

BOARD OF INQUIRY

Northern Corridor
Improvements Proposal

8¹ Report and Decision

of the Board of Inquiry into the

Northern Corridor Improvements Proposal

Volume 2 of 2: Conditions

CHANGES MADE BY THE BOARD OF INQUIRY TO THE REVISED CONDITIONS ATTACHED TO THE CLOSING SUBMISSIONS OF THE TRANSPORT AGENCY, WHICH WERE DATED 14 AUGUST 2017

DC .1	Wording changed to incorporate changes made to the plans
DC.3	Change 5(a) to 5A
DC.6	Last line. Refer to CNMP, CYMP, and UDLP rather than just “plan”
CNV.1(a)	Divide into 2 conditions
CNV.1(i)	Rephrase for clearer meaning
CTMP.6C	Replace “areas” with “matters” for clarity
ON.3	Replace “incorporate” with “implement”
ON.1e.	Change made to correct the wording of the Assessment.
ON.3.	Additional detail about the location and extent of the noise barriers
ON.6d.	Add “or after reasonable time has not responded”
UDL.4f.	New condition re. design and maintenance of lighting.
UDL.4g.	New condition re. design of SUP in vicinity of Kiwi Self Storage
UDL.5 and UDL.5A	Add “and enhancement“ after “mitigation”
UDL.5A	Change 2 years to 4 years
UDL.15	Replace “overbridge” with “Road bridge”
SCP.6b.	Include the Melanesian Mission and St Johns College Trust Board
SCP.8(b)	Replace “for a” with “forums”
SCP.9	Include “education facilities”
SCP.9d.	Add reference to pedestrian and cycle connectivity to educational facilities
SCP 14	Add reference to construction noise or vibration
SCP.17	Add “and if requested by those owners and operators”
SCP.19	Add a requirement to provide business advice and assistance to owners and operators if requested
RC.1	Wording changed to incorporate changes made to the plans
CEMP.6(i)	Add “Procedures for the identification and control of ...”
CEMP.6l	Expand to include stability of earthworks
CEMP.6p	Include details of temporary lighting
CEMP.6q	A new condition requiring the use of the NZTA Z22 Accidental Discovery Protocol

CEMP.7	Add sub-clauses (f), (g) and (h) CTMP, CNVP & CSMP
DMP.1B	Replace “receptors” with “receivers”
LM.4	New condition offering IIG participation
AMP.3a.	After “AMP.2” add “Consistent with the methods” and delete “for deterring prospecting dotterels are”.
AMP.3d	New clause offering IIG participation
CL.3	Additional clauses dealing with managing contaminated water and procedures if contaminated water is to be left in place
GW.3	A new condition relating to groundwater and the need to avoid damage
EW.7	After “CESCP” add “for each area of work”
LW.1B	Delete “referred to in Condition RC.1” as it is not referred to in that condition.
EC.1A	A new condition specifying which streams are subject to fish recovery and relocation
NU.9C	Advice note. Delete “progress related matters under” and replace with “proceed in accordance with”
NU.10A	This was an advice note at the end of NU.10 but it is more appropriately a condition
SW.11	Expand the word “damage” to refer to land controlled and not controlled by the Transport Agency.

CHANGES MADE BY THE BOARD OF INQUIRY TO THE REVISED CONDITIONS ATTACHED TO THE DRAFT REPORT AND DECISION OCTOBER 2017

The Board has considered all the comments on the conditions that are within the scope of the statutory requirements. These are detailed in Appendix H of Volume 1 of the Final Report and Decision.

Most of the comments received on the conditions are self-explanatory and where necessary errors in the report and conditions have been corrected (for example, changes in relation to formatting, spelling and grammar etc.) without further comment.

In addition, to the comments provided by the parties, the Board has also taken the opportunity to make some improvements to the drafting of the Final Report and Decision and conditions. The changes to the conditions that have been made by the Board are:

DESIGNATION CONDITIONS

Traffic noise (operation)

ON.1 Change made to reflect that conditions now only go to ON.11.

