be provided to the community;
 - (c) Enable opportunities for concerns and issues to be reported to and responded to by the Consent Holder; and
 - (d) Provide feedback on the development of the Construction Communication Plan (CCP), Ecological Management Plan (EMP), Pest Management Strategy for Biodiversity Plan (PMSBR), Construction Noise and Vibration Management Plan (CNVMP), Construction Traffic Management Plan (CTMP), *Phytophthora* Risk Management Plan (PRMP), Heritage Management and Restoration Plan for the Nihotupu Filter Station (NHMRP), plans to enhance local recreational facilities and the future re-use of the Nihotupu Filter Station and 1928/1947 Huia Filter Station building.
16. The Consent Holder shall:
 - (a) Consult with the CLG on the development and content of the CCP, EMP, CNVMP, CTMP, PMSBR, NHMRP, plans to enhance local recreational facilities and the future re-use of the Nihotupu Filter Station and 1928/1947 Huia Filter Station building including provision of a space for use by the community within at least one of the heritage buildings;
 - (b) Provide reasonable administrative support for the CLG including:
 - Organising meetings at a local venue;
 - Inviting all members of the CLG;
 - Distributing an agenda to each CLG member no less than five working days prior to meetings; and
 - The taking and dissemination of meeting minutes,
 - (c) Provide an update at least every six months (or as otherwise agreed with the CLG) on compliance with consent conditions.
17. The Consent Holder shall endeavour to ensure that the CLG meets at least every three (3) months and more often as required during construction of the Project, and at least annually at other times, or as otherwise agreed with the CLG. The CLG shall continue for the duration of the construction period.
18. Prior to the commencement of works a Construction Communication Plan (CCP) shall be submitted to the Council for certification in accordance with Condition 19. The objective of the CCP is to set out a framework to ensure appropriate communication is undertaken with relevant stakeholders, including neighbours and local businesses

during the construction of the Project. The CCP shall set out how the Consent Holder will:

- 1) Inform the community of construction progress and future construction activities and constraints that could affect them;
- 2) Receive and respond to feedback on construction related matters; and
- 3) Provide information on key project milestones.

The CCP shall, as a minimum, include:

- a) A communications framework that details the consent holder's communication strategies, the accountabilities and timeframes for responding to inquiries and complaints, frequency of communications, the range of communication methods to be used (including any modern and relevant communication methods, newsletters or similar, advertising), and any other relevant communication matters;
- b) The Communication Liaison Manager for the Project including their contact details (phone, email and postal address);
- c) How the community, stakeholders, local business, and affected in proximity parties will be notified of the commencement of construction activities and works, the expected duration of the activities and works, and who to contact for any queries, concerns and complaints; and
- d) Methods for communicating in advance of proposed construction activities where there is the potential for noise/vibration effects (required by Condition 136), to surrounding relevant stakeholders and methods to record and deal with any concerns raised about such activities.

The CCP shall have regard to, and where appropriate implement, any relevant actions arising from the Community Liaison Group meetings (required by Conditions 15 and 16). The CCP shall be implemented and complied with for the duration of the construction of the Project.

Management Plans – General

19. The following are general provisions related to all management plans, reports or other plans identified in Table 1 below:
 - (a) Management Plans shall be submitted to the Council for certification or written approval (as determined by the relevant condition) as follows:
 - i. At least forty (40) working days prior to the intended start of the works, the Consent Holder shall provide Council with a schedule detailing the timing of all relevant Management Plans that will be provided to Council for

certification or written approval. The schedule should be updated and provided to Council prior to any new stage.

- ii. Management Plans shall be submitted at least twenty (20) working days prior to the Commencement of Construction unless otherwise specified in the conditions. The consent holder shall ensure that any changes to draft Management Plans are clearly identified.
- (b) Management Plans may be submitted in parts or in stages to address particular activities or to reflect a staged implementation of the Project, and when provided in part or for a stage shall be submitted at least twenty (20) working days prior to Commencement of Construction on that part or stage unless otherwise specified in the conditions. Management Plans submitted shall clearly show the linkage with plans for adjacent stages and interrelated activities.
- (c) The Council shall review and certify or approve (as applicable) management plans, reports or other plans (as identified in Table 1 below) using best endeavours to meet the following timeframes:
 - i. Certify a Management Plan, report or other plan submitted for certification within thirty (30) working days.
 - ii. Approve a Management Plan, report or other plan submitted for written approval within thirty (30) working days.

Where the above timeframes cannot be met, then the Council shall provide reasons for this and set out an alternative timeframe within twenty-five (25) working days of the Management Plan, report or other plan being submitted to Council.

- (c) Any approved or certified Management Plan may be amended if necessary to reflect any minor changes in design, construction methods or management of effects. Any amendments are to be provided to the Council for confirmation in writing prior to implementation of the change, unless the Council determines at its discretion that those amendments once implemented would result in a materially different outcome to that described in the original Management Plan.
 - (d) Any changes to an approved or certified Management Plan involving a materially different outcome shall be submitted to the Council to certify that they comply with the applicable requirements of these conditions. Any material change must be consistent with the objective of the relevant Management Plan and the other requirements of the relevant conditions of these consents. Where a Management Plan was prepared in consultation with interested or affected parties, any material changes to that Plan shall be prepared in consultation with those same parties.
 - (e) All works shall be carried out in accordance with the approved or certified Management Plans. No works shall commence until written approval or certification of all the relevant Management Plans for that stage have been received, unless otherwise approved in writing by the Council.

- (f) The *Phytophthora* Risk Management Plan (PRMP) required by Condition 26 sets out the management protocols and adaptive management approach to be implemented to avoid or minimise the risks of spreading *Phytophthora* species. All of the management plans identified in Table 1 below and in the respective conditions of consent shall be consistent with the applicable management protocols and approach set out in the PRMP.

Advice note: The summary table below outlines the management plans, reports and plans required to be provided to Council and timeframes.

Table 1: Summary of management (and other) plans required

Management Plans / Reports / Plans	Condition	Prepared by	Consultation required in preparation of plan	Timeframes ¹	Approved or Certified by Council	Additional matters
Detailed engineering drawings and design	11	Consent Holder	-	At least 20 WD prior to commencement of construction	N/A	-
Optimised Site Layout Report (OSLR)	13	Consent holder	-	Prior to commencement	Written Approval	An independent peer review of the conclusions and recommendations of the OSLR shall be undertaken and submitted to Council with the OSLR.
Construction Communication Plan (CCP)	18	Consent holder	CLG	At least 20 WD prior to commencement of construction	Certification	-
Ecological Management Plan (EMP) Includes Fauna Management Protocols (FMP) and Revegetation Plan	20	Suitably qualified and experienced person with reference to relevant specialists as required	DoC, the Royal Forest and Bird Protection Society of New Zealand, Te Kawerau ā Maki and CLG	At least 20 WD prior to commencement of construction	Written Approval	Shall be provided to DoC for its review prior to being finalised.

¹Conditions provide for staging. Some conditions specifically exclude site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing, etc.

Management Plans / Reports / Plans	Condition	Prepared by	Consultation required in preparation of plan	Timeframes ¹	Approved or Certified by Council	Additional matters
Phytophthora Risk Management Plan (PRMP)	26	Suitably qualified experts in erosion and sediment control, biosecurity, Phytophthora species, plant pathology and related disciplines	CLG	<p>Draft PRMP circulated to the Panel no later than 60 WD before works are scheduled to commence.</p> <p>The expert peer review panel shall provide their written review comments within a 20-WD period.</p> <p>Final PRMP shall be submitted to Council at least 20 WD prior to the commencement of construction</p>	Written Approval	Consent holder to engage an expert peer review panel ("the Panel") comprising appropriately qualified representatives.
Geotechnical investigation-specific PRMP	43	See PRMP above	CLG	See PRMP above	Written approval	See PRMP above
Erosion and Sediment Control Plan (ESCP)	66	See PRMP above.	-	See PRMP above.	Written Approval	See PRMP above.
Dewatering Plan	69	Consent holder	-	At least 20 WD prior to commencement of construction	Written Approval	-
Adaptive Management Plan (AMP)	79	Consent holder	Te Kawerau ā Maki.	At least 20 WD prior to the commencement of construction	Written Approval	-
Freshwater Baseline Report (FBR)	81	Consent holder	Te Kawerau ā Maki	Prior to any streamworks or earthworks commencing.	Written Approval	-
Chemical Treatment Management Plan (ChTMP)	86	See PRMP above.	-	See PRMP above.	Written Approval	See PRMP above.

Management Plans / Reports / Plans	Con- dition	Prepared by	Consultation required in preparation of plan	Timeframes ¹	Approved or Certified by Council	Additional matters
Yorke Stream Diversion Design Plan (YSDDP)	89	Suitably qualified person	-	At least 20 WD prior to commencement of stream daylighting works	Certification	-
Armstrong Stream Daylighting Design Plan (ASDD)	92	Suitably qualified person	-	At least 20 WD prior to the commencement of stream diversion works	Certification	-
Stream Restoration Plan (SRP) Includes Offset and Compensation Reporting	95	Consent holder	Te Kawerau ā Maki	Prior to streamworks commencing. Offset and Compensation Report shall be provided to the Council within 30 WD of each stage of the offset and compensation work being completed.	Certification	Further Offset Works Plan required If monitoring shows that the SEV values of the mitigation streams and constructed stream channel have not reached the predicted value within ten years.
Pest Management Strategy for Biodiversity Restoration (PMSBR)	113	Suitably qualified and experienced ecologist	CLG	At least 20 WD prior to commencement of construction	Written Approval	May require a Further Biodiversity Works Plan
Nihotupu Heritage Management and Restoration Plan (NHMRP)	123	Suitably qualified and experienced person(s)	CLG, Auckland Council (Heritage Team) and Heritage New Zealand Pouhere Taonga (HNZ)	At least 20 WD prior to commencement of construction	Certification	Shall be provided to Auckland Council (Heritage Team) and HNZ for review prior to it being submitted to the Council.
Cultural Management and Engagement Plan (CMEP)	124	Consent holder in collaboration with Te Kawerau ā Maki	-	Not specified (at least 20 WD prior to the commencement of construction; or as agreed with Te	Certification	Final version provided to Te Kawerau ā Maki for review prior to it being

Management Plans / Reports / Plans	Condition	Prepared by	Consultation required in preparation of plan	Timeframes ¹	Approved or Certified by Council	Additional matters
				Kawerau ā Maki)		submitted to the Council.
Construction Traffic Management Plan (CTMP)	127	Consent holder	CLG, AT and schools	Submit the CTMP for each stage of construction to the Council at least 20 WD prior to the commencement of construction	Certification	Input from schools located along HV routes; include Titirangi Primary School, Kaurilands School, Woodlands Park School, Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School.
Pavement Impact Assessment (PIA) Includes monitoring plan requirement.	131	Suitably qualified pavement engineer	-	At least 20 WD prior to commencement of construction	Certification	Consent holder to arrange meeting with the Council and AT's Asset Roding Manager to discuss the findings of the PIA.
Construction Noise and Vibration Management Plan (CNVMP)	136	Suitably qualified acoustic specialist	CLG	At least 20 WD prior to works	Certification	-
Activity Specific Construction Noise and Vibration Management Plan (ASCNVMP)	137	Suitably qualified acoustic specialist	-	At least 20 WD prior to works	Written Approval	-
Certification of stormwater management	152	suitable qualified	-	5 WD prior to the post-	Certification	Post construction certification may be

Management Plans / Reports / Plans	Con- dition	Prepared by	Consultation required in preparation of plan	Timeframes ¹	Approved or Certified by Council	Additional matters
works (As-Built Plans)		registered surveyor		construction meeting		undertaken in stages to allow for staged completion of the stormwater management works associated with the replacement WTP, Reservoir 1 and Reservoir 2.
Operation and Maintenance Plan (OMP)	154	Consent holder	-	5 WD prior to the post-construction meeting	Certification	
Maintenance Report (MR)	159	Consent holder	-	Provided on request	N/A	
Site Management Plan (SMP)	160	Consent holder	-	Works in accordance with existing SMP. Updated SMP and/or RAP (If required) at least 10 WD before earthworks commence.	N/A	Requires additional soil investigations and asbestos survey.
Detailed Site Investigation (DSI)	160	SQEP	-	At least 10 WD prior to commencement of earthworks	Acceptance of Council	-
Site Validation Report (SVR)	172	Consent holder	-	Within 3 months of completion of the earthworks	Acceptance of Council	Only if investigations show this is required.
Groundwater and Settlement Monitoring and Contingency Plan (GSMCP)	180	SQEP	-	At least 20 WD prior to the commencement of dewatering	Written approval	Close-out report also required.

C. Ecological Management Plan

20. The Consent Holder shall prepare a final Ecological Management Plan (EMP) for the Project Site. The objective of the EMP is to identify how the Project will avoid, remedy and mitigate potential adverse effects on the ecological values and biodiversity of the land within the Project Site, as well as a methodology for pre- and post-works monitoring.
21. The EMP shall be prepared in accordance with the Draft EMP and shall address how the Project will avoid, remedy and mitigate actual and potential adverse effects on ecological values including:
- 1) individual large trees close to the works footprint;
 - 2) herpetofauna (lizards and frogs);
 - 3) kauri snails;
 - 4) bats;
 - 5) avifauna (birds); and
 - 6) vegetation / habitat.

Advice note: For avoidance of doubt, the EMP sets out the vegetation and fauna management protocols to be undertaken at all stages of the works to minimise potential effects on flora and fauna. This includes protocols to be undertaken prior to, and during, the initial site preparation works including geotechnical investigations, vegetation clearance, topsoil and surficial soil disturbance, clearance and disposal phases, along with the subsequent bulk earthworks phase.

22. The protocols to manage the risk of introducing or spreading *Phytophthora* species within or off the Project Site are to be set out in the *Phytophthora* Risk Management Plan (PRMP) required under Condition 26. The EMP shall be implemented in accordance with the relevant PRMP protocols, Traffic Light System and in accordance with Conditions 36 to 62 'Staging of Works'.
23. The EMP shall provide detail on site-specific ecological management and mitigation measures that will be implemented on the Project Site which shall include:
- (a) Vegetation protection and clearance protocols, including surveying and demarcation of the works area and other protocols for minimising accidental encroachment and damage to individual trees and vegetation outside of the works footprint for the duration of earthworks and construction activities. These shall include, but not be limited to:
 - A tree protection methodology for works within the Tree Protection Zone (TPZ) (note: Kauri Containment Zones (KCZ) identified in accordance with Condition 28(f) represent the TPZ for works within the vicinity of kauri trees). This shall include:
 - (i) Arborist supervision to monitor, supervise and direct all works within the TPZ of identified trees near the perimeter of the construction footprint;

- (ii) Tree protection measures and protection plans, including fencing, for trees where works are to occur within the TPZ.
- A tree risk register;
- Root pruning and remediation methodology;
- Protocols for concrete deliveries and pours within the vicinity of trees and within the TPZ;
- On-going monitoring of tree protection measures by a suitably qualified arborist for the duration of construction works.

In addition to the above:

- Any tree pruning or removal required to facilitate the works must be undertaken by an Auckland Council approved arborist.
 - Within the seepage range of any TPZ there shall be no refueling of equipment or machinery and no storage of fuel or any other substance detrimental to tree health.
- (b) Management measures and protocols to avoid, remedy or mitigate the impact of activities (vegetation clearance, earthworks and construction) on flora and fauna within the Project Site, including:
- (i) Fauna Management Protocols (FMP) prepared by a suitably qualified ecologist holding the appropriate Wildlife Act Authority (incl. in the case of herpetofauna, a Department of Conservation (DoC) approved herpetologist) to handle fauna. The FMP shall specify kauri snail, lizard and Hochstetter's frog surveys, capture, salvage and relocation programmes. The FMP are to be implemented within the delineated earthworks footprint agreed by the ecologist and the DoC approved herpetologist immediately prior to and during any vegetation clearance.

The FMP shall include (in order of preference):

- Visual inspection and destructive searching of potential habitat features (including trees and ground cover habitats). Inspection methods are to include search techniques suitable for lizards and kauri snails.
- Supervised felling where high-quality lizard habitat cannot be adequately searched (e.g. tall, dense tree species), felling should be supervised to allow a herpetologist to search through fallen trees for resident lizards.

The FMP shall also set out the procedures to be followed in the event Hochstetter's frogs are encountered. These procedures are to be developed in consultation with the DoC's Frog Recovery Group.

- (ii) Subject to obtaining the necessary landowner approvals, Spragg's Track (the bush adjoining Parau Sludge Disposal Site to the west and east of Lower Nihotupu Reservoir) is the preferred location to release relocated fauna. This area is shown in the Huia Replacement WTP Project –

Indicative Lizard Release Site. Pest control (in accordance with Condition 118 Table 2) is required in and around release site(s) prior to relocation of any target fauna. These measures are to enhance relocation success for native fauna. Where relocated fauna is released at this location, pest control shall be undertaken for a duration of 10 years post-release.

- (iii) Native bat management procedures prepared by a suitably qualified and experienced field ecologist holding a permit from DoC certifying the holder as competent for bat research and management skills. The bat management procedures shall detail:
- Pre-vegetation removal bat survey methodology including a native bat survey monitoring programme;
 - Procedures if no bat activity is recorded;
 - Procedures to be followed if bat activity is recorded;
 - Procedures in the event of finding dead or injured bats.

Where applicable, the native bat management procedures shall be in general accordance with the most recent DoC guidelines “*Tree removal protocols for areas where bats are present*”.

- (iv) A detailed schedule of seasonal constraints and optimal work intervals shall be included in the final EMP to ensure that vegetation clearance is carried out with consideration for bird, lizard, bat, frog and kauri snail seasonal constraints.

Advice note: Vegetation clearance within each of the project footprints (being the Replacement WTP, Reservoir 1 and Reservoir 2) should, as far as practicable, be completed in a single season and outside of winter months. For the avoidance of doubt, this applies separately to each of the project footprints (i.e., it is anticipated that vegetation clearance within each of these areas will occur at different stages of construction).

- (c) Vegetation clearance within the works footprints shall, as far as practicable, take place outside the native bird breeding season (August-February inclusive). If vegetation clearance is undertaken during the main breeding season, a bird and nest survey shall be undertaken by an appropriately qualified and experienced field ornithologist (“Project Ornithologist”). The Project Ornithologist shall undertake all avifauna work including the sighting and deployment of acoustic recorders, analysis of sound files and nest surveys. The bird and nest survey protocol is as follows:
- Any vegetation scheduled for removal shall be surveyed for any native bird nests within 24 hours prior to clearance.
 - If an active native bird nest is identified during the visual inspection, all vegetation removal within 20m of the nest shall cease until the Project Ornithologist has confirmed that the nest has failed, or the chicks have

fledged. This area shall be clearly demarcated to ensure the vegetation is not accidentally felled.

- Once an area of vegetation has been confirmed clear of active native bird nests, vegetation clearance shall be initiated as soon as possible to prevent birds establishing further nests.
- (d) A Revegetation Plan with a 10-year maintenance period shall be prepared for all parts of the Project Site that are outside the Project development area. This shall utilise plant material eco-sourced from the Waitakere Ecological District for riparian planting, mitigation planting and restoration planting such as:
- a) Exposed bush edges, old tracks and open areas shall be revegetated with fast growing forest edge species to buffer the forest interior, inhibit weed encroachment and accelerate regeneration. These new edges shall be planted with low-growing, lizard-friendly species such as pohuehue and shrubby *Coprosma* species to enhance these areas as habitat for lizards; and
 - b) Riparian buffer zones adjacent to watercourses within the Project Site shall be planted with species to buffer and enhance the watercourse and adjacent forest areas with a minimum width of 10m for the true right bank of the Armstrong-Manuka Stream.
24. The EMP shall be prepared in consultation with DoC, the Royal Forest and Bird Protection Society of New Zealand ('Forest and Bird'), Te Kawerau ā Maki and the CLG. The EMP shall be provided to DoC for its review, prior to the EMP being finalised. If comments are provided by DoC within 20 working days, the Suitably Qualified and Experienced Person who prepared the EMP shall amend the EMP where appropriate, noting why DoC's recommendations were or were not adopted. The amended EMP shall be provided to the Council for written approval in accordance with Condition 19.
25. The Consent Holder shall submit the final EMP to the Council at least twenty (20) working days prior to the commencement of works (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing) for written approval that the EMP complies with the requirements of Conditions 20 to 23, as applicable. The EMP shall be prepared by a suitably qualified person with reference to relevant specialists as required. No works shall commence until the EMP, or the EMP for that stage of works, has been approved by Council.

D. Earthworks and Vegetation removal

***Phytophthora* Risk Management Plan Requirements**

26. The Consent Holder shall submit a *Phytophthora* Risk Management Plan (PRMP) to the Council for written approval in accordance with the timeframes set out in Condition 19. The PRMP shall be prepared by suitably qualified experts in erosion and sediment control, biosecurity, *Phytophthora* species, plant pathology and related disciplines and shall be prepared in accordance with the Draft KDMP.
27. The objective of the PRMP is to ensure that the works do not exacerbate the movement of *Phytophthora* species by creating or intensifying routes of dispersal within or from the Project Site beyond that which currently occurs through passive runoff. The PRMP is to provide a comprehensive document that sets out the management protocols and adaptive management approach, and monitoring measures to be implemented to avoid or minimise the risks of spreading *Phytophthora* species.

*Advice note: For the avoidance of doubt, the PRMP and Traffic Light System must follow best practice in order to avoid or minimise the risk of spreading *Phytophthora* beyond the Project Site. Principles such as minimising the time of vegetation clearance and earthworks, containment and treatment of water will be applied to all activities*

28. The PRMP shall, as a minimum, stipulate or include:
- (a) The *Phytophthora* species hygiene protocols to be followed by all staff, contractors and visitors to the site including during flora and fauna surveys, vegetation clearance, riparian and revegetation planting activities, earthworks and construction. These protocols shall meet or exceed the Auckland Council kauri hygiene SOP and Biosecurity (National PA Pest Management Plan) Order 2022. Site wide hygiene protocols are to include, but are not limited to;
 - i. Site hygiene stations (vehicles, machinery and personnel) at all entry and exit points on the Project Site and between traffic light areas (as specified in Condition 37) with separate boot and equipment wash facilities at all KCZ entry points.
 - ii. Washwater collected and contained onsite until it can be sterilised onsite or disposed of offsite at an approved facility.
 - iii. Clear delineation of earthworks / native vegetation boundary. This shall include mapping of earthwork boundaries overlaid with placement of site hygiene facilities, site entrance points and any kauri root zones.
 - iv. Design details for site hygiene stations, the description and placement of consistent *Phytophthora* species hygiene signage, and the disposal of hygiene station water and Sterigene run-off.

- (b) Measures to ensure run-off from washdown facilities will be managed to avoid:
- i. Re-contaminating equipment and vehicles etc., as they leave the facility and between 'traffic light areas'.
 - ii. Creating wet or muddy conditions in the site that pose a risk of contaminating other equipment, or creating conditions such as standing puddles that allow *Phytophthora* species to propagate.
 - iii. Run-off leaving the washdown facility without containment; and
 - iv. Creating any further biosecurity risks or ecological impact.
- (c) Details of the ongoing on-site training and induction sessions to be updated regularly to ensure that all plant operators, site staff and visitors are informed of the relevant PRMP and Traffic Light System (Condition 37) upon their first entry to the site, and the general content of training on *Phytophthora* species management that will be delivered to all plant operators, site staff and visitors that will access the site during the course of the works. In addition, weekly toolbox meetings on hygiene protocols for all operational staff shall be recorded, minuted and retained onsite and made available for audit. Training to be performed by an independent specialist and experienced *Phytophthora* species contractors.
- (d) Measures that will be put in place during site establishment (including establishing erosion and sediment control devices) to prevent the spread of *Phytophthora* species.
- (e) Measures to ensure surface run off from bulk earthwork catchments is discharged without cross contamination of run off from the surficial soil (including topsoil) clearance and disposal catchment(s).
- (f) Run-off management (including any treatment) placement and design specifications. This shall include:
- i. Details of on-site detention including pond size and the basis for this.
 - ii. Design of the water detention and treatment system which must incorporate the following risk minimisation actions:
 - Minimise the duration of vegetation felling, surficial soil excavation and earthworks.
 - Maximise the capture of runoff from the site for treatment prior to discharge to achieve a minimum of a 1 in 20-year storm unless demonstrated that it can be reduced by evidence that includes the efficacy of the treatment process and a residual risk assessment.
 - Separate runoff from the 'red and orange areas' and detain/treat this runoff separately from other areas (*Advice note: for the avoidance of doubt, this provides for runoff from red and orange areas to be detained and treated together, separately from other areas*).
 - Provide details of the efficacy of the water treatment process including the ChTMP and response mechanisms when the water is

- too turbid to treat (e.g., returned to holding pond for further treatment or increased time under UV).
 - Incorporation of multiple treatment stages in the treatment train approach.
 - UV treatment of the pond/storage discharge, including testing to comply with the agreed pathogen removal standard under the PRMP.
 - Identify deposition zones and required flow rate at which deposition does not occur between the site and marine environment.
 - Management procedures, such as the physical cover of exposed work site, will be implemented when rainfall events are forecast that may impact the efficacy of the treatment process as determined by the Site Hygiene Manager or otherwise set out in the PRMP.
- iii. The residual risk of *Phytophthora* species discharging to the receiving environment.
- iv. The design shall also take into consideration those requirements set out in the Traffic Light system (Condition 37).

