

Appendix G: Proposed key conditions of consent

Draft Key Conditions of Consent

Definitions

Construction Commencement Date– is the date that initial site construction works will commence, as notified in advance by the consent holder to Council.

Construction Completion Date – is the date that the consent holder notifies the Council that the initial site construction works are complete.

Council – means, unless otherwise stated, Team Leader Compliance Monitoring Northern.

Initial Site Construction Works – those works required on site up prior to the receipt of waste, including, but not limited to, the SH 1 roundabout, access road and bridge from SH 1 to the bin exchange area, the bin exchange area, the access road from the bin exchange area to the landfill area, the workshop and site facilities, the initial earthworks/removal of vegetation, stockpiles, and sediment retention ponds.

Landfill Capping Completion Date – is the date on which the consent holder gives notice to the Council that they have completed the final capping of the landfill and that post-closure aftercare will commence.

Landfill Commencement Date– is the date that waste acceptance commences at the landfill.

PART A - GENERAL CONDITIONS

- 1 The activity shall be carried out in general accordance with the application comprising the following plans and reports: [to be completed prior to grant]

Duration

- 2 Consents for the initial site construction works shall expire 15 years after the construction commencement date. The regional consents for landfill operations and discharges shall expire 35 years after the landfill commencement date. This expiry does not apply to the land-use consents for landfill operations, final restoration works or post closure works.

Bond

- 3 [Bond condition to be provided].

Community Liaison Group

- 4 The consent holder shall, in consultation with mana whenua, local community groups and representatives of local residents (including those living close to the landfill and in the wider community) establish and maintain a Community Liaison Group (CLG). The CLG shall comprise up to 4 representatives of those groups, an independent Chairperson, a representative of the Landfill operator / consent holder and two representatives of Auckland Council. The role of this group will be to bring feedback from the community to the consent holder, disseminate information about the Landfill to the local community, hear concerns of local residents, receive, discuss and consider material.
- 5 The CLG shall comprise no fewer than 5 and no more than 8 representatives (including the chair but not including the consent holder). Meetings of the CLG shall be held on a quarterly basis (or less frequently as determined by the CLG). Meeting minutes shall be taken and distributed to the members of the CLG. The consent holder shall cover the costs of the meeting venue and independent chair.

Advice note: Meetings of the CLG will be open to the public to attend.

Complaints management

- 6 Upon receiving a complaint, the consent holder shall:
 - a Identify the nature of the complaint, the location, date and time of the alleged incident event(s);
 - b Acknowledge receipt of the complaint to the complainant within 1 working day of receipt;
 - c Respond to the complaint in accordance with any relevant Management Plan or condition; and
 - d Advise the complainant of what steps have been taken in response to the complaint within 10 working days.
- 7 A record of all complaints received shall be kept by the consent holder. This record shall include:
 - a The name and address of the person(s) who raised the complaints (unless they elect not to provide this) and time and nature of the complaint;
 - b Where practicable, weather conditions at the time of the concern or complaint, including wind direction and cloud cover if the complaint relates to noise, dust or air quality;

- c Known activities occurring on site at the time and in the vicinity of the concern or complaint; and
 - d Remedial actions taken (if any) and the outcomes of these.
- 8 The record specified in Condition 7 shall be maintained on site by the consent holder, be available for inspection on request, and shall be provided every 6 months (or as otherwise agreed) to Auckland Council.

Accidental Discovery Protocol

- 9 Where, during earthworks, any archaeological artefact, koiwi or taonga are accidentally uncovered or are suspected to have been discovered, the following protocol shall apply. Evidence of archaeological sites can include oven stones, charcoal, shell middens, ditches, banks, pits, old building foundations, artefacts of Maori and European origin or human burials.
- a All works within the vicinity shall cease immediately (10m radius)
 - b The site supervisor shall take steps immediately to secure the area so that the artefact, koiwi or taonga remain untouched and site access is restricted
 - c The site supervisor will ensure that no eating, drinking, and smoking occurs in the immediate vicinity
 - d The consent holder shall notify:
 - The New Zealand Police (in the case of koiwi/skeletal remains only);
 - Heritage New Zealand;
 - Manuhiri Kaitiaki Charitable Trust (registration number CC48343) and [other appropriate mana whenua groups to be confirmed];
 - Advice note: The consent holder will invite Manuhiri Kaitiaki Charitable Trust to contact the appropriate kaumatua in order to advise the parties involved as to the appropriate course of action. The costs of the kaumatua's inputs shall be met by the consent holder.
 - The consent holder's archaeologist.
- 10 The consent holder shall ensure staff are available on site to guide police (as appropriate) and kaumatua to the site in the event of discoveries specified in Condition 9.
- 11 In the case of discovery of koiwi, site access shall be restricted to other parties until Police are satisfied the remains are not of forensic relevance.
- Advice note: If the parties involved are satisfied that the koiwi or taonga are of Māori origin, the kaumatua will decide how they are to be dealt with and will communicate this to the New Zealand Police and other parties as appropriate. The consent holder shall meet any appropriate costs with this process.*
- 12 Activity within 10m of discoveries specified in Condition 9 will remain on hold until the Police (in the case of koiwi), the kaumatua and Heritage New Zealand have given approval for the activity to recommence.
- 13 The consent holder shall ensure that kaumatua have the opportunity to undertake karakia and other cultural ceremonies and activities at the site of the discovery as specified in Condition 9, as may be considered appropriate in accordance with tikanga Māori (Māori customs and protocols).

Management Plan revisions

- 14 The consent holder may make amendments to the final management plans that may change how any adverse effect is managed at any time subject to the certification of Auckland Council.

- a The amendment to the management plans shall be consistent with the objectives and performance requirements of the management plan and these consent conditions.
- b In the event of an amendment to a management plan under Condition 14(a), the consent holder must submit, in writing, the amendment to Auckland Council for certification 20 working days before the commencement of the relevant works. Certification shall confirm that the amendment is in accordance with Condition 1 and meets the objectives and performance requirements of the management plan.
- c Auckland Council shall be requested, no later than 30 working days of receipt of the amendment, to confirm in writing to the consent holder that the amendment is either certified or declined, or shall request that the consent holder incorporate changes suggested by the Council. If a revised timeframe has been agreed, confirmation shall be made in accordance with that timeframe. If no response is received, approval is deemed to have been given as set out in condition 16.
- d Should Auckland Council decline to certify the amendment or request the incorporation of changes to the amendment the consent holder may then resubmit a revised material amendment to the management plan.
- e The Certification process for a revised amendment shall follow the same process described above in Conditions 14 (a) to (d).

Public walkways and cycle tracks

- 15 The consent holder shall, subject to reaching agreement on reasonable recommendations from the Department of Conservation and Walking Access Commission, and obtaining the necessary landowner approval, implement the following:
- a two opportunities to enhance the recreational value of Sunnybrook Scenic Reserve;
 - b two opportunities to create mountain bike tracks;
 - c establish and form a walking and cycling access to and along the Waiwhiu Stream, including amenity areas that may be appropriate at any swimming or picnicking sites along the stream;
 - d All access tracks shall be registered by way of an esplanade strip or walkway easement within 12 months of being completed;
- Such access arrangements shall be subject to any requirements to protect native flora, fauna or taonga.

Deemed approval

- 16 If no response is received from Auckland Council within 40 working days of submission of any plan or other information provided for approval, the submitted information shall be deemed to have been approved.

PART B - INITIAL SITE CONSTRUCTION WORKS CONDITIONS

Advice note: These conditions apply to the site establishment and initial enabling works, as defined and described in the Assessment of Environmental Effects prepared by Tonkin + Taylor (May 2019), and includes all work required to be undertaken in order to prepare the landfill to accept waste. Once the landfill becomes operational, these conditions will no longer apply, and will be superseded by the operational conditions.

- 17 The consent holder shall notify Auckland Council of the Construction Commencement Date at least 30 working days prior to the Construction Commencement Date.

Baseline monitoring

- 18 Baseline sampling and analysis of surface water, groundwater and groundwater levels from each of the monitoring locations listed in Schedule 1, or other locations at the reasonable approval of the Auckland Council, shall be undertaken three monthly (quarterly) for a continuous period of at least two years prior to the Construction Commencement Date.

Advice note: baseline monitoring undertaken prior to consent being granted can form part of the continuous period of baseline monitoring.

Schedule 1: Water monitoring locations

Reference	Groundwater level	Groundwater chemistry
BH1	*	*
BH2	*	*
BH3	*	*
BH4	*	
BH5	*	*
BH6	*	
BH7	*	*
BH8	*	
BH9	*	*
BH10	*	*
BH11	*	
BH12	*	
BH13	*	
BH14	*	
TB01 (potable)		*

Reference	Macroinvertebrates, periphyton and macrophytes (three monthly intervals)	Surface water chemistry
MC1	*	
MC2	*	
MC3	*	
MC4	*	
MC5	*	

Reference	Macroinvertebrates, periphyton and macrophytes (three monthly intervals)	Surface water chemistry
MC6	*	
SW1		*
SW3		*
SW4		*
(discharge from bin exchange area)		*

- 19 The analysis of groundwater chemistry and surfacewater chemistry required by Condition 18 shall be for the following parameters:

PARAMETER	UNITS
• Temperature	°C
• Sodium	g Na/m ³
• pH	
• Chloride	g Cl/m ³
• Conductivity	mS/m
• Potassium	g K/m ³
• Total Ammoniacal Nitrogen	g N/m ³
• Total Hardness	g CaCO ₃ /m ³
• Zinc (soluble)	g Zn/m ³
• Manganese (soluble)	g Mn/m ³
• COD	g O/m ³
• Arsenic (soluble)	g As/m ³
• Copper (soluble)	g Cu/m ³
• Lead (soluble)	g Pb/m ³
• Nitrate Nitrogen	g N/m ³
• Sulphate	g SO ₄ /mM ³
• Alkalinity	g CaCO ₃ /m ³
• Boron	mg/m ³ g B/m ³
• Nickel (soluble)	mg/m ³ g Ni/m ³
• Calcium	mg/m ³ g Ca/m ³
• Iron (soluble)	mg/m ³ g Fe/m ³
• Magnesium (soluble)	mg/m ³ g Mg/m ³

Construction Environmental Management Plan

- 20 The consent holder shall prepare and submit a Construction Environmental Management Plan (CEMP) to Auckland Council at least three months prior to the Construction Commencement Date. The purpose of the CEMP shall be to establish general procedures for all of the enabling works up until the landfill opens so that the construction works remain within the limits and standards approved under this consent and set out the management procedures and construction methods to be undertaken in order to avoid, remedy or mitigate potential adverse effects arising from construction activities.