Stakeholder and Communications Plan ('SCP')

- SCP.2 Minor change with addition of "and".
- SCP.8 Corrected cross reference error to condition SNP.7(b).
- SCP.18 Corrected to reflect wording proposed in Draft Report and Decision and correction of cross reference.
- IHF.1 Addition of brackets IHF.1(b).

RESOURCE CONSENT CONDITIONS

Construction Environmental Management Plan ('CEMP')

- CEMP.6 Correct cross reference in CEMP.6 (n) to reference CEMP.7.
- CEMP.7 Deleted number "4" from CEMP.7 (b) and delete (f), (g) and (h).

Contaminated land

- CL.2 Corrected to reflect wording proposed in Draft Report and Decision.
- EW.2 Added reference to GD05.

Stormwater - overland flow paths

- SW.11 Reverted wording back to original as proposed in Applicant's closing.

NOTICE OF REQUIREMENT AND RESOURCE CONSENT CONDITIONS

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NOTICE OF REQUIREMENT CONDITIONS (14 August 2017)

Acronym/Abbreviation	Full Term or Definition
AUP	Auckland Unitary Plan
BPO	Best Practicable Option, and in relation to the Traffic Noise conditions BPO is in accordance with s16 of the Resource Management Act 1991
Building-Modification Mitigation	Has the same meaning as in NZS 6806
CNV	Construction Noise and Vibration Conditions
CNVMP	Construction Noise and Vibration Management Plan
Council	Auckland Council
Commencement of construction or construction works	In all conditions which refer to 'commencement of construction', construction includes work such as earthmoving and earthworks excavation; and the construction, erection, installation, carrying out, alteration, repair, restoration, renewal, maintenance, extension, demolition, removal, or dismantling of any building or structure.
CTMP	Construction Traffic Management Conditions and Construction Traffic Management Plan
DC	General Designation Conditions
Design Year	Means 2031 in relation to the Traffic Noise conditions
FIH	International Hockey Federation
Habitable Space	Has the same meaning as in NZS 6806
HHCT	Harbour Hockey Charitable Trust
IHF	North Harbour Hockey Stadium Conditions
IIG	Iwi Integration Group
Key Stakeholders	Includes community groups, business groups, residents organisations, childcare groups, Council, Watercare Services Limited, Auckland Transport, Ministry of Education, Waste Management NZ Limited, the IIG, and local boards.
Landfill	Rosedale Closed Landfill
Major Construction Activity	For the purposes of the Noise and Vibration Conditions, means any construction activity that would result in an exceedance of the standards in CNV.3 and CNV.4
Noise Assessment	Means the <i>Traffic Noise and Vibration Assessment Report</i> submitted with the NoR
NZ 8606	Means New Zealand Standard NZS 6806:2010 <i>Acoustics – Road-traffic noise – New and altered roads</i>
ON	Operational Noise and Vibration Conditions
OP	Outline Plan as required under section 176A of the RMA

PPF	Protected Premises and Facilities and has the same meaning as in NZS 6806. For the purpose of these conditions they also include all dwellings in Stage 1 of the Colliston Rise subdivision where Building Consent or Resource Consent which authorises the construction of a dwelling has been granted
PPV	Peak Particle Velocity
Practical completion	Means completion of all construction works.
Project	The Northern Corridor Improvements Project.
Proposed Design	The design of the project as indicated on General Arrangements Sheets 1 – 2 (Revised Albany Busway Bridge – Rev J), 3 – 8 (Consent Issue – Rev H), 9 – 10 (Revised Alteration to Designation Boundary – Bluebird Reserve)
PTTMP	Public Transport Traffic Management Plan
RAMM	Road Assessment and Maintenance Management
RMA	Resource Management Act 1991
RWWTP	Rosedale Wastewater Treatment Plant
SCP	Stakeholder and Communications Plan and Stakeholder and Communications Plan Conditions
SSCNMP	Site Specific Construction Noise Management Plan
SSCVMP	Site Specific Construction Vibration Management Plan
Structural Mitigation	Has the same meaning as in NZS 6806. For the purpose of these conditions the structural mitigation measures are low noise road surface materials and noise barriers
SUP	Shared Use Path
Suitably qualified and experienced person	Means a person with a tertiary qualification in the field to which a particular condition relates; or having sufficient technical expertise that is at least equivalent; and having at least 5 years working experience, unless otherwise specified in the conditions.
Transport Agency	New Zealand Transport Agency
UDL	Urban Design and Landscape Conditions
UDLF	Urban Design and Landscape Framework
UDLP	Urban Design and Landscape Plan
Watercare	Watercare Services Limited
Work Area	For the purposes of the Noise and Vibration conditions, means any area where construction works associated with the Project are undertaken (e.g. all active works areas and construction support areas)