Advice note: All practicable steps shall be taken to detain and treat water as set out in the PRMP. The brief periods where there may not be sufficient capacity to detain water in a high-volume rainfall event shall be identified and addressed in the risk register required by Condition 28(i) e.g., establishment and decommissioning of the pond detention/storage requirements and/or commencement of deep excavations, noting that as far as practicable these activities shall be scheduled to be undertaken in dry weather conditions.

- (g) Additional requirements in relation to Kauri Containment Zones (KCZ), within the Project Site including:
 - i. How the KCZ will be protected from access, identified and signposted to clearly communicate the delineation and protocols required in relation to the KCZ.
 - ii. How works within KCZ will be carried out in a manner that minimises the impact on the kauri and the risk of introducing or spreading *Phytophthora* species within, from or between KCZ.
 - iii. Identification of the suitably qualified and experienced person who will supervise works within KCZ.
 - iv. The design and construction methodology that will be employed in establishing and maintaining accessways that intersect KCZ such that vehicles, plant and machinery will have separation from bare soil or kauri roots adequate to avoid damaging or compacting kauri roots and avoid tracking of material into, within or out of the KCZ.
 - v. Methods used to remove all soil from, and decontaminate vehicles, equipment, personnel, footwear etc when entering and exiting the KCZ, and how run-off from this activity will be contained and disposed of in a manner that poses minimal risk of spreading *Phytophthora* species.

- (h) A list of activities and associated risk register and matrix, and detailed mitigation and controls for those activities.
- (i) The collection, maintenance and reporting of records pertaining to:
 - i. Hygiene facility maintenance.
 - ii. Training and inductions.
 - iii. Vehicle and equipment hygiene at each traffic light area boundary location.
 - iv. Maintenance and auditing of water treatment train process approach and performance.
 - v. Soil and vegetation removal and transport hygiene off-site.
 - vi. Hygiene protocols for all riparian and revegetation planting.
 - vii. Spillages or other incidents that may enable pathogen movement.
- (j) Auditing processes and the planned response for non-compliance with any of the requirements in the PRMP or where treatment inadequacies are identified.
- (k) Specification of the responsibilities of the Site Hygiene Manager, reporting and contact procedures. Responsibilities must include the ability for the Site Hygiene Manager to make minor changes to site hygiene protocols and site management in relation to *Phytophthora* species deemed necessary to address risk factors or operational changes, and to respond to issues identified in the weekly toolbox meetings to ensure that any issues are addressed immediately. Any amendments are to be notified to the Council within five (5) days of the change. Records of all changes are to be documented and held onsite by the Site Hygiene Manager for the duration of the Project.
- (l) Protocols for the movement of soils and soil-contaminated equipment, personnel and vehicles between staging areas on-site and protocols for off-site movement, including transport vehicle hygiene, all transport routes, accidental spillage response, and the covering and sealing of trucks to prevent escape of soil and dust.
- (m) Protocols to prevent the introduction of *Phytophthora* species to the site in regard to sourcing of brought-in materials, vehicles, equipment, plant stock, personnel, personal equipment or other risk goods (water, soil and organic material).
- (n) Measures to collect and dispose of sediment from sediment and erosion control devices post completion of the topsoil removal phase (and prior to the bulk earthworks phase commencing) to an approved facility.
- (o) Details on how drainage, run-off, or other water discharges from the site will be directed away from kauri and their rootzones.
- (p) Procedures to monitor sediment tracking or deposition (including dust and dirt) outside of the Project site and how this will be responded to and remediated in a timely manner.

29. Key principles of the PRMP must be displayed prominently at key locations, including clear signage noting the presence of PA on site and the requirement for *Phytophthora* hygiene measures at the site entry/exit and all traffic light boundaries. A master copy of the PRMP and Traffic Light System (Condition 37) must be held at the site office and be accessible to all staff and contractors.
30. Access to the site will be controlled through designated entry and exit points.

Peer review panel

31. The Consent Holder shall engage, at its own cost, a Peer Review Panel ("the Panel"). The Consent Holder shall invite the following parties to identify appropriately qualified representatives on the Panel:
- (i) Te Kawerau ā Maki representative
 - (ii) The Tree Council Incorporated (up to two representatives)
 - (iii) The Titirangi Protection Group (up to two representatives).

The Panel may also comprise additional independent experts as agreed by the Consent Holder, the Tree Council and the Titirangi Protection Group.

32. The draft PRMP, Traffic Light System (Condition 37) and any substantial amendments not provided for under Condition 28(k) (and associated SOP) shall be circulated to the Panel for review and comment prior to being submitted to Council for approval. The draft PRMP shall be provided to the Panel no later than 60 working days before works are scheduled to commence, or in the case of a staged PRMP 60 working days prior to works on that stage commencing. The Panel shall provide their written review comments within a 20-working day period.
- 32B. The Panel shall be provided with the Management Plans (required under Condition 19) for the purpose of ensuring the risk register required under Condition 28 is complete and that all activities in these Management Plans that have the potential to exacerbate the movement of *Phytophthora* species have been identified and addressed in the risk register and PRMP. Any required additions to the risk register and PRMP shall be identified within a 20-working day period.
33. The draft PRMP shall be amended in accordance with the review comments received from the Panel. Where the Consent Holder does not update the draft PRMP in accordance with the review comments, the reasons for this shall be provided to the Panel and to the Council when submitting the final PRMP for approval.

Approval and implementation of the PRMP

34. The Consent Holder shall submit the final PRMP and any substantial amendments not provided for under Condition 28(k) to the Council for approval at least twenty (20) working days prior to the commencement of works for written approval that the PRMP complies with the objective and the requirements of Conditions 26 to 30, as applicable. No works shall commence until the final PRMP, or the final PRMP for that stage of works, has been approved by Council.

35. All works shall be undertaken in accordance with the Auckland Council approved final PRMP and Traffic Light System. The Consent Holder shall follow the relevant protocols and procedures included in the final PRMP and Traffic Light System at all times.

Staging of works

36. Staging of vegetation clearance, topsoil and surficial soil removal, bulk earthworks and associated standard operating procedures (SOP) and limitations shall, as a minimum, include the measures set out below in relation to:

- (i) Traffic-light system
- (ii) Geotechnical investigations
- (iii) Vegetation clearance
- (iv) Surficial soils
- (v) Bulk earthworks
- (vi) Building stage

Traffic-light system

37. Staging of works shall include the implementation of an SOP traffic light system or similar to manage the spread of *Phytophthora* species as follows:
- (i) Red: Areas of removal, disturbance and stockpile of surficial soils, organic materials, water and any other high *Phytophthora* risk materials (as identified by a *Phytophthora* expert or an ecologist with appropriate expertise).
 - (ii) Orange: Bulk earthworks activities beyond surficial soil removal provided for in 'red' above.
 - (iii) Yellow: Areas with stabilised hardfill and measures in place to avoid cross contamination of run off from red or orange areas. Localised excavations can occur within stabilised areas across the Project footprint (e.g., localised excavations that are required to form building foundations and excavations, utility and drainage services, etc).
 - (iv) Green: Areas located outside the subject site and after any machinery, equipment and personnel have been decontaminated.
38. Machinery can only freely progress through the traffic light system from lower to higher risk areas. Movement of machinery and equipment from higher risk to lower risk areas shall be minimised. To go from a higher to a lower risk area, the machinery, equipment and/or personnel must be decontaminated as set out in the PRMP.
39. As far as is practicable, machinery should remain on site until completion of the staging.
40. Different traffic light areas are to be appropriately flagged on the ground and adjusted as circumstances change. The traffic light system shall also apply to any stockpiling of material.

41. All works shall be conducted in a sequential and staged manner in accordance with the traffic light system, staging plans and SOP to be finalised following completion of the Replacement WTP design.
42. Except for the creation of the detention pond, works shall generally proceed from a higher elevation (lower risk) to a lower elevation (higher risk) in accordance with the traffic light system.

Geotechnical investigations

43. A geotechnical investigation-specific PRMP shall be developed as a standalone plan to manage geotechnical investigations to inform future works and submitted to the Council for approval in accordance with Condition 19. The geotechnical investigation-specific PRMP is subject to the Panel process set out in Conditions 31 to 33 above. The objective of the geotechnical investigation-specific PRMP is to ensure that geotechnical investigations do not exacerbate the movement of *Phytophthora* species by creating or intensifying routes of dispersal within or from the Project Site beyond that which currently occurs through passive runoff.

Advice note: For avoidance of doubt, the geotechnical PRMP only requires a subset of management measures appropriate to the limited extent of physical works to be undertaken on site.

44. The clearance of vegetation and soil disturbance shall be limited to that required to undertake the investigations (which includes access).
45. No vegetation, earth or soil (except core samples) shall leave the site.
46. An SOP shall be developed for the handling and disposal of core samples.
47. All equipment, vehicles, personnel etc. shall be decontaminated prior to leaving site.

Vegetation clearance

48. No vegetation shall be transported off site. Stumps shall remain in situ to be removed with surficial soils to an MPI approved facility.
49. The first stage of vegetation clearance is limited to that required for the establishment of the run-off detention pond, chemical treatment, filtration and UV treatment process (the Treatment Train). The detention pond, chemical treatment, filtration and UV treatment process must then be established and fully functioning to design specifications prior to further vegetation clearance commencing.
50. Vegetation clearance shall be limited to the areas set out in the approved PRMP.
51. All works shall be conducted in a sequential and staged manner in accordance with staging plans and SOP to be prepared following completion of the Replacement WTP design.

Advice note: Vegetation clearance within each of the project footprints (being the Replacement WTP, Reservoir 1 and Reservoir 2) should, as far as practicable, be completed in a single season and outside of winter months. For the avoidance of doubt, this applies separately to each of the project footprints (i.e., it is anticipated

that vegetation clearance within each of these areas will occur at different stages of construction).

Surficial soils

52. All works shall be conducted in a sequential and staged manner in accordance with staging plans, PRMP, Traffic Light System and SOP to be finalised following completion of the Replacement WTP design. Where a higher standard as outlined in the PRMP or other specific conditions does not apply, the principles of Auckland Council's *'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region'* (GD05) shall be adhered to as a minimum standard.
53. The earthworks disturbance areas shall be limited to 3,000 m² unless a different area is specified as set out in the approved PRMP.
54. Decanting earth bunds shall be sized to at least 3% of that catchment area from which flows shall be conveyed to a detention pond/storage.
55. Surface run-off will be managed through the use of:
 - (i) Clean water diversions bunds shall divert flows away from the works area. Bund formation shall not exacerbate the potential for the spread of *Phytophthora* species.
 - (ii) Bunds shall be covered by a geotechnical fabric that will prevent contact and potential contamination of clean water with *Phytophthora* infected soils.
 - (iii) Water collected from areas that have been cleared of vegetation shall be conveyed to the detention pond.
 - (iv) Potentially *Phytophthora* contaminated water diversion bunds shall convey water from disturbed areas (surficial soils) initially to a decanting earth bund which shall then discharge to the detention pond/storage.
 - (v) All materials and risk goods (water, soil, or organic material) that leave the site shall be either decontaminated in accordance with the PRMP or be disposed of to an MPI approved disposal facility.
- 55B All perimeter controls shall be operational before earthworks commence. All 'cleanwater' runoff from stabilised surfaces including catchment areas above the Project Site shall be diverted away from earthworks areas via a stabilised system so as to prevent surface erosion.

Bulk earthworks

56. All works shall be conducted in a sequential and staged manner in accordance with staging plans and relevant PRMP measures, Traffic Light System and SOP to be finalised following completion of the replacement WTP design. Where a higher standard as outlined in the PRMP or other specific conditions does not apply, the principles of Auckland Council's *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05) shall be adhered to as a minimum standard.
57. The earthworks disturbance areas shall be limited to 3,000m² unless a different area is specified as set out in the approved PRMP (noting this is for *Phytophthora* species

management purposes and at the bulk earthworks stage more than one such area may be open at any one time).

58. Decanting earth bunds (DEB) shall be sized to at least 3% of that catchment area, from which flows shall be conveyed to the detention pond, or as otherwise determined by the PRMP.
59. Upon completion of the bulk earthworks, exposed surface(s) shall be stabilised (covered with hardfill) and only then can surface run-off from the stabilised catchment be conveyed directly to the receiving environment unless otherwise specified in the PRMP and only where these areas are classed as Yellow under the Traffic Light System.

Advice note: Following the completion of surficial soil removal and bulk earthworks platform formation across the development footprint, all earthworks areas will be stabilised (covered with hardfill). Localised excavations may then occur (e.g. localised excavations that are required to form building foundations and excavations, utility and drainage services, etc-as part of the Building Phase.

Building phase

61. The traffic light system is to remain in place for the duration of the works, including during the construction of the Replacement WTP, associated infrastructure and structures.
62. Appropriate site hygiene (including site hygiene stations for vehicles, machinery and personnel), and ESC in accordance with Auckland Council's GD05) shall remain in place for the duration of any construction activities occurring on the site.

Audit and ongoing compliance with the PRMP

63. The Consent Holder is responsible to engage an independent auditor to audit the performance of the implementation of the PRMP and Traffic Light System, including monitoring results and records.
64. Audit is to be undertaken on a frequency determined by the Site Hygiene Manager and no less than that specified in the PRMP. The results of the audit shall be provided to the Peer Review Panel.
65. Any non-compliances are to be remediated as soon as practicable. All non-compliances and the management response shall be reported to Auckland Council within two (2) days.

Erosion and Sediment Control Plan

66. Prior to the commencement of bulk earthworks activity for each stage, finalised Erosion and Sediment Control Plans (ESCP) shall be prepared in accordance with Auckland Council's Guidance Document 005 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) and the preliminary erosion and sediment control plans provided in the application, except where a higher standard is detailed in the documents referred to in the conditions above, in particular Condition 28, in which case the higher standard shall apply.
67. The ESCP shall include the following information:
- (a) Timing and duration of construction and operation of control works;
 - (b) Specific erosion and sediment control works (location, dimensions, capacity) in accordance with GD05, including staging details and stage-specific erosion and sediment controls. Erosion and sediment controls are to include:
 - i. established entrance ways;
 - ii. sediment retention ponds;
 - iii. silt fences and super silt fences;
 - iv. decanting earth bunds; and
 - v. clean and dirty water diversion bunds.
 - (c) Details relating to the management of exposed areas (e.g. grassing, mulching);
 - (d) Supporting calculations and design drawings;
 - (e) Details of construction methods;
 - (f) Catchment boundaries and contour information; and
 - (g) Cut and fill isopach plan.
68. The ESCP shall be submitted to the Council for approval in accordance with Condition 19. No earthworks activity on the subject site shall commence until the ESCP has been approved. For the avoidance of doubt, the ESCP can be prepared as a standalone plan or as part of the PRMP.

Dewatering Plan

69. Prior to the commencement of bulk earthworks activity on the subject site a Dewatering Plan shall be prepared for dewatering any surface water and/or groundwater that becomes impounded in the excavation pits.

The objectives of the Dewatering Plan are:

- i. to set out the measures to ensure excavations are not inundated by surface and/or groundwater; and

- ii. to ensure all dewatering discharges are treated and disposed of appropriately, and in accordance with any requirements in the PRMP.

The Dewatering Plan shall include, but not be limited to:

- (a) Dewatering methodology;
- (b) Pump size and specifications;
- (c) Treatment train approach;
- (d) Discharge locations; and
- (e) Impounded water treatment methodologies in accordance with the approved Chemical Treatment Management Plan (required under Condition 86).

The Dewatering Plan shall be submitted to the Council for written approval in accordance with Condition 19. No bulk earthworks activity on the subject site shall commence until the plan has been certified.

Erosion and Sediment Management

- 70. All water in the sediment retention ponds and decanting earth bunds shall be chemically treated in accordance with the approved Chemical Treatment Management Plan (ChTMP).
- 71. Prior to each stage of earthworks commencing, including any streamworks, an as-built certificate signed by a suitably qualified and experienced person shall be submitted to the Council, to certify that the erosion and sediment controls specific to that stage have been constructed in accordance with the approved erosion and sediment control plans and GD05.
- 72. Certified controls shall include the stabilised entrance ways, sediment retention ponds, super silt fences, silt fences, decanting earth bunds and clean and dirty water diversion bunds. The certification for these measures shall be supplied immediately upon completion of their construction. Information supplied, if applicable, shall include:
 - (a) Contributing catchment area;
 - (b) Shape and volume of structure (dimensions of structure);
 - (c) Position of inlets/outlets; and
 - (d) Stabilisation of the structure.
- 73. Erosion and sediment control measures shall be constructed and maintained in accordance with GD05, and any amendments to this document, except where a higher standard is detailed in the documents referred to in conditions above, in which case the higher standard shall apply.
- 74. There shall be no deposition of earth, mud, dirt or other debris on any road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed in accordance with the

protocols specified in the PRMP. In no instance shall roads or footpaths be washed down with water without appropriate *Phytophthora* species hygiene and erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

Advice note: In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted in addition to those specified in the PRMP to prevent or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces*
- *silt and sediment traps*
- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned.

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Council for more details.

75. Upon completion or abandonment of earthworks on the subject site all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Council.

Advice note: Should the earthworks be completed or abandoned, bare areas of earth shall be permanently stabilised against erosion.

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Council for more details. Alternatively, please refer to GD05.

76. The operational effectiveness and efficiency of all erosion and sediment controls and associated measures specifically required as a condition of resource consent or by the earthworks methodology shall be maintained throughout the duration of earthworks, or until the site is permanently stabilised against erosion.
77. The sediment and erosion controls shall be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record shall be maintained of the date, time and any maintenance undertaken in association with this condition which shall be forward to the Council on request. Actions must be taken to prevent under performance of the erosion and sediment controls and the treatment train prior to predicted storm events as required by the PRMP.

Seasonal Restrictions

78. No earthworks or streamworks on the site shall be undertaken between 1 May and 30 September in any year, without the prior written approval of the Council. Revegetation/stabilisation is to be completed by 30 April in accordance with measures detailed in GD05 and any amendments to this document, and in accordance with relevant requirements set out in the PRMP and Traffic Light System.

Advice note: Any 'Request for winter works' submitted in accordance with Condition 78 will be assessed against criteria in line with the information required to assess a comprehensive application. Principally that will focus on the level of risk, the propensity to manage that risk with contingency planning and a 'track record' of good compliance with consent conditions. Each 'Request for winter works' submitted, should include the following:

- *Description of works proposed to be undertaken between 1 May and 30 September and the duration of those works;*
- *Details of proposed measures to maintain Phytophthora species hygiene and to prevent sediment discharge from these specific works, particularly during periods of heavy rainfall;*
- *Details of area(s) already stabilised;*
- *Revised erosion and sediment control plan detailing stabilisation to date and time-line/staging boundaries showing proposed progression of stabilisation;*
- *Contact details for contractor who will undertake stabilisation of the site including date(s) expected on site;*
- *Alternatives/contingencies proposed if the contractor referred to above becomes unavailable;*
- *Details of site responsibilities, specifically who is responsible for Phytophthora species hygiene and erosion and sediment controls and stabilisation processes over the specified period.*

Baseline Monitoring and Adaptive Management

79. Prior to commencement of earthworks activity on the site an Adaptive Management Plan (AMP) shall be submitted to the Council for written approval in accordance with Condition 19. The AMP shall be prepared in consultation with Te Kawerau ā Maki.

The objective of the AMP is to set out a monitoring and reporting programme for the erosion and sediment control devices and downstream receiving environment, and to set specific trigger levels for management actions if specified limits are exceeded.

The AMP shall include, but is not limited to:

- (a) Baseline testing;
- (b) Trigger levels;
- (c) Weather monitoring (rainfall, forecasting);

- (d) Freshwater monitoring (water quality, MCI, sediment deposition, *Phytophthora*);
 - (e) Erosion and Sediment control device monitoring (including outlet turbidity) and maintenance requirements (either provided here or in the PRMP as required by Condition 28);
 - (f) Treatment train efficacy and performance in eliminating *Phytophthora* from water (either provided here or in the PRMP as required by Condition 28);
 - (g) Reporting requirements (exceedance, quarterly, annual); and
 - (h) Management actions.
80. The requirements of the AMP under Condition 79 and any subsequent revisions shall be implemented throughout the duration of the earthworks activity on the sites.
81. A Freshwater Baseline Report (FBR) containing the pre-construction in-stream monitoring required under Condition 79 shall be provided to the Council for written approval in accordance with Condition 19. prior to any earthworks or streamworks commencing. The FBR shall be prepared in consultation with Te Kawerau ā Maki. The minimum requirements of this report shall be:
- (a) Freshwater Monitoring sites shall be located both upstream and downstream of each earthworks site on both the Yorke Stream and Armstrong Stream. The locations of these monitoring sites will allow water quality to be tested as freshwater flows into the site and downstream of the site.
 - (b) The pre-construction environmental conditions shall be represented by:
 - (i) Water quality (turbidity, pH);
 - (ii) Sediment deposition over a transect; and
 - (iii) MCI sampling.
82. Pre-rain forecast inspections as defined within the AMP must be undertaken at a minimum of 24 hours prior to the forecasted event. If the forecast is not made available within 24 hours of the proposed event, all reasonable attempts shall be made to inspect the site prior to the proposed event.
83. An earthworks catchment which has been stabilised as a result of a trigger level exceedance as defined and required by the AMP may only be re-opened on the written approval of the Council.
84. Any proposed revisions to the AMP must be submitted to the Council for written approval prior to formalising and implementing the revised AMP.
85. If in the Council's opinion, there are changes required to be made to the AMP as a result of observing inefficiencies on site or identified within the site reporting, the Council may request that the AMP be updated to address these inefficiencies. If a request is made, the revised plan shall be submitted to the Council within five working days of the request for certification prior to implementation.

Chemical Treatment Management Plan

86. Prior to the commencement of earthworks at the site, a Chemical Treatment Management Plan (ChTMP) shall be submitted to the Council for written approval in accordance with Condition 19. The objective of the ChTMP is to set out management methods, controls and reporting standards to be implemented relating to the chemical treatment of the sediment control devices required by the PRMP.

The ChTMP shall include, but not be limited to:

- (a) Specific design details of the chemical treatment system based on a rainfall activated dosing methodology for the site's sediment retention ponds and batch dosing methodology for dewatering the excavation pits;
- (b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
- (c) Details of optimum dosage (including assumptions);
- (d) Results of initial chemical treatment trial;
- (e) A spill contingency plan; and
- (f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.

For the avoidance of doubt, the ChTMP can be prepared as a standalone plan or as part of the ESCP or PRMP.

Disposal of soil

87. Organic material and surface surficial soil (immediately below topsoil) shall be disposed of to an appropriate facility approved to receive *Phytophthora* infected material.

All excavated bulk fill material shall be reused on site wherever possible, and otherwise disposed of to an MPI approved facility approved to receive *Phytophthora* infected material.

The disposal location(s) shall be determined in collaboration with Te Kawerau ā Maki, and subject to gaining the necessary approvals shall be within the local area. Where this is not possible, then an alternate disposal location shall be determined in collaboration with Te Kawerau ā Maki.

Advice note: Watercare's existing Parau sludge disposal site has been identified as a potential preferred location for disposal of organic material and surficial soil (immediately below topsoil) and for bulk earthworks material that cannot otherwise be retained or reused on site. Watercare shall undertake best endeavours to seek the necessary statutory approvals to authorise the Parau site as an approved facility in collaboration with Te Kawerau ā Maki.

E. Streamworks

88. The protocols to manage the risk of introducing or spreading *Phytophthora* species within or off the Project Site are to be set out in the *Phytophthora* species PRMP required under Condition 26 - 30. Streamworks shall be undertaken in accordance with the relevant PRMP protocols and in accordance with Conditions 36 - 42 (Staging of works and Traffic Light System).

Yorke Stream Diversion Design Plan

89. The Consent Holder shall prepare a Yorke Stream Diversion Design Plan (YSDDP) for the Project. The YSDDP shall be in accordance with the recommendations and Yorke Stream SEVm-P assumptions detailed in the Addendum to Stream Ecological Value Plan by Boffa Miskell, dated 26 November 2019. The objectives of the YSDDP are to ensure the proposed diversion channel:
- (a) Mimics, where practicable, the existing stream morphology for Yorke Stream and intermittent nature of the stream (including a minimum intermittent length of 70 m); and
 - (b) Achieves a Stream Ecological Value (SEV) of at least 0.65.
90. The YSDDP shall include:
- (a) Detailed design for the new length of stream, including typical long-sections and cross-sections;
 - (b) Design of features that enhance instream ecology values;
 - (c) A Riparian Planting Plan that aims to enhance the ecological function of the riparian zone adjacent to the diversion channel;
 - (d) A programme to monitor scour and erosion at the downstream extent of the diversion channel. If monitoring identifies new erosion that is attributable to the Project by a suitable qualified engineer, the Consent Holder shall implement remedial action in the form of stream stabilisation measures;
 - (e) Detailed design of any energy-reducing engineered structures required to minimise scour and erosion within the diversion channel, and at the downstream extent of the diversion channel should monitoring indicate this is required; and
 - (f) An ecological monitoring programme of the diversion channel to demonstrate it provides ecological benefit.
91. The Consent Holder shall submit the YSDDP to the Council in accordance with Condition 19 at least twenty (20) working days prior to the commencement of stream diversion works for certification that the YSDDP complies with the requirements in Conditions 89 and 90, as applicable. The YSDDP shall be prepared by a suitably qualified person.