- 21 The CEMP is not required to include all details for every stage of work at the time the plan is submitted for certification by Auckland Council. If further details are to be provided for later stages of the work, the CEMP shall clearly state which aspects of the work are covered within the submitted plan.
- 22 The CEMP shall incorporate or refer to the following management plans:
- a Construction Erosion and Sediment Control Plan (CESCP)
 - b Construction Traffic Management Plan (CTMP)
 - c Construction Noise and Vibration Management Plan (CNVMP)
 - d Vegetation Management Plan (VCP)
 - e Fauna Management and Relocation Plan (FMP)
 - f Streamworks Management Plan (SMP)
- 23 The CEMP shall provide details of the responsibilities, reporting frameworks, coordination and management required for effective site management. The CEMP shall provide information on the following matters:
- a Construction works programming;
 - b Site management;
 - c Consultation and communications;
 - d Confirmation of the construction methodology, including for permanent and temporary structures and clear identification of working areas and sensitive areas to be protected;
 - e Contact details of the Consent Holder's Project Liaison Person (phone, postal address, email address);
 - f Methods and systems to inform and train all persons working on the site of potential environmental issues and how to avoid remedy or mitigate any potential adverse effects;
 - g Procedures for the refuelling, cleaning, maintenance and storage of plant and equipment, methods to be used to avoid discharges of contaminants from these activities;
 - h Measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; and
 - i Procedures for incident management and to deal with extreme weather events.

Construction Erosion and Sediment Control Plan

- 24 At least three months prior to the Construction Commencement Date, the consent holder shall submit to Auckland Council for certification, an updated Construction Erosion and Sediment Control Plan (CESCP) for the site establishment and enabling works earthworks, prepared in general accordance with the 'Construction Erosion and Sediment Control Plan', prepared by Tonkin + Taylor, dated May 2019. The purpose of the CESCP is to provide a framework of controls for the construction earthworks to avoid, remedy and/or mitigate the potential adverse effects on the receiving environment, including measures to ensure sediment generation is minimised and the works are conducted in accordance with best practice.
- 25 The CESCP required by Condition 24 shall include a sediment monitoring programme with the following information:
- a Details of the baseline monitoring for suspended solids and turbidity within the catchments of the works;
 - b Monitoring to be undertaken during the construction works including:

- Programme for regular visual inspections of all receiving environments, and sediment control devices;
 - Rainfall and weather forecasting;
 - Rainfall triggers levels for supplementary visual inspections;
 - Sampling at inlets and outlets of sediment settlement devices;
 - Sampling in the receiving environment; and
 - Turbidity monitoring downstream of any works within any tributary of the Waiteraire stream.
- c Development of monitoring response triggers and associated actions in the event that the triggers are exceeded.

Site Specific Erosion and Sediment Control Plans

- 26 Prior to the Commencement of earthworks for each stage of the initial construction works, a Site Specific Erosion and Sediment Control Plan (SSESCP) shall be prepared by a suitably qualified person in general accordance with Auckland Council Guideline GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region and the CESSCP, and the consent holder shall submit the SSESCP to Auckland Council at least two months prior to the commencement of that stage of works. The purpose of the SSESCP is to set out the specific measures to be implemented during construction to minimise erosion and the discharge of sediment beyond the boundaries of the site.
- 27 The SSESCP shall include the following information as appropriate to the scale, location and type of earthworks:
- a The location and total area of earthworks, including catchment boundaries and contour information;
 - b Details of construction methods to be employed, including timing and duration;
 - c The volume of earthworks. This is to include details of the volumes to be excavated, stockpiled, re-used and disposed of off-site;
 - d The location of erosion controls (e.g. perimeter control such as a clean water diversion bunds);
 - e The location of sediment controls (e.g. silt fence along low point of site where surface water will discharge from site or around stockpile areas);
 - f Supporting calculations for erosion and sediment controls;
 - g Staging of the earthworks (if appropriate). If works are to be staged the details of each of the above need to be detailed for each stage of the works and means of progressive stabilisation of exposed areas identified;
 - h Key responsibilities for implementing and maintaining the controls detailed in the SSESCP during the project;
 - i A description of any proposed chemical treatment (if appropriate), with a preference for organic flocculants if suitable;
 - j The location of site entrance points and means to control tracking of dirt off-site;
 - k The frequency and responsibility for monitoring the effectiveness of controls, downstream water quality, and the undertaking of any maintenance on controls;
 - l The details for decommissioning controls;
 - m Contingency plans in case of unexpected sediment discharges during works and to respond to extreme weather events;

- n Drawings showing location, area and quantities of earthworks, contour information, catchment boundaries and erosion and sediment controls (location, dimensions, capacity).

Erosion and sediment controls certification and maintenance

- 28 Prior to any earthworks commencing within a works area, a certificate signed by an appropriately qualified and experienced person shall be submitted to Auckland Council, to certify that the erosion and sediment controls have been constructed in accordance with the approved SSESCP required by Condition 26 and Auckland Council Guideline GD05. Information supplied if applicable, shall include:
 - a Contributing catchment area;
 - b Shape and capacity of structure (dimensions of structure);
 - c Position of inlets/outlets;
 - d Stabilisation of the structure; and
 - e A statement that the erosion and sediment control measures have been constructed in general accordance with Auckland Council Guideline GD05; except where a higher standard is detailed in the documents referred to the CESC required by Condition 24, in which case the statement shall confirm that the higher standard has been constructed.
- 29 The sediment and erosion controls for each stage of the initial construction works shall be inspected on a regular basis, no less often than monthly, and within 24 hours after each rainstorm event that is likely to impair the function or performance of the control measure. A record shall be maintained of the date, time and extent of any inspection, maintenance and repair undertaken in association with this condition which shall be forward to Auckland Council on request.

Construction Earthworks Design and Oversight

- 30 The investigation, final design and specification of landfill and appurtenant structure earthworks shall be carried out or reviewed by a Chartered Professional Engineer practicing in geotechnical engineering or an experienced Engineering Geologist.
- 31 A detailed construction methodology shall be prepared and included in the CEMP as required by Condition 20 to ensure that the proposed earthworks are staged and carried out in a manner that will not contribute to slope instability, and to ensure that subsoil drainage is provided where appropriate.
- 32 Cut slopes shall be assessed by a Chartered Professional Engineer practicing in geotechnical engineering or an experienced Engineering Geologist for the presence of adverse geological conditions including landslide deposits, geological faults and the groundwater seepage.
- 33 On satisfactory completion of earthworks the consent holder shall submit a completion report and appropriate land use and earthfill suitability statements prepared by a Geotechnical Engineer or Engineering Geologist.
- 34 All earthworks shall be carried out in accordance with NZS4431:1989 and all fill foundations should be stripped, benched and drained.

Construction Traffic

- 35 A Construction Traffic Management Plan (CTMP) shall be prepared by a suitably qualified and experienced person in accordance with the NZTA Code of Practice for Temporary Traffic Management and after consultation with NZTA, addressing all construction and temporary works that involve access onto or across SH1. The objective of the CTMP is to provide a

framework to be adopted by the consent holder to avoid, remedy or mitigate the adverse traffic and access effects of the construction works. The CTMP shall be submitted to Auckland Council for certification at least three months prior to the construction commencement date.

- 36 There shall be no queuing of earthworks or construction-related vehicles accessing the site out on to State Highway 1 (as result of site establishment or construction-related activities) at any time.
- 37 The CTMP shall include consideration of:
- a Avoidance of hazards upon the operation of the school bus pick-up and drop-off activity at the Crowther Road intersection with SH1 (such as but not necessarily limited to the avoidance of construction traffic movements to and from the Crowther Road intersection with SH1 between 7.30am and 8.30am, 3.30 – 4.30pm on school term weekdays);
 - b Minimisation of the safety impacts of construction activities on users of the SH 1 and public roads;
 - c Means by which the total number of truck movements to and from the construction activities could be minimised (e.g. back loading of departing vehicles);
 - d Means by which the movement of large machinery/items can be undertaken at times and in a manner which minimises effects on SH1 users;
 - e Timing and sequencing of any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions;
 - f Provision for a Site Traffic Management Supervisor (STMS) to be in attendance (or adoption of other methods) to ensure that the movement of construction-related vehicles to and from SH1 is undertaken in a safe and controlled manner;
 - g Together with methods to address those matters.

Advice note: If the NZTA Dome Valley Safety Improvements project is still underway at the time of works commencing under this consent, the CTMP shall include measures to co-ordinate and operate alongside the Safety Improvements project.

Finalised State Highway 1 intersection design

- 38 The intersection and roundabout shall be designed in accordance with the 'Integrated Traffic Assessment', prepared by Stantec, dated May 2019, to the relevant standards as set out in NZ Transport Agency's Register of Network Standards and Guidelines ISBN 978-0-478-38032, and the design shall be subject to detailed design road safety audit in accordance with NZTA procedures.
- 39 The roundabout shall be subject to, and satisfy, NZTA road safety audit stages during detailed and pre-opening stages.

Construction noise

- 40 Construction noise shall be measured and assessed in accordance with NZS 6803: 1999 "Acoustics - Construction Noise".
- 41 Construction noise shall comply with the noise limits in Standard E25.6.27 of the Auckland Unitary Plan.
- 42 A Construction Noise and Vibration Management Plan (CNVMP) shall be prepared by a suitably qualified person and submitted to Auckland Council for certification at least three months prior to the construction commencement date. The CNVMP must be implemented throughout the Initial Site Construction Works and expanded and updated as appropriate. The

CNMP shall include as a minimum the relevant measures from Appendix E of NZS 6803:1999 “Acoustics – Construction Noise”. The CNMVP shall also include the following controls:

- a No construction materials or earthmoving plant delivered to the site via the Crowther Road access prior to 0730 hrs; and
 - b No construction or maintenance works on Crowther Road prior to 0730 hrs within 150m of a residential dwelling.
- 43 Noise measurements shall be carried out by a suitably qualified acoustic engineer within one week of construction works commencing on each of the roundabout and the upgrade of Crowther Road to determine whether compliance with Standard E25.6.27 of the Auckland Unitary Plan is being achieved. If non-compliance with the Standard is identified, noise mitigation measures are to be implemented. Once compliant noise emissions are confirmed the process shall be documented and submitted to the satisfaction of Auckland Council.

Streamworks

- 44 Prior to any streamworks commencing, a detailed Streamworks Methodology shall be prepared, submitted to, and approval obtained from Auckland Council. The streamworks methodology shall include but is not limited to:
- a a SSESCP (providing location, dimensions, capacity, supporting calculations and design drawings) for the streamworks and any wetland reclamations. All controls should be in line with industry best practice;
 - b timing and duration of works (in relation to the staging and sequencing of both streamworks and earthworks), including scheduling at times when normal (for the time of year) in-stream flows can be diverted around the works and a four-day weather forecast predicts no rainfall;
 - c provision for a Native Freshwater Fish and Fauna Management Plan (Condition 56);
 - d appropriate contingency plans and measures, and;
 - e monitoring and maintenance requirements for the proposed erosion and sediment controls, in reference to the CESCO required by Condition 24.

Advice note: The streamworks methodology may be submitted for the whole site or as a number of plans for specific works areas to allow for different methods within different areas and different timing/staging of works.

- 45 Streamworks shall only be carried out in accordance with the approved Streamworks Methodology required in Condition 44.
- 46 Notwithstanding condition 45 above, no streamworks on the subject site shall be undertaken between 30 April and 1 October in any year, without the prior written approval of Auckland Council.