These conditions relate to the following designations:

EPA reference	Lapse period	Duration granted
Designations OR NOR		
NSP39/001 An alteration to a designation (Auckland Unitary Plan – Operative in Part 2016, Designation 6750) for the construction, operation and maintenance of a State highway, being the Auckland-Waiwera Motorway between Greville Road Interchange and the Sunset Road overbridge.	7 years	N/A
NSP39/002 An alteration to a designation (Auckland Unitary Plan – Operative in Part 2016, Designation 6751) for the construction, operation and maintenance of a State highway, being the Auckland Waiwera Motorway between Greville Road Interchange and Oteha Valley Road.	7 years	N/A
NSP39/003 An alteration to a designation (Auckland Unitary Plan – Operative in Part 2016, Designation 6756) for the construction, operation and maintenance of a State highway, being State Highway 18 between Albany Highway and State Highway 1.	7 years	N/A
NSP39/004 A designation for the construction, operation and maintenance of the Northern Busway adjacent to State Highway 1 from Albany Bus Station to Constellation Bus Station.	7 years	N/A
NSP39/005 A designation for the construction, operation and maintenance of a shared use path adjacent to State Highway 1 from Constellation Bus Station to Oteha Valley Road.	7 years	N/A
NSP39/006 An alteration to a designation (Auckland Unitary Plan – Operative in Part 2016, Designation 6758) for the upgrade of the Constellation Bus Station.	7 years	N/A

General Conditions

DC.1 Except as modified by the conditions below, and subject to final design, the Northern Corridor Improvements Project ('Project') shall be carried out in general accordance with:

- a. *General arrangements drawings*
 Sheets 1 and 2, DRG 0201 – 0202, Rev J
 Sheets 3 – 8, DRG 0203 – 0208, Rev H
 Sheets 9 – 10, DRG 0209 – 0210, Rev I (Revised Alteration to Designation Boundary – Bluebird Reserve)
- b. *Typical cross sections*
 Sheets 1 to 9, DRG 0301 - 0309, Rev F
 Sheet 10, DRG 0310, Rev C
- c. *Plan and long section SH1 Mainline*
 Sheets 1 – 7, DRG 0401 – 0407, Rev. A
Plan and long section SH18 Westbound