Armstrong Stream Daylighting Design Plan

92. The Consent Holder shall prepare an Armstrong Stream Daylighting Design Plan (ASDDP) for the Project. The ASDDP shall be in accordance with the recommendations and Armstrong Stream SEVm-P assumptions detailed in the Addendum to Stream Ecological Value Plan by Boffa Miskell, dated 26 November 2019. The objectives of the ASDDP are to ensure the proposed diversion channel:
- (a) Mimics, where practicable, the existing stream morphology for Armstrong Stream and intermittent nature of the stream; and
 - (b) Achieves a Stream Ecological Value (SEV) of at least 0.74 for the upper section and 0.58 for the lower section.
93. The ASDDP shall include:
- (a) Detailed design for the new length of stream, including typical long-sections and cross-sections;
 - (b) Design of features that enhance instream ecology values;
 - (c) Design of engineered structures to provide access and passage for climbing fish;
 - (d) A Riparian Planting Plan that aims to enhance the ecological function of the riparian zone adjacent to the daylighted channel; and
 - (e) Detailed design of any energy-reducing engineered structures required to minimise scour and erosion within the daylighted channel, and at the downstream extent of the daylighted channel should monitoring indicate this is required.
94. The Consent Holder shall submit the ASDDP to the Council in accordance with Condition 19 at least twenty (20) working days prior to the commencement of stream daylighting works for certification that the ASDDP complies with the requirements in Conditions 92 and 93, as applicable. The ASDDP shall be prepared by a suitably qualified person.

Stream Restoration Plan

95. Prior to streamworks commencing a Stream Restoration Plan (SRP) shall be prepared in consultation with Te Kawerau ā Maki and submitted to the Council for certification in accordance with Condition 19.. The SRP shall incorporate all recommendations from the Addendum to the Stream Ecological Valuation Plan (Boffa Miskell, November 2019), including the SEVm-P assumptions for the diversion channel and daylighting sections. The SRP shall consist of the following:
- (a) Yorke intermittent stream diversion channel design including stream bank grades;
 - (b) Armstrong Stream daylighting channel design including stream bank grades;
 - (c) Long and cross sections of the stream channels demonstrating habitat heterogeneity in accordance with SEVm-P assumptions (including a minimum length of 70m for the Yorke stream diversion channel);

- (d) All Riparian Planting, true right and left bank riparian widths are to be in accordance with SEVm-P assumptions;
- (e) Plans identifying riparian planting zones (all measurements must be clearly depicted on the plans);
- (f) Appropriate species list of eco-sourced plants including planting densities to be applied across new planting areas and any infill planting areas;
- (g) All riparian planting shall be in accordance with the Auckland Regional Council Riparian Zone Management Strategy for the Auckland Region, Technical Publication 148, June 2001 (TP148);
- (h) A monitoring and maintenance plan for a period of no less than ten years to ensure that a 90% survival rate and canopy closure is achieved;
- (i) A weed management plan to ensure that the planting areas remain weed free for the length of the monitoring and maintenance period of ten (10) years; and
- (j) A programme to monitor scour and erosion at the downstream extent of the proposed Yorke Stream diversion channel. If monitoring identifies new erosion that is attributable to the Project by a suitably qualified engineer, the Consent Holder shall implement remedial action in the form of stream stabilisation measures or similar.

96. The Stream Restoration Plan shall be completed within the following timeframes:

- (a) The Armstrong Stream daylighting shall be undertaken during the first earthworks season of land disturbance associated with the construction of Reservoir 2 having commenced with riparian enhancement undertaken the following planting season.
- (b) The Yorke Stream diversion channel shall be created either before, or at the same time, as the loss of the existing section of Yorke intermittent stream on the replacement WTP site.
- (c) Enhancement of riparian planting along the length of the Yorke Stream diversion channel shall be undertaken, as far as practicable, immediately after completion of the diversion channel or during the following planting season. To the extent that it is not practicable to complete the enhancement planting at that time, or if further enhancement planting is required, this must be undertaken the following planting season upon completion of the construction works on the replacement WTP site.
- (d) All plantings shall be carried out between the months of May to August. Written confirmation in the form of a planting completion report shall be provided to the Council, within 30 working days of the stream planting works being completed. This report shall confirm the species and number of plants planted and that the planting has been completed in accordance with the approved plans.

97. The Consent Holder shall ensure that all machinery operates from the stream banks at all times and in accordance with relevant PRMP requirements and the Traffic Light System. No machinery shall enter the wetted cross section of the watercourses at any time.

98. All machinery shall be operated in a way which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during stabilisation and machinery servicing and maintenance. Refuelling and lubrication activities shall be carried out away from any water body such that any spillage can be contained so it does not enter the watercourse associated with this consent. The use of grouts and concrete products shall also be limited adjacent to the watercourse with all mixing of products carried out outside the 100-year floodplain area such that any spillage can be contained so it does not enter the Yorke Gully and Armstrong Streams.
99. Written confirmation in the form of an Offset and Compensation Report shall be provided to the Council, within 30 working days of each stage of the offset and compensation work being implemented and completed, confirming that the works have been completed in accordance with the approved Stream Restoration Plan.
100. Plant maintenance in accordance with the Stream Restoration Plan shall occur for 10 years. The 10-year period shall commence once all the naturalisation works for each respective stream have been completed. The Council shall be notified once the naturalisation planting has been completed.

Advice note: The ten year period can only commence once all planting has been completed to the satisfaction of the Council.

101. The Consent Holder shall monitor the SEV of the mitigation sites and the constructed stream channels at three (3), five (5) and ten (10) years after completion of the Armstrong stream daylighting and Yorke stream diversion channel creation respectively, or until the monitoring shows that the offsetting site or constructed stream channels have achieved the predicted SEV values (Table 1 and Appendix 2 of 'Addendum to Stream Ecological Valuation Plan', prepared by Boffa Miskell, dated 26 November 2019), whichever time period is the lesser. Monitoring shall be undertaken at times that avoid transient conditions, such as flood events.
102. Within two months of each round of monitoring being completed, the Consent Holder shall provide the SEV assessments and associated calculations used for monitoring the sites required by Condition 101 to the Council for written approval and comparison against the SEV values required to be met in Condition 103.
103. Where the monitoring concludes that the SEV values of the mitigation streams and constructed stream channel have not reached the predicted SEV value within ten (10) years of completion, a Further Offset Works Plan shall be prepared and submitted to the Council for approval. The Further Offset Works Plan shall include, but not be limited to the repair or improvement of mitigation works along the existing offset stream reaches to meet the predicted SEV values and further monitoring until such time that the requirements of the Further Offset Works Plan are achieved.

The SEV values to be met are:

Yorke Stream Diversion	Upper Armstrong Daylighting	Lower Armstrong Daylighting
0.65	0.74	0.58

Advice note: In the event that a suitably qualified freshwater ecologist determines that the predicted SEV values when planted vegetation matures are unlikely to be met, offsite mitigation works may be required. The Future Offset Works Plan can address this and must ensure no net loss of ecological function based on the SEV values of the stream reach that have been lost.

104. Where required by Condition 103, the Consent Holder shall provide the Further Offset Works Plan within six (6) months of monitoring, and shall implement the Further Offset Works Plan within six months of approval of the plan by the Council or during the next planting season (whichever is appropriate to the measures adopted).

F. Protective covenant or encumbrance

105. On completion of the works authorised under these consents, the Consent Holder shall enter into a covenant or encumbrance to:

- (a) Protect the Armstrong Stream restoration areas on the existing Huia WTP site;
- (b) Protect the high value SEA vegetation on the existing Huia WTP site; and
- (c) Protect the high value SEA vegetation in the south west corner of the replacement WTP site and the vegetation outside of the Replacement WTP footprint; and
- (d) Protect the Yorke Stream diversion channel and associated riparian planting.

Advice note: Those areas to be protected via a covenant or encumbrance are generally shown on Hearing Plan B: Overview: Site Protection, dated 21 February 2020 (attached). The final areas to be protected will be confirmed at the detailed design stage.

The covenant or encumbrance shall:

- (i) Secure the protection in perpetuity of these areas from future development;
- (ii) Require the Consent Holder to take measures to ensure that the area is maintained free of pest animals, noxious weeds, exotics and environmental pest plants; and
- (iii) Require that the Consent Holder should, as far as practicable, refrain from doing anything within the covenanted area that could prejudice the health or ecological value of the areas of native bush to be protected, its long-term viability and/or sustainability.

G. The Biodiversity Trust

106. As soon as practicable after the grant of this consent and in any event prior to commencement of works being undertaken under this consent (excluding site investigations, demolition and removal of buildings and structures, and establishment of site entrances and fencing), the Consent Holder shall establish a charitable trust ("The Biodiversity Trust") on the terms set out in Conditions 107 - 110, by finalising, executing and proceeding in accordance with the draft trust deed for the Trust referenced in Condition 2.
107. The resource management purposes of the Trust, as set out in the trust deed, shall be to compensate for residual adverse ecological effects from the construction of the Replacement Water Treatment Plant and Reservoirs within an area of significant ecological vegetation.
108. The terms of the Trust Deed must, as set out in the draft trust deed, provide for the Trust to:
 - (a) Be established as an accountable administrative structure committed to implementing the projects and achieving the targets for the 380 ha Pest Management Area set out in Map 1 'Pest Management Proposal – Pest Management Areas' (PMSBR Area) of the PMSBR required by Condition 113.
 - (b) Provide an appropriate mechanism through which the following objectives of the PMSBR can be achieved:
 - i. To coordinate and increase conservation efforts to protect and restore viability to populations of native flora and fauna within the PMSBR Area by: Undertaking multi-species vertebrate pest management and German and common wasp control throughout the PMSBR Area to suppress pests below target thresholds, by contributing funding to an appropriate organisation or engaging suitably qualified contractors;
 - ii. To repair and strengthen connective linkages throughout the PMSBR Area through enhancing native forest regeneration and long-term viability;
 - iii. To increase community-wide engagement in stewardship and sustainable environmental management of the PMSBR Area by seeking acceptance of landowners and residents within the area for the Trust's activities on their properties.
 - (c) Facilitate setting priorities and allocating funding for projects within the PMSBR Area to achieve these objectives; and
 - (d) Have measurable targets that the Trust is required to meet in order to achieve the objectives set out in (b) above.
109. At least three months prior to the commencement of construction, the Consent Holder shall provide a lump sum of \$8,250,000 to the Trust. For the avoidance of doubt, the

Trust shall have the ability to access additional funding from other sources in addition to the Consent Holder's contribution (including from the Consent Holder itself).

110. The terms of the Trust Deed shall also, as set out in the draft Trust Deed:

- (a) Require the trustees of the Trust, in relation to their appointment of additional or replacement trustees, to invite and act upon the following nominations:
 - i. One representative trustee from the Consent Holder;
 - ii. One representative trustee from the Council;
 - iii. One representative trustee from the CLG (established under Condition 15);
 - iv. One representative trustee from the Waitākere Ranges Local Board;
 - v. Two community representative trustees connected with local community-led conservation projects; and
 - vi. One mana whenua representative trustee from Te Kawerau ā Maki.
- (b) Provide for the trustees of the Trust to appoint at least one additional, appropriately qualified trustee to be responsible for overseeing the Trust's financial reporting.
- (c) Prescribe the basic procedures for the trustees of the Trust to govern the Trust and otherwise provide the trustees with the power to regulate their own procedures, provided that:
 - i. No change may be made which would alter the charitable nature of the Trust or the funding the consent holder is required to provide in Condition 109 above;
 - ii. The Trust is to operate for a minimum period of twenty-five years following the grant of resource consent; and
 - iii. No change may be made to the objectives set out in Condition 108(b).
- (d) Provide for the appointment of a person to hold the position of operations manager / project coordinator and to be responsible for:
 - i. Strategic and operational planning;
 - ii. Implementation of project initiatives; and
 - iii. Ongoing evaluation against the measurable targets.
- (e) Require annual reporting regarding the distribution of the trust fund and reporting against the measurable pest reduction targets to:
 - i. The Consent Holder;
 - ii. Auckland Council; and
 - iii. The CLG (established under Condition 15).

Advice note: For the avoidance of doubt, the role of the Council trustee identified in Condition 110(a)(ii) is completely separate from and unrelated to Council's regulatory functions regarding the conditions of this consent.

111. Provided the Trust has sufficient funds budgeted in any year to meet the requirements of Condition 108 a) to d) above and the pest reduction targets in Tables 2 and 3 within the 380 ha Pest Management Area, it may then direct any surplus funds from its annual budget to support community-based pest management programmes with funding and/or expertise within the broader 990 ha Waima Catchment (refer Revised Pest Management Proposal - Map 1, 26 April 2023).
112. The Biodiversity Trust does not absolve the Consent Holder of accountability for meeting the consent conditions. Compliance with the conditions of consent including the achievement of consent Conditions 113 to 122 below, is the responsibility of the Consent Holder, no matter the existence or otherwise of the Trust.

H. Pest Management Strategy for Biodiversity Restoration

113. Prior to the commencement of any vegetation removal works the Consent Holder shall submit a final Pest Management Strategy for Biodiversity Restoration (PMSBR) prepared by a suitably qualified and experienced ecologist to the Council for approval in accordance with Condition 19. No vegetation clearance provided for under this consent shall commence until written approval from the Council is obtained that the PMSBR has been prepared in accordance with Conditions 114 to 118 to the satisfaction of the Council.
114. The PMSBR shall be prepared in accordance with the management targets and thresholds set out in Condition 118.
115. The objectives of the PMSBR shall include, but not be limited to, achieving the agreement of the owners of at least 340 private properties or 80 ha of privately owned land, appropriately dispersed across the whole of the PMSBR Area, to secure access for vertebrate pest control (rats, possums, mustelids);
116. The requirements for the PMSBR shall include, but not be limited to:
- i. Control of rats, possums and mustelids over the 340 private properties or 80ha of privately owned land to the management targets and threshold control levels for 'Year 1 (*Baseline monitoring to obtain initial population abundance estimates*), Years 2 to 11, and Year 12 and beyond' set out in Tables 1, 2 and 3 below or as otherwise determined by the Trust in accordance with Condition 118, for a period of no less than 24 consecutive years; and
 - ii. Control of mice, rats, possums, mustelids, feral cats and ungulates over public land to the management targets and threshold control levels for 'Year 1 (*Baseline monitoring to obtain initial population abundance estimates*), Years 2 to 11, and Year 12 and beyond' set out in Tables 1, 2 and 3 below or as otherwise determined by the Trust in accordance with Condition 118, for a period of no less than 24 consecutive years; and
 - iii. Suppression of German and common wasps via a target to reduce at least 80% of the wasp numbers on public land. Control shall occur between late-January and late February. If high wasp activity persists, control must be repeated annually (or, if necessary, twice annually to include control in early April or four weeks after first application).
 - iv. The PMSBR shall also encourage and facilitate an integrated approach to ecological enhancement works, including weed and animal pest control, within the PMSBR Area across publicly owned and private land.
117. The Consent Holder shall ensure that the pest control management targets and management thresholds for 'Years 2 to 11 and Years 12 and beyond' set out in Tables 2 and 3 below, or as otherwise determined by the Trust in accordance with Condition 118, are met and sustained for a minimum duration of twenty-four (24) consecutive years across the PMSBR Area.
118. The management targets and the management thresholds for initiating additional controls set out in Tables 2 and 3 below shall be reflected in the PMSBR, except that

the Biodiversity Trust can review and make these management targets and thresholds more stringent.

Table 1: Baseline mammalian pest monitoring in Year 1 - CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

Pest Species	Management Target	Threshold	Monitoring frequency
On all land			
Mice	Obtain initial population abundance estimates.	n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)	Four monitors in Year 1 in February, May, August, and November
Rats	Obtain initial population abundance estimates.	n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)	
Possums	Obtain initial population abundance estimates.	n/a - Baseline Chew Card (CCI) index.	
Mustelids	Obtain initial population abundance estimates.	n/a - Baseline population estimate via CCH	
Feral cats	Obtain initial population abundance estimates.	n/a - Baseline population estimate via CCH	

Table 2: Pest management targets and thresholds for Years 2 - 11 on public and private land within the 380 ha proposed pest management area - CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol. Wasp population reduction as per the standard Wasp Nest Flight Count Monitoring Method (DOC-2597036).

Pest Species	Management Target	Threshold	Monitoring frequency
On public land			
Mice	<15% CCI or TTI	>15% CCI or TTI	Before and after toxic control, four monitors per year in February, May, August, and November
Rats	<5% CCI (year round)	≥10% (year round)	
Possums	<5% CCI	≥10% CCI	
Stoats	2 detections per 2000 CH ¹	3 detections per 2000 CH ¹	
Ferrets	2 detections per 2000 CH	3 detections per 2000 CH	
Weasels	2 detections per 2000 CH	3 detections per 2000 CH	
Feral cats	3 detections per 2000 CH	>5 individual cat detections per 2000 CH	

Ungulates	Zero density	Any observation (incl. sign)	
Common and German wasps	Population reduction of 80%	>80%	Control between late-January and late February annually.
On private land			
Rats	<5% CCI (Sep – Feb), <10% CCI (Mar – Aug)	≥10% CCI (Sep – Feb), <15% CCI (Mar – Aug)	Four monitors per year in February, May, August, and November
Possums	<5% CCI	≥10% CCI	
All mustelid species	2 detections per 2000 CH	3 detections per 2000 CH	

Table 3: Pest management targets and thresholds for Years 12 and beyond on public and private land within the 380 ha proposed project - CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

Pest Species	Management Target	Threshold	Monitoring frequency
On public land			
Rats	<5% CCI (Sep – Feb), <15% CCI (Mar – Aug)	≥10% CCI (Sep – Feb), <20% CCI (Mar – Aug)	Four monitors per year in February, May, August, and November
Possums	<5% CCI	≥10% CCI	
Mustelids	3 detections per 2000 CH ¹	5 detections per 2000 CH ¹	
Feral cats	3 detections per 2000 CH ¹	>5 individual cat detections per 2000 CH ¹	
Common and German wasps	Population reduction of 80%	>80%	Control between late-January and late February annually.
On private land			
Rats	<5% CCI (Sep – Jan)	≥10% CCI (Sep – Jan)	Two monitors per year in August and December.

Advice notes:

1. The management target in the first year is to obtain a population abundance estimate within the PMSBR area as control infrastructure is being deployed.
2. Monitoring in areas where toxic baiting is undertaken shall generally occur within 25m of toxic bait stations for rats and within 50m of toxic bait stations for possums. Monitoring in areas where control infrastructure has been installed shall generally occur within 25m of control infrastructure for rats and within 50m of control infrastructure for possums.

119. Monitoring and reporting on the results and outcomes of the PMSBR shall be provided to Auckland Council in accordance with the timeframes set out in the PMSBR.
120. Where pest population monitoring following any toxic baiting operations indicates that the management thresholds set out in Tables 2 and 3 have not been achieved, additional controls-as set out in a further Biodiversity Works Plan shall be implemented to ensure the thresholds are met. The Consent Holder shall prepare a Further Biodiversity Works Plan where:
- i) The required number or area of private landowners involved is not met after two successive years; or
 - ii) Monitoring required under Condition 116 indicates that the management thresholds set out in Tables 2 and 3 above are being regularly exceeded as set out below.

The management thresholds are considered to be regularly exceeded where the monitoring results indicate pest populations in controlled areas exceed the management threshold required in successive periods (e.g. are exceeded more than twice per year when monitoring operations are undertaken at least 2 to 3 months apart).

121. Where a Further Biodiversity Works Plan is required under Condition 119, this shall include, but not be limited to, further measures to ensure the protection, restoration and enhancement of native flora and fauna and ecosystems in the Waitakere Ranges Ecological District with priority given to land within the 990ha Waima Catchment (refer Revised Pest Management Proposal - Map 1, 26 April 2023):
- a. In instance 119(i), the works area for the PMSBR may be extended on public land where it is permissible to use pesticides to reduce pest numbers to below target requirements.
 - b. In instances where 119(ii) is not met, the objective of the Further Biodiversity Works Plan is to ensure that the specified targets are achieved, for example in a different location in the Waitakere Ranges Ecological District with priority given to land within the 990ha Waima Catchment, or through varying the methodology so that biodiversity benefits are at least equivalent to those that would have been achieved through meeting the management targets set out above. The Further Biodiversity Works Plan shall therefore identify additional measures to address any shortfall in biodiversity benefits.
122. The Further Biodiversity Works Plan shall be prepared and submitted to the Council for written approval.

I. Heritage Management

Restoration of Nihotupu Filter Station

123. The Consent Holder shall commission a suitably qualified and experienced person(s) to prepare a Heritage Management and Restoration Plan for the Nihotupu Filter Station (NHMRP). The Nihotupu Heritage Management and Restoration Plan (NHMRP) shall:
- (a) Identify the heritage values of the filter station; and
 - (b) Identify measures to appropriately maintain, repair and restore the heritage values of the filter station in accordance with good practice conservation principles and methods; and
 - (c) Identify the required actions to maintain, repair and restore the filter station to ensure the building is safe and structurally sound; and
 - (d) Enable the use, development and adaptation of the filter station in a manner which protects heritage values and is undertaken in accordance with good practice conservation principles and methods.

The NHMRP shall include a programme for implementation of the plan such that works identified at (b) and (c) above are completed no later than 5 years after the commencement of consent.

The NHMRP shall be developed in consultation with the CLG, Auckland Council (Heritage Team) and Heritage New Zealand Pouhere Taonga (HNZ), and shall be provided to Auckland Council (Heritage Team) and HNZ for review prior to it being submitted to the Council for certification. The NHMRP shall be amended to reflect any review comments where appropriate, noting where or why the CLG's, Auckland Council's (Heritage Team) and HNZ's recommendations were or were not adopted.

The updated NHRMP shall be provided to Council for certification in accordance with Condition 19.

Advice notes: *The Building Act 2004 requirements may also apply.*

Heritage Management re-uses at 123(d) to be considered shall include a publicly available meeting space, a community hub, or some other community-focused use.

J. Cultural Management and Engagement Plan

124. The consent holder in collaboration with Te Kawerau ā Maki shall prepare a Cultural Management and Engagement Plan (CMEP). The objective of the CMEP is to ensure ongoing engagement with Te Kawerau ā Maki during detailed design and construction of the Project. To achieve this objective, the CMEP shall:
- (a) Identify proposed cultural monitoring of topsoil removal;
 - (b) Identify Mana Whenua-directed procedures to be implemented in the event of an accidental discovery;
 - (c) Specify tree related protocols for the repurposing of felled trees that cannot be reused onsite;
 - (d) Specifically provide for Te Kawerau ā Maki input into the preparation and implementation of the EMP, PRMP, AMP, FBR and SRP;
 - (e) Specifically provide for Te Kawerau ā Maki input into selecting a preferred disposal facility to receive fill material that cannot otherwise be retained onsite (as set out in Condition 87);
 - (f) Specifically provide for Te Kawerau ā Maki input into the monitoring of freshwater ecology; and
 - (g) Identify opportunities for additional mitigation and offsetting measures taking into account those measures identified in Table 3 of the Cultural Impact Assessment (CIA). This includes, but is not limited to, input into:
 - (i) Stormwater treatment and design;
 - (ii) Interpretive panels and cultural markers; and
 - (iii) Incorporation of cultural design elements into built design.
125. The CMEP shall be developed in collaboration with Te Kawerau ā Maki with the final version provided to Te Kawerau ā Maki for review prior to it being submitted to the Council for certification in accordance with Condition 19. The CMEP shall be amended to reflect any review comments where appropriate, noting where and why Te Kawerau ā Maki's recommendations were or were not adopted.

Advice note: The CMEP shall be a 'living document' and shall be regularly revisited and updated as the project progresses.