Culvert design

- 47 Where practicable, fish passage shall be provided through culverts unless deemed unnecessary or impractical by a suitably qualified freshwater ecologist, who has assessed the fish passage requirements in accordance with New Zealand Fish Passage Guidelines for structures up to 4 metres (NIWA, 2018). Where fish passage is deemed unnecessary or impractical, appropriate data and rationale for this decision shall be provided with the design drawings to Auckland Council for approval.
- 48 Culvert design shall:
- a Be designed to accommodate the 1 per cent annual exceedance probability flood without materially increasing flood levels upstream or downstream of the structure;

- b Fish passage elements shall be informed by the New Zealand Fish Passage Guidelines for structures up to 4 metres (NIWA, 2018); and
- c Incorporate energy dissipation and erosion control to minimise the occurrence of bed scour and bank erosion in receiving environments.

Vegetation Management Plan

- 49 A Vegetation Management Plan (VMP) shall be prepared by an appropriately qualified and experienced ecologist(s). At least two months prior to the construction commencement date, the VMP shall be submitted to Auckland Council. The VMP shall describe the measures to minimise the area of habitat/vegetation impacted by the project construction of the project. The plan shall address native forest and wetland protection measures, including:
- a Vegetation clearance protocols to protect surrounding habitat and to avoid intrusion of construction works beyond the construction area, such as the physical delineation/protection of areas and individual significant or high value large trees that are close to but outside the project footprint, or sediment controls around wetlands;
 - b Timing of removal of indigenous vegetation (of contiguous areas more than 10 m²) to avoid the bird breeding season (September – December inclusive) to the extent practicable;
 - c Proposed measures to stockpile and manage cleared vegetation to avoid or minimise potential adverse effects (e.g. lizards not detected during salvaging or from wood leachate)
 - d Procedures for moving felled logs with a dbh of 60cm or greater into areas proposed for revegetation. 12m² of felled logs shall be moved into each hectare of revegetation planting.

Fauna Management Plan

- 50 The consent holder shall develop a Fauna Management Plan (FMP), prepared by an appropriately qualified and experienced ecologist/s. The FMP shall be submitted to Auckland Council at least three months prior to the construction commencement date. The FMP shall describe the measures to address effects on fauna and their habitat during construction of the project. The FMP shall be comprised of the following sub-sections (described in conditions 52 - 58):
- a Bats;
 - b Avifauna (birds);
 - c Lizards;
 - d Hochstetter's frogs;
 - e Native fish and kōura;
 - f Invertebrates (peripatus, snails);
- 51 By 1 December of each year, an appropriately qualified and experienced ecologist(s) shall certify that the works have been carried out in accordance with the approved FMP, and shall provide details of any species removed or relocated to the Council's ecologist.

Bats

- 52 At least three months prior to the Construction Commencement Date, the consent holder shall provide a Bat Management Plan (BMP) to Auckland Council for certification. The purpose of the BMP is to minimise any potential effects on bats within the vegetation. The BMP shall be prepared by a suitably qualified and experienced ecologist, and shall include standard best practice tree felling protocol and lighting management.

Note: The objective of the BMP is to set out the procedures to be implemented by the consent holder to avoid and mitigate the effects on long-tailed bats from the removal of any vegetation and/or trees that are potential bat roost habitat.

In particular the BMP shall include measures to be implemented prior to removing the potential bat roost trees identified in Tonkin + Taylor's Assessment of Ecological Effects (2019), which shall include:

- a A pre-tree felling protocol prepared by a recognised bat ecologist that sets out the monitoring procedures to be implemented for the removal of any vegetation and/or trees that are identified as potential bat roost. This can be achieved through acoustic surveys, direct observation of trees prior to their removal, and by managing the time (month) of removal;
- b Details of ongoing monitoring and reporting of bat activity where occupied bat roosts are discovered;
- c Proposal for minimising disturbance from construction activities near any discovery of active roosts until the recognised bat ecologist confirms they are vacant; and
- d Methods for the replacement of any actual and potential bat roost trees that are removed as part of the proposal.

Advice note: This condition applies to vegetation clearance undertaken by the consent holder and its sub-contractors. Vegetation clearance of plantation pine forestry undertaken by the forestry operator will proceed under its own set of appropriate authorisations.

Avifauna (birds)

- 53 An Avifauna Management Plan (AMP) shall be submitted and certified by Auckland Council at least three months prior to the construction commencement date. The AMP shall be prepared by a suitably qualified and experienced ecologist. The purpose of the plan is to minimise any potential effects on avifauna from the construction works. The Avifauna Management Plan shall provide forest and wetland bird breeding protection including:
- a Seasonal constraints on felling and/or noise disturbance in habitats that are likely to have high bird values to avoid or minimise harm to eggs and chicks;
 - b Proposed controls for maintaining a 30m setback of construction works from the margin of wetlands during peak breeding season (September – December);
 - c A process for ensuring no nesting birds are present within vegetation to be cleared if works are required during peak breeding season (September – December).

Lizards

- 54 At least three months prior to the construction commencement date, the consent holder shall provide for the certification of Auckland Council a Lizard Management Plan to minimise any potential effects on indigenous skinks and/or geckos within the vegetation. Copies of any Department of Conservation permits shall be attached to the plan. The Lizard Management Plan shall be prepared by a suitably qualified and experienced herpetologist and shall include:
- a Timing of the works;
 - b A description of salvaging methodology;
 - c A description of relocation methodology, including transfer methods, relocation site(s) selection and habitat enhancement measures (such as deployment of logs and pest control).

Hochstetter's frog

- 55 At least three months prior to the construction commencement date, the consent holder shall provide for the certification of Auckland Council a Hochstetter's Frog Management Plan (HFMP) to minimise any potential effects on frogs within streams. Copies of any Department of Conservation permits shall be attached to the plan. The HFMP shall be prepared by a suitably qualified and experienced herpetologist and shall include:
- a Timing of the works;
 - b A description of salvaging methodology;
 - c A description of relocation methodology, including transfer methods, relocation site(s) selection and habitat enhancement measures (such as deployment of rock refugia and pest control).
 - d Proposed monitoring at the relocation site(s) and adaptive management measures and threshold triggers.

Fish and kōura

- 56 At least three months prior to the construction commencement date, the consent holder shall provide for the certification of Auckland Council a Native Freshwater Fish and Fauna Management Plan (NFFFMP). The purpose of the NFFFMP is the recovery and relocation of fish, kōura and kākahi (if present) in the sections of waterways affected by instream works, prior to instream works occurring. The NFFFMP shall include and in reference to the CEMP and streamworks methods required by conditions 23 and 44:
- a The timing and duration of fish capture, taking into account the timing of construction and forestry works to ensure capture occurs before works;
 - b The methodologies used to ensure all fish are captured and transported in accordance with the New Zealand Freshwater Fish Sampling Protocols;
 - c Specific measures for ensuring fish upstream in the catchment do not enter the works area;
 - d Specific measures to provide for passage past the works area (if required), and,
 - e Fauna relocation sites.
- 57 A suitably qualified freshwater ecologist shall oversee the streamworks for the project and specifically to conduct the freshwater fauna relocation as per the NFFFMP.

Invertebrates

- 58 At least three months prior to the construction commencement date, the consent holder shall provide for the certification of Auckland Council an Invertebrate Management Plan (IMP). The objective of the IMP is to describe the specific procedures to address potential adverse effects associated with the construction and operation of the Project on peripatus, rhytid snails and kauri snails (if present) through salvage and relocation. The IMP shall be prepared by a suitably qualified and experienced ecologist and shall include:

In relation to peripatus:

- a Timing of works;
- b Identification of decaying logs (high quality peripatus habitat) that can be relocated. A minimum of 10 logs or 10% of available and moveable decaying logs shall be relocated; and
- c Relocation methods, including transfer methods and selection of appropriate native forest relocation site(s).

In relation to snails:

- a Timing of the works;
- b A description of salvaging methods; and
- c A description of relocation methods, including transfer methods, relocation site(s) selection and pest control.

Copies of any Department of Conservation permits shall be attached to the plan.

Biosecurity

- 59 All vegetation, soil, and other material from within a “kauri contamination zone” (defined as 3 x the radius of the canopy dripline of any kauri tree) must remain on site or be disposed of within the landfill.
- 60 All footwear, clothing, tools, vehicles and equipment used on site must be cleaned of all soil, vegetation, or other material that has, or may have, come from a “kauri contamination zone” must be thoroughly washed with Sterigene (or other suitable agent) on entry and exit from the site, on every occasion, to avoid the spread of kauri dieback (*Phytophthora agathidicida*).

PART C - LANDFILL OPERATIONS

- 61 The consent holder shall notify Auckland Council of the Landfill Commencement Date at least 30 working days prior to the Landfill Commencement Date.

Hours of operation

- 62 The hours of operation shall be:
- a 5.00am to 10.00pm for the working face on all days. Operation of the working face includes all tipping operations and daily opening and closing works that involve the use of landfill machinery, including machinery used to remove or place daily cover, but does not include the bin exchange area.
 - b 24 hours a day, 7 days a week for the bin exchange area.
 - c 7.00am to 8.00pm Monday to Saturday for stockpiles outside of the landfill valley.
 - d 6.00am to 8.00pm Monday to Sunday for seasonal construction.

Site access

- 63 The landfill, including the bin exchange area, shall not be open to the public.
- 64 Entrance gates across the access to the landfill shall be provided and locked outside the specified hours of operation.
- 65 There shall be no queuing of vehicles accessing the site out on to State Highway 1 at any time.

Refuse Placement

- 66 Refuse placement shall include the following measures:
- a The working surface of the daily refuse cell shall be kept to a practicable minimum and shall not exceed 80 metres by 80 metres (excluding the open area of any inert material).
 - b Daily cover shall be removed by cutting windows through the previous layer of daily cover before refuse placement at the start of each day.
 - c Stormwater diversion berms shall be formed to prevent surface stormwater running into the current working area.

Daily cover

- 67 Daily cover shall be placed over the entire working face (excluding areas of inert waste) by the end of each operating day and no refuse shall remain exposed overnight. Daily cover shall be 150 mm thickness or more of soil, but may also be one of a number of non-soil alternative daily cover (ADC) options of an appropriate thickness where it can be demonstrated that they achieve a comparable level of control with respect to discharges of odour or dust to air, vermin, birds, litter, and visual effects. An equivalent alternative daily cover may be used with the prior certification of the Auckland Council.

Litter

- 68 Effective procedures shall be implemented to control litter. In particular the following measures shall be taken:
- a Best practicable options shall be used in the vicinity of the working face in order to control windblown litter;
 - b Regular patrols (approximately weekly) shall be conducted to identify and pick up wind-blown litter within the landholding;

- c Any trucks delivering waste to the landfill shall be covered if there is any potential for litter leaving the trailer.
- 69 Waste shall be transported to the landfill as follows:
- a Municipal waste in sealed bins;
 - b Other waste, including C&D waste and any fill, which may create dust or windblown debris, shall be covered;
 - c C&D waste and other materials that are non-dusty and non-odorous is not required to be covered but shall be contained within the truck/trailer.