Sheets 1 – 4, DRG 0415 – 0418, Rev. A

- d. *Civil structures*
DRG 1310 (Rev. C), and 1315, 1320, 1325, 1330, 1335, 1340, 1345, 1350, 1355, 1365, 1370, 1375 (all Rev. B).
 - e. *Stormwater layout plans*
Sheets 1 – 10, DRG 1401 – 140, Rev B
 - f. *Stormwater catchment plan*
Sheets 1 – 10, DRG 1451 – 1460, Rev B
 - g. *Conceptual construction water management plan*
Sheets 1 – 10, DRG 1601 – 1610, Rev B
 - h. *Erosion and sediment control standard details*
Sheets 1 – 2, DRG 1620 - 1621, Rev A
 - i. The notice of requirement plans DRG 2001 Rev C, 2002 Rev C, DRG 2003-2008 Rev B, DRG 2009 Rev C, DRG 2010 Rev C and DRG 2011 Rev C.
- DC.2 Where there is inconsistency between the General Arrangements referred to in Condition DC.1 above and these conditions, these conditions shall prevail.
- DC.3 Conditions DC.8, ON.1-ON.11, OV.1, UDL.5A, UDL.13, UDL.14 and SCP.10 on this designation apply to the operational matters that are intended to address ongoing effects of the activities authorised by the designation or impose obligations that are required to be satisfied following practical completion of the Project. The other conditions on this designation are intended only to apply to construction related activities. As soon as practicable after practical completion of the Project construction works, the Requiring Authority shall provide written notice of practical completion. Upon confirmation of receipt by the Council of the notice of practical completion, all conditions other than conditions relating to operational matters (i.e. DC.8, ON.1-ON.11, OV.1, UDL.5A, UDL.13, UDL.14 and SCP.10) shall cease to have effect.
- DC.4 The Requiring Authority shall provide written notice to the Council on completion of the monitoring required by conditions UDL.5A. This condition shall cease to have effect from the date of this notice being received.
- DC.5 The designation shall lapse if not given effect to within seven years from the date on which it is included in the Auckland Unitary Plan ('**AUP**').
- DC.6 The outline plans ('**OP**') shall include the following plans for the relevant stage(s) of the Project:
- a. Construction Noise and Vibration Management Plan ('**CNVMP**') prepared in accordance with conditions CNV.1 to CNV.9;
 - b. Construction Traffic Management Plan ('**CTMP**') prepared in accordance with conditions CTMP.1 to CTMP.5D; and
 - c. Urban Design and Landscape Plan(s) ('**UDLP**') prepared in accordance with conditions UDL.1 to UDL.12.

The CNVMP, CTMP and UDLPs may be amended following the submission of the OP(s) if necessary to reflect any changes in design, construction methods, or management of effects.

Any amendments are to be discussed with and submitted to the Council for information without the need for a further OP process, unless those amendments once implemented would result in materially different effects to that described in the original CNVMP, CTMP, and UDLPs.

- DC.7 Any OP(s) or plans may be submitted in parts or in stages to address particular activities or to reflect the staged implementation of the Project.
- DC.8 As soon as practicable following completion of the construction of the Project, the Requiring Authority shall give notice in accordance with Section 182 of the Resource Management Act 1991 ('**RMA**') to the Council, for the removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the Project including from land within the Watercare Services Ltd ('**Watercare**') Designations 9310 and 9311, the Rosedale Closed Landfill ('**Landfill**') Designation 417 and other areas where infrastructure owned and operated by other organisations are located.

For the purpose of this condition as it relates to land within the Watercare Designations 9310 and 9311, the Requiring Authority shall remove the parts of its designation in general accordance with areas of land identified as 'Occupation During Construction' in the Aurecon Design Drawings:

- Auckland Northern Corridor Improvements SH1 and SH18 Land Requirement Plan #36, Drawing No. 250310-5DOC-1PRP-DRG-1855-A.

Any changes to the operational boundaries of the 'Land Required' and the 'Occupation during Construction' identified in Drawing No. 250310-5DOC-1PRP-DRG-1855-A shall be made following consultation with Watercare prior to any such change being implemented.

Construction Noise and Vibration (CNV)

For the purpose of the CNV conditions:

BPO – means the Best Practicable Option in accordance with s16 of the RMA

Major Construction Activity – means any construction activity that would result in an exceedance of the standards in CNV.3 and CNV.4

Work Area – means any area where construction works associated with the Project are undertaken (e.g. all active works areas and construction support areas)

- CNV.1 A CNVMP shall be prepared by a suitably qualified and experienced person, and shall be submitted as part of the relevant OP. The purpose of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option ('**BPO**') for the management of all construction noise and vibration effects, and additionally to define the procedures to be followed when the noise and vibration standards in the CNV conditions are not met following the adoption of the BPO.