K. Traffic and transportation

Construction Traffic Management Plan

126. The Consent Holder shall prepare a Construction Traffic Management Plan (CTMP) in accordance with the Council's requirements for CTMPs and the New Zealand Transport Authority's Code of Practice for Temporary Traffic Management for each stage of the Project. The CTMP shall be in general accordance with the Draft CTMP provided as part of the application documents and shall address the management of construction traffic from the site enabling works.
127. The Consent Holder shall submit the CTMP for each stage of construction to the Council for certification in accordance with Condition 19 at least twenty (20) working days prior to the Commencement of Construction. The purpose of the CTMP is to provide a comprehensive document that sets out the management procedures and construction methods to be implemented to avoid, remedy or mitigate potential adverse effects on the environment arising from construction activities and shall be consistent with the information provided in the Assessment of Environmental Effects and further information provided as part of the application. No construction activity shall commence until certification is provided from the Council that the CTMP satisfactorily gives effect to the objectives in Condition 128 and complies with the requirements in Conditions 129 and 130, as applicable to the particular stage of construction, the Council's requirements for CTMPs and New Zealand Transport Authority's Code of Practice for Temporary Traffic Management, and all measures identified in the CTMP as needing to be put in place prior to commencement of works have been put in place.
128. The objectives of the CTMP are to:
- 1) Limit and manage the number of construction traffic movements on the transport network;
 - 2) Provide for the safety of everyone at all times;
 - 3) Maintain pedestrian and vehicle access at all times to / from properties;
 - 4) Minimise disruption from construction traffic on the travelling public and road users along the identified sections of the construction routes;
 - 5) Seek to avoid full road closures and minimise any partial or managed closures;
 - 6) Manage integration with other construction projects and Auckland Transport projects;
 - 7) Manage the condition of roading assets to ensure road user safety and accessibility is maintained;
 - 8) Provide for prior engagement with relevant stakeholders, including:
 - (i) when public access, particularly to properties, will be affected by construction traffic; and
 - (ii) with the Principals of Schools located along identified heavy vehicle routes (Titirangi Primary School, Kaurilands School, Woodlands Park School and Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School),

- 9) Provide a mechanism for addressing queries and responding to complaints (including through the CLG or similar).

129. The CTMP shall include:

- (a) The traffic management measures that will be required to be implemented, including in the vicinity of the site access points and at the Woodlands Park Road / Scenic Drive intersection;
- (b) A mechanism and nominated stakeholder manager responsible for receiving, addressing and monitoring queries and responding to complaints in relation to the construction works;
- (c) Provision of appropriate ingress and egress routes to/from the sites for the construction vehicles, including confirmation of appropriate heavy vehicles layover areas and over-dimensional vehicle routes;
- (d) For each Project stage, confirmation of typical numbers of heavy vehicle movements throughout the day for heavy vehicle access routes;
- (e) Coordination with Auckland Transport regarding other construction sites and road works;
- (f) Restricted parking for workers on construction sites, with parking prioritised for minor trades (i.e. those needing to bring tools for specialist activities), car / van pooling, staff working outside standard hours and mobility impaired staff / visitors;
- (g) A site parking plan, including measures to restrict construction vehicles associated with this consent from parking on Woodlands Park Road, Manuka Road and Scenic Drive;
- (h) Location of any shuttle bus interchange and operation of this (or similar) service to transport workers to and from the site;
- (i) Location and operation of any works staging site;
- (j) The Titirangi Road route as the preferred ingress and egress route to/from the sites for the construction vehicles, instead of the Atkinson Road (South), Kaurilands Road, Glendale Road, Godley Road, Golf Road and Portage Road, whenever possible unless otherwise agreed with Auckland Transport;
- (k) No heavy vehicle movements, other than vehicle movements associated with concrete pours, to and from the construction sites on the Titirangi Road route during the following periods:
 - (i) during morning and afternoon drop-off/pick-up periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays).
Note: this restriction does not apply on school holidays;
 - (ii) after 13:00 on Saturdays; and
 - (iii) on Sundays and public holidays.
- (l) No heavy vehicle movements, other than vehicles associated with concrete pours, to and from the construction sites on the Atkinson Road (South), Kaurilands Road and Glendale Road route during morning and afternoon pick-up/drop-off periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays excluding school holidays), and on Sundays and public holidays, unless approved via the CTMP;

- (m) No heavy vehicle movements on the Woodlands Park Road / Huia Road route (associated with any use of the Parau landfill site) during morning and afternoon drop-off/pick-up periods for schools (generally being from 8:00 to 9:00 and from 14:30 to 15:30 on weekdays excluding school holidays), and on Sundays and public holidays, unless approved via the CTMP;
- (n) No construction traffic on Waima Crescent.
- (o) Monitoring of pavements located on haulage routes and remediation of any damage resulting from Project construction traffic in accordance with Conditions 131 to 134;
- (p) Provision of heavy vehicle tracking on the proposed haulage route(s), and measures to address any conflicts, including potential removal of on-street parking as identified in the CH2M Beca Report dated 9 August 2019 (reference 6513515/s92/BUN60339273 NZ1-16354770-3);
- (q) Measures to address the restricted visibility for heavy vehicles turning right out from Woodlands Park Road into Scenic Drive, in the instance that permanent improvements have not been undertaken;
- (r) Specific measures to ensure safety is maintained while providing continuous access to bus stops, a continuous footpath and cycling network, and to minimise detours and additional crossing points for pedestrians and cyclists;
- (s) The provision of construction traffic management staff to assist any construction trucks reversing into or out of the construction site;
- (t) Monitoring of and cleaning of spillage from construction trucks onto roads or footpaths in accordance with Condition 74;
- (u) Vegetation trimming or removal within the site to achieve sufficient sight lines from site accesses;
- (v) Educating construction staff of the safety needs of pedestrians and people cycling;
- (w) Provisions to ensure the ongoing ability of road pavements to withstand the proposed loading from heavy vehicles without affecting safety or behaviour of other road users;
- (x) Monitoring of traffic volumes at Titirangi Road roundabout to identify any impact of construction activities on the operation of the roundabout and associated queueing times, and any mitigation measures should these be required; and
- (y) Processes for monitoring, review and amendments to the CTMP, in particular in response to changes in the roading network including any change in the condition of roading assets.

130. The CTMP shall be prepared in consultation with the CLG in accordance with Condition 15, and in consultation with Auckland Transport and schools located along identified heavy vehicle routes (Titirangi Primary School, Kaurilands School, Woodlands Park School and Glen Eden Intermediate School, Laingholm Primary School and the Rudolph Steiner School).

Advice notes:

The CTMP is required to address the management of construction traffic from the site enabling works (including earthworks and vegetation clearance).

Overall traffic management, including for enabling works and construction of the Water Treatment Plant (WTP) and reservoirs, will be addressed by the separate Outline Plan of Works (OPW) process and does not form part of this consent.

The heavy vehicle tracking assessment undertaken by CH2M Beca on 9 August 2019 (reference 6513515/s92/BUN60339273 NZ1-16354770-3) is sufficient to address the requirements in Conditions 129(p) unless there have been changes to the road network that affect the conclusion of that assessment.

It is the responsibility of the consent holder to seek approval for the TMP from Auckland Transport. Contact Auckland Transport on (09) 355 3553.

All applications for temporary use of the road reserve during construction, including temporary removal of any on-street parking, must be submitted to Auckland Transport as a Corridor Access Request (CAR). The CAR application should be submitted to Auckland Transport at least 12 weeks prior to the scheduled commencement of works.

Works within the Auckland Transport road reserve will require a Works Access Permit and Engineering Plan Approval from Auckland Transport.

Pavement Impact Assessment

131. Prior to the activity approved in this consent and to the satisfaction of the Council, the Consent Holder shall provide a Pavement Impact Assessment (PIA) undertaken by a suitably qualified pavement engineer to determine the current condition of the pavement on Woodlands Park Road between the sites access(es) and Scenic Drive and other sections of haulage routes. The PIA shall include the following sections of road (where they are used as haulage routes):
- (a) Woodlands Park Road, between the site access(es) and Scenic Drive;
 - (b) Scenic Drive, between Woodlands Park Road and Titirangi Road;
 - (c) Atkinson Road, for a distance of 100m from the intersection with Titirangi Road;
 - (d) Titirangi Road, for a distance of 100m from the intersection with Atkinson Road;
 - (e) Woodlands Park Road, between the site access(es) and Huia Road (in the instance of the Parau fill site being used); and
 - (f) Huia Road, between Woodlands Park Road and the Parau fill site (in the instance of the Parau fill site being used).
132. The Consent Holder shall arrange a site meeting with the Council and Auckland Transport's Asset Roading Manager to discuss the findings of the PIA and to agree on the existing condition of Auckland Transport assets on the haulage routes.

133. As part of the PIA, the Consent Holder shall include a monitoring plan to monitor and report on any damage to public roads, footpaths, berms, curbs or drains, along the haulage routes identified in Condition 131, as a result of the enabling earthworks activities. The PIA and associated monitoring plan shall be provided to Council for certification in accordance with Condition 19.
134. Should the monitoring plan required by Condition 133 show that damage has occurred, Auckland Council shall be notified within 24 hours of its discovery (or immediately where the damage presents a safety hazard). The costs of rectifying such damage and restoring the asset to its original condition will be met by the Consent Holder.

Woodland Park Road / Scenic Drive intersection upgrade

135. The Consent Holder shall upgrade the intersection of Woodlands Park Road and Scenic Drive, and upgrade the Exhibition Drive walkway carpark, subject to obtaining all necessary approvals.

The Consent Holder shall ensure the upgraded carpark provides at least the same number of car parks currently provided and shall undertake best endeavours to increase the number of car park spaces available. Where the number of parking spaces within the car park cannot be increased, then the Consent Holder shall work with Auckland Council to provide additional parking within proximity to the entrance to the Exhibition Drive walkway.

This work shall be undertaken in general accordance with the draft Scenic Drive Intersection plan prepared by Beca and Boffa Miskell, dated 27 February 2018, as updated and finalised through consultation with Auckland Transport. The final design shall be provided to Council for written approval in accordance with Condition 19.

The Consent Holder shall take all reasonably practicable steps to implement the final design such that the works are completed no later than 5 years after the commencement of consent. This work shall be undertaken at the Consent Holder's cost and in accordance with the draft Scenic Drive Intersection plan prepared by Beca and Boffa Miskell, dated 27 February 2018, as updated and finalised through consultation with Auckland Transport. The final design shall be provided to Council for certification in accordance with Condition 19.

Advice note: The consent holder shall be responsible for meeting CAR and other requirements that may apply.

L. Construction Noise and Vibration

Construction Noise and Vibration Management Plan

136. The Consent Holder shall prepare a Construction Noise and Vibration Management Plan (CNVMP) for each stage of the Project that addresses the management of construction noise and vibration from the site enabling works. The CNVMP shall be submitted to the Council in accordance with Condition 19 no less than twenty (20) working days prior to works on that stage commencing (excluding site investigations and establishment of site entrances and fencing) for certification that the CNVMP complies with the requirements of Conditions 137 to 145, as applicable. The CNVMP shall be prepared by a suitably qualified person and in accordance with the Draft CNVMP.
137. An Activity Specific Construction Noise and Vibration Management Plan (ASCNVMP) shall be prepared for any night-time works or works predicted to exceed the project construction noise limits and shall be appended to the main CNVMP. An ASCNVMP shall be submitted to the Council in accordance with Condition 19 no less than twenty (20) working days prior to works on that stage commencing for written approval that the ASCNVMP complies with the requirements of Conditions 137 to 145, as applicable.
138. Noise from activities shall where practicable comply with the limits contained in Table E25.6.27(1) of the AUP(OP) as modified by Standard E25.6.27(4).
139. Earthworks and associated construction activities (i.e. which involve heavy machinery or high noise-producing equipment) shall be limited to 7:30 am – 6:00 pm Monday to Friday and 8:00 am – 5:00 pm Saturdays except as provided for through an ASCNVMP. Construction activities which do not involve the use of heavy machinery or other high noise-producing equipment are permitted outside these hours provided they comply with the relevant AUP limits or are supported by an ASCNVMP.
140. Noise from construction work activity shall be measured and assessed in accordance with the requirements of New Zealand Standard NZS 6803:1999 Acoustics – Construction noise.
141. Tonal reverse alarms on vehicles shall not be used on the site. Broadband reverse alarms are permitted.
142. Vibration levels arising from construction work activity of more than three days in a given location shall comply with Standard E25.6.30(1A)(b), Table E25.6.30.1, of the AUP(OP) or limits otherwise approved through an ASCNVMP.
143. Vibration levels arising from construction work activity of three days or less in a given location shall comply with the limits stipulated in Standard E25.6.30(1A)(a) of the AUP(OP), as set out in German Industrial Standard DIN 4150-3 (1999) Structural Vibration – Part 3 Effects of Vibration on Structures, when measured in accordance with that standard.

144. The Consent Holder shall engage a suitably qualified acoustic specialist to prepare the CNVMP and ASCNVMPs (where required) to identify how Conditions 138, 142 and 143 will be met. The objective of the CNVMP / ASCNVMP is to identify the best practicable option for management and mitigation of all construction noise and vibration, including where full compliance with the levels in Conditions 138, 142 and 143 cannot be achieved at all times.

The CNVMP / ASCNVMP shall as a minimum include, but not be limited to, the following information:

- (a) Construction noise/vibration criteria;
- (b) Identification of the most affected premises where there exists the potential for noise/vibration effects and the methodology for communication and consultation with these stakeholders;
- (c) Description and duration of the works, anticipated equipment and the processes to be undertaken including general acoustic management and mitigation measures proposed to be implemented throughout the course of the Project consistent with best practice;
- (d) Hours of operation, including specific times and days when construction activities causing noise/vibration would occur;
- (e) Mitigation options where noise/vibration levels are predicted or demonstrated to approach or exceed the relevant limits. Specific noise/vibration mitigation measures must be implemented which may include, but are not limited to, acoustic screening, time management procedures and alternative excavation / construction / piling method technologies;
- (f) Identification of the nearest sensitive receptors and approach to pre- and post-construction building condition surveys at these locations where vibration limits in Condition 143 will be exceeded and where agreed to with the owners of adjacent sites;
- (g) The erection of temporary construction noise barriers, enclosures or other mitigation measures where appropriate;
- (h) Schedule and methods for monitoring and reporting on construction noise/vibration;
- (i) Details of noise/vibration monitoring to be undertaken in the event of any complaints received. The results of such monitoring shall be submitted to the Council within one week of receiving the complaint;
- (j) Implementation of a complaint management system with contact numbers for key construction staff responsible for the implementation of the CNVMP and complaint investigation. This system should include procedures for maintaining contact with stakeholders, notifying of proposed construction activities and handling of noise/vibration complaints;

- (k) Notification shall be provided to the owners and occupiers of adjacent buildings prior to construction activities commencing on the site; and
 - (l) Training procedures for construction personnel.
145. The CNVMP shall be prepared in consultation with the CLG in accordance with Condition 15.

Advice note: The CNVMP required by Condition 136 is required to address the management of construction noise and vibration from the site enabling works (including earthworks and vegetation clearance), and not construction of the WTP and reservoirs which is addressed by the separate OPW process and does not form part of this consent.

M. Stormwater

Stormwater diversion and discharge – permanent structures

146. The detailed design, including drawings, specification, design report and calculations for permanent stormwater management devices for each stage (or stages) of the Project shall be submitted to the Council for certification in accordance with Condition 19 and at least 20 working days prior to initiation of construction of the devices for that stage / stages.
147. The Consent Holder shall ensure (through detailed design) that stormwater management devices are designed in accordance with the Council's guidance document GD01 '*Stormwater Management Devices in the Auckland Region*'. The detailed design shall be constructed for the following catchment areas and design requirements, and shall be completed prior to discharges commencing from the site:

Works to be undertaken	Catchment Area (ha)	Design Requirements
Existing Dry Detention Pond	3.139	<p>Retention of 5mm runoff depth from impervious areas.</p> <p>Detention of the 95th percentile storm (SMAF1) and slow release over a 24-hour period minus any retention volume that is achieved from impervious areas, with the remaining volume which cannot be achieved substituted as additional detention.</p> <p>Peak flow attenuation of the 10 year ARI storm event to predevelopment levels.</p> <p>Peak flow attenuation of the 100 year event to pre-development level.</p>
Proposed Permanent Dry Pond	1.224	<p>Retention of 5mm runoff depth from impervious areas.</p> <p>Detention of the 95th percentile storm (SMAF1) and slow release over a 24-hour period minus any retention volume that is achieved from impervious area, with the remaining retention volume which cannot be achieved substituted as additional detention.</p> <p>Peak flow attenuation of the 10 year ARI storm event to predevelopment levels.</p>

		Peak flow attenuation of the 100 year event to predevelopment levels
Roof material	All	Inert materials only and no exposed unpainted metal surfaces.
Stormwater outfalls	Varies	Erosion protection measures in accordance with TR2013_018 or higher standard
Proprietary devices or equivalent water quality solution in accordance with GD01	Varies	Water Quality treatment of all trafficable impervious areas in accordance with manufacturers specifications or GD01 (or higher standard).

148. A final site plan with stormwater management features and supporting calculations shall be provided to the Council for certification prior to the commencement of works. The final site plan must give due consideration to additional stormwater treatment measures that achieve stormwater quality benefits for the Project Site. Consideration shall be given to providing living roofs on one or both of the reservoirs in accordance with the Council's Guidance Document GD01.
149. In the event that any modifications to the stormwater management system are required, the following information shall be provided:
- (a) Plans and drawings outlining the details of the modifications; and
 - (b) Supporting information that details how the proposal does not affect the capacity or performance of the stormwater management system. All information shall be submitted to the Council for certification prior to implementation.
150. For stormwater flows in excess of the capacity of the primary drainage systems, overland flow paths shall be provided and maintained to allow surplus stormwater from critical storms, up to the 100 year Annual Recurrence Interval (ARI) event, to discharge with the minimum of nuisance and damage to properties. Overland flow paths shall be kept free of all obstructions.

Stormwater Management – post construction

151. A post-construction site meeting shall be held by the consent holder, within 20 working days of completion of the stormwater management works, that:
- (a) Includes representation from the Council; and
 - (b) Includes representation from the site stormwater engineer, contractors who have undertaken the works and any other relevant parties.

Advice note: To arrange the construction meetings required by this consent, please contact the Council on 09 301 0101.

Certification of stormwater management works (As-Built Plans)

152. As-built certification and plans of the stormwater management works, which are certified (signed) by a suitable qualified registered surveyor as a true record of the stormwater management system, shall be provided to the Council in accordance with Condition 19 for certification 5 working days prior to the post-construction meeting required by this consent.
153. The as-built plans shall display the entirety of the stormwater management system and shall include:
- (a) The surveyed location (to the nearest 0.1m) and level (to the nearest 0.01m) of the stormwater management devices, with co-ordinates expressed in terms of NZTM and LINZ datum;
 - (b) Plans and cross sections of all stormwater management devices, including confirmation of any storage volumes and levels of any outflow control structure;
 - (c) Documentation of any discrepancies between the design plans and the As-Built plans approved by the Modifications Approval condition.

Advice note: Post construction certification may be undertaken in stages to allow for staged completion of the stormwater management works associated with the replacement WTP, Reservoir 1 and Reservoir 2.

Operation and Maintenance Plan

154. An Operation and Maintenance Plan shall be submitted to Council for certification in accordance with Condition 19 5 working days prior to the post-construction meeting required by this consent.
155. The Operation and Maintenance Plan shall set out how the stormwater management system is to be operated and maintained to ensure that adverse environmental effects are minimised. The plan shall include:
- (a) Details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process;
 - (b) A programme for regular maintenance and inspection of the stormwater management system;
 - (c) A programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices;
 - (d) A programme for post storm inspection and maintenance;

- (e) General inspection checklists for all aspects of the stormwater management system, including visual checks; and
 - (f) A copy of any current maintenance contract.
156. The stormwater management system shall be managed in accordance with the certified Operation and Maintenance Plan. Any amendments or alterations to the Operation and Maintenance Plan shall be submitted to, and certified by Council in writing prior to implementation.
157. The Operation and Maintenance Plan shall be updated and submitted to Council for certification, on request.

Specialist Maintenance Contract

158. Where applicable, a written maintenance contract for the on-going maintenance of the proprietary device(s) shall be entered into with an appropriate stormwater management system operator, prior to the operation of the proprietary stormwater management device(s). A written maintenance contract shall be in place and maintained for the duration of the consent. A signed copy of the maintenance contract for the first three (3) years of operation shall be forwarded to the Council a minimum of 5 working days prior to the post-construction meeting required by this consent. A copy of the current maintenance contract shall be provided to the Council upon request throughout the duration of the consent.

Advice note: Due to the nature of the surrounding contributing area, being a dense bush catchment, a higher than typically anticipated maintenance frequency is expected. The maintenance frequency of the propriety devices shall be determined by the device loading and as recommended by the specialist maintenance provider.

Maintenance Report

159. Details of all inspections and maintenance for the stormwater management system, for the preceding three (3) years, shall be retained. A maintenance report shall be provided to the Council on request. The maintenance report shall include the following information:
- (a) Details of who is responsible for maintenance of the stormwater management system and the organisational structure supporting this process;
 - (b) Details of any maintenance undertaken; and
 - (c) Details of any inspections completed.

N. Contaminated land

Contaminated soil disturbance

160. The Consent Holder shall engage a suitably qualified and experienced practitioner to undertake soil investigations in accordance with Section 4 of the *Site Management Plan for Ground Contamination* (Tonkin & Taylor, May 2019) (SMP), and in accordance with the PRMP and Traffic Light System, and at least 10 working days prior to commencement of earthworks, provide to the acceptance of the Council a Detailed Site Investigation report (DSI) confirming the site soil contamination status.
161. The consent holder shall include additional soil investigation within the former workshop and chemical store area into the sampling plan in the SMP and engage a suitably qualified and experienced practitioner to undertake soil sampling and testing following the demolition of the existing chlorine building within the Reservoir 2 area, and include any test results into the DSI required by Condition 160 (or as a later update or addendum to the DSI).
162. The Consent Holder shall engage an asbestos surveyor to carry out an inspection of that part of the existing Huia WTP building to be demolished prior to demolition commencing. This shall be to confirm and identify the presence of lead-based paint and any (potential) asbestos containing material (ACM) within the building structures proposed to be demolished. The survey results shall be included into the DSI required by Condition 160 or as a later update or addendum to that DSI.
163. If the survey required by Condition 162 demonstrates there is the potential of soil contamination from lead-based paint and/asbestos/ACM, the Consent Holder shall include the soil investigation of the existing WTP site into the sampling plan proposed in the SMP, and include the test results in the DSI required by Condition 160 (or as later updates or addendums to the SMP and DSI);
164. If the DSI required by Condition 160 shows the level of soil contamination present at the site requires additional controls, the Consent Holder shall at least 10 working days prior to commencement of earthworks provide an updated SMP or a combined Remedial Action Plan/SMP (when required) for certification to the Council.

Management of contaminated soil – during earthworks

165. The Consent Holder shall carry out earthworks and implement the control measures in accordance with an approved Site Management Plan (SMP). Any changes to the SMP shall be certified by the Council.

Advice note: Due to the presence of *Phytophthora* species, earthworks and the disturbance of soil shall be undertaken in compliance with the PRMP and Traffic Light System.

166. Excavated soil or waste from areas where a DSI (or later update or addendum to the DSI) identifies that contamination exceeds the applicable health and environmental criteria shall be managed on site in accordance with the updated Site Management

Plan or shall be disposed of at a disposal site, which is authorised by the Council to accept the relevant levels of contamination. If the Parau Landfill is chosen as an alternative disposal site, written confirmation shall be provided to the Monitoring Team Leader to confirm that Parau Landfill has appropriate consent, at least five working days prior to the disposal commencing. Copies of the disposal dockets for any contaminated material removed from the sites shall be retained.

167. The Consent Holder shall not undertake activities that result in any airborne and deposited dust beyond the property boundary of the site that is determined to be noxious, objectionable or offensive. Good practice measures, such as those described the *Good Practice Guide for Assessing and Managing Dust* (Ministry for the Environment 2016) shall be adopted at all times.
168. If evidence of contamination, which has not been previously identified is discovered during any excavation at the site, the Consent Holder shall immediately cease the works in the vicinity of the material and notify the Council and agree on appropriate remediation and validation actions.
169. The Consent Holder shall ensure that the contamination level of any imported soil complies with the definition of 'Cleanfill material', as per the AUP(OP). Any imported material shall be solid material of an inert nature and must not contain *Phytophthora* species, hazardous substances or contaminants above natural background levels of the receiving site. Imported soils shall be tested at a rate of 1 per 1,000m³ of material imported to the site except that sampling is not required for hard-fill material sourced from a commercial quarry.
170. All land disturbance works shall be managed to minimise any discharge of debris, soil, silt, sediment or sediment-laden water from beyond the subject site to either land, stormwater drainage systems, watercourses or receiving waters in accordance with the PRMP and Traffic Light System.
171. Any perched groundwater or surface water encountered within the excavation area, where the DSI and any later update or addendum to the DSI shows that the concentrations of soil contaminants exceed the permitted activity soil acceptance criteria specified in Table E30.6.1.4.1 or E30.6.1.4.2 of Chapter E30 of the AUP(OP), requiring removal shall be considered potentially contaminated and shall be:
 - (a) disposed of by a licenced liquid waste contractor; or
 - (b) pumped to sewer, providing the relevant permits are obtained; or
 - (c) discharged to the site's stormwater system or surface waters provided:
 - testing demonstrates compliance with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)* for the protection of 80 percent of species, except for benzene where 95 percent of species shall apply; and
 - any discharge is in accordance with the relevant requirements of the PRMP;

- (d) free from petroleum hydrocarbons.