Lining system

- 70 The lining system for the landfill on both the base and side slopes shall, as a minimum, comprise one of the following two lining systems:
- a Type 1 Lining system (from top to bottom)
 - 300 mm layer of leachate drainage material
 - Protection geotextile
 - 1.5 mm HDPE geomembrane
 - 600 mm compacted soil (clay) with a coefficient of permeability $k < 1 \times 10^{-9}$ m/s
 - b Or Type 2 lining system
 - 300 mm layer of leachate drainage material
 - Protection geotextile
 - 1.5 mm HDPE geomembrane
 - Geosynthetic clay liner (GCL)
 - 600 mm compacted soil with a coefficient of permeability $k < 1 \times 10^{-8}$ m/s
 - c The Consent Holder may use an alternative lining system demonstrated to provide equivalent or better performance compared with the specified systems. Use of an alternative lining system shall be subject to written approval of the Peer Review Panel and Auckland Council.
 - d Where the bottom of the lining system is less than 2 m vertically above fractured rock, the rock shall be sub-excavated by 2 m and replaced with compacted inorganic soil to provide an additional attenuation layer.
- 71 A Type 2 lining system shall be used on the bottom of the landfill and on sidewalls up to the first bench.
- 72 The leachate drainage system shall be designed to achieve leachate head not in excess of 300 mm at any point on the geomembrane liner.
- 73 A double layer of HDPE geomembrane shall be provided underneath leachate sumps.
- 74 The consent holder shall retain an independent testing organisation to the satisfaction of the PRP to monitor the construction of the lining system including the subgrade and to undertake quality assurance (QA) of all components of the lining system and their installation. QA shall include oversight of the testing undertaken by the contractor, regular observation of lining system placement and testing, and a review of all quality control documentation produced by the supplier and contractor. Items to be observed and reviewed as part of the QA process is to include:
- a Inspection of the subgrade.
 - b All specified manufacturing QA documentation and/or independent testing of the geosynthetic materials supplied.
 - c Specifications of the standards to be achieved

- d All compaction testing associated with installing the compacted soil liner (strength, density, moisture content, air voids).
- e Permeability testing of the placed compacted soil layer.
- f Thickness of the layers.
- g Approval of the clay surface for placing any geosynthetic liner components.
- h Approval of the geosynthetic liner placement methodology and panel layout.
- i Observation of placing, welding and testing of geosynthetic liner to include:
 - Shear and peel testing of test weld samples at the commencement of each day.
 - Shear and peel testing of destructive test samples.
 - Air pressure testing of all dual track fusion welds.
 - Vacuum box or spark testing of all extrusion welds.
 - Visual inspection of the completed surface.
- j Review of all lining system construction records.
- k Observation of placement of leachate drainage material.

On completion of each stage of lining system installation, a report is to be prepared by the independent testing organisation and shall include all of the test results, a description of the observations undertaken and certification that the lining system had been installed in accordance with the specification. This report is to be submitted to the Peer Review Panel (PRP) who will make recommendations to Auckland Council on whether the lining system has been installed in accordance with the specifications. The consent holder shall obtain certification from Auckland Council of each stage of lining system construction prior to any waste being placed in the area.

Peer Review Panel

- 75 The consent holder shall establish and maintain a Peer Review Panel (PRP) at its cost. The objective of the PRP will be to monitor the design and construction of the landfill in order to confirm that these activities are consistent with the requirements of the conditions of these consents and good practice and that the work is undertaken by appropriately qualified personnel.
- 76 The PRP shall consist of a maximum of five members and a minimum of two members, all of which must have appropriate experience and qualifications. All members are to be appointed by the consent holder following consultation between the consent holder and Auckland Council.
- 77 The consent holder shall provide a report from the PRP at six monthly intervals ending 31 March and 30 September each year to the Auckland Council, on the following matters as relevant to each report period:
 - a final design;
 - b construction undertaken;
 - c lining system performance and design of any new lining system installed;
 - d more frequent reporting or special reports shall be made as determined by the Auckland Council or the PRP.
- 78 The consent holder shall ensure that records are kept of any site investigations for any engineering works associated with all consents granted for the landfill operation and that these records are forwarded monthly to the PRP.

Waste Acceptance

- 79 Material accepted into the landfill shall be limited to non-hazardous commercial wastes, non-hazardous industrial wastes, residential wastes, construction and demolition debris, contaminated soils, sludges from wastewater treatment plants with a solids content greater than 20% and site-generated sludges. Wastewater treatment plant sludges with a solids content less than 20% may be accepted if the chemical and physical stabilisation processes ensure that the sludges contain no free liquids as determined by the paint filter test at the point of loading into trucks going direct to the landfill.
- 80 The landfill shall not accept any hazardous wastes as defined in USEPA Subtitle C [US Code of Federal Regulations Title 40 Volume 18 Parts 260 to 295 and in particular Part 261 - Identification and Listing of Hazardous Waste], or prohibited waste as defined by WasteMINZ [Technical Guidelines for Disposal to Land, Waste Management Institute New Zealand, August 2018], with the modifications shown in the application Technical Report by T+T titled 'Auckland Regional Landfill, Waste Acceptance Criteria', May 2019. The landfill must keep sufficient records to show that any waste accepted for disposal is not hazardous.
- 81 Leachate and site-generated sludges from the operation of any leachate evaporator unit, cesspits and drains on the site may also be disposed of into the landfill in areas and by procedures and within volumes and/or weight limits approved by the Auckland Council and described in the LMP (refer to Conditions 148 - 154).
- 82 If any waste load is rejected at the gatehouse or the working face because it is hazardous, Auckland Council is to be notified within 48 hours. The consent holder shall inform the Auckland Council of details of the generator and transporter of any hazardous waste that has been refused entry to the landfill.
- 83 Pre-acceptance testing is required for all special wastes and likely contaminated soils whose contaminant concentrations are not known.
- 84 Any new special waste with potential ecotoxicity shall not be accepted unless the customer can provide the consent holder with test results that show that the waste meets the TLCP limits or the total concentration limits.

The requirements for TCLP testing are:

- a The testing must be done by an accredited laboratory.
- b The sample size must be sufficient to effectively characterise the material.
- c The sampling will typically include worst-case and average concentrations, but this is disposer-specific.

Operational noise

- 85 Trucks accessing the bin exchange area between 7pm-7am are to be fitted with a broadband reverse alarm.
- 86 Any noise emitted from activities authorised by this consent shall comply with the following noise limits at the notional boundary of any dwelling existing as at the date of granting consent (excluding any houses on land owned by the consent holder):

Time period	Time period Noise limit
0700 – 2200 hours Monday to Saturday 0900 - 1800 hours Sunday	55 dB LAeq
At all other times	45 dB LAeq 75 dB LAFmax

- 87 Noise levels shall be measured and assessed in accordance with New Zealand Standards NZS 6801:2008 “Acoustics - Measurement of Environmental Sound” and NZS 6802:2008 “Acoustics - Environmental Noise”.
- 88 Noise measurements shall be carried out:
- a Within one month of the initial operation of:
 - The Working Face
 - The Clay Pit
 - Stockpile 1
 - Stockpile 2
 - Bin Exchange area
 - b Within three months of commencing operations of any item of permanent fixed plant, including any landfill gas utilisation plant, landfill gas powered electricity generator, leachate treatment plant, leachate evaporator or flare, that brings the total power (adding power consumption or power output whichever is the greater for each item), ignoring silent heat loss, to 3 MW more than that at the time of any previous noise monitoring.
- 89 The Consent Holder must submit to Council a report by a suitably qualified acoustic engineer outlining the measured noise levels at the notional boundaries of the nearest residential dwellings existing as at the date of granting consent with all the plant operating that can reasonably be operated together at the instances described in Condition 88.
- 90 Prior to the installation of any new plant on site (e.g. generators, leachate evaporators, blowers and flares) within 1km of a dwelling existing at the time of granting of this consent (excluding dwellings within the WMNZ landholdings), the potential noise levels at the notional boundary of those dwellings shall be calculated, including the simultaneous operation of the new and existing plant that would reasonably be expected to operate together. Once the new plant is operational, the noise emissions shall be measured to confirm compliance with noise limits in Condition 86. If non-compliance with the noise limits of Condition 86 is identified, noise mitigation measures are to be implemented as soon as practical to achieve compliance. Once compliant noise emissions are confirmed, the process shall be documented and a report shall be submitted to Auckland Council.

Lighting

- 91 Lighting of the roundabout shall comply with the relevant NZTA standards for lighting on State Highways.
- 92 Prior to any permanent lighting being established within the WMNZ landholding, the consent holder shall provide a finalised lighting design plan to Auckland Council that demonstrates that:
- a The proposed lighting meets the relevant permitted standards in Chapter E24 of the Auckland Unitary Plan.
 - b All permanent lighting is downward facing, is not located on the ridgelines (unless there is no practicable alternative or it is required for safety reasons), and will have lighting shields (where appropriate).
- 93 Within 2 months after installation of lighting, the consent holder shall provide a report from a suitably qualified lighting expert confirming that all lighting has been installed in accordance with the approved finalised lighting design plan and complies with the permitted standards in chapter E24 of the Auckland Unitary Plan.

- 94 Lighting within the site shall not be obtrusive and shall meet lighting standards (as outlined in Condition 92) so that glare and light spill is generally confined to the site to minimise sky glow effects on the surrounding environment.

Air quality

- 95 There shall be no burning of waste material on site.

Dust

- 96 Beyond the boundary of the site there shall be no dust caused by discharges from the landfill operations on the site which, in the opinion of a suitably qualified and experienced enforcement officer, is noxious, offensive or objectionable
- 97 Effective dust control procedures shall be implemented at the site including, but not limited to:
- a Watering of unpaved internal access and manoeuvring areas during dry periods.
 - b Maintenance of all access and manoeuvring areas to the satisfaction of the Auckland Council in order to reduce the creation of dust and to prevent the deposition of significant dirt or other material onto public roads.
 - c Maintenance of a permanent water supply on the site to control dust at the working face, to dampen down unsealed access roads, and for fire control.

Landfill gas

- 98 The Consent Holder shall install and operate a gas extraction system in a manner which ensures that the rate of extraction of landfill gas is maximised, while minimising the risk of landfill fire due to over extraction.
- 99 All extraction wells shall be connected to the gas extraction system as soon as practicable and in any case not longer than 12 months after placing wastes within the radius of influence of the wells. Passive flares with flame arresters shall be allowed to burn the gas venting from the wells prior to connection to the gas extraction system.
- 100 The gas extraction and treatment system shall be restored as soon as practicable in the event of a malfunction or fault. The Consent Holder shall maintain a standby diesel generator or equivalent on site for the purposes of restarting gas extraction blowers as soon as possible in the event of a mains power failure. The procedures for reducing emissions to air during a mains power failure including the operation of the generators, flare and standby diesel generator and during routine maintenance shall be documented in the Landfill Gas Management Plan (LGMP) (refer to Condition 156).
- 101 All extracted landfill gas shall be combusted in a flare(s) or generator(s) in accordance with the following requirements:
- a Any landfill gas flare(s) shall comply with the requirements of the Resource Management Act (National Environmental Standards for Air Quality) Regulations 2004 for a principal flare, and shall have the following minimum specifications:
 - flame arrester and backflow prevention devices, or similar equivalent system,
 - continuous automatic ignition system;
 - automatic isolation systems to ensure that there is no discharge of unburnt landfill gas from the flare in the event of flame loss;
 - minimum temperature of 750 °C and retention time of 0.5 seconds;
 - a permanent temperature indicator at half a diameter from the top of the flare with a visual readout at ground level.
 - Adequate sampling ports to enable emissions testing to be undertaken; and

- Provision for safe access to sampling ports while any emission tests are being undertaken
 - b The landfill gas powered generator shall comply with specifications a(i) and a(iii) above.
 - c Any landfill gas emergency flare shall comply with specifications a(i) to a(iii) above.
- 102 No more than 12 generators shall be operated at any one time for the purposes of landfill gas combustion.
- 103 There shall be no visible emission, other than water vapour, light, heat haze, or steam, from a landfill gas destruction device.
- 104 Each generator engine shall be tuned at least once every six months to comply with a maximum concentration of 550mg/m³ NO_x in the exhaust gas.
- 105 The concentration of methane at the surface of landfill areas with intermediate or final cover shall not exceed 0.5% by volume.
- 106 The concentration of methane in monitoring probes outside the landfill footprint shall not exceed 5% by volume.
- 107 The residual nitrogen content of landfill gas in all extraction wells shall not exceed 20% by volume.