The CNVMP shall be prepared in accordance with the requirements of Annex E2 of *New Zealand Standard NZS 6803:1999 'Acoustics – Construction Noise'* (NZS 6803:1999) and shall address the following matters as a minimum:

- (a) Description of the works, anticipated equipment/processes and their scheduled durations;

- (b) Hours of operation and duration for the Major Construction Activities;
 - (c) The construction noise and vibration standards for the Project as set out in Tables CNV.A to CNV.B below;
 - (d) Identification of affected occupied buildings and any other sensitive receivers (including unoccupied buildings) at each Work Area;
 - (e) Management and mitigation options to be adopted for all works during the Project, including prohibition of tonal reverse alarms;
 - (f) Minimum separation distances from receivers for plant and machinery where compliance with the construction noise and vibration standards are met;
 - (g) A procedure for developing and implementing the Site Specific Construction Noise Management Plans ('**SSCNMPs**') and Site Specific Construction Vibration Management Plans ('**SSCVMPs**') (as required by conditions CNV.6, CNV.7 and CNV.8 below) forming part of this CNVMP;
 - (h) Methods and frequency for monitoring and reporting on construction noise and vibration;
 - (i) Procedures for engaging with stakeholders, notification of proposed construction activities and responding to noise and vibration complaints consistent with conditions SCP.1-SCP.16;
 - (j) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration and procedures for the management of behaviours for all construction workers;
 - (k) Contact details for the Project Manager (or nominee) and the Requiring Authority's Project Liaison Person (phone and email addresses); and
 - (l) The process for identifying businesses which operate processes, machinery or equipment that may be unreasonably disrupted by construction vibration even where the project vibration standards are met. For any such businesses identified, a SSCVMP shall be prepared in accordance with CNV.8 and complied with.
- CNV.2 Where construction noise is predicted to exceed the standards in CNV.3, at any location, and a traffic noise barrier will ultimately be required for the operational phase, the Requiring Authority shall implement the required traffic noise barrier at that location in accordance with the SSCNMP. In the event that it is not practicable to install the traffic noise barrier at the location for construction-related reasons, prior to the commencement of work, the Requiring Authority shall install the traffic noise barrier as soon as it is practicable to do so.
- CNV.3 Noise arising from construction activities shall be measured and assessed in accordance with NZS 6803:1999 *Acoustics - Construction Noise* and (subject to CNV.6) shall comply with the noise standards set out Table CNV.A:

Table CNV.A: Construction noise standards

Day	Time	L _{Aeq}	L _{AFmax}
Residential Receivers			
0630h Monday to 0630h Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturdays 0630h Saturday to 0630h Sunday	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sundays 0630h Sunday and Public Holidays to 0630h the following morning	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Industrial and commercial receivers			
All days	0730h – 1800h	70dB	--
	1800h – 0730h	75dB	--

CNV.4 Vibration arising from construction activities which may affect people and buildings shall be measured in accordance with ISO 4866:2010 *Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures*, and shall comply with the Category A vibration standards

Table CNV.B: Construction vibration standards for people and buildings

Receiver	Details	Category A	Category B
Occupied PPFs*	Night-time 2000h - 0630h	0.3mm/s PPV	1mm/s PPV
	Daytime 0630h - 2000h	1mm/s PPV	5mm/s PPV
Other occupied buildings	At all times	2mm/s PPV	5mm/s PPV
All other buildings	At all times	5mm/s PPV	Tables 1 and 3 of DIN4150-3:1999

* For vibration, protected premises and facilities (PPFs) are defined as dwellings, educational facilities, boarding houses, homes for the elderly and retirement villages, marae, hospitals that contain in-house patient facilities and buildings used as temporary accommodation (e.g. motels and hotels).

If measured or predicted vibration from construction activities exceeds the Category A standards, the Requiring Authority shall consult with the affected receivers to:

- (a) Discuss the nature of the work and the anticipated days and hours when the exceedances are likely to occur; and
- (b) Determine whether the exceedances could be timed or managed to reduce the effects on the receiver.