Advice note: All testing and analysis should be undertaken in a laboratory with suitable experience and ability to carry out the analysis. For more details on how to confirm the suitability of the laboratory please refer to Part 4: Laboratory Analysis, of Contaminated Land Management Guidelines No.5.

Site Validation Report – Post-completion

172. The Consent Holder shall, within three months following the completion of the earthworks from areas where a DSI and a later update or addendum to the DSI identifies that contamination exceeds the applicable human health and environmental criteria, provide to the acceptance of the Council a Site Validation Report (SVR). The Site SVR shall include, but not be limited to:

- (a) confirmation of performance of earthworks, remediation (if required) conducted in accordance with approved plans and consent conditions;
- (b) details and tabulated results of testing undertaken including testing of soil, water, vapour, and interpretation of the results in the context of the National Environmental Standard for Assessing the Managing Contaminants to Soil to Protect Human Health (NES Soil) and Chapter E30 of the AUP(OP);
- (c) any unexpected contamination identified during excavation on the site and response actions;
- (d) volume of soil excavated from the site, disposed off-site and landfill receipts; and
- (e) any complaints received and response during remediation works.

Advice note: Site validation reporting may be undertaken in stages to allow for staged completion of the disturbance works within contaminated land.

O. Groundwater diversion

Groundwater definitions

Words in the ground dewatering (take) and groundwater diversion consent conditions below have specific meanings as outlined in the table below.

Alarm Level	Specific levels at which actions are required as described in the relevant conditions.
Alert Level	Specific levels at which actions are required as described in the relevant conditions.
Completion of Dewatering	Means, in the case of a tanked building or structure construction, the stage when all the external base slab and walls are essentially watertight, the structures internal support mechanisms, including basement floors have been completed any temporary retention removed and no further groundwater is being taken for the construction of the basement.
Commencement of Excavation	Means commencement of Bulk Excavation or excavation below the water table.
Completion of Construction	Means when the Code Compliance Certificate (CCC) is issued by Auckland Council
Completion of Excavation	Means the stage when all Bulk Excavation has been completed and all foundation/footing excavations within 10 meters of the perimeter retaining wall have been completed.
Condition Survey	Means an external visual inspection or a detailed condition survey (as defined in the relevant conditions).
Damage	Includes Aesthetic, Serviceability, Stability, but does not include Negligible Damage. Damage as described in the table below.
External visual inspection	A condition survey undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage. Includes as a minimum a visual inspection of the exterior and a dated photographic record of all observable exterior Damage.
GSMCP	Means Groundwater and Settlement Monitoring and Contingency Plan
Monitoring Station	Means any monitoring instrument including a ground or building deformation station, inclinometer, groundwater monitoring bore, retaining wall deflection station, or other monitoring device required by this consent.
RL	Means Reduced Level.
Seasonal Low Groundwater Level	Means the annual lowest groundwater level – which typically occurs in summer.
Services	Include fibre optic cables, sanitary drainage, stormwater drainage, gas and water mains, power and telephone installations and infrastructure, road infrastructure assets such as footpaths, curbs, catch-pits, pavements and street furniture.
SQEP	Means Suitably Qualified Engineering Professional
SQBS	Means Suitably Qualified Building Surveyor

Table 2: Building Damage Classification

Category of Damage	Normal Degree of Severity	Description of Typical Damage	General Category
0	Negligible	Hairline cracks.	Aesthetic Damage
1	Very Slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection. Typical crack widths up to 1mm.	
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repainting may be required for weather-tightness. Doors and windows may stick slightly. Typically crack widths up to 5mm.	
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Brick pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired. Typical crack widths are 5mm to 15mm or several greater than 3mm.	Serviceability Damage
4	Severe	Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted. Typical crack widths are 15mm to 25mm but also depend on the number of cracks.	
5	Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion. Danger of instability. Typical crack widths are greater than 25mm but depend on the number of cracks.	Stability Damage

Note: In the table above the column headed “Description of Typical Damage” applies to masonry buildings only and the column headed “General Category” applies to all buildings.

Notice of Commencement of Dewatering

173. The Council shall be advised in writing at least 10 working days prior to the date of the Commencement of Dewatering.

Design of Excavations and Retaining Systems

174. The design and construction of the excavations, shafts, fill platform, retaining walls and permanent drainage system shall be undertaken in general accordance with the specifications contained in the groundwater and settlement reports referenced in Condition 2.

Excavation Limit

175. The Bulk Excavation shall not extend below a depth demonstrated through detailed investigations and analysis to result in groundwater and settlement effects greater than predicted in the information submitted with the Application referred to in Condition 2. This shall be demonstrated in the Geotechnical Interpretive / Design Report required under Condition 183.

Performance Standards

Damage avoidance

176. All excavation, dewatering systems, retaining structures and works associated with the diversion or taking of groundwater, shall be designed, constructed and maintained so as to avoid Damage to buildings, structures and Services on the site or adjacent properties, outside that considered as part of the application process unless otherwise agreed in writing with the asset owner.

Alert and alarm levels

177. The activity shall not cause any settlement or movement greater than the Alarm Level thresholds specified in Schedule A below. Alert and Alarm Levels are triggered when the following Alert and Alarm Trigger thresholds are exceeded:

Schedule A: Alarm and Alert Levels			
Movement		Trigger Thresholds (+/-)	
		Alert	Alarm
a)	Differential vertical settlement between any two Ground Surface Deformation Stations (the Differential Ground Surface Settlement Alarm or Alert Level): <ul style="list-style-type: none"> GS1 to GS18 	1:750	1:550
b)	Total vertical settlement from the pre-excavation baseline level at any Ground Surface Deformation Station (the Total Ground Surface Settlement Alarm or Alert Level): <ul style="list-style-type: none"> G1, G2, G10, G11, G12, G14, G15, G16, G17 and G18 G13 G3, G4, G8 and G9 G5, G6 and G7 	7 mm 20 mm 40 mm 80 mm	10 mm 25 mm 50 mm 95 mm
c)	Total lateral deflection from the pre-excavation baseline level at any retaining wall deflection station (the Retaining Wall Deflection Alarm or Alert Level): <ul style="list-style-type: none"> RW1 to RW5 	32 mm	40 mm
d)	Distance below the pre-dewatering Seasonal Low Groundwater Level and any subsequent groundwater reading at any groundwater monitoring bore (the Groundwater Alert Levels 1 & 2):	n/a	(1) 80% of calculated (2) 100% of calculated

Advice note:

The locations of the Monitoring Stations listed in Schedule A are shown on the drawing entitled "Proposed monitoring points" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019.

These levels may be amended subject to approval by the Council as part of the Groundwater Settlement Monitoring and Contingency Plan (GSMCP) approval process, and, after the receipt of pre-dewatering monitoring data, condition surveys and recommendations from a suitably qualified engineering professional (SQEP), but only to the extent that avoidance of Damage to building, structures and Services can still be achieved.

There are conditions below that must be complied with when the Alert and Alarm Level triggers are exceeded. These include actions that must be taken immediately including seeking the advice of a SQEP.

Alert level actions

178. In the event of any Alert Level being exceeded the Consent Holder shall:

- (a) Notify the Council within 24 hours.
- (b) Re-measure all Monitoring Stations within 50m of the affected monitoring location(s) to confirm the extent of apparent movement.

- (c) Ensure the data is reviewed, and advice provided, by a SQEP on the need for mitigation measures or other actions necessary to avoid further deformation. Where mitigation measures or other actions are recommended those measures shall be implemented.
- (d) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council within five working days of Alert Level exceedance. The report shall provide an analysis of all monitoring data (including wall deflection) relating to the exceedance, actions taken to date to address the issue, recommendations for additional monitoring (i.e. the need for increased frequency or repeat condition survey(s) of building or structures) and recommendations for future remedial actions necessary to prevent Alarm Levels being exceeded.
- (e) Measure and record all Monitoring Stations within 50m of the location of any Alert Level exceedance every two days until such time the written report referred to above has been submitted to the Council.

Alarm level actions

179. In the event of any Alarm Level being exceeded at any ground deformation pin, building deformation pin, retaining wall deflection pin or inclinometer Monitoring Station required by this consent, the Consent Holder shall:
- (a) Immediately halt construction activity, including excavation, dewatering or any other works that may result in increased deformation, unless halting the activity is considered by a SQEP to be likely to be more harmful (in terms of effects on the environment) than continuing to carry out the activity.
 - (b) Notify the Council within 24 hours of the Alarm Level exceedance being detected and provide details of the measurements taken.
 - (c) Undertake a condition survey (this could comprise either a detailed condition survey or an external visual inspection at the discretion of the SQEP responsible for overseeing the monitoring) by a SQEP or suitably qualified building surveyor (SQBS) of any building or structure located adjacent to any Monitoring Station where the Alarm Level has been exceeded.
 - (d) Take advice from the author of the Alert Level exceedance report (if there was one) on actions required to avoid, remedy or mitigate adverse effects on ground, buildings or structures that may occur as a result of the exceedance.
 - (e) Not resume construction activities (or any associated activities), halted in accordance with (a) above, until any mitigation measures (recommended in accordance with (d) above) have been implemented to the satisfaction of a SQEP.
 - (f) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council, on the results of the condition survey(s), the mitigation

measures implemented and any remedial works and/or agreements with affected parties within five working days of recommencement of works.

Groundwater and Settlement Monitoring and Contingency Plan (GSMCP)

180. At least twenty (20) working days prior to the Commencement of Dewatering, a final Groundwater and Settlement Monitoring and Contingency Plan (GSMCP) prepared by a SQEP and in accordance with the Draft GSMCP, shall be submitted to the Council for written approval in accordance with Condition 19. No dewatering activities shall commence on site until written approval is provided from the Council that the GSMCP meets the conditions of consent.

The overall objective of the GSMCP shall be to set out the practices and procedures to be adopted to ensure compliance with the consent conditions and shall include, at a minimum, the following information:

- (a) A monitoring location plan, showing the location and type of all Monitoring Stations including groundwater monitoring bores, ground and building deformation pins and retaining wall deflection pins. The monitoring plan should be based on the drawing entitled "*Proposed monitoring points*" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019. In any case where the location of a Monitoring Station differs substantively from that shown on the drawing entitled "*Proposed monitoring points*" prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, a written explanation for the difference shall be provided at the same time that the final GSMCP is provided.
- (b) Final completed Schedules B to E (as per the conditions below) for monitoring of groundwater drawdown, and, ground surface, building and retaining wall deformation (including any proposed changes to the monitoring frequency) as required by conditions below.
- (c) All monitoring data, the identification of Services susceptible to Damage and all building/Service condition surveys undertaken to date and required by conditions below.
- (d) A bar chart or a schedule, showing the timing and frequency of condition surveys, visual inspections and all other monitoring required by this consent, and a sample report template for the required two monthly monitoring.
- (e) All Alert and Alarm Level Triggers (including reasons if changes to such are proposed, for example as a result of recommendations in the building condition surveys or data obtained from pre-dewatering monitoring).
- (f) Details of the contingency actions to be implemented if Alert or Alarm Levels are exceeded.

The consent holder may request amendments to the GSMCP in writing to the Council for approval at least 10 working days prior to any changes taking effect. Any changes

to the GSMCP shall remain consistent with the overall intent of the GSMCP and shall be consistent with the requirements of the relevant conditions of these consents. No changes shall take effect without the prior approval of the Council.

181. All construction, dewatering, monitoring and contingency actions shall be carried out in accordance with the approved GSMCP.

Additional geotechnical investigations

182. Prior to the submission of the GSMCP, additional investigations as shown on the drawing titled "*Indicative Geotechnical Investigation Plan*" appended to the s92 response letter dated 15 July 2019 are to be undertaken as set out below, and in accordance with the geotechnical investigation-specific PRMP required by Condition 43:

- I. A minimum of two boreholes shall be drilled to 50m depth to investigate large-scale instability within the rock mass.
- II. A nested or piezometer pair (PZW1 and PZW2) shall be installed immediately adjacent to, and a stilling well (SW1) shall be installed within, the Kahikatea wetland along the western boundary of the reservoir 1 site.
The stilling well shall be monitored to determine surface water level in the wetland. The piezometer shall include one shallow piezometer at the same level as the wetland and a deeper piezometer screened in the expected upper groundwater level.
The stilling well and piezometer shall be monitored for a minimum of 12 months to determine vertical gradients in the vicinity of the wetland and if there is any groundwater – surface water connection.

183. The results of the investigation are to be summarised in a Geotechnical Interpretive / Design report and reporting shall include: confirmation sufficient investigation has been undertaken to address uncertainties and confirm the ground model (including deep-seated instability, geotechnical and hydrogeological parameters, and groundwater-surface water connection), confirmation of groundwater levels across the site(s), updated assessments of global stability, a summary of detailed design analyses undertaken and an updated assessment of environmental effects where different to that presented at the time of consenting, and detail any residual geotechnical risks that may not be fully addressed by the design.

Pre-Dewatering Building and Structure Survey

184. The Consent Holder shall undertake a risk assessment to identify existing buildings and structures at risk of damage due to settlement caused by the project. The risk assessment process and results shall be set out in the GSMCP required by Condition 180 and shall be based upon the additional site investigation and analyses, and final design and construction methodology. The risk assessment shall include:
- (a) Identification of the zone of settlement or ground movement influence;

- (b) Identification of the building types in this zone, and their susceptibility to ground movement induced damage;
 - (c) Identification of the buildings and structures at risk of damage due to the project works and requirements for monitoring; and
185. Where the risk assessment required by Condition 184 above identifies existing buildings and structures at risk of damage due to settlement caused by the project, a detailed condition survey of those buildings and structures shall be undertaken by a SQEP or SQBS and a written report shall be prepared and reviewed by the SQEP responsible for overseeing the monitoring. The report shall be submitted for certification by the Council.

The detailed condition survey shall include:

- (a) Confirmation of the installation of any required building deformation stations;
- (b) A description of the type of foundations;
- (c) A description of existing levels of Damage considered to be of an aesthetic or superficial nature;
- (d) A description of existing levels of Damage considered to affect the serviceability of the building where visually apparent without recourse to intrusive or destructive investigation;
- (e) An assessment as to whether existing Damage may or may not be associated with actual structural Damage and an assessment of the susceptibility of buildings/structures to further movement and Damage;
- (f) Photographic evidence of existing observable Damage;
- (g) A review of proposed Alarm and Alert Levels to confirm they are appropriately set and confirmation that any ground settlement less than the Alarm Level will not cause Damage;
- (h) An assessment of whether the monitoring frequency is appropriate; and
- (i) An assessment of whether the locations and density of existing ground and building deformation stations are adequate and appropriate for the effective detection of change to building and structure condition.

This condition does not apply where written evidence is provided to the Council that the owner of a property has confirmed they do not require a detailed condition survey.

Pre-Dewatering Services Condition Survey

186. Prior to the Commencement of Dewatering, a condition survey of potentially affected stormwater services shall be undertaken in consultation with the relevant service provider.

This condition does not apply to any service where written evidence is provided to the Council that the owner of that service has confirmed they do not require a condition survey.

External Visual Inspections during Dewatering

187. External visual inspections of the surrounding ground (including Scenic Drive, Woodlands Park Road and Manuka Road) and any neighbouring buildings and structures identified through the risk assessment required by Conditions 184 and 185 shall be undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage.

Inspections are to be carried out weekly from the Commencement to Completion of Dewatering. A photographic record is to be kept, including time and date, of each inspection and all observations made during the inspection, and should be of a quality that is fit for purpose.

The results of the external visual inspections and an assessment of the results are to be reviewed by the SQEP responsible for overseeing the monitoring and included in the bimonthly monitoring report for the relevant monitoring period.

Completion of Dewatering - Building, Structure and Service Condition Surveys

188. Between six and twelve months after Completion of Dewatering a detailed condition survey of all previously surveyed buildings, structures and stormwater Services, shall be undertaken by a SQEP or SQBS and a written report shall be prepared. The report is to be reviewed by the SQEP responsible for overseeing the monitoring and then submitted to the Council, within one month of completion of the survey.

The condition survey report shall make specific comment on those matters identified in the pre-dewatering condition survey. It shall also identify any new Damage that has occurred since the pre-dewatering condition survey was undertaken and provide an assessment of the likely cause of any such Damage.

This condition does not apply to any building, structure or Service where written evidence is provided to the Council confirming that the owner of that building, structure, or Service does not require a condition survey to be undertaken.

Additional surveys

189. Additional condition surveys of any building, structure, or Service within the area defined by the extent of groundwater drawdown or ground movement (as defined in the reports titled "Addendum to the Groundwater and Settlement Report, prepared by T+T, dated July 2019, Ref 30848.2000") shall be undertaken, if requested by the Council, for the purpose of investigating any Damage potentially caused by ground movement resulting from dewatering or retaining wall deflection. A written report of the results of the survey shall be prepared and/or reviewed by the SQEP responsible for overseeing the monitoring. The report shall be submitted to the Council.

190. The requirement for any such additional condition survey will cease six months after the Completion of Dewatering unless ground settlement or building deformation monitoring indicates movement is still occurring at a level that may result in Damage to buildings, structures, or Services. In such circumstances the period where additional condition surveys may be required will be extended until monitoring shows that movement has stabilised and the risk of Damage to buildings, structures and Services as a result of the dewatering is no longer present.

Groundwater monitoring

191. Groundwater monitoring is to be undertaken at the groundwater monitoring bore locations shown on the drawing entitled “*Proposed monitoring points*” prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, or in the approved GSMCP. Water level monitoring shall also be undertaken in and adjacent to the Kahikatea wetland. Groundwater level monitoring is to be undertaken in accordance with Schedule C below:

Schedule C: Groundwater Monitoring Frequency					
Bore Name	Location		Groundwater level monitoring frequency (to an accuracy of 10mm)		
	Easting (m E)	Northing (m N)	From bore construction until one month before Commencement of Dewatering	One month before Commencement of Dewatering to Completion of Dewatering	From Completion of Dewatering until 3 months later
PZ1	tbc	tbc	Monthly (with a minimum of three (3) monthly readings)	Weekly	Monthly
PZ2	tbc	tbc			
PZ3	tbc	tbc			
PZ4	tbc	tbc			
PZ5	tbc	tbc			
PZ6	tbc	tbc			
SW1	tbc	tbc	Monthly for 12 months	Weekly	Monthly
PZW1	tbc	tbc			
PZw2	tbc	tbc			

The monitoring frequency may be changed if approved by the Council. Any change shall be specified in the GSMCP. In addition, the three-month monitoring period post Completion of Dewatering may be extended by the Council, if measured groundwater levels are not consistent with inferred seasonal trends or predicted groundwater movement.

Advice note: If groundwater level measurements show an inconsistent pattern immediately prior to the Commencement of Dewatering (for example varying more than +/-200mm during a month), then further readings may be required to ensure that an accurate groundwater level baseline is established before dewatering commences.

Ground Surface and Building Deformation Monitoring

192. Ground Surface Deformation Monitoring Stations (and Building Deformation Monitoring Stations, if required) shall be established and maintained at the approximate locations shown on the drawing entitled “*Proposed monitoring points*” prepared by Tonkin & Taylor Ltd, Figure No. A3, and appended to the s92 response dated 13 August 2019, or in the approved GSMCP. The Monitoring Stations will be monitored at the frequency set out in Schedule D. The purpose of the Monitoring Stations is to record any vertical or horizontal movement. Benchmark positions shall be established no less than 50m away from the excavated area.

Schedule D: Ground Surface and Building Monitoring			
Monitoring Station and type	Frequency		
	Pre-Commencement of Dewatering	Commencement to Completion of Dewatering	Post- Completion of Dewatering
Ground markers G1 to G18	Twice to a vertical accuracy of +/-2mm (achieved by precise levelling)	Weekly	Monthly for 6 months
Building markers (if identified as required by the risk assessment in condition 155)	Twice to a vertical accuracy of +/-2mm (achieved by precise levelling)	Weekly	Monthly for 6 months

The monitoring frequency may be changed, if approved by the Council.

Retaining Wall Monitoring

193. Five retaining wall deflection stations (RW1 to RW5), for the measurement of lateral wall movement shall be installed along the top of the southern Reservoir 1 retaining wall. Monitoring of the retaining wall deflection stations shall be undertaken and recorded in accordance with Schedule E below and shall be carried out using precise levelling.

Schedule E: Retaining Wall Monitoring
Frequency

Pre-Commencement of Dewatering	Commencement of Dewatering to one month after Completion of Excavation	One month after Completion of Excavation to Completion of Dewatering
Twice to a horizontal and vertical accuracy of +/-2mm	Once for every 2 metres depth (on average) of excavation, and, in any case, at a minimum of once weekly.	Fortnightly

The monitoring frequency may be changed, if approved by the Council, through the GSMCP.

Access to third party property

194. Where any monitoring, inspection or condition survey in this consent requires access to property/ies owned by a third party, and access is declined or subject to what the consent holder considers to be unreasonable terms, the Consent Holder shall provide a report to the Council prepared by a SQEP identifying an alternative monitoring programme. The report shall describe how the monitoring will provide sufficient early detection of deformation to enable measures to be implemented to prevent Damage to buildings, structures or Services. Written approval from the Council shall be obtained before an alternative monitoring option is implemented.

Contingency actions

195. If the consent holder becomes aware of any Damage to buildings, structures or Services potentially caused wholly, or in part, by the exercise of this consent, the Consent Holder shall:
- (a) Notify the Council and the asset owner within two working days of the consent holder becoming aware of the Damage.
 - (b) Provide a report prepared by a SQEP (engaged by the Consent Holder at their cost) that describes the Damage; identifies the cause of the Damage; identifies methods to remedy and/or mitigate the Damage that has been caused; identifies the potential for further Damage to occur, and, describes actions that will be taken to avoid further Damage.
 - (c) Provide a copy of the report prepared under (b) above, to the Council and the asset owner within 10 working days of notification under (a) above.

Advice note: It is anticipated the Consent Holder will seek the permission of the damaged asset to access the property and asset to enable the inspection/investigation. It is understood that if access is denied the report will be of limited extent.

Building, Structure, and Services Surveys and Inspections

196. A copy of all pre-dewatering building, structure condition surveys, and Service condition surveys and photographic records of external visual inspections required by this consent shall be submitted to the Council with the GSMCP. All other condition surveys and photographic records required by this consent shall be provided to the Council upon request.
197. At two monthly intervals from commencement of dewatering until completion of dewatering, or as otherwise set out in the GSMCP, a report containing all monitoring data required by conditions of this consent shall be submitted to the Council. This report shall include a construction progress timeline, the monitoring data (including the results of condition surveys) recorded in that period, and, a comparison of that data with previously recorded data and with the Alert and Alarm Levels for each Monitoring Station.

Upon Completion of dewatering, one electronic data file (excel workbook) containing digital data for all groundwater monitoring bores shall be provided to the Council. Data should include the monitoring bore name, type, location (NZTM easting / northing and elevation), screened depth for groundwater monitoring bores, absolute and relative readings (and their units of measure) and the date / time of each reading. The worksheets should contain data values only (no formulas, circular references or links to other sheets).

Requirement for Close-out Report

198. The final post-construction report shall constitute a close-out report and present a summary of overall trends observed on the project and confirmation that monitored readings post-construction (groundwater level, and / or ground and building movement) have reached steady state conditions (accounting for seasonal variation).

Notice of completion

199. The Council shall be advised in writing within 10 working days of when excavation and dewatering has been completed.

Permanent drainage

200. After Completion of Construction, any permanent backfill or drainage systems installed behind retaining walls or below base slabs shall not cause groundwater levels adjacent to the site to be reduced below pre-existing seasonal low levels, or, to rise above seasonal high levels (as measured during pre-construction monitoring) or in accordance with any subsequent monitoring.

Advice note: The Consent Holder is advised that the discharge of pumped groundwater to a stormwater system or waterbody will need to comply with any other regulations, bylaws or discharge rules that may apply.

Advice notes:

General

1. Any reference to number of days within this decision refers to working days as defined in s2 of the RMA.
2. For more information on the resource consent process with Auckland Council see the Council's website www.aucklandcouncil.govt.nz. General information on resource consents, including making an application to vary or cancel consent conditions can be found on the Ministry for the Environment's website: www.mfe.govt.nz.
3. If you disagree with the additional charges relating to the processing of the application, you have a right of objection pursuant to s357B of the RMA. Any objection must be made in writing to the Council within 15 working days of notification of the decision.
4. 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 in Employment Act 1992), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval.
5. The Consent Holder shall obtain a Corridor Access Request from Auckland Transport prior to the commencement of any works within the legal road.
6. Compliance with the consent conditions will be monitored by the Council in accordance with s35(d) of the RMA. This will typically include site visits to verify compliance (or non-compliance) and documentation (site notes and photographs) of the activity established under the consents. In order to recover actual and reasonable costs, inspections will be charged at the relevant hourly rate applicable at the time.
7. The Consent Holder is advised that the proposed works will be subject to an Outline Plan of Works process pursuant to s176A of the RMA.
8. The unwanted organism *P. agathidicida* has been confirmed to exist on site. The movement of soil, water or material containing the organism offsite is covered by the Biosecurity Act 1993. The consent holder is responsible for obtaining the necessary exemptions relevant to the Biosecurity Act (and other relevant consents and permits) prior to the works commencing on site.