Monitoring

- 108 A walkover site inspection within the landfill footprint shall be undertaken no less frequently than weekly. Any evidence of actual or potential landfill gas leaks, such as odour, cracks in the landfill surface, gas bubbles, leaks in the gas extraction system or vegetation damage shall be investigated. Where necessary remedial action shall be undertaken as soon as practicable to minimise fugitive gas discharges.
- 109 A Flame Ionisation Detector (FID) or equivalent shall be used to carry out surface methane emission monitoring over the entire surface of the landfill excluding the working face at least once every three months.
- 110 If monitoring carried out in accordance with Condition 109 demonstrates that the surface methane gas concentration limit specified in Condition 105 is exceeded, then remedial action shall be carried out and the concentrations re-tested within 14 days. If this is not practicable, the Consent Holder shall obtain the approval of Auckland Council for a proposed programme of remedial action, including a timetable, within 14 days of the exceedance. The proposed programme shall be implemented to the satisfaction of Auckland Council within the proposed time period.
- 111 Methane concentrations shall be measured and recorded using hand-held landfill gas analysis instruments on a monthly basis in each of the monitoring probes outside the landfill footprint to demonstrate compliance with Condition 106.
- 112 Landfill gas shall be monitored at each extraction wellhead or, if more appropriate, at manifold points, on a monthly basis. Monitoring shall be carried out using hand-held landfill gas analysis instruments. The following parameters shall be measured and recorded:
- a Gas flowrate (m³/hour);
 - b Composition (methane (%v/v), oxygen (%v/v), carbon dioxide (%v/v), carbon monoxide (ppm), hydrogen sulphide (ppm));
 - c Residual nitrogen (% v/v) shall be calculated as the balance of gas measured in clause (b) to demonstrate compliance with Condition 107;
 - d Gas temperature (°C);
 - e Ambient temperature (°C);
 - f Gas pressure (mb);

- g Barometric pressure (mb).
- 113 The total LFG flow rate (m³/hour) shall be monitored and recorded continuously at the Renewable Energy Centre. The flow meter shall be calibrated annually.
- 114 Landfill gas (blended) shall be monitored at the Renewable Energy Centre on a six monthly basis. The following parameters shall be measured and recorded:
- a Gas flowrate (m³/hour);
 - b Composition (methane (%v/v), oxygen (%v/v), carbon dioxide (%v/v), carbon monoxide (ppm));
 - c Gas temperature (°C);
 - d Ambient temperature (°C);
 - e Gas pressure (mb);
 - f Barometric pressure (mb);
 - g Hydrogen sulphide (ppm);
 - h Total non-methane organic compounds (ppm).
- 115 Emission testing shall be undertaken on the generator exhaust stacks to demonstrate compliance with condition 104 and determine sulphur dioxide emission concentrations. Emissions shall be averaged over all test results measured for each pollutant, from each generator tested. These tests shall:
- a Be conducted for nitrogen oxides and sulphur dioxide;
 - b Be conducted within one year after the first generator is installed and thereafter at least once every three years. Once there are two or more generators installed, at least two representative generators shall be tested on each sampling occasion. Once there are four or more generators installed, different generators shall be tested on each consecutive sampling occasion;
 - c Be conducted in accordance with:
 - ISO 7935:1992, ISO 7934:1998, USEPA Method 6 or 6C (sulphur dioxide);
 - ISO 10849:1996 or US EPA Method 7E (nitrogen oxides); and/or
 - other equivalent methods to the satisfaction of the Auckland Council
 - d Be carried out by a company with International Accreditation New Zealand (IANZ) accreditation for the method(s) required by (d) above;
 - e Be conducted during normal process conditions that will give rise to maximum emissions;
 - f Comprise not less than three separate samples for each type of emission test undertaken at each generator.
- 116 On-site weather conditions shall be measured and recorded at least every 30 minutes. The parameters measured shall include:
- a wind velocity
 - b wind direction
 - c barometric pressure
 - d rainfall
 - e temperature
- 117 The Consent Holder shall maintain a log of all monitoring data, inspections, investigations and actions taken with regard for landfill gas in accordance with Conditions 108-115. The log shall be made available to the Auckland Council upon request.

- 118 The Consent Holder shall submit a summary of landfill gas monitoring results to Auckland Council at the end of each year. The summary shall include;
- a the average volume of landfill gas extracted (m³/hr);
 - b a summary of monitoring undertaken;
 - c a comparison of the actual landfill gas production rate with that predicted. Revised predictions shall be included where significant discrepancies are identified, as well as an explanation for the discrepancies; and
 - d an estimate of average waste composition.

Leachate evaporator

- 119 The low temperature leachate evaporation unit and all associated ducting and pipe work shall be maintained in good condition and be free of gas or liquid leaks.
- 120 The temperature of leachate in the low temperature leachate evaporation unit shall not exceed 95°C. The temperature shall be continuously monitored and recorded. The records shall be marked with the correct time and date.

Odour

- 121 Beyond the boundary of the site, there shall be no odour caused by discharges from the landfill which, in the opinion of a suitably qualified and experienced enforcement officer when assessed in accordance with the Best Practice Guide for Assessing and Managing Odour' (Ministry for the Environment, 2016) is noxious, dangerous, offensive or objectionable.
- 122 Effective odour control procedures shall be implemented at the site including, but not limited to:
- a Keeping the working surface of the daily refuse cell to a practicable minimum in accordance with condition 66.
 - b Applying daily cover in accordance with condition 67.
 - c Managing known odorous wastes in accordance with specific procedures in the Landfill Management Plan, including but not limited to:
 - Waste acceptance and pre-treatment criteria
 - Restrictions on the hours of delivery
 - Procedures for excavations and immediate covering of placed waste
 - d Ensuring equipment and materials for application of odour neutralising sprays are available for use, if required.

Landscape and visual mitigation

- 123 All earthworks areas, including soil stockpiles, not intended to be disturbed for more than 4 months shall be grassed, hydroseeded or otherwise planted.
- 124 Any areas of the landfill which are no longer required for filling activity, and have reached the final contour and have final cover placed, shall be reseeded or planted with suitable groundcover species as outlined in the report titled 'Landscape and Visual Assessment' Dated May 2019 by Boffa Miskell Ltd and as specified in the Landscape Mitigation and Management Plan required by Condition 177. The timeframe of this planting will be determined by the requirements and restraints of gas extraction, waste settlement and optimum planting seasons but should be within 12 months of completion of the final cover.
- 125 The final landform and restoration of the landfill cap and associated works shall be in accordance with the Landscape Mitigation and Management Plan required by Condition 177.

- 126 Final contouring of earthworks, including stockpiles and landfill cap shall be contoured to reflect natural or existing adjacent ground contours as far as practicable within engineering constraints.
- 127 The primary (main) colour or colours of all external buildings, roofs and structures shall be in the range of greys, charcoal, dark greens and browns with a reflective value no more than 40%. Non-reflective glass shall be used in glazing.

Erosion and Sediment control

- 128 The operational effectiveness and efficiency of all erosion and sediment control measures required by the ESCPLO provided in accordance with Condition 157 shall be maintained throughout the duration of earthworks activity, or until the area of works is permanently stabilised against erosion.
- 129 No bulk construction earthworks shall be undertaken between 30 April and 1 October in any year, without the submission of a 'Request for winter works' to Auckland Council. All requests must be renewed annually, and must be submitted at least 10 days prior to 30 April each year of proposed winter works. No works shall occur until written approval has been received from Auckland Council.
- 130 Prior to any earthworks commencing each October or later within each summer construction season, a certificate signed by an appropriately qualified and experienced person shall be submitted to Auckland Council, to certify that the erosion and sediment controls have been constructed in accordance with the approved ESCPLO and Auckland Council Guideline GD05.

ITA activities

- 131 The Consent Holder shall ensure that each ITA activity within the landholding is operated and managed in accordance with the ITAMP required by Condition 161 for the duration that the ITA continues.
- 132 The Consent Holder shall prepare and provide a copy to Auckland Council of a Hazardous Substances Management Plan (HSMP) for the management and storage of any hazardous substance that is stored or used at the site. The HSMP shall be implemented for the duration of hazard substances being stored on site.

Spill prevention

- 133 All machinery shall be operated in a way, which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during 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 any watercourse. All mixing of chemicals for construction purposes including grouts, additives and adhesive products shall be carried out outside the 2 year ARI floodplain area such that any spillage can be contained so it does not enter any watercourse. Provisions for being prepared for any spill shall be described in the Site Emergency Management Plan required by Condition 155.

Stormwater Treatment Devices

- 134 The stormwater treatment devices shall be designed to treat the runoff from the 90th Percentile Storm Event for water quality treatment.
- 135 The stormwater treatment devices shall be designed to hold and release the runoff volume from the 95th Percentile Storm Event for stream erosion.
- 136 The consent holder may make modifications to the stormwater systems and treatment devices shown in the Stormwater and Industrial and Trade Activities Report by Tonkin + Taylor Ltd, date May 2019, submitted with the consent application, including the use of alternative

Council approved stormwater treatment devices, subject to the prior approval of Auckland Council.

- 137 Wheel washing facilities shall be provided and shall be used by all vehicles that have travelled off the sealed road/hardstand areas, prior to the vehicle departing the site.
- 138 At least 20 working days prior to construction of the proposed stormwater systems and treatment devices, the Consent Holder shall submit a design report, including detailed engineering drawings, specifications, and calculations for the stormwater treatment devices. The details shall include:
- a Confirmation that the design achieves the requirements of Conditions 134-141;
 - b Contributing catchment size and boundaries and impervious percentage;
 - c Specific design and location of stormwater treatment devices; and
 - d Supporting calculations for stormwater treatment devices, including capacity and suspended solid removal efficiency.
- 139 The maximum design rate of discharge from the stormwater ponds system shall be no more than the following:
- 5.8 m³/s for the 2 year ARI;
 - 11.7 m³/s for the 10 year ARI; and
 - 21.9 m³/s for the 100 year ARI.
- 140 All structures authorised by this consent including earth fill dams, stormwater ponds, spillways, pipes and permanent erosion protection shall be maintained by the consent holder to ensure that they perform at all times to the standards specified in this consent.
- 141 Stormwater discharged from the site boundary to tributaries of the Hoteo River shall contain no more than 30 g/m³ of suspended solids in 95% of samples in any consecutive twelve month period where one sample is one half-hourly reading in NTU units of a nephelometric turbidity meter converted to its equivalent reading in g/m³ units of suspended solids.