The Requiring Authority shall maintain a record of these discussions and make them available to the Council on its request.

If measured or predicted vibration from construction activities exceeds the Category B standards, those activities may only proceed subject to condition CNV.7

- CNV.5 Vibration arising from construction activities which may affect underground pipe work shall be measured in accordance with DIN4150-3:1999 *Structural vibration – Part 3: Effects of vibration on structures*, and (subject to condition CNV.7) shall comply with the vibration standards in Table CNV.C.

Table CNV.C: Construction vibration standards for underground pipe work

Pipe material	PPV (measured on the pipe)
Steel (including welded pipes)	100 mm/s
Clay, concrete, reinforced concrete, pre-stressed concrete, metal (with or without flange)	80 mm/s
Masonry, plastic	50 mm/s

- CNV.6 A SSCNMP shall be prepared when construction noise is either predicted or measured to exceed the standards in Table CNV.A, except where the exceedance of the standards in Table CNV.A is no greater than 5 decibels and:

- a. For day time between 0700 and 2200 - the exceedance of the standards in Table CNV.A does not occur on more than 14 consecutive days in any rolling 8 week period; or
- b. For night time between 2200 and 0700 - the exceedance of the standards in Table CNV.A does not occur on more than 2 consecutive nights in any rolling 10 day period.

The objective of the SSCNMP is to set out the BPO for the minimisation of noise effects of the construction activity. The SSCNMP shall as a minimum set out:

- i. Construction activity location, start and finish dates;
- ii. The predicted noise level for the construction activity;
- iii. Noise limits to be complied with for the duration of the activity;
- iv. The mitigation options that have been selected and the options that have been discounted as being impracticable;
- v. The proposed noise monitoring regime; and
- vi. The consultation undertaken with owners and occupiers of sites subject to the SSCNMP, and how consultation outcomes have and have not been taken into account.

The SSCNMP shall be submitted to the Council for certification at least 7 working days in advance of Construction Works which are covered by the scope of the SSCNMP. If the Council does not respond within 5 working days (excluding time associated with requesting and receiving further information) then certification is deemed to have been given.

- CNV.7 A SSCVMP shall be prepared when construction vibration is either predicted or measured to exceed the Category B standards in Table CNV.B and the standards in Table CNV.C. The objective of the SSCVMP is to set out the BPO for the minimisation of vibration effects of the construction activity. The SSCVMP shall as a minimum set out:
- a. The relevant construction activity location, start and finish dates;
 - b. The predicted vibration level for the construction activity;
 - c. The pre-condition surveys of buildings and pipe work which document their current condition and any existing damage;
 - d. An assessment of each building and any pipe work to determine susceptibility to damage from vibration and define acceptable vibration limits that the works must comply with to avoid damage;
 - e. The mitigation options that have been selected and the options that have been discounted as being impracticable;
 - f. The proposed vibration monitoring regime;
 - g. The methods adopted to minimise amenity effects on buildings which remain occupied during the works;
 - h. The consultation undertaken with owners and occupiers of sites subject to the SSCVMP, and how consultation outcomes have and have not been taken into account.

The SSCVMP shall be submitted to the Council for certification at least 7 working days in advance of Construction Works which are covered by the scope of the SSCVMP. If the Council does not respond within 5 working days (excluding time associated with requesting and receiving further information) then certification is deemed to have been given.

- CNV.8 For any buildings identified in condition CNV.1(l), the Requiring Authority shall prepare an SSCVMP which shall include:
- a. Consultation with the owners and/or occupiers of sites identified to ascertain the sensitivity of processes, machinery or equipment to construction vibration;
 - b. Construction vibration limits specific to the sensitive activities which must be complied with that will avoid unreasonable disruption of the businesses;
 - c. Procedures and methods for monitoring compliance with the vibration limits established;
 - d. A process for dealing with any disagreement which may arise, particularly in relation to the determination of specific vibration limits;
 - e. The relevant construction activity location, start and finish dates;
 - f. The mitigation options that have been selected and the options that have been discounted as being impracticable; and
 - g. The consultation undertaken with owners and occupiers of sites subject to the SSCVMP, and how consultation outcomes have and have not been taken into account.