Annexure 3

DEED OF TRUST

THE BIODIVERSITY TRUST

DRAFT

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DRAFT

DEED OF TRUST dated the

day of

xxx

EXECUTED BY

WATERCARE SERVICES LIMITED, a company incorporated under the Companies Act 1993, registration number 519049, and having its registered office in Auckland, as Settlor

[Full name, place of residence and occupation of each of the Initial Trustees, e.g. Jane Doe, Solicitor, Auckland, to be inserted here. The Initial Trustees will have a temporary role only, as per clause 5.2.], as Initial Trustees

BACKGROUND

- A. The Settlor is undertaking a project to develop a replacement water treatment plant and reservoirs at Woodlands Park Road, Auckland, in an area of significant ecological vegetation.
- B. As a condition of the Consent granted to the Settlor to proceed with that project, the Settlor is required to establish a charitable trust for resource management purposes, to be called The Biodiversity Trust, to mitigate or compensate for the residual adverse ecological effects of the project.
- C. In accordance with the Consent Conditions, the Trust is being established by the Settlor, and is to be maintained by the Trust's Board, for the charitable purposes set out in clause 4.2 of this deed and in accordance with the further terms set out in this deed.
- D. It is intended that:
 - (i) the Trust will continue to operate for a minimum of 25 years following the grant of the Consent, and may continue to operate for any additional period or indefinitely;
 - (ii) the Initial Trustees will hold office on a temporary basis only and the Trust will be governed by its Board, which is intended to include representatives of various Stakeholders;
 - (iii) the Board will be incorporated under the Charitable Trust Act 1957; and
 - (iv) the Trust will be eligible for certain tax concessions benefitting charitable entities, and for this purpose registered as a charitable entity under the Charities Act 2005.
- E. In order to establish the Trust, the Settlor holds, and will transfer to a bank account for the Trust as soon as reasonably practicable following the execution of this deed, \$100 which constitutes the initial Trust Fund settled on the terms of the Trust.
- F. The Settlor will also provide, or procure the provision of, assistance and services required by the Board to complete the establishment of the Trust, including the incorporation of the Board, applying to register the Trust under the Charities Act 2005, and opening a bank account for the Trust.

- G.** Following the Trust's establishment, the Board is to receive from the Settlor, in accordance with the Consent Conditions, a further settlement of \$8,250,000 for the purposes of the Trust. It is also intended that the Board may receive and acquire further funds or other property from time to time from other sources for the purposes of the Trust.

TRUST TERMS

1. INTERPRETATION PROVISIONS

- 1.1 General:** Clauses 1.2 to 1.8 shall apply to this deed unless the context requires otherwise.

1.2 Definitions:

"Annual Meeting" means an annual meeting of the Board held in accordance with clause 12.1.1;

"Annual Report" means a report regarding the activities of the Trust for a Financial Year and, as the context requires, the most recent annual report, as referred to in clause 13.3;

"Auckland Council" means the unitary authority for Auckland established under section 6 of the Local Government (Auckland Council) Act 2009;

"Balance Date" means 30 June or any other date adopted from time to time by the Board as the end of the Trust's Financial Year;

"Board" means the Trustees, collectively, acting as board, whether or not the Trustees are incorporated as a board under the Charitable Trusts Act 1957 and, if the context requires, the Trustees constituting the Board for the time being;

"Chair" means the Trustee appointed to that office for the time being by the Board in accordance with clause 10.5.1;

"Charitable Purpose" includes every purpose which is charitable in accordance with the law of New Zealand and falls within the "charitable purpose" definition in section 5 of the Charities Act 2005;

"CLG" means the Community Liaison Group referred to in, and established in accordance with, the Consent Conditions;

"Consent" means the resource consent (Application Number BUN60339273) granted by Auckland Council to the initial Settlor for the project referred to in paragraph A of the Background section of this deed;

"Consent Conditions" means the conditions of the Consent, as originally set out in the Consent or as subsequently amended through any decision of the Environment Court or any other Court on appeal following the Environment Court appeals numbered ENV-2021-AKL-000088-94 and includes any subsequent amendment to those conditions approved by the relevant consent authority;

"**Deputy Chair**" means the Trustee appointed to that office for the time being by the Board in accordance with clause 10.5.1;

"**Financial Statements**" means the financial statements of the Trust for a Financial Year prepared in accordance with clause 13.2.1;

"**Financial Year**" means any 12 month or other accounting period ending on the Balance Date;

"**Initial Trustee**" means an individual executing this deed as one of the first Trustees of the Trust, until such time as the individual first ceases to hold office as Trustee;

"**Interested**" has the meaning given to that term in clause 11.5;

"**Major Transaction**" has the meaning given to that term in clause 9.2;

"**PMSBR Area**" means the area of approximately 380ha referred to in the Pest Management Strategy for Biodiversity Restoration and shown in the map included in Schedule 1 of this deed;

"**Pest Management Strategy for Biodiversity Restoration**" or "**PMSBR**" means the plan known by that name which specifies the PMSBR Area and outlines the approach for a comprehensive pest control regime to reduce target pest species within the PMSBR Area, a draft of which (dated 26 June 2023) is referred to in the Consent Conditions and is attached in Schedule 2 of this deed;

"**Officer**" means a person for the time being holding an office to which that person has been appointed in accordance with clause 10.5.2;

"**person**" includes an individual, partnership, firm, company, body corporate, corporation, association, organisation, trust, a state or government or any agency thereof, a municipal, local or regional authority, and any other entity or organisation, whether incorporated or not (in each case whether or not having separate legal personality);

"**property**" means real or personal property of any kind and includes any right or interest in such property and any thing in action;

"**Settlor**" means:

1.2.1 Initial Settlor: Watercare Services Limited, being the company of that name incorporated under the Companies Act 1993 (registration number 519049) as at the date of execution of this deed; or

1.2.2 Successor/Appointee: the person succeeding the initial Settlor as holder of the Consent, or a person who has been appointed by the initial Settlor or by any successor to the initial Settlor, by way of revocable or irrevocable appointment, to act as the Settlor under the terms set out in this deed;

"**Stakeholders**" means:

- 1.2.1 Settlor:** the Settlor;
- 1.2.2 Council:** Auckland Council or any successor local authority entity or entities responsible for all or any part of the PMSBR Area;
- 1.2.3 Community:** members of the community, including the CLG, owners of property and residents in the PMSBR Area and the Waima Catchment and community organisations connected with the PMSBR Area and the Waima Catchment;
- 1.2.4 Mana Whenua:** any iwi or hapu exercising historical and continuing mana whenua in respect of all or any part of the PMSBR Area, including in particular Te Kawerau ā Maki; and
- 1.2.5 Waitākere Ranges Local Board:** elected representatives comprising the Auckland Council Waitākere Ranges Local Board or any successor body or bodies responsible for all or any part of the PMSBR Area;

"**Strategy**" means a three year strategy for the Trust, and, as the context requires, the most recent strategy, prepared in accordance with clause 13.1;

"**Tax Concession**" means any tax concession under New Zealand law directly or indirectly benefiting charitable entities, including (without limitation) exemption of a charitable entity's income from income tax and any tax concessions in respect of contributions to a charitable entity;

"**this deed**" means the deed executed by the Settlor and the Initial Trustees to establish the Trust (including the Schedules) setting out the initial terms of the Trust and, as the context requires, includes any variation to the terms of the Trust in accordance with clause 18;

"**Trust**" means the trust established and maintained in relation to the Trust Fund on the terms set out in this deed;

"**Trust Fund**" means:

- 1.2.1 Settlor Funding:** the initial amount transferred by the Settlor to the Initial Trustees to establish the Trust as referred to in paragraph E of the Background section of this deed, and the additional funding required to be provided by the Settlor to the Board under the Consent Conditions as referred to in paragraph G of the Background section of this deed; and
 - 1.2.2 Other Property/Funds:** all other property, including capital and income and from any source, that is paid to, held under the control of, vested in, or earned, derived or otherwise acquired (by way of gift, bequest, devise, purchase, exchange or otherwise) by the Board on the terms of the Trust on or after the date of this deed;
-

"Trustee" means any individual holding office as a trustee of the Trust for the time being in accordance with the terms of this deed, whether as an Initial Trustee or as an additional or replacement Trustee;

"Waima Catchment" means the area of approximately 990ha shown in the map included in Schedule 3 of this deed;

- 1.3 Clauses:** a reference to any clause is a reference to a clause of this deed;
- 1.4 Headings:** section, clause and other headings are for ease of reference only and do not form any part of the context or affect the interpretation of this deed;
- 1.5 Negative Obligations:** any obligation not to do anything includes an obligation not to suffer, permit or cause that thing to be done;
- 1.6 Particular References:** a reference to anything of a particular nature either before or after a general statement does not limit the general statement;
- 1.7 Plural and Singular:** singular words include the plural and vice versa; and
- 1.8 Legislation:** a reference to any legislation or to any provision of any legislation includes:
 - 1.8.1 Legislative Amendments:** that legislation or provision as from time to time amended or re-enacted and any corresponding replacement legislation or provision; and
 - 1.8.2 Subordinate Legislation:** any statutory instrument, regulation, rule or order issued under that legislation or provision (as from time to time amended or re-enacted) or under any corresponding replacement legislation or provision.

2. SETTLEMENT OF TRUST

The Settlor transfers the initial Trust Fund to the Initial Trustees, and the Initial Trustees accept that settlement, to establish the Trust, and the Settlor will transfer the additional funding required to be provided by the Settlor under the Consent Conditions (as referred to in paragraph F of the Background section of this deed) and the Board will accept that further settlement, and the Settlor and the Initial Trustees declare that the Board will hold and administer the Trust Fund on the terms set out in this deed.

3. NAME OF THE TRUST

- 3.1 Initial Name:** The name of the Trust is **THE BIODIVERSITY TRUST**.
 - 3.2 Change of Name:** The Board may, by deed, change the name of the Trust to any other name, as determined by the Board from time to time, provided that the new name must not be offensive or liable to mislead any member of the public and the name change will not be effective unless and until it is approved in writing by the Settlor.
-

- 3.3 Records and Notice:** The Board must ensure that any change of name is recorded in the Trust's records and, if required by law, notified to any relevant authority (for example, under the Charitable Trusts Act 1957, under the Charities Act 2005 if the Trust is registered under that Act, and under any relevant tax legislation).

4. CHARITABLE PURPOSES OF THE TRUST

- 4.1 Trust Fund Held for Charitable Purposes:** The Trust Fund, including both capital and income, is to be held and administered by the Board on trust upon the terms set out in this deed for exclusively Charitable Purposes in New Zealand as set out in clause 4.2, which are to be pursued for the benefit of the public and not for private profit.

- 4.2 Purposes of the Trust:** In accordance with and in order to meet the Consent Conditions, the Trust has been established, and is to be maintained, to compensate for residual adverse ecological effects from the construction of the Huia Replacement Water Treatment Plant and Reservoirs within an area of significant ecological vegetation, by:

- 4.2.1 Implementation of PMSBR:** providing an accountable administrative structure committed to implementing the projects, and achieving the targets and objectives, set out in the Pest Management Strategy for Biodiversity Restoration - PMSBR;

- 4.2.2 Achievement of PMSBR Objectives:** facilitating the achievement of the following objectives of the PMSBR (where appropriate by contributing funding to appropriate organisations or engaging suitably qualified contractors, as determined by the Board):

- (a) Pest Management:** to co-ordinate and increase conservation efforts to protect and restore viability to populations of native flora and fauna within the PMSBR Area, in particular by undertaking multi-species vertebrate pest management and German and common wasp control throughout the PMSBR Area to suppress pests below target thresholds (by contributing funding to appropriate organisations or engaging suitably qualified contractors);
 - (b) Forest Regeneration:** to repair and strengthen connective linkages throughout the PMSBR Area through enhancing native forest regeneration and long-term viability; and
 - (c) Community-wide Engagement:** to increase community-wide engagement in stewardship and sustainable environmental management of the PMSBR Area, in particular by seeking acceptance of owners of property and residents in the PMSBR Area for the Trust's activities, including activities on their properties, to advance the Trust's Charitable Purposes set out in this clause 4.2 and by engaging with other relevant groups as determined by the Board;
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- 4.2.3 Priority-setting and Funding for PMSBR Area:** setting priorities and allocating funding for projects within the PMSBR Area to achieve the objectives set out in clause 4.2.2;
- 4.2.4 Measurable Targets for PMSBR Area:** pursuing and meeting, and measuring the Trust's performance against, the pest management targets and thresholds for the PMSBR Area set by the Consent Conditions and included in Schedule 4 of this deed. As provided for by the Consent Conditions, the Board may review those management targets and thresholds, and set other targets and thresholds for implementing the PMSBR and for achieving the particular objectives set out in clause 4.2.2, except that the Board can only adjust those management targets and thresholds to make them more stringent, not less stringent. The Board may review, and maintain, revoke or amend, any such adjustment to those management targets and thresholds;
- 4.2.5 Further Biodiversity Works Plan:** where the required number or area of private landowners involved for the PMSBR Area is not met after two successive years or monitoring indicates management thresholds set out in Appendix 3 are being "regularly exceeded" (as defined in the Consent Conditions), implementing a Further Biodiversity Works Plan as provided for by the Consent Conditions. The Further Biodiversity Works Plan shall include further measures to ensure the protection, restoration and enhancement of native flora and fauna and ecosystems in the Waitakare Ranges Ecological District (with priority given to land within the Waima Catchment) and shall be consistent with the requirements of the Consent Conditions; and
- 4.2.6 Wider Waima Catchment:** subject to meeting, and having sufficient funds to continue to meet, the pest management targets and thresholds for the PMSBR Area (including any more stringent targets and thresholds set by the Board) referred to in clause 4.2.4 and other applicable requirements under this clause 4.2, providing or supporting the provision of any pest management programmes or other initiatives in the Waitakare Ranges Ecological District (with priority given to land within the Waima Catchment) that complement or are otherwise consistent with the purposes set out in this clause 4.2.
- 4.3 Geographical Focus of Trust:** The Board must ensure that the Trust Fund is distributed and/or applied to advance the Trust's Charitable Purposes set out in clause 4.2 with a predominant focus on the PMSBR Area. This does not preclude the Board from undertaking any activity or applying any part of the Trust Fund within the Waima Catchment but outside the PMSBR Area, or in a manner that may benefit any community or communities within the Waima Catchment but outside the PMSBR Area, if the Board considers that the relevant activity or application of the Trust Fund is an appropriate means by which to advance the Trust's Charitable Purposes set out in clause 4.2.
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4.4 Management of Trust Fund: The Board must ensure that the Trust Fund is managed to provide long-term funding for the implementation of the PMSBR and the advancement of the Charitable Purposes set out in clause 4.2. This includes investing the Settlor funding provided to the Trust (as referred to in clause 1.2.1 of the Trust Fund definition), to the extent that it is not used or required for use in advancing the Trust's Charitable purposes, in order to maintain and grow the Trust Fund and generate funds that can be used to advance the Trust's Charitable Purposes. Subject to this requirement and the further terms set out in this deed, the Board may distribute or apply from time to time so much of the capital and/or income constituting the Trust Fund as the Board thinks fit to advance the Trust's Charitable Purposes.

4.5 Specific Trusts: The Board may receive, acquire and hold any part of the Trust Fund on trust for any specific purpose falling within the Charitable Purposes of the Trust as set out in clause 4.2 or subject to specific terms consistent with the general terms of the Trust (referred to as a **Specific Trust**), and in relation to any such Specific Trust:

4.5.1 Identification/Administration: the Board must separately identify, administer and apply, that part of the Trust Fund in accordance with the terms of the Specific Trust on which it is held; and

4.5.2 Costs of Administration: costs relating to the administration of the Specific Trust, including a fair proportion of the general administration costs of the Trust, will be borne by that part of the Trust Fund held on Specific Trust, provided that the Board may apply any other part of the Trust Fund (but excluding any part of the Trust Fund held on another Specific Trust) to meet all or part of the costs relating to the administration of the Specific Trust.

5. ROLE, DUTIES AND POWERS OF THE BOARD/TRUSTEES

5.1 Role of the Board and Trustees: In accordance with the terms set out in this deed, the role of the Board, and each Trustee, is to act in the best interests of the Trust in relation to the advancement of the Trust's Charitable Purposes as set out in clause 4.2. The Board will have overall control of, and responsibility for, the Trust Fund and the administration of the Trust, and the affairs of the Trust will be managed by, or under the direction or supervision of, the Board.

5.2 Role of the Initial Trustees: Without derogating from, and at all times acting in accordance with, clause 5.1, the role of the Initial Trustees is temporary only and is limited to:

5.2.1 Replacement Trustees: effecting, as soon as reasonably practicable, the appointment of replacement Trustees in accordance with clauses 10.1 and 10.2, and the Initial Trustees will immediately cease to hold office upon the appointment of eight replacement Trustees in accordance with clause 10.2.2(a); and

5.2.2 Establishment Steps: to the extent practicable and expedient prior to their replacement, taking steps to establish the Trust

structure, including incorporating under the Charitable Trusts Act 1957 and applying for any registration or approval required to become eligible for the benefit of any Tax Concession in accordance with clause 8.

- 5.3 Statutory Duties:** Without derogating from clauses 5.1 and 5.2, the Trustees must also comply, and must enable and assist the Board to comply, with all applicable trustee duties under the Trusts Act 2019 (including all mandatory duties set out in sections 22 to 27 of that Act and, to the extent applicable to charitable trusts and not excluded or modified by this deed, the default duties set out in sections 28 to 38 of that Act).
- 5.4 Powers of Board:** In order to carry out its role, and in particular to advance the Trust's Charitable Purposes as set out in clause 4.2, in addition to all other powers conferred by law but subject to the restrictions contained in this deed (and any other applicable law):
- 5.4.1 Widest Possible Powers:** the Board has the same powers as if it were the absolute owner of, and beneficially entitled to, the Trust Fund, including:
- (a) General Powers:** all powers necessary to manage the Trust Fund, and all powers necessary to carry out the Trust;
 - (b) Full Capacity:** full capacity to carry on or undertake any business or activity, do any act, or enter into any transaction; and
 - (c) Full Rights, Powers, Privileges:** for the purposes of clause 5.4.1, full rights, powers, and privileges; and
- 5.4.2 Powers Not Limited or Restricted:** the Board's powers will not be limited or restricted by any principle of construction or rule of law or any statutory power or provision except to the extent that it is obligatory.
- 5.5 Exercise of Powers:** The Board and each Trustee must exercise their powers and discretions (including the power to invest any part of the Trust Fund):
- 5.5.1 Advancement of Charitable Purposes:** to advance the Charitable Purposes of the Trust as set out in clause 4.2; and
- 5.5.2 Prudent Person Standard:** in a prudent manner, exercising the care, diligence and skill that a prudent person of business would exercise in managing the affairs of others.
- 5.6 Input from Settlor:** In exercising their powers and discretions, the Board and each Trustee must have regard to any advice, recommendations or other input received from the Settlor, whether or not any such advice and/or recommendation has been sought by the Board.
-

5.7 Delegation by the Board: Subject to sections 67 and 68 of the Trusts Act 2019 and any other applicable restrictions, to the full extent permitted by law the Board may delegate any of its powers or discretions, in writing and subject to such terms and/or directions as the Board thinks fit, to any subcommittee or subcommittees of the Board, or any officer, employee, manager, agent, attorney or other person or body nominated or appointed by the Board, provided that:

5.7.1 Exercise of Delegated Powers: any delegated power or discretion must be exercised in accordance with the terms of this deed and any terms set or directions given by the Board;

5.7.2 Review of Delegation: the Board must keep any such delegation under review and, if the circumstances make it appropriate to do so, consider whether to intervene in any way (whether by way of giving directions, amending or revoking the delegation or any of its terms/directions, or otherwise);

5.7.3 Modification/Revocation of Delegation: the Board may wholly or partly revoke or modify any such delegation or any of its terms/directions at any time; and

5.7.4 Responsibility of Trustees: no such delegation will release the Board and the Trustees from their responsibilities in relation to the Trust.

5.8 Engagement of Personnel: Without limiting the general scope of the Board's powers and discretions:

5.8.1 Operations Manager/Project Coordinator: so long as the Board considers that it has sufficient funding to do so, the Board must engage a person to hold the position of Operations Manager/Project Coordinator for implementation of the PMSBR and the Trust's activities, to be responsible for:

(a) **Planning:** strategic and operational planning;

(b) **Implementation:** implementation of project initiatives; and

(c) **Evaluation:** ongoing evaluation of the Trust's performance against the measurable targets referred to in clause 4.2.4; and

5.8.2 Other Personnel: the Board may engage any other personnel, including employees or contractors, to advance the Trust's Charitable Purposes as set out in clause 4.2.

6. BOARD RELATIONSHIP WITH SETTLOR AND STAKEHOLDERS

6.1 Settlor Relationship: It is intended that the Board will have an ongoing and co-operative relationship with the Settlor in relation to pursuing the Trust's Charitable Purposes set out in clause 4.2, and the Board must use all reasonable endeavours to ensure that this intention is met.

6.2 Settlor Rights/Powers: Without limiting the scope of clause 6.1, the Settlor is entitled to:

6.2.1 Provision of Input: provide advice, recommendations or other input to the Board on any matter relating to the Trust and the pursuit of its Charitable Purposes, which must be taken into account by the Board as set out in clause 5.6; and

6.2.2 Approval and Other Rights/Powers: exercise any approval or other right or power reserved to the Settlor in respect of the Trust under this deed.

6.3 Stakeholder Relationships: It is intended that the Trust will facilitate and coordinate Stakeholder engagement and involvement in the advancement of the Trust's Charitable Purposes set out in clause 4.2, including by way of representation on the Board for this purpose, and the Board must use all reasonable endeavours to ensure that this intention is met.

7. RESTRICTIONS RELATING TO PRIVATE BENEFITS

7.1 General Restriction: Nothing expressed or implied in this deed will permit the activities of the Trust, or any business carried on by, or for, or for the benefit of the Trust, to be carried on for the private profit of any person so as to affect:

7.1.1 Charitable Purposes: the continued operation of the Trust for exclusively Charitable Purposes in New Zealand, for the benefit of the public and not for private profit; or

7.1.2 Tax Concessions: the Trust's eligibility for the benefit of any Tax Concession for which it would otherwise be eligible, unless in relation to any such concession the Board has determined that eligibility for the benefit of that concession is not required in the best interests of the Trust in relation to the advancement of its purposes.

7.2 Permitted Trust Expenditure: For the avoidance of doubt, the proscription of private profit under clause 7.1 does not preclude the application of the Trust Fund to or towards:

7.2.1 Public and Private Land: the advancement the Trust's Charitable Purposes set out in clause 4.2 across both publicly-owned and privately-owned land in the Waima Catchment and in particular the PMSBR Area;

7.2.2 Remuneration and Reimbursement: remuneration for services provided, and reimbursement of expenses properly incurred, by the Trustees, in accordance with clause 15; or

7.2.3 Consideration for Goods and Services: consideration for the supply of any goods or services acquired in the course of pursuing the Trust's Charitable Purposes set out in clause 4.2, provided that

the consideration does not exceed fair market value for the supply.

7.3 Business Income Restriction: For the purpose of ensuring that income derived by the Board from any business carried on by, or for, or for the benefit of the Trust, is exempt from income tax (as at the date of this deed, under section CW 42 of the Income Tax Act 2007), if the Trust derives, or has derived, any such business income. no person holding any of the following positions is permitted to have, by virtue of that position, an ability, either directly or indirectly, to determine or materially influence the determination of the nature or extent of any benefit or advantage from the business or the circumstances in which a benefit or advantage from the business is or is to be given or received:

7.3.1 Settlor or Trustee: a settlor or trustee of the trust by which the business is carried on:

7.3.2 Shareholder or Director: a shareholder or director of the company by which the business is carried on:

7.3.3 Settlor or Trustee of Shareholder Trust: a settlor or trustee of a trust that is a shareholder of the company by which the business is carried on:

7.3.4 Associates: a person associated with any person referred to in clauses 7.3.1 to 7.3.3 (as determined under the Income Tax Act 2007, for the purpose of section CW 42 of that Act).

For the avoidance of doubt, for the purposes of this clause 7.3 a relevant benefit or advantage does not include any benefit or advantage to a person for any Charitable Purpose of the Trust or any other benefit or advantage that may be disregarded under section CW 42(1)(c) in the Income Tax Act 2007, or under any other provision of section CW 42.

8. ELIGIBILITY FOR TAX CONCESSIONS

8.1 General Requirement: The Board must do all things practicable and expedient to ensure that the Trust is, and remains, eligible for the benefit of any Tax Concession, unless in relation to any such concession the Board has determined that eligibility for the benefit of that concession is not required in the best interests of the Trust in relation to the advancement of its purposes.

8.2 Specific Requirements: Without limiting the generality of clause 8.1, the things to be done under that clause may include:

8.2.1 Registration under the Charities Act: registering under the Charities Act 2005 and maintaining such registration; and

8.2.2 Compliance under Charities and Tax Legislation: complying with all relevant obligations under:

(a) Charities Act: the Charities Act 2005; and

- (b) **Revenue Legislation:** the Income Tax Act 2007, Goods and Services Tax Act 1985, Tax Administration Act 1994 or any other relevant tax legislation.