Leachate monitoring

- 142 The consent holder shall continuously ("continuously" shall mean at intervals of not more than 15 minutes) monitor the flow into the stormwater ponds for electrical conductivity (mS/m), and the discharge for the following:
- Flow rate; L/min
 - Electrical conductivity; mS/m
 - Temperature °C
- 143 If continuous monitoring results obtained at the pond outlet show electrical conductivity has exceeded the approved trigger level, a grab sample of the stormwater shall be taken at the point of discharge (outlet) and analysed for the following parameters.
- Temperature °C
 - pH;
 - Total Ammoniacal Nitrogen; gN/m³,
 - COD; and gO/m³,
 - Chloride gCl/m³.
- 144 If the results of samples obtained from stormwater ponds in accordance with Condition 142 and tested for the parameters listed in Condition 143 show that leachate contamination is occurring (as defined in the Leachate Monitoring and Contingency Plan (LMCP) required by Conditions 174-176), then discharge from the stormwater ponds outlet shall be ceased immediately. The following shall then occur:

- a Further testing of the stormwater shall be undertaken to characterise the contamination;
 - b Downstream testing shall be conducted to determine whether any contamination has been discharged from or escaped the stormwater ponds;
 - c An investigation shall be undertaken to determine the source of the contamination, and measures shall be put into place to prevent further contamination;
 - d Discharges of stormwater from the relevant treatment device shall not recommence until electrical conductivity at the point of discharge no longer indicates that contamination is occurring.
- 145 Where any leachate contamination or other pollutants associated with the consent holder's operations escapes to a natural surface water body, the consent holder shall:
- a Undertake appropriate remedial action immediately as prescribed in the LMCP.
 - b Immediately notify the Auckland Council of the escape of leachate or other pollutants.

Environmental reporting

- 146 An Annual Report evaluating the site's environmental performance for the preceding year shall be forwarded annually to Auckland Council from a date that is within 12 months from the landfill commencement date, and thereafter annually.
- 147 Advice Note: The month of submission of the Annual Report shall be agreed with Auckland Council
- 148 The Annual Report shall include but not be limited to:
- a all aspects of the performance of ITAMP, and LMCP (Condition 161 and 174) relating to this consent;
 - b a summary of all revisions and revised sections of the ITAMP and LMCP;
 - c summary details of all inspections and maintenance of the stormwater treatment devices for the preceding 12 months;
 - d details of the person(s) or body responsible for maintenance of site and the organisation's structure supporting this process;
 - e results and analysis of the preceding 12 months' stormwater groundwater, macroinvertebrate, periphyton and macrophyte monitoring, along with an interpretation of those results and suggestions for improvement to the site operations; and
 - f records of any spills or incidents which occurred within the previous 12 months and the response which was undertaken.

PART D - LANDFILL MANAGEMENT PLAN

- 149 The consent holder shall develop and implement an overall Landfill Management Plan (LMP) for the duration of this consent. The LMP shall be held on site at all times. The overall objective of the LMP shall be to set out the practices and procedures to be adopted to achieve compliance with the conditions of consent.
- 150 At least six months prior to the landfill commencement date (acceptance of waste at the site), the LMP shall be submitted to the Auckland Council for certification, to confirm that the activities undertaken in accordance with the LMP will achieve the objectives of the Plan and compliance with the relevant consent conditions.
- 151 The LMP shall address how the following matters will meet any limits or restrictions set out by the consent conditions:
- Height and timing of visual screen bund construction.
 - The stages and order of landfill development.
 - Construction and testing of the lining system.
 - Gas, leachate and water management.
 - Types of waste to be accepted.
 - Waste acceptance control and methodology of monitoring type of refuse accepted.
 - Restricted and prohibited materials.
 - Methods of placing refuse.
 - Methods of handling special wastes, including biosolids.
 - Landfill working face and cover management.
 - The width of the working surface in relation to the rate of refuse deposition.
 - Noise and vibration management.
 - Nuisance control procedures.
 - Dust management.
 - Pest and weed control.
 - Monitoring procedures.
 - Emergency procedures.
 - Contingency plans.
 - Odour management, including best practice methods to manage odour.
 - Complaints response procedure for odour effects.
 - The method for odour field inspections.
 - Monitoring and records.
 - Traffic management, including means by which the total number of vehicle movements to and from the State Highway 1 can be minimised.
 - Final post settlement height, shape and contours of the land, in accordance with the plans.
 - After-care.
- 152 The LMP shall also include the following management plans, each of which is described in later conditions of this consent:
- Bin Exchange Area Management Plan (BEAMP)
 - Site Emergency Management Plan (SEMP)
 - Landfill Gas Management Plan (LGMP)
 - Erosion and Sediment Control Plan - Operations (ESCPO)

- ITA Management Plan (ITAMP)
- Stormwater Operation and Maintenance Plan (SOMP)
- Stormwater Monitoring and Contingency Plan (SMCP)
- Groundwater Monitoring and Contingency Plan (GMCP)
- Leachate Monitoring and Contingency Plan (LMCP)
- Landscape Mitigation and Restoration Plan (LMRP)
- Ecological Enhancement and Restoration Plan (EERP)
- Pest Control Plan - Landfill Operations (PMPLO)
- Ecological Enhancement Pest Control Plan (EEPCP)
- Closure and Aftercare Management Plan (CAMP) (to be prepared towards the end of the landfill's life)

153 The LMP, when approved, shall be adhered to at all times.

154 The LMP shall be subject to review annually from the date the landfill begins placement of waste (unless the requirement for review is waived by the Auckland Council), such review to include assessment of the performance of the practices and procedures specified in it. Any amendment required by the Auckland Council arising out of this review or requested by the PRP arising out of their role in design and construction shall be incorporated into the LMP without delay. The consent holder shall lodge a copy of the approved LMP with the Auckland Council and a hard copy shall be made available at the Landfill during office hours for use by the CLG. Auckland Council may waive the annual review requirement for that year if no amendments are required by the PRP and Auckland Council.

Bin Exchange Area Management Plan

- 155 The consent holder shall prepare and maintain a Bin Exchange Area Management Plan (BEAMP). The BEAMP shall describe the operations of the bin exchange area, including demonstrating how compliance with the conditions of this consent will be achieved. The plan shall include (if appropriate by way of reference to other plans described in these conditions):
- a Methods for recording time of bin arrival and exit from the bin exchange to ensure that bins containing waste will be taken to landfill within 2 working days;
 - b Measures to control and manage the bin exchange area in the event of a forecast extreme weather event;
 - c Controls on traffic movements into and out of the bin exchange area, including measures to restrict public/non-permitted access to the bin area (and means to direct public/non-permitted users back to the public road SH1);
 - d Means to prevent queuing onto SH1 from the Bin Exchange Area and maintain the safe and effective operation of the State Highway for all users;
 - e Methods and recommended actions to be implemented should any queuing generated by the Bin Exchange Area extend onto Landfill Access Road, to ensure queuing onto SH1 is avoided;
 - f Measures to manage noise in the area, including restrictions on reversing alarms;
 - g Appropriate cross references to measures in other management plans applying to the Bin Exchange Area;
 - h Methods to confirm bins are sealed and contained.

Site Emergency Management Plan

- 156 The consent holder shall prepare and maintain a Site Emergency Management Plan (SEMP). Advice of the existence of this Plan, and information on how to obtain a copy, shall be

provided by the consent holder to the Auckland Council and other appropriate organisations such as Fire and Emergency New Zealand and the District Health Board. The SEMP shall include procedures to manage the risk from and contingency measures for:

- Landfill fire
- Wildfire
- Forecast extreme weather event
- Flooding

Landfill Gas Management Plan

157 The Consent Holder shall maintain a Landfill Gas Management Plan (LGMP), as part of the Landfill Management Plan. The purpose of the LGMP is to record all management and operations procedures, methodologies, and contingency and emergency plans necessary to comply with the conditions of this consent. The LGMP shall include the following information:

- Landfill Gas System – Design and Construction
- Landfill Gas System – Operation
- Landfill Gas Monitoring
- Landfill Gas Contingency

Erosion and Sediment Control Plan - Landfill Operations

158 An Operational Erosion and Sediment Control Plan (ESCPO) shall be prepared by a suitably qualified person in general accordance with Auckland Council Guideline GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, and submitted to Auckland Council for certification. The purpose of the ESCPO is to set out the measures to be implemented to minimise erosion and the discharge of sediment beyond the boundaries of the site.

159 The ESCPO shall include the following information as appropriate to the scale, location and type of earthworks:

- a Drawings showing location and quantities of earthworks, contour information, catchment boundaries and erosion and sediment controls (location, dimensions, capacity);
- b Supporting calculations for erosion and sediment controls;
- c Catchment boundaries and contour information;
- d Details of construction methods to be employed, including timing and duration;
- e Dewatering and pumping methodology (if applicable);
- f Details of the proposed water treatment devices (if applicable);
- g Specific location of stockpile areas (if applicable);
- h A programme for managing exposed area, including progressive stabilisation considerations;
- i Roles and responsibilities under the ESCPO and identification of those holding roles including the suitably qualified person; and
- j Monitoring, maintenance and record-keeping requirements.

160 The Consent Holder shall carry out monitoring in accordance with the ESCPO and shall keep records detailing:

- a The monitoring undertaken;
- b The erosion and sediment controls that required maintenance;
- c The time when the maintenance was completed; and

- d Areas of non-compliance with the erosion and sediment control monitoring plan (if any) and the reasons for the non-compliance.

This information shall be made available to Auckland Council upon request.

- 161 Prior to the commencement of earthworks each October for the life of this consent, the consent holder shall undertake an annual review of the ESCP, and re-submit for certification to Auckland Council if works are proposed in a new area of the landholding or to re-excavate an area which has been vegetated on a temporary basis.

Industrial and Trade Activities Management Plan

- 162 The consent holder shall prepare and submit a Stormwater and Industrial and Trade Activities Management Plan(s) (ITAMP) to Auckland Council. The purpose of the ITAMP is to set out the Best Practicable Option (BPO) approach to avoid, remedy or mitigate potential adverse effects arising from stormwater management and the ITAs on site, including treatment devices, operational procedures and management systems.
- 163 The ITAMP shall include the following:
 - a Site activities, layout and drainage plans, including an up-to-date and accurate site drainage plan showing the location of all stormwater treatment devices on site and the final discharge point(s) of the site stormwater system;
 - b Identification of potential contaminants associated with the activities conducted on the site(s), methods to avoid, control and treat discharges of these from the site(s), and methods to manage environmental risks from site activities as far as practicable;
 - c Identification of hazardous substances on site;
 - d an emergency Spill Response Plan (SRP) (which includes the provision that all spills over 20 litres, or any spill of Environmentally Hazardous Substances that has entered the stormwater system, a water-body or has contacted unsealed ground, shall be reported immediately to the Auckland Council's 24 Hour Pollution Hotline (09-377-3107));
 - e Operation and maintenance procedures for treatment devices, which may be contained in a separate plan cross referenced in the ITAMP as required by Condition 164 (design report for stormwater treatment);
 - f Roles and responsibilities associated with the ITAMP;
 - g Methods for providing and recording staff training on the ITAMP;
 - h Stormwater Monitoring and Contingency Plan (SMCP) (as described in Condition 168);
 - i a Stormwater Operation and Maintenance Plan (SOMP) as outlined in Condition 164;
 - j A programme for auditing site performance against the ITAMP provisions; and
 - k Reporting and review of the ITAMP.
- 164 The site shall be operated and managed in accordance with the ITAMP to ensure the risks from the site are managed appropriately.