- CNV.9 If any damage to buildings or pipe work is shown to have occurred, by reference to pre-condition survey findings from CNV.7(c), as a result of vibration from the construction of the Project, any such damage shall be remedied by the Requiring Authority as soon as reasonably practicable subject to any associated asset and/or owner agreement.

Construction Traffic Management Plan

CTMP.1 A CTMP shall be prepared by a suitably qualified and experienced person and shall be submitted as part of the relevant OP.

CTMP.2 The purpose of the CTMP is to avoid or mitigate adverse effects on traffic safety and efficiency resulting from the construction works, in order to:

- a. Protect public safety, including the safe passage of pedestrians and cyclists;
- b. Minimise delays to road users, pedestrians and cyclists, and particularly public transport at all times, especially bus travel times at peak traffic periods during weekdays (06:30 to 09:30 and 16:00 to 19:00); and
- c. Inform the public about any potential impacts on the road network.

CTMP.3 The CTMP shall be prepared using best practice (to better understand the effects of construction of the works subject of the OP on the affected road network), which may include the use of traffic modelling tools. Any such assessment shall be undertaken in consultation with Auckland Transport (including Auckland Transport Metro), and have the ability to simulate lane restrictions and road closures (unless otherwise agreed with Auckland Transport). The outcome of consultation undertaken between the Requiring Authority and Auckland Transport shall be documented and any Auckland Transport comments not acted on provided with the final CTMP when submitted to the Council.

CTMP.4 The CTMP shall describe the methods for avoiding, remedying or mitigating the local and network wide transportation effects resulting from the Project works subject of the relevant OP, and shall address the following matters:

- a. Methods to avoid, remedy or mitigate the local and network wide effects of the construction of individual elements of the Project (e.g. intersections/overbridges) and the use of staging to allow sections of the Project to be opened to traffic while other sections are still under construction;
- b. Methods to manage the effects of the delivery of construction material, plant and machinery (including oversized trucks);
- c. The numbers, frequencies, routes and timing of construction traffic movements;
- d. Traffic management measures to address and maintain traffic capacity and minimise adverse effects including, where applicable to the relevant OP:
 - i. Retaining the existing number of traffic lanes along SH1 (between Tristram Avenue and Oteha Valley Road);
 - ii. Retaining the extent of existing bus priority measures along SH1 (between the Albany Station and the Constellation Station), noting that the bus only on ramp from McClymonts Road and the bus only access to the Constellation Station may need to be temporarily closed. Any temporary closure will minimise adverse effects on buses and general traffic. The duration of any temporary closure shall be minimised as far as reasonably practicable;
 - iii. Retaining the existing number of through traffic lanes along SH18 between the Upper Harbour interchange and the Albany Highway interchange, noting that right turning movements to and from Paul Matthews Road may need to be

- temporarily closed. Any temporary closure will minimise adverse effects on buses and general traffic. The duration of any temporary closure shall be minimised as far as reasonably practicable;
- iv. Retaining two traffic lanes on McClymonts Road, over SH1, noting that temporary restrictions to one lane or temporary full closures may be required; and
 - v. Retaining at least one traffic lane and one footpath on Rosedale Road, under SH1, except where night time or weekend closures may be required for heavy civil works such as bridge or deck lifting. This single traffic lane is to allow signalised one way traffic in alternate directions; and
 - vi. Maintaining pedestrian connectivity across SH18 via a controlled pedestrian and cycle crossing should the Alexandra Stream underpass be closed during construction.
- e. Measures to maintain existing vehicle access to private properties, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with Auckland Transport and the affected landowner; and
 - f. Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours.
 - g. Where applicable to the relevant OP, measures to ensure no more than 20 car parking spaces are removed from the Albany Park and Ride during the construction period unless otherwise provided for at an alternative nearby site agreed between Auckland Transport and the Requiring Authority during the construction of the Project.
 - h. Include measures to avoid road closures, and the restriction of vehicle, cycle and pedestrian movements. Where there may be:
 - i. A restriction of cycle and pedestrian connectivity to schools, consultation with the Ministry of Education shall be undertaken; and
 - ii. A restriction on access to Waste Management NZ Limited ('WMNZ') from Rosedale Road, consultation with WMNZ shall be undertaken.
 - i. Identify alternative routes for over-dimension and over-weight vehicles where these routes are affected during construction, and consult with Auckland Transport and the freight industry (including affected local businesses) on the alternative routes or closures.