9. APPROVAL OF MAJOR TRANSACTIONS

- 9.1 **Approval of Major Transactions:** The Board must not enter into any Major Transaction unless the transaction is:

9.1.1 **Special Resolution:** approved by resolution of the Board passed at a meeting of the Board by a number of Trustees that equals or exceeds 75% of the total number of Trustees for the time being, or by a written resolution under clause 12.2.2; and

9.1.2 **Settlor Approval:** approved in writing by the Settlor, or contingent on approval in writing by the Settlor.

- 9.2 **"Major Transaction":** For the purpose of clause 9.1, Major Transaction means:

9.2.1 **Acquisition of Assets:** the acquisition of, or an agreement to acquire, whether contingent or not, assets the value of which is more than half the value of the Trust Fund before the acquisition; or

9.2.2 **Disposal of Assets:** the disposition of, or an agreement to dispose of, whether contingent or not, any part of the Trust Fund the value of which is more than half the value of the Trust Fund before the disposition; or

9.2.3 **Other Transactions:** a transaction that has, or is likely to have, the effect of the Board acquiring rights or interests or incurring obligations or liabilities, including contingent liabilities, the value of which is more than half the value of the Trust Fund before the transaction;

provided that:

9.2.4 **Charge Over Assets:** nothing in clause 9.2.2 or 9.2.3 applies by reason only of the Board giving, or entering into an agreement to give, a charge secured over all or any part of the Trust Fund the value of which is more than half the value of the Trust Fund for the purpose of securing the repayment of money or the performance of an obligation; and

9.2.5 **Assessment of Contingent Liabilities:** in assessing the value of any contingent liability for the purposes of clause 9.2.3, the Board:

- (a) **Circumstances Affecting Value:** must have regard to all circumstances that the Board knows, or ought to know, affect, or may affect, the value of the contingent liability; and

- (b) **Reasonable Estimates:** may rely on estimates of the contingent liability that are reasonable in the circumstances; and
- (c) **Likelihood of Contingency and Claims:** may take account of the likelihood of the contingency occurring and any claim the Board is entitled to make and can reasonably expect to be met to reduce or extinguish the contingent liability.

10. TRUSTEES AND OFFICERS OF THE TRUST

10.1 Number of Trustees: Except for the initial period during which the Initial Trustees hold office, the total number of Trustees constituting the Board must be not less than eight individuals and not more than nine individuals, provided that if at any time the total number of Trustees falls below eight:

10.1.1 Number to be Maintained: the remaining Trustee or Trustees must take any necessary or expedient steps to ensure that the number of Trustees is increased to at least eight, including notifying and liaising with the Settlor and/or any other relevant Stakeholder or other person under clause 10.2.2(a), as soon as reasonably practicable; and

10.1.2 Trustees Entitled to Act: subject to clause 10.1.1, the remaining Trustee or Trustees will be entitled to act in connection with the Trust until the number of Trustees is increased to at least eight.

10.2 Appointment/Removal of Trustees: Subject to clauses 10.1, 10.3 and 10.4, the following provisions apply in relation to the appointment and removal of Trustees:

10.2.1 Appointment by Board: The Board has the power to appoint an individual as an additional or replacement Trustee, and in exercising that power the Board must act honestly and in good faith and for a proper purpose.

10.2.2 Board Exercise of Appointment Powers: In relation to the Board's exercise of its power to appoint Trustees under clause 10.2.1:

(a) **Stakeholder Representation:** The Board must at all times endeavour to ensure that the Board includes eight Trustees who represent various Stakeholders (as set out in clauses 1.2.1 to 1.2.5 of the Stakeholders definition). For this purpose, the Board must, as soon as reasonably practicable in the event of any relevant vacancy or pending vacancy, invite nominations for these Trustee positions from the following Stakeholders:

(i) **Settlor:** the Settlor, who may nominate one individual for appointment as a Trustee (such nominee being the manager of the water treatment plant referred to in paragraph A of

the Background or a similarly suitable nominee);

- (ii) **Council:** Auckland Council, who may nominate one individual for appointment as a Trustee (such nominee being a manager within Auckland Council's biodiversity team or a similarly suitable nominee);
- (iii) **CLG:** the CLG, who may nominate one individual for appointment as a Trustee;
- (iv) **Waitākere Ranges Local Board:** the Waitākere Ranges Local Board, who may nominate one individual for appointment as a Trustee;
- (v) **Community Conservation:** one or more entities or groups of persons involved in local community-led conservation projects (as determined by the Board, after consulting with the CLG), who may nominate two individuals for appointment as Trustees; and
- (vi) **Mana Whenua:** Te Kawerau ā Maki, who may nominate one individual for appointment as a Trustee.

In each case, subject to a nomination being received by the Board and the relevant nominee's written acceptance of appointment, the Board must appoint the nominee as a Trustee.

(b) Additional Trustees: The Board:

- (i) **Financial Oversight:** must appoint an additional, appropriately qualified, Trustee to be responsible for overseeing the Trust's financial reporting, including the Board's compliance with clause 13; and
- (ii) **Other Appointments:** may appoint a Trustee or Trustees, either in addition to the eight Trustees contemplated under clause 10.2.2(a) and (b)(i) or, if any Stakeholder under clause 10.2.2(a) advises the Board that the Stakeholder is unable or unwilling to make any nomination, in lieu of appointing the relevant Stakeholder's nominee.

(c) Skills and Other Factors: In relation to any appointment under 10.2.2(b)(ii), the Board must take into account the skills, knowledge, experience and diversity of the existing Board and a prospective appointee's skills, knowledge, experience and any other attributes relevant

to the Trust's Charitable Purposes as set out in clause 4.2 and the Board's advancement of such purposes in accordance with the terms of this deed.

- (d) **Board Discretion:** In all other respects, the power of appointment is to be exercised at the discretion of the Board.

10.2.3 Removal by Board: The Board, acting honestly, in good faith and for a proper purpose, has the power to remove an individual from office as Trustee if the Board considers on reasonable grounds that such removal is in the best interests of the Trust, provided that any such removal must be:

- (a) **Special Resolution:** approved by resolution of the Board passed at a meeting of the Board by a number of Trustees that equals or exceeds 75% of the total number of Trustees for the time being; and
- (b) **Settlor Approval:** approved in writing by the Settlor, or contingent on approval in writing by the Settlor.

10.3 Disqualifying Factors: An individual is not eligible to be appointed or to continue to hold office as a Trustee, or to be appointed or to continue to act as an Officer, if the individual is:

10.3.1 Bankruptcy: an undischarged bankrupt, or a discharged bankrupt who is prohibited by court order from engaging in any form of business activity;

10.3.2 Criminal Conviction: a person who has been:

- (a) **Crime Involving Dishonesty:** convicted of any crime involving dishonesty (within the meaning of section 2(1) of the Crimes Act 1961) or any offence under section 143B of the Tax Administration Act 1994, and sentenced for that crime or offence within the last seven years; or
- (b) **Other Offences:** convicted of any offence punishable by a term of imprisonment of two or more years, or sentenced to imprisonment for any offence, unless that person has obtained a pardon;

10.3.3 Disqualification from Company Positions: prohibited from being a director or promoter of, or from being concerned or taking part in the management of, a company under any of the Companies Act 1993, the Financial Markets Conduct Act 2013 or the Takeovers Act 1993;

10.3.4 Incapacity: a person:

- (a) **Property Order:** who is subject to a property order made under the Protection of Personal and Property Rights Act 1988;

- (b) **Property Management:** whose property is managed by a trustee corporation under section 32 of the Protection of Personal and Property Rights Act 1988; or
- (c) **Mental Incapacity:** who is mentally incapable in relation to property or personal care and welfare, as defined in respect of a donor of an enduring power of attorney under section 94 of that Protection of Personal and Property Rights Act 1988;

10.3.5 Youth: under eighteen years of age; or

10.3.6 Statutory Disqualification: disqualified from holding office as a trustee under the Trusts Act 2019, or from being an officer of a charitable entity under section 16 of the Charities Act 2005 (if the Trust is registered, or required under clause 8 to be registered, under the Charities Act 2005).

10.4 Term of Office: The following provisions apply in relation to an individual's term of office as a Trustee:

10.4.1 Term of Appointment: Subject to clause 10.4.2:

- (a) **Initial Trustees:** an Initial Trustee will hold office until the appointment of replacement Trustees in accordance with clause 5.2.1; and
- (b) **Appointed Trustees:** any Trustee other than an Initial Trustee will hold office until the conclusion of the third Annual Meeting following the effective date of his or her appointment as a Trustee, or for a lesser period if so determined by the Board at the time of appointing the individual as a Trustee;

and unless reappointed as a Trustee, the individual will cease to hold office as a Trustee at the relevant time.

10.4.2 Cessation of Office: An individual holding office as a Trustee will immediately cease to hold such office, notwithstanding that his or her term of appointment has not expired, upon:

- (a) **Resignation:** the expiry of 28 days (or a shorter period if approved by the Board) following the Trustee giving written notice of his or her resignation to the Board;
 - (b) **Ineligibility:** becoming ineligible to hold office as a Trustee under clause 10.3;
 - (c) **Failure to Attend Meetings:** failing to attend a third consecutive meeting of the Board without leave granted by the Board;
 - (d) **Death:** death; or
-

- (e) **Removal:** removal from office in accordance with clause 10.2.3.

10.5 Appointment/Removal of Officers: The following provisions apply in relation to the appointment of the Chair and Deputy Chair, and any other Officers:

10.5.1 Chair and Deputy Chair: The Board:

- (a) **Chair:** must appoint from time to time one Trustee to hold office as the Chair of the Trust; and
- (b) **Deputy Chair:** may appoint from time to time another Trustee to hold office as the Deputy Chair of the Trust;

provided that any individual appointed to hold office as Chair or Deputy Chair will only hold that office while they remain a Trustee.

10.5.2 Other Officers: The Board may appoint from time to time either one of the Trustees or some other person to hold any other designated office (for example, secretary or treasurer), as determined by the Board, and the Board may remove and replace any Trustee or other person appointed to hold any such office at any time, provided that any such appointee must not be ineligible, and will cease to hold such office if they become ineligible, to hold office as a Trustee under clause 10.3. Unless the Board determines otherwise, any Officer who is not a Trustee will be notified of, and entitled to attend and participate (but not vote) at, meetings of the Board, as if the Officer were a Trustee.

10.6 Records and Notice: On every appointment, reappointment, removal or cessation of office of any Trustee or Officer, the Board must cause an entry to that effect to be included in the minute book kept and maintained by the Board and, if required, notify the change to any relevant authority (for example, under the Charities Act 2005, if the Trust is registered under that Act).

11. MANAGING TRUSTEE/OFFICER CONFLICTS OF INTEREST

11.1 Entry into Transactions: Subject to the provisions of this clause 11, the Board may enter into a transaction in respect of which a Trustee or Officer is Interested, if the Board considers that the transaction is in the best interests of the Trust in relation to the advancement of its purposes.

11.2 Disclosure and Records: If a Trustee or Officer is Interested in any transaction entered into, or to be entered into, by the Board (other than any general remuneration or reimbursement of Trustees under clauses 15.1.1 and 15.3 or general Trustee indemnification or insurance under clause 17):

- 11.2.1 Disclosure:** the Trustee or Officer, immediately upon becoming aware that he or she is interested in the transaction, must disclose to the Board:
- (a) Disclosure of Interest:** the fact of his or her interest in the transaction; and
 - (b) Disclosure of Nature/Extent of Interest:** the nature of his or her interest and either the monetary value of the interest, if the monetary value of the interest is able to be quantified, or, if the monetary value of the interest is not able to be quantified, the extent of the interest; and
- 11.2.2 Record of Interests:** the Board must keep a record of the interest of the Trustee or Officer in relation to the transaction, in the Trust records kept and maintained by the Trust Board, such records to be made available to the Settlor upon request.
- 11.3 Involvement in Transaction:** A Trustee or Officer who is Interested in any transaction entered into, or to be entered into, by the Board (including remuneration or reimbursement of a particular Trustee under clause 15.1.1 or clause 15.3, remuneration for services provided by a particular Trustee or a particular Trustee's employee, partner or firm under clause 15.1.2, or indemnification or insurance for a particular Trustee under clause 17):
- 11.3.1 Deliberations and Voting:** must not be involved in deliberations, and in the case of a Trustee will not be counted for the purpose of establishing a quorum and will not be entitled to vote, on any matter relating to the transaction;
 - 11.3.2 Attendance at Meetings:** subject to clause 11.3.1, may attend any meeting of the Board that is not limited to dealing with matters relating to the transaction and be included among the attendees at that meeting for the purpose of establishing a quorum to commence the meeting and to deal with other matters at the meeting; and
 - 11.3.3 Other Matters:** may sign a written resolution of the Board dealing with any matter relating to the transaction and, acting in accordance with the Board's decisions in relation to the transaction, may sign any contract or other document, or do anything else in relation to the transaction as Trustee or Officer of the Trust.
- 11.4 Board Change or Alternative Options:** If, as a consequence of any Trustee or Trustees being Interested in a transaction, the Board would be unable to establish a quorum and/or decide on a resolution in respect of the transaction, for the Board to act in relation to the transaction:
- 11.4.1 Board Change:** the composition of the Board must change (by way of the appointment and/or the removal or resignation of one or more Trustees); or
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11.4.2 Alternative Options: by unanimous resolution of all Trustees including any Interested Trustee (being either a resolution at a meeting or a written resolution), the Board may:

- (a) **Independent Trustee(s):** authorise the independent Trustee or Trustees on the Board, acting unanimously (by way of a resolution at a meeting or a written resolution), to determine the Board's position on the transaction; or
- (b) **Independent Advice:** engage (as an advisory trustee, special trust advisor or otherwise), and determine to proceed in relation to the transaction in accordance with the advice and/or recommendations of, a suitably qualified independent person.

11.5 Meaning of "Interested": For the purpose of this clause 11, a Trustee or Officer will be interested in a transaction if the Trustee or Officer:

11.5.1 Direct Financial Interest: is a party to, or will or may derive a material financial benefit from, the transaction;

11.5.2 Indirect Financial Interest:

- (a) **Through Another Interested Party:** has a material financial interest in another party to the transaction;
- (b) **As Director, Officer or Trustee of another Interested Person:** is a director, officer, or trustee of another party to the transaction, or person who will or may derive a material financial benefit from, the transaction (unless the party or person is wholly owned or wholly controlled by the Board in connection with the Trust);
- (c) **As a Relative of Another Interested Person:** is the parent, child, spouse, civil union partner, or de facto partner of another party to, or a person who will or may derive a material financial benefit from, the transaction; or

11.5.3 Other Material Interest: otherwise has, directly or indirectly, any material personal interest in the transaction.

12. PROCEEDINGS OF THE BOARD

12.1 Board Meetings: Unless provided otherwise in this deed, the following provisions apply in relation to meetings of the Board:

12.1.1 Obligation to Meet: The Board must meet from time to time, as the Board considers necessary or expedient for the conduct of the affairs of the Trust, provided that:

- (a) **Convening Meetings:** the Chair, the Deputy Chair, or any two Trustees, may convene a meeting of the Board

at any time by giving, or arranging for the any Officer or employee of the Trust to give, written notice of the meeting in accordance with clause 12.1.3; and

- (b) **Annual Meeting Requirement:** the Board must hold a meeting designated as the annual meeting of the Trust each year, within four months of the end of the Financial Year, to receive and approve the Annual Report for that year and to deal with any other business as determined by the Board.

12.1.2 Method of Meeting: A meeting of the Board may be held by Trustees assembling together and/or attending by means of audio, audio and visual, or any other form of communication suitable for conducting meetings (by which all Trustees can participate and simultaneously hear each other throughout the meeting), and references in this deed to Trustees attending a meeting are to be read accordingly.

12.1.3 Notice of Meetings: Unless the Board determines otherwise, meetings of the Board are to be convened by giving each Trustee (other than a Trustee who has waived the right) not less than five working days' written notice of any meeting of the Board and such notice must:

- (a) **Date/Time:** specify the date and time of the meeting;
- (b) **Method:** specify the place of the meeting at which the Trustees are to assemble and/or the manner in which each Trustee may participate in the meeting (if the meeting is to be held, exclusively or in part, by means of audio, audio and visual, or any other form of communication suitable for conducting meetings); and
- (c) **Agenda:** give an indication of the matters to be discussed, in sufficient detail to enable a reasonable Trustee to appreciate the general import of those matters, unless this is already known to the Trustees or is impracticable in the particular circumstances;

provided that any irregularity in relation to giving such notice is waived by a Trustee if the Trustee attends the meeting without protest as to the irregularity or agrees to the waiver (whether before, after or during the meeting).

12.1.4 Quorum and Voting: Subject to clause 11.3:

- (a) **Quorum:** a quorum for a meeting of the Board will be established only if the number of Trustees in attendance exceeds 50% of the total number of Trustees for the time being, and no business will be transacted at a meeting at any time unless a quorum is present at that time; and

- (b) **Voting:** each Trustee in attendance at a meeting shall have one vote.

12.1.5 Resolutions at Meetings: Unless provided otherwise in this deed, for a resolution to be passed at a meeting of the Board on any matter it must be approved by a number of Trustees that exceeds 50% of the total number of Trustees for the time being. Any resolution passed in accordance with this clause will be binding on all Trustees.

12.1.6 Role of Chair: The Chair, or in the absence of the Chair the Deputy Chair, must chair any meeting of the Board. If no Trustee has been appointed Chair or Deputy Chair, or if neither the Chair nor Deputy Chair is present within 15 minutes after the time appointed for commencement of the meeting, the Trustees in attendance at that meeting may appoint one of their number to chair the meeting. Subject to the terms of this deed and any rules/regulations adopted by the Board prior to any meeting, the Trustee chairing the meeting will control the conduct of that meeting.

12.2 Board Resolutions: Unless provided otherwise in this deed, the following provisions apply in relation to resolutions to be passed by the Board:

12.2.1 Resolutions at Meetings: Any resolution at a meeting of the Board must be passed in accordance with clause 12.1.5

12.2.2 Written Resolutions: A written resolution signed or approved by notice in writing by all of the Trustees for the time being will be as valid and effectual as if it had been passed at a meeting of the Board duly convened and held, provided that the requisite majority of Trustees for passing the resolution at a meeting must not be Interested in any transaction to which the resolution relates. Any such resolution may consist of several documents in like form each signed or approved by notice in writing by one or more of the Trustees. An electronic scanned copy or other facsimile of any such signed resolution shall be as valid and effectual as the original signed document with effect from its transmission.

12.2.3 Rescission/Variation: The Board may rescind or vary any resolution of the Board by way of a resolution passed at a meeting of the Board by at least the same majority as was necessary to pass the resolution that is to be rescinded or varied, or by way of a written resolution.

12.3 Board Rules/Regulations: Subject to the terms of this deed, the proceedings of the Board, including the manner in which meetings of the Board are to be convened and conducted (including holding meetings by means of audio, audio and visual, or any other suitable form of communication), will be regulated by the Board, for which purpose the Board may develop and adopt from time to time any rules and/or regulations relating to its proceedings as the Board thinks fit.

12.4 Validity of Proceedings: Any meeting of the Board and any resolution of the Board will be as valid and effectual as if:

12.4.1 Trustees Duly Appointed: the individuals acting as Trustees had been duly appointed;

12.4.2 Trustees Eligible: the individuals acting as Trustees were eligible to hold office as Trustee; and

12.4.3 Compliance With Rules/Regulations: the Board, and the individuals acting as Trustees, had complied with any applicable rule and/or regulation adopted by the Board relating to such matters;

even if it is later discovered that:

12.4.4 Defect in Appointment: there was some defect in the appointment of any individual acting as Trustee;

12.4.5 Trustee Ineligible: any individual acting as Trustee was for any reason ineligible to hold office as Trustee; or

12.4.6 Non-compliance with Rules/Regulations: there was accidental failure to comply with any applicable rule and/or regulation adopted by the Board.

12.5 Records of Meetings/Resolutions: The Board must ensure that a record of all meetings and resolutions of the Board is included in a minute book kept and maintained by the Board. Once any minutes are confirmed by the Board, the Chair (or, if confirmed at a meeting of the Board, the Trustee chairing the meeting) must sign the minutes as a true and correct record. The signed minutes will be *prima facie* evidence of the facts stated in those minutes. The minutes, and any reports received by the Board referenced in the minutes, will be made publicly available (as provided for under clause 13.4) unless the Board determines, on reasonable grounds, that any such minutes or reports (or part thereof) should not be publicised.

13. REPORTING AND ACCOUNTABILITY REQUIREMENTS

13.1 Annual Strategy: At or before the start of each Financial Year (starting with the 20XX/20XX year commencing 1 July 20XX), the Board must prepare a Strategy for the Trust for that Financial Year and at least the two following Financial Years, including a statement of priorities for that Financial Year. Once the Strategy for the Trust is finalised by the Board, the Board must provide a copy for information to the Settlor, Auckland Council and the CLG and make a copy available to other Stakeholders and to the wider public.

13.2 Financial Information: Without limiting the financial and non-financial recordkeeping, reporting and assurance requirements that may apply to the Trust under clause 8.1 (or any other applicable law):

13.2.1 Financial Statements: The Board must ensure that financial statements of the Trust are prepared as soon as practicable after

the end of each Financial Year (starting with the 20XX/20XX year ending 30 June 20XX), for presentation and approval at the next Annual Meeting after the end of that Financial Year. The Financial Statements must give a true and fair view of the financial position of the Trust Fund for that Financial Year and must include:

- (a) **Financial Position:** a statement of financial position;
- (b) **Financial Performance:** a statement of financial performance; and
- (c) **Notes:** notes to those statements.

13.2.2 Review or Audit: The Financial Statements must be independently reviewed, or if the Board so resolves or if required by law they must be independently audited, in either case by a chartered accountant or other appropriately qualified person appointed for that purpose by the Board; and

13.2.3 Records and Filing: the Financial Statements, and any review or audit of such statements, must be included in the Trust's records and, if required by law, filed with any relevant authority (for example, under the Charities Act 2005, if the Trust is registered under that Act).

13.3 Annual Report: As soon as practicable after the end of each Financial Year (starting with the 20XX/20XX year ending 30 June 20XX), for presentation and approval at the Annual Meeting, the Board must prepare an Annual Report that includes:

13.3.1 Report on Trust's Activities: a report on the Trust's activities during the relevant Financial Year, including details of the allocation/distribution of funds from the Trust Fund and evaluation of the Trust's performance against the measurable targets referred to in clause 4.2.4; and

13.3.2 Financial Statements: a copy of the Financial Statements (reviewed or audited, as applicable) for that Financial Year.

Once the Annual Report for the Financial Year is finalised and approved at the Annual Meeting, the Board must provide a copy for information to the Settlor, Auckland Council and the CLG and must make a copy available to other Stakeholders and to the wider public.

13.4 Making Documents Available: For the purpose of clauses 13.1 and 13.3, the Board may make copies of the Trust's Strategy and its Annual Report available to Stakeholders and to the wider public by:

13.4.1 Electronic Access: publishing an electronic version of any such document on a website for the Trust and/or on any public electronic register (for example, the charities register established under the Charities Act 2005); and/or

- 13.4.2 Hard Copy Access:** making a hard copy of any such document available for inspection at the Trust's registered office or any other premises, as determined by the Board.

14. GENERAL ADMINISTRATIVE MATTERS

- 14.1 Record Keeping:** The Board must ensure that full and accurate records are kept and maintained in respect of the Trust, in written form or in a form or in a manner that allows such records to be easily accessible and convertible into written form. The Trust's records must include all records required under the Trusts Act 2019 and any other applicable law, and in particular must include:

- 14.1.1 Trust Fund Records:** full and accurate records identifying the Trust Fund and associated matters, including all assets, liabilities, income and expenses of the Trust;
- 14.1.2 Financial Records:** financial books, accounts, papers and other financial records of the Trust, including full and accurate records and accounts of all receipts, credits, payments, assets, liabilities, transactions and other matters necessary for giving a true and fair view of the financial position of the Trust and the Financial Statements for each Financial Year;
- 14.1.3 Minute Book:** a minute book, which must include a full and accurate record of the appointment, removal and cessation of office of Trustees and Officers, disclosures of interest, Board meetings and resolutions, delegations, and any other matters appropriately included in a minute book relating to the Trust; and
- 14.1.4 Other Records:** any other records that it may be necessary or appropriate to keep and maintain in respect of the Trust, including this deed, any rules and/or regulations adopted by the Board, written communications with the Trustees and the Settlor and other Stakeholders, and any contracts and other documents and information relating to the Trust and its activities.

All such records will be open to inspection by any of the Trustees and by the Settlor, and all of the Trustees must have and retain a copy of this deed.

- 14.2 Financial Matters:** The Board must ensure that:

- 14.2.1 Bank Account(s):** the Trust has an account or accounts, at any bank or banks, for its funds, as determined by the Board from time to time, and in relation to any such accounts, cheques, withdrawals and authorities must be signed or endorsed, as the case may be, by one or more persons, any such person on being either a Trustee or another person acting on, and in accordance with, the written authority of the Board; and;
- 14.2.2 Administration of Funds:** there are at all times appropriate procedures in place in relation to the Board's receipt, administration and expenditure of the Trust's funds.