Stormwater Operation and Maintenance Plan

- 165 A Stormwater Operation and Maintenance Plan (SOMP) shall be provided to Auckland Council at least three months prior to Industrial and Trade Activities occurring on site. The SOMP shall set out how the stormwater management system is to be operated and maintained so that adverse environmental effects are minimised or mitigated. The plan shall include:
 - a Details of who will hold responsibility for maintenance of the stormwater management system and the organisational structure which will support this process;
 - b A monitoring programme to determine maintenance frequency;

- c A programme for regular maintenance and inspection of the stormwater management system;
 - d A programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices;
 - e A programme for post storm inspection and maintenance;
 - f A programme for inspection and maintenance of the outfalls;
 - g General inspection checklists for all aspects of the stormwater management system, including visual check
- 166 The stormwater management system shall be managed in accordance with the approved Stormwater Operation and Maintenance Plan.
- 167 Details of all inspections and maintenance for the stormwater management system, for the preceding three years, shall be retained, and shall be provided to Auckland Council on request, including:
- 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.
- 168 A final updated Stormwater Operation and Maintenance Plan shall be submitted for the approval of Auckland Council within 90 days of the commencement of this consent.

Stormwater Monitoring and Contingency Plan

- 169 At least 90 days prior to the commencement date, a final Stormwater Monitoring and Contingency Plan (SMCP), incorporating a Stormwater Monitoring Programme (SMP), to assess the ongoing adequacy of all water quality management practices shall be developed and submitted to Auckland Council for approval. The SMCP shall include, but not be limited to:
- a Sampling location for final discharge from the site stormwater treatment device outlets;
 - b Sampling locations from the surface water bodies within the site;
 - c Methods and procedures for water quality sampling;
 - d Monitoring parameters for analysis from the stormwater discharge points on a fortnightly basis and shall include:
 - pH
 - Temperature oC
 - Total Suspended Solids (TSS) mg/L
 - Alkalinity g CaCO₃/m³
 - Chloride gCl/ m³
 - Total ammonical Nitrogen g N/ m³
 - Electrical Conductivity (EC) mS/m m³
 - Dissolved Oxygen g O/ m³
 - e Monitoring parameters for analysis from the stormwater pond discharges and the receiving water downstream on a quarterly basis and shall include:
 - Temperature oC
 - Total heavy metals (dissolved copper, lead, Cadmium chromium, nickel and zinc) mg/L
 - Oil & grease mg/L
 - Chemical Oxygen Demand (COD) gO/ m³

- Total petroleum hydrocarbons mg/L
 - f Sampling location for discharges from the site wheel wash pond;
 - g Monitoring parameters for analysis from the wheel wash pond shall include:
 - pH mg/L
 - Total suspended solids (TSS) mg/L
 - Electric conductivity mS/m
 - Oil and grease mg/L
 - Temperature oC
 - Total ammonical nitrogen mg/L g N/ m³
 - h Trigger levels for each of the above parameters in Conditions 168.d and 168.e based on the relevant ANZECC Guidelines values, the baseline monitoring results, and the concentrations measured upstream prior to mixing.
 - i Proposed monitoring of macroinvertebrates, which shall occur at 6-monthly intervals, and of periphyton and macrophytes, which shall occur at 3 monthly intervals
 - j The methods and procedures for investigating and reporting stormwater discharge monitoring results to Auckland Council.
- 170 The SMP shall be implemented after the landfill commencement date.
- 171 Within 5 working days of receipt of sample results showing contaminants exceeding the agreed trigger levels:
- a an investigation shall be undertaken to determine why exceedances were detected and to identify any additional source controls or treatment required;
 - b the results of the investigation shall be reported to Auckland Council; and
 - c any additional structural or procedural controls proposed by the consent holder shall be approved by Auckland Council, in writing prior to their implementation.

Groundwater Monitoring and Contingency Plan (GMCP)

- 172 At least three months prior to the commencement date, a final Groundwater Monitoring and Contingency Plan (GMCP), incorporating a Groundwater Monitoring Programme (GMP), to assess the ongoing adequacy of all water quality management practices shall be developed and submitted to Auckland Council for approval. The GMCP shall include, but not be limited to:
- a Up-gradient and down-gradient groundwater monitoring bore locations and details;
 - b Methods and procedures for water quality sampling;
 - c Water levels and water quality in the groundwater monitoring bores shall be measured and recorded at quarterly intervals. Monitoring parameters for groundwater quality shall include:
 - soluble arsenic
 - cadmium
 - chromium
 - copper
 - lead
 - nickel
 - zinc
 - total petroleum hydrocarbons (TPH)
 - organochlorine pesticides (OCP), including DDT-compounds

- polycyclic aromatic hydrocarbons (PAH)
 - d Identified trigger levels for each of the above parameters. Trigger levels for contaminants not included in the schedule submitted with the application shall be developed with reference to the 95% trigger value for fresh water ANZECC Guidelines for water quality where applicable.
 - e The methods and procedures for investigating and reporting groundwater monitoring results to Auckland Council.
- 173 The GMP shall be implemented after the landfill commencement date.
- 174 Within 5 working days of receipt of sample results showing contaminants exceeding the agreed trigger levels:
- a an investigation shall be undertaken to determine why exceedances were detected and to identify any additional source controls or treatment required;
 - b the results of the investigation shall be reported to Auckland Council; and
 - c any additional structural or procedural controls proposed by the consent holder shall be approved by Auckland Council, in writing prior to their implementation.

Leachate Monitoring and Contingency Plan

- 175 The consent holder shall provide a Leachate Monitoring and Contingency Plan (LMCP) for the approval of the Auckland Council at least three months prior to the landfill commencement date. The LMCP shall describe in greater detail proposals for water chemistry monitoring, detection limits, methods of analysis and units of measurement for all parameters listed in Conditions. The LMCP shall:
- a include methods for managing the collection, treatment and disposal of leachate to manage potential adverse effects;
 - b contain guidelines for the determination of whether leachate contamination is occurring; and
 - c provide contingency plans for remedial actions should leachate contamination or other pollutants associated with the landfill and activities on the site associated with this consent occur.
- 176 In addition to the requirements of Condition 174, the LMCP shall:
- a Specify methods for managing the collection of leachate, including pump out of sumps, regime of maintenance checks on integrity of pipes, and management of trucks to prevent spills;
 - b Include methods for disposal of leachate and any by-products from leachate treatment, including any measures to manage the process and potential adverse effects;
 - c Include detection limits, methods of analysis and units of measurement for all parameters;
 - d describe procedures for water chemistry, groundwater level and leachate level monitoring;
 - e specify the methods of analysis for samples taken in accordance with these special conditions;
 - f specify the units of measurement for reporting of analysis of water samples;
 - g specify the detection limits for analysis of water samples;
 - h summarise the results of baseline monitoring;
 - i summarise how the results of the leachate levels in the landfill will be compared to ground water levels outside the landfill;

- j provide a definition of leachate contamination;
- k contain guidelines for procedures to determine whether leachate contamination is occurring;
- l state the sources of the criteria and water quality standards used as a basis for the definition of leachate contamination;
- m define the circumstances and times when notification to Auckland Council is required;
- n Procedures or systems will also be implemented to monitor and identify potential leachate breakouts or contamination of surface water including:
 - Weekly inspections of the landfill surface to look out for any evidence of leachate breakouts and any malfunctioning or leaking associated with the reticulation system;
 - Continuous monitoring of conductivity at the inlet to the ponds as an indicator of the presence of leachate in surface water including automated notification from site operated telemetry system if pond inlet conductivity exceeds the trigger limits; and
 - Monitoring of contaminants at pond outlets.
- o provide contingency plans for mitigation and remedial actions should leachate contamination occur.

177 The testing suite described in the LMCP is to include (but not limited to):

Quarterly (including annual)	Annual only
Metals for which there are leachability limits: <ul style="list-style-type: none"> • Arsenic • Cadmium • Copper • Chromium • Lead • Nickel • Mercury • Selenium • Silver • Zinc 	Volatile organic compounds, including: <ul style="list-style-type: none"> • Benzene • Chlorinated solvents • Organochlorine pesticides, including DDT-compounds
Other leachate quality parameters: <ul style="list-style-type: none"> • pH • Ammonia • Conductivity • Potassium • Chloride • Total petroleum hydrocarbons (TPH) 	

Landscape Mitigation and Management Plan

- 178 At least three months prior to the landfill commencement date, the consent holder shall submit to Auckland Council for certification a detailed Landscape Mitigation and Management Plan (LMMP) which has been prepared by a qualified Landscape Architect. This plan is to be read in conjunction with the Ecological Enhancement and Restoration Plan (condition 180) and shall be based on the conceptual layouts of the Mitigation Plans depicted in Appendix 3 of the Boffa Miskell Ltd document entitled "Landscape and Visual Assessment, May 2019". The objective of the LMMP is to meet the conditions of this consent and to avoid, remedy or

mitigate the adverse landscape and visual effects of the project through the following measures:

- a Establish and maintain tree shelterbelts to provide effective visual screening of the landfill during its development and during the aftercare period;
 - b Ensure planting is of appropriate scale and mix of species to reflect the existing vegetation structure of the rural and forested area;
 - c Outline an ongoing and adaptive planting and management process for the landfill both during its development and during the aftercare period.
- 179 The LMMP shall detail areas of planting, or landscape treatment and shall include the following information:
- a Description of the objectives of the mitigation planting / landscape treatment, including the mitigation intent of each of the planting areas and how this will be fulfilled over time as the plants develop and age;
 - b Identification of areas of existing vegetation to remain or be removed and the methodology for managing, and supplementing this vegetation where necessary in a timely manner to maintain the mitigation objectives;
 - c Schedules of planting, including details of proposed species, grass mixes, plant grades, numbers and planting density,
 - d A proposed timetable for planting and;
 - e Ongoing planting maintenance and management techniques, including demonstration that the proposed vegetation will be myrtle rust resistant.
- 180 The LMMP shall be implemented in accordance with the plan approved under Condition 177.

Ecological Enhancement and Restoration Plan

- 181 An Ecological Enhancement and Restoration Plan (EERP) shall be prepared and provided to Council within six months of the construction commencement date. The objectives of the EERP are to describe forest, wetland, and riparian and wetland margin revegetation. The focus of the EERP is the replacement/replanting of plant species that have been affected by the project and the optimisation of ecological benefits through improving ecological connectivity between habitat types and protecting significant habitat types through buffer/margin plantings. The EERP shall be consistent with and complementary to the Ecological Enhancement Pest Management Plan required by condition 187.