14.3 Method of Contracting: Unless the law requires otherwise, and subject to clause 14.4:

- 14.3.1 Deeds:** a deed to be executed by the Board may be signed on behalf of the Board by two or more Trustees;
- 14.3.2 Written Contracts:** any contract or other obligation required by law to be in writing, and any other written contract or obligation to be entered into by the Board, may be signed on behalf of the Board by a Trustee or another person acting under the express or implied authority of the Board; and
- 14.3.3 Other Contracts:** any other contract or obligation may be entered into on behalf of the Board in writing or orally by a Trustee or another person acting under the express authority of the Board.

14.4 Common Seal: If the Trustees are incorporated as a board under the Charitable Trusts Act 1957 and the Board is required to have a common seal under that Act, the Trustees will have a common seal for the board and the common seal:

- 14.4.1 Custody of Seal:** must be held by one of the Trustees, or an Officer, as determined by the Board;
- 14.4.2 Mandatory Use:** must be affixed to any document required to be executed by the Board under common seal; and
- 14.4.3 Optional Use:** may be affixed to any other document to be executed by the Board;

provided that the common seal must in all cases be affixed pursuant to prior authority given by the Board and in the presence, and accompanied by the signatures, of two or more Trustees.

14.5 Provision of Notices: Any notice required to be given by a person (**Sender**) to any other person (**Recipient**) under this deed, including notice of any written approval, resolution or other matter, may be:

- 14.5.1 Delivery:** delivered to the Recipient directly or to an address given by the Recipient to the Sender for such purpose;
- 14.5.2 Electronic Means:** sent by electronic means in accordance with any request made by the Recipient from time to time for notices to be sent by such means; or
- 14.5.3 Post:** posted to an address given by the Recipient to the Sender for such purpose.

14.6 Receipt of Notices: A notice given by a Sender to a Recipient pursuant to clause 14.5 is deemed to be given:

- 14.6.1 Delivery:** in the case of delivery, when the notice is handed to the Recipient or delivered to the address of the Recipient;

14.6.2 Electronic Means: in the case of electronic means, at the time of transmission; or

14.6.3 Post: in the case of posting, five days after it is posted.

15. REMUNERATION AND REIMBURSEMENT OF TRUSTEES

15.1 Remuneration of Trustees: Subject to clause 15.2:

15.1.1 General Remuneration: a Trustee may be remunerated for services provided as a Trustee, provided that any such remuneration must be reasonable having regard to the Trustee's duties and responsibilities and the services provided by the Trustee; and

15.1.2 Professional Remuneration: any Trustee engaged in any profession, business or trade may be paid all usual professional, business and trade charges for services requested by the Board that are provided by that Trustee or by that Trustee's employee or partner, including acts which the Trustee, not being in any profession, business or trade, could have done personally.

15.2 Remuneration Restrictions: In relation to any remuneration to be paid under clause 15.1:

15.2.1 Fair Market Value: the amount of the remuneration must not exceed fair market value for the relevant services when provided in the local government sector or an equivalent or similar context;

15.2.2 Settlor Approval: the amount and/or the rate or rates of any such remuneration, and the circumstances in which the remuneration is to be provided, must be approved in writing by the Settlor; and

15.2.3 Business Income Restriction: if the remuneration is a benefit or advantage in respect of which clause 7.3 applies, neither the Trustee receiving the remuneration nor any person associated with the Trustee may determine or materially influence, directly or indirectly, the nature or amount of that remuneration or the circumstances in which it is to be provided.

15.3 Reimbursement of Expenses: A Trustee is entitled to be indemnified against and reimbursed for expenses properly incurred by the Trustee in connection with the Trust, including travel and other expenses.

16. LIABILITY OF TRUSTEES

16.1 Standard of Care: Despite the fact that the Board may from time to time include Trustees whose profession, employment or business is or includes acting as a trustee or investing money on behalf of others:

16.1.1 Reasonable/Prudent Person Standard: the Trustees' general duty when administering the Trust is to exercise the care and skill that is reasonable in the circumstances, and the Trustees' duty in relation to investment is to exercise the care and skill that a

prudent person of business would exercise in managing the affairs of others; and

16.1.2 Higher Standard Excluded: no Trustee will be subject to any more onerous duty or higher standard of care on account of any special skill, knowledge or experience of the Trustee, under section 29 or 30 of the Trusts Act 2019 or under any equivalent or similar legislation.

16.2 Limited Liability: No Trustee (including any former Trustee) will be liable for any loss to the Trust Fund arising from any act or omission of the Trustee, the Board or any of the Trustees, except to the extent that the loss is attributable to:

16.2.1 Dishonesty: dishonesty on the part of the Trustee; or

16.2.2 Wilful Misconduct: wilful misconduct on the part of the Trustee, including any wilful act or omission of the Trustee known by the Trustee to be a breach of trust or a breach of any other obligation of the Trustee in connection with the Trust; or

16.2.3 Gross Negligence: gross negligence on the part of the Trustee;

and no Trustee (including any former Trustee) will be liable for any loss to the Trust Fund attributable to any negligence, dishonesty, misconduct or delay on the part of any agent, contractor or employee engaged by the Board in connection with the administration of the Trust.

16.3 Proceedings Against Trustees: Neither the Board nor any Trustee will be bound to take, or liable for failure to take, any proceedings against any other Trustee (including any former Trustee) for any breach or alleged breach of trust committed by that other Trustee.

16.4 Receipt of Money: Subject to this clause 16, a Trustee (including any former Trustee) will be chargeable only for any money which that Trustee has received. For the purposes of this clause, a Trustee is deemed to have received money even if not actually paid to that Trustee if that money has been credited in account, reinvested, accumulated, capitalised, carried to any reserve, sinking or insurance fund, or otherwise dealt with on that Trustee's behalf.

17. TRUSTEE INDEMNIFICATION AND INSURANCE

17.1 Indemnification: Subject to clause 17.2, each Trustee (including any former Trustee) is entitled to be indemnified out of the Trust Fund against all actions, proceedings, claims, damages, losses, demands, calls, liabilities, costs (including legal costs) and expenses (together called **Liabilities**) suffered or incurred by that Trustee in connection with the Trust.

17.2 Indemnification Restriction: The indemnification provided under clause 17.1 will not apply to any Trustee (including any former Trustee) to the extent that the Liabilities suffered or incurred by that Trustee are attributable to:

- 17.2.1 Dishonesty:** dishonesty on the part of the Trustee; or
 - 17.2.2 Wilful Misconduct:** wilful misconduct on the part of the Trustee, including any wilful act or omission of the Trustee known by the Trustee to be a breach of trust or a breach of any other obligation of the Trustee in connection with the Trust; or
 - 17.2.3 Gross Negligence:** gross negligence on the part of the Trustee.
- 17.3 Insurance:** The Board may obtain insurance for the benefit of the Trustees in relation to any Liabilities covered by the indemnification provided under this clause 17 and meet the cost of such insurance out of the Trust Fund.

18. VARIATION OF TRUST TERMS

- 18.1 Approval of Variation:** Subject to clause 18.3, the Board may from time to time, by deed (which may be in the form of a revised deed of trust setting out all of the terms of the Trust, as varied), vary the terms of the Trust, by amending, deleting or replacing any term set out in this deed (including, for the avoidance of doubt, the details of the Charitable Purposes of the Trust set out in clause 4.2 and the details in Schedules 1 and 2), provided that any such variation must be:
- 18.1.1 Special Resolution:** approved by resolution of the Board passed at a meeting of the Board by a number of Trustees that equals or exceeds 75% of the total number of Trustees for the time being, or by a written resolution under clause 12.2.2; and
 - 18.1.2 Settlor Approval:** approved in writing by the Settlor, or contingent on approval in writing by the Settlor.
- 18.2 Required Variation:** Subject to clause 18.3, in the event that any inconsistency between the terms of the Trust and the Consent Conditions arises or is identified following the establishment of the Trust, the terms of the Trust must be varied by the Board, by deed (which may be in the form of a revised deed of trust setting out all of the terms of the Trust, as varied), to ensure consistency with the Consent Conditions.
- 18.3 Variation Restrictions:** No variation (or purported variation) of the terms set out in this deed will be valid or effective if it would:
- 18.3.1 Focus of the Trust:** change, directly or indirectly, the Trust's general purpose as set out at the commencement of clause 4.2 or any of the objectives set out in clause 4.2.2 or cause those aspects of clause 4.2 to be inconsistent with the Consent Conditions, provided that this restriction does not preclude any variation required to ensure consistency with the Consent Conditions and provided also that this restriction will no longer apply after the expiry of 25 years following the grant of the Consent; or

18.3.2 Charitable Purposes: permit the Trust to operate other than for exclusively Charitable Purposes in New Zealand, pursued for the benefit of the public and not for private profit; or

18.3.3 Tax Concessions: affect the Trust's eligibility for the benefit of any Tax Concession for which it would otherwise be eligible, unless in relation to any such concession the Board has determined that eligibility for the benefit of that concession is not required in the best interests of the Trust in relation to the advancement of its purposes; or

18.3.4 Mandatory Requirements: purport to modify, limit or exclude any legally mandatory provision or requirement that cannot be modified, limited or excluded by the Trust's terms (such as the mandatory duties referred to in clause 5.3, which cannot be modified or excluded, and the restrictions on the limitation of Trustees' liability and indemnification of Trustees under clauses 16.2 and 17.2, which are the minimum restrictions required by law).

18.4 Records and Filing: The Board must ensure that any variation of the terms set out in this deed is included in the Trust's records and, if required by law, filed with any relevant authority (for example, under the Charitable Trusts Act 1957, and under the Charities Act 2005 if the Trust is registered under that Act).

19. RESETTLEMENT OF TRUST FUND

19.1 Approval of Resettlement: Subject to clause 19.2, the Board may, by deed, resettle all or any part of the Trust Fund on trust for any one or more Charitable Purposes in New Zealand, on terms determined by the Board, provided that any such resettlement must be:

19.1.1 Special Resolution: approved by resolution of the Board passed at a meeting of the Board by a number of Trustees that equals or exceeds 75% of the total number of Trustees for the time being, or by a written resolution under clause 12.2.2; and

19.1.2 Settlor Approval: approved in writing by the Settlor, or contingent on approval in writing by the Settlor.

19.2 Resettlement Restrictions: No resettlement will be valid or effective if it would:

19.2.1 Focus of the Trust: detract, directly or indirectly, from the intended operation of the Trust for the Charitable Purposes set out in clause 4.2 for a minimum of 25 years following the grant of the Consent or from the requirement for the Board to use the Trust Fund to advance those purposes; or

19.2.2 Charitable Purposes: permit any resettled part of the Trust Fund, or any income to be derived from any resettled part of the Trust Fund, to be distributed or applied other than for exclusively

Charitable Purposes in New Zealand, pursued for public benefit and not for private profit; or

- 19.2.3 Tax Concessions:** affect the Trust's eligibility for the benefit of any Tax Concession for which it would otherwise be eligible, unless in relation to any such concession the Board has determined that eligibility for the benefit of that concession is not required in the best interests of advancing the purposes of the Trust.

20. SETTLOR OVERSIGHT AND INTERVENTION

- 20.1 Settlor Oversight and Intervention:** The Settlor may exercise oversight of the Trust and the Board in relation to whether or not the Trust's Charitable Purposes and the Consent Conditions are being, and will continue to be, met and in relation to compliance with the terms of the Trust. If the Settlor considers that any issue, or potential issue, arises in respect of any of those matters that may require remediation, then:

- 20.1.1 Notification to Board:** the Settlor may notify the Board in writing of the issue(s) identified by the Settlor and, if applicable, the Settlor's advice, recommendations or other input to the Board in relation to remediating the issue(s);

- 20.1.2 Board Response:** the Settlor must give the Board a reasonable opportunity (as determined by the Settlor, taking into account the nature and urgency of the issue(s) identified by the Settlor) to respond in writing, and if appropriate to be heard by the Settlor, regarding the Board's position in relation to the issue(s) identified by the Settlor and remediating the issue(s); and

- 20.1.3 Action by Settlor:** having taken into account the Board's position as referred to in clause 20.1.2 (if the Board takes up the opportunity to respond to the Settlor), the Settlor may:

- (a) Input and Reporting:** determine and notify to the Board in writing the Settlor's advice, recommendations or other input to the Board in relation to remediating the issue(s) identified, and require the Board to report to the Settlor in relation to remediation of the issue(s);
- (b) Replacement of Board:** if the conditions set out in clause 20.2 are met, remove and replace the Board in accordance with that clause; and/or
- (c) Other Action:** take any other action that the Settlor considers appropriate in relation to the issue(s) identified and remediation of the issue(s) (including, by way of example, any form of application or submission to the High Court or any other authority).

- 20.2 Replacement of Board:** Without limiting the actions that may be taken by the Settlor under clause 20.1, in order to ensure that the Trust's Charitable Purposes and the Consent Conditions are being, and will continue to be, met, the Settlor may remove and replace the Board by appointing a person

or persons as the new Trustee or Trustees for Trust (who may be, or include, the Settlor), provided that:

- 20.2.1 Compliance with Clause 20.1:** the Settlor has complied with the process for notifying identified issues to the Board and giving the Board the opportunity to respond as set out in clauses 20.1.1 and 20.1.2; and
- 20.2.2 Settlor Determination:** the Settlor, having taken into account the Board's position as required under clause 20.1.3 and acting honestly and in good faith and for a proper purpose, has identified on reasonable grounds that there has been or will be non-compliance or potential non-compliance with the Consent Conditions and has determined that the exercise of its power under this clause 20.2 is the only or best way to ensure that the Trust's Charitable Purposes and the Consent Conditions are being, and will continue to be, met. Prior to exercising this power of removal, Settlor must also request and have regard to any relevant information obtained from Auckland Council in its capacity as Consent Authority on compliance or non-compliance with the Consent Conditions.

If the Settlor exercises its power under this clause 20.2, any person appointed as a new Trustee must not be disqualified under clause 10.3 and the new Trustee or Trustees must review the Trust's terms and, as necessary, may vary the terms in accordance with clause 18 to provide for governance and administration of the Trust by the new Trustee or Trustees. The Trust's terms must continue to provide for Stakeholder engagement and input in relation to the advancement of the Trust's Charitable Purposes set out in clause 4.2.

21. WINDING UP THE TRUST

- 21.1 Minimum Duration:** The Trust is intended to operate for a minimum of 25 years following the grant of the Consent, and may continue to operate for any additional period or indefinitely, and the Board must not exercise the power to wind up the Trust under this clause 21 within that 25-year period.
- 21.2 Approval of Winding Up:** Subject to clauses 21.3 and 21.4, the Board may, by resolution passed at a meeting of Trustees, determine to wind up the Trust and direct the distribution or application of the Trust Fund upon winding up for exclusively Charitable Purposes as required under clause 21.4, provided that such resolution must be:
 - 21.2.1 Special Resolution:** approved by a number of Trustees that equals or exceeds 75% of the total number of Trustees for the time being; and
 - 21.2.2 Settlor Approval:** approved in writing by the Settlor, or contingent on approval in writing by the Settlor.
- 21.3 Board Meeting Required:** In relation to the Board's consideration of any resolution to wind up the Trust under clause 21.2:

21.3.1 Resolution at Meeting: the resolution must be passed at a meeting of the Board called for that purpose; and

21.3.2 Notice of Meeting: all of the Trustees for the time being must be given not less than 28 days' notice of the meeting and the purpose of the meeting (unless all of the Trustees agree in writing to waive or reduce that notice period).

21.4 Winding Up the Trust: In relation to winding up the Trust:

21.4.1 Satisfaction of Debts/Liabilities: the Board must first ensure that all debts and liabilities of the Trust, including the costs of winding up the Trust, have been or will be satisfied out of the Trust Fund or have been or will be assumed by another person; and

21.4.2 Distribution/Application of Surplus: the remainder of the Trust Fund must then be distributed or applied for exclusively Charitable Purposes in New Zealand, for the benefit of the public and not for private profit, and in particular for one or more Charitable Purposes that fall within, or are as close as possible to, or are otherwise consistent with the Trust's Charitable Purposes set out in this deed; and

21.4.3 Determination of Distribution/Application: the distribution or application of any surplus in accordance with clause 21.4.2 is to be determined:

(a) **Trustee Resolution:** by resolution of the Board, under clause 21.2 or otherwise; or

(b) **Court Direction:** otherwise, by a Judge of the High Court of New Zealand.

21.5 Notice Requirements: The Board must ensure that notice of winding up of the Trust is filed with any relevant authority (for example, under the Charitable Trusts Act 1957, under the Charities Act 2005 if the Trust is registered under that Act, and under any relevant tax legislation).

22. GOVERNING LAW AND JURISDICTION

22.1 Governing Law: This deed is governed by New Zealand law.

22.2 Jurisdiction: In connection with the Trust, the Settlor, the Board and the Trustees submit to the non-exclusive jurisdiction of all courts having jurisdiction in New Zealand.

EXECUTED AND DELIVERED AS A DEED

SIGNED on behalf of **WATERCARE SERVICES LIMITED** as Settlor by:

Signature of director

Signature of director

Name of director/authorised signatory

Name of director/authorised signatory

Witness:*

Witness:*

Signature of witness

Signature of witness

Full name of witness

Full name of witness

Occupation of witness

Occupation of witness

Address of witness

Address of witness

**Signatures need not be witnessed if two directors sign. A witness must not be party to this deed.*

SIGNED by **[1st TRUSTEE'S NAME]** as Trustee
in the presence of:

[1st Trustee's Name]

Witness:

Signature of witness

Full name of witness

Occupation of witness

Address of witness

DRAFT

SIGNED by [2nd TRUSTEE'S NAME] as Trustee
in the presence of:

[2nd Trustee's Name]

Witness:

Signature of witness

Full name of witness

Occupation of witness

Address of witness

SIGNED by [3rd TRUSTEE'S NAME] as Trustee
in the presence of:

[3rd Trustee's Name]

Witness:

Signature of witness

Full name of witness

Occupation of witness

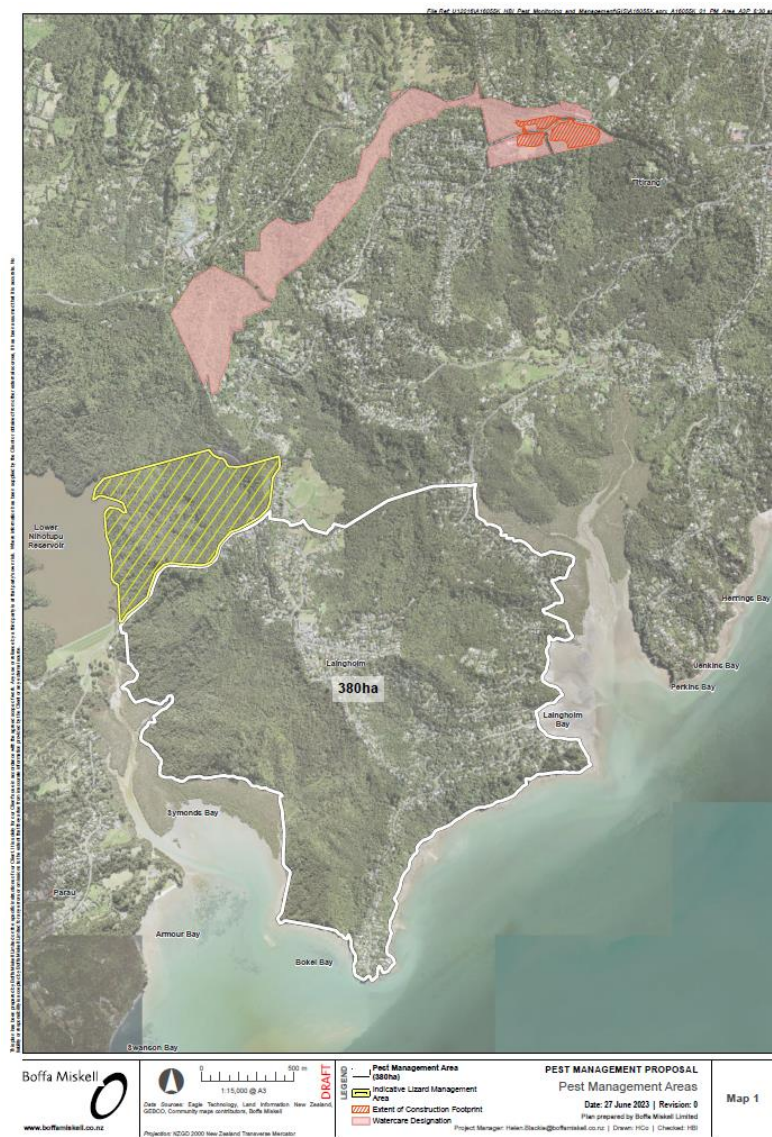
Address of witness

[SIGNATURE SECTION TO BE INCLUDED FOR EACH OF THE INITIAL TRUSTEES]

SCHEDULE 1

PMSBR Area

The PMSBR Area is the approximately 380 ha “Pest Management Area” outlined in white shown in the map below.



SCHEDULE 2

DRAFT PEST MANAGEMENT STRATEGY FOR BIODIVERSITY RESTORATION

DRAFT

SCHEDULE 3

Waima Catchment

The Waima Catchment is the 989.4 ha “Proposed Pest Management Area” outlined in red shown in the map below.



Schedule 4

Management Targets and Thresholds for the PMSBR Area from Consent Conditions

Table 1: Baseline mammalian pest monitoring in Year 1 CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

Pest Species	Management Target	Threshold	Monitoring frequency
On all land			
Mice	Obtain initial population abundance estimates.	n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)	Four monitors in Year 1 in February, May, August, and November
Rats	Obtain initial population abundance estimates.	n/a - Baseline chew Card Index (CCI) or Tracking Tunnel Index (TTI)	
Possums	Obtain initial population abundance estimates.	n/a - Baseline Chew Card (CCI) index.	
Mustelids	Obtain initial population abundance estimates.	n/a - Baseline population estimate via CCH	
Feral cats	Obtain initial population abundance estimates.	n/a - Baseline population estimate via CCH	

Table 2: Pest management targets and thresholds for Years 2 - 11 on public and private land within the 380 ha proposed pest management area. CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol. Wasp population reduction as per the standard Wasp Nest Flight Count Monitoring Method (DOC-2597036).

Pest Species	Management Target	Threshold	Monitoring frequency
On public land			
Mice	<15% CCI or TTI	>15% CCI or TTI	Before and after toxic control, four monitors per year in February, May, August, and November
Rats	<5% CCI (year round)	≥10% (year round)	
Possums	<5% CCI	≥10% CCI	
Stoats	2 detections per 2000 CH1	3 detections per 2000 CH1	
Ferrets	2 detections per 2000 CH	3 detections per 2000 CH	
Weasels	2 detections per 2000 CH	3 detections per 2000 CH	
Feral cats	3 detections per 2000 CH	>5 individual cat detections per 2000 CH	
Ungulates	Zero density	Any observation (incl. sign)	Control between late-January and late February annually.
Common and German wasps	Population reduction of 80%	>80%	

On private land			
Rats	<5% CCI (Sep – Feb), <10% CCI (Mar – Aug)	≥10% CCI (Sep – Feb), <15% CCI (Mar – Aug)	Four monitors per year in February, May, August, and November
Possums	<5% CCI	≥10% CCI	
All mustelid species	2 detections per 2000 CH	3 detections per 2000 CH	

Table 3: Pest management targets and thresholds for Years 12 and beyond on public and private land within the 380 ha proposed project. CCI is a chew-card index, TTI Tracking Tunnel Index and CH refers to the number of camera hours as per the Department of Conservation interim camera protocol.

Pest Species	Management Target	Threshold	Monitoring frequency
On public land			
Rats	<5% CCI (Sep – Feb), <15% CCI (Mar – Aug)	≥10% CCI (Sep – Feb), <20% CCI (Mar – Aug)	Four monitors per year in February, May, August, and November
Possums	<5% CCI	≥10% CCI	
Mustelids	3 detections per 2000 CH ¹	5 detections per 2000 CH ¹	
Feral cats	3 detections per 2000 CH ¹	>5 individual cat detections per 2000 CH ¹	
Common and German wasps	Population reduction of 80%	>80%	Control between late-January and late February annually.
On private land			
Rats	<5% CCI (Sep – Jan)	≥10% CCI (Sep – Jan)	Two monitors per year in August and December.
Possums	<5% CCI	≥10% CCI	
All mustelid species	3 detections per 2000 CH ¹	5 detections per 2000 CH ¹	

Advice Notes:

1. The management target in the first year is to obtain a population abundance estimate within the PMSBR area as control infrastructure is being deployed.
2. Monitoring in areas where toxic baiting is undertaken shall generally occur within 25m of toxic bait stations for rats and within 50m of toxic bait stations for possums. Monitoring in areas where control infrastructure has been installed shall generally occur within 25m of control infrastructure for rats and within 50m of control infrastructure for possums.