The planting areas shall be in general accordance with those shown in the Ecological Values and Effects Report by Tonkin + Taylor, date May 2019:

- a Enhancement and/or protection of 14 km of stream within or as close as practicable to the WMNZ landholdings.
- b Planting of 9.9 ha of native terrestrial vegetation within WMNZ landholdings.
- c Long term pest control of WMNZ landholdings and Sunnybrook Reserve.
- d Protection of 11.9 ha native forest areas within WMNZ landholdings by covenant.
- e Planting and protection of 4.63 ha of degraded wetlands within the Western Block that are not affected by the project.
- f Planting of wetland buffers of 10 m or 5 m around SEA and non-SEA wetlands within the Western Block, approximately 15.18 ha.
- g Protection of all native wetland habitats by covenant, approximately 25.59 ha.

The details of this plan shall include:

- a Confirmation of the areal extent and spatial configuration of plantings proposed.

- b Site preparation (if required), e.g. fencing, weed or animal pest management and habitat enhancement (e.g. deployment of felled logs in revegetation sites).
 - c Timing of plantings.
 - d Plant species composition, plant sizes, plant densities, measures of stock condition (e.g. health of plant stock) the use of growth enhancement measures where required (e.g. fertiliser tablets or stock guards). Where available, plants will be eco-sourced native species from the same ecological district. Planting plans for stream riparian margins and wetland areas shall be in accordance with the Auckland Regional Council Riparian Zone Management Strategy for the Auckland Region, Technical Publication 148, June 2001 (TP148) and Appendix 16 of the Auckland Unitary Plan 'Guideline for native revegetation plantings'.
 - e Plant maintenance methods for ensuring successful establishment and long-term persistence of plantings, including the duration of maintenance, methods for ongoing control of weed or animal pests and infill planting.
 - f Monitoring and reporting requirements.
 - g Covenanted/encumbrance details.
- 182 Should the actual area of habitat impacted by the project be reduced through detailed design, the consent holder shall have the ability to demonstrate, through use of a mitigation/compensation model prepared by a suitably qualified ecologist, that the required area of ecological restoration has been reduced. This is subject to the consent holder providing sufficient evidence of the actual area of clearance and demonstrating to Auckland Council that the area of clearance is less than the consented area. The consent holder shall then submit an updated EERP based on the revised restoration planting area.
- 183 All plantings from the Myrtaceae family of species shall be sourced from a nursery that is a signatory to Myrtle Rust Nursery Management Declaration V6, 11 October 2017 that certifies that the plant producer has implemented the New Zealand Plant Producers Incorporated Myrtle Rust Nursery Management Protocol (Myrtle Rust Nursery Management Protocol – V6, 11 October 2017).
- 184 All restoration planting described in the EERP shall be completed within three years of the initial construction and enabling works being completed. Written confirmation shall be provided to the Auckland Council within 30 days of the works being completed confirming that all works have been completed in accordance with the Ecological Enhancement and Restoration Plan.
- 185 A monitoring and maintenance plan for the duration of the landfill operation shall be developed and implemented to ensure plant densities and 90% survival rate are maintained. Monitoring shall be undertaken at times that avoid transient conditions, such as flood events. In relation to wetlands, monitoring shall include site photographs to demonstrate that a compliment of facultative wetland species at a density and a planting survival rate of at least 90% that is in accordance with the EERP referenced in condition 180. Any plants that die should be replaced the following planting season. The findings of the monitoring shall be reported to Auckland Council on a two-yearly basis.

Pest Control Plan - Landfill Operations

- 186 A Pest Control Plan - Landfill Operations (PCPLO) shall be submitted to Auckland Council for certification at least three months prior to waste being accepted at the site. The purpose of the PCPLO is to control weeds, vermin and predators that could be attracted to the landfill, and to prevent populations from being established.

Advice note: This plan applies to the landfill operational areas. The broader pest management for the project is described in conditions 187 – 190.

- 187 The PCPLO shall include methods for controlling weeds, vermin and predators, including rats, feral cats and seagulls within the landfill valley. Control methods may include physical controls such as fencing or traps, or bait. The PCPLO shall be implemented from the time of the use commencing to prevent pest populations from being established at the site, and form part of the LMP as set out in Conditions 148 – 154.

Advice note: Appropriate control methods shall be selected to control red billed gulls to avoid killing or harming birds.

Ecological Enhancement Pest Management Plan

Advice note: These conditions refer to the pest management programme being offered as compensation for the adverse effects of the project on ecological values. Separate conditions are proposed (Conditions 185-186) to address predators and vermin within the landfill operational areas.

- 188 An Ecological Enhancement Pest Management Plan (EEPMP) shall be prepared by a suitably qualified and experienced ecologist. The purpose of the EEPMP is to improve the ecological integrity of forest, wetland and riparian ecosystems within areas subject to pest control, including the protection and recovery of bats, lizards, Hochstetter's frogs, invertebrates and native forest and wetland plants). The objective of the EEPMP is to achieve:
- a a long-term reduction in rats, possums, feral cats and mustelids densities
 - b a long-term reduction in feral goats and pig densities and
 - c the exclusion of farm stock within habitat for native fauna and areas of native vegetation within the WMNZ landholding and the Sunnybrook Reserve.
- 189 The EEPMP shall specify:
- a Target pest species and target thresholds to achieve the objectives of the EEPMP;
 - b Methods to achieve target species outcomes, with a preference for physical controls over chemical wherever practicable. Methods may include descriptions of spatial configuration of bait lines and baiting and/or trapping details including types of baits/traps and frequency of baiting; and
 - c A description of monitoring/auditing proposed in accordance with standard accepted practice.
- 190 Pest control shall be undertaken in accordance with the EEPMP for a period of 35 years within appropriate and accessible areas in Sunnybrook and WMNZ landholding. The areal extent of pest control operations within Sunnybrook Reserve is to be confirmed following consultation with the Department of Conservation, and may vary over the life of the consent.
- 191 The scope and frequency of the ecological pest control shall be reviewed by the consent holder at 5 year intervals. Should a change to the scope or frequency be considered appropriate, a report on the effectiveness of the existing pest control programme shall be provided to Auckland Council, along with a description of the proposed changes and an explanation of how the new proposal will achieve the objectives of condition 187.

Off-Site Stream Compensation Plan

- 192 An Off-Site Stream Compensation Plan (OSSCP) shall be prepared and submitted to Auckland Council within six month of the construction commencement date. The OSSCP shall include performance measures, actions, methods, trigger levels and monitoring programmes designed to achieve the below objectives. The objective of the OSSCP shall be to describe the principles by which the consent holder shall provide compensation for residual adverse effect on ecological values associated with the project. The OSSCP shall set out methodologies and processes that will be used to achieve these objectives and shall include habitat

restoration/offset on the following basis: a 3:1 restoration ratio for residual stream length affected which has not been fully offset in accordance with condition 180 (i.e. to achieve a total 46.2 km stream length including on-site measures, if the loss of permanent and intermittent streams is equal to 15.4 km). The OSSCP provisions for stream restoration shall include the following:

- a Overarching principles for the identification of restoration sites including a preference for sites within the Hoteo Catchment, and in close proximity to the location of development, where this will result in the best ecological outcome.
 - b Process for the consent holder informing landowners within the Hoteo Catchment, including criteria for selection and the establishment of a group comprising mana whenua and community representatives and land-owners to provide suggestions on restoration sites.
 - c The ecological values being achieved through the offset are the same or similar to those being lost.
 - d Provisions to protect restored areas in perpetuity.
- 193 Should the actual length of intermittent and/or permanent streams impacted by the project be reduced through detailed design or further ground-truthing, the consent holder shall have the ability to recalculate the required length of stream restoration. This is subject to the consent holder providing sufficient evidence of the actual length of stream impacted and demonstrating to Auckland Council that the length of intermittent and permanent stream is less than the consented area. The consent holder shall then submit an updated OSECP based on the revised restoration planting area.
- 194 The consent holder shall undertake the compensation described in the OSSCP in a staggered manner, providing at least 1.5km of stream enhancement each year until the required restoration ratio has been achieved.
- 195 An Stream Compensation Works Plan (SCWP) shall be prepared and provided to Auckland Council every 5 years in accordance with the OSSCP, and will:
- a describe the proposed compensation to occur within the next 5 planting seasons, including identification of compensation site(s);
 - b describe the proposed enhancement (eg riparian planting, stream habitat creation, in-stream habitat enhancement, fencing and stream protection) for the Compensation Sites, the purpose of which is to enhance the Compensation Sites' condition;
 - c provide details regarding how compensation sites shall be protected in perpetuity (where practicable) by land covenant or consent notice(s) or similar, placed on the subject area of the land's title and provide evidence that this protection is sufficient for the purpose of this consent.
- 196 A monitoring and maintenance plan for a period of five (5) to ensure plant densities and 90% survival rate are maintained. Any plants that die should be replaced the following planting season. Replacement planting and planting maintenance shall continue beyond year 5 until 90% survival is achieved. The 5 year period shall commence once all the compensation works describe within a SCWP have been completed.
- 197 By 1 December every 5th year, the consent holder shall provide a report to Auckland Council, prepared by an appropriately qualified person, confirming that the requirements of that period's SCWP have been achieved.

PART E – AFTERCARE CONDITIONS

- 198 The consent holder shall adopt a minimum post-closure aftercare period of 30 years. Monitoring and maintenance requirements for the aftercare period shall be set out in the Post Closure Management Plan. The term of the aftercare period may be reduced in accordance with the provisions of Condition 200.

Leachate and Landfill Gas collection and disposal

- 199 The consent holder shall have a continuing responsibility for leachate and gas collection and disposal beyond the life of the landfill as a disposal facility, as described in Condition 200.
- 200 The consent holder shall produce a report at the end of the post-closure aftercare period which shall demonstrate that the leachate and landfill gas no longer presents any undue or unacceptable risk to the environment to the satisfaction of the appropriate regulatory authority.

Post Closure Management Plan

- 201 At least 12 months prior to the landfill ceasing to accept waste for placement, the consent holder shall provide a Post Closure Management Plan (PCMP) for certification by Auckland Council. The objective of the PCMP is to describe the measures to be taken to stabilise the site and maintain environmental controls including stormwater, leachate and landfill gas collection and treatment. The consent holder shall adhere to and maintain the PCMP for the duration of the post-closure aftercare period. The PCMP shall be updated as necessary and any updates shall be certified by Auckland Council. The PCMP shall include details of:
- a Ongoing measures for collection and disposal of leachate and landfill gas;
 - b Ongoing monitoring and reporting of groundwater, surface water and landfill gas;
 - c Proposed planting of the landfill cap;
 - d Proposed access and use of the site, including consideration of public access to the site whilst limiting activities to avoid damage to the final cap and gas extraction plant;
 - e monitoring of site integrity, including repairs to the final cover system; contingency measures in case of natural hazards, and maintenance and control of vegetation;
 - f contact arrangements for Auckland Council and adjacent property owners to maintain communications with operations personnel.