Public Transport Traffic Management Plan

CTMP.5 The CTMP shall include a specific Public Transport Traffic Management Plan ('PTTMP'). The PTTMP (and any amendments) shall be prepared in consultation with Auckland Transport. The purpose of the PTTMP is to define the process for identifying and managing the potential adverse effects of the Project on bus services. More specifically, the PTTMP shall address

those road network/bus routes/bus services which interface with SH1, SH18, and the Busway, and which may be affected by the construction of the Project, in such areas as:

- a. Delays to services and reliability;
- b. Increased journey distances and/or duration;
- c. Frequency of services;
- d. Loss of service/replacement services; and
- e. The procedures and timeframes needed for planning and communicating any road network/bus routes/bus services changes with Auckland Transport (and its bus operators) and customers.

CTMP.5A For each of the above matters, the Requiring Authority shall develop and agree with Auckland Transport acceptable performance thresholds that shall be met to agreed key destinations, having regard to:

- a. Staging of the Project works;
- b. Duration of the Project works;
- c. Time of day/night that the works are conducted;
- d. Convenience to public transport patrons;
- e. Safety;
- f. Public transport patronage.

CTMP.5B The performance thresholds shall be developed with specific acknowledgement of the necessary temporary closure of: the bus only on ramp at McClymonts Road; the bus only access to the Constellation Station; and the right turn movements to and from Paul Matthews Road.

CTMP.5C The performance thresholds for the specified road network/bus routes/bus services shall be monitored by the Requiring Authority, using, where appropriate, data provided by Auckland Transport. The methods and frequency for the monitoring of the performance thresholds (and the reporting of the outcome of the monitoring) shall be agreed between the Requiring Authority and Auckland Transport.

CTMP.5D Where the monitoring undertaken demonstrates that the performance thresholds are not being met, then traffic management measures shall be reviewed by the Requiring Authority (in consultation with Auckland Transport). In order to achieve the thresholds, such a review shall include, amongst other things:

- a. The staging of the construction activity;
- b. Methods to provide further prioritisation of bus services on certain routes;
- c. Methods to provide bus priority beyond the site(s) of the construction activity;
- d. The provision of additional or revised bus services to respond to delays/frequency of service;
- e. The measures to communicate changes to the road network/bus routes/bus services to the community.

Local roads used for heavy vehicle access to construction areas

CTMP.6 Prior to the commencement of construction of the works subject of the relevant OP, the Requiring Authority shall:

- a. Identify all access points from the Project construction areas accessing onto the local road network;
- b. Confirm existing levels of traffic using the road to which the proposed site access points relate;

- c. Estimate proposed construction vehicle volumes;
- d. Identify, in consultation with Auckland Transport, a monitoring programme to be implemented for the duration of construction of the Project (or relevant Project stage) to validate the construction vehicle volumes identified in (c)

CTMP.6A At least four weeks prior to the commencement of construction works identified in CTMP.6, the Requiring Authority shall submit to Auckland Transport, a RAMM visual condition assessment including a high-definition video and Pavement Strength Testing of the following:

- a. Where the construction site access point is onto an arterial road, the expected tracking curves of construction vehicles entering/ exiting via the relevant construction site access points; and
- b. Where the construction site access point is onto a local road between the access point(s), along the local road(s) to arterial road(s) and including the expected tracking curves of construction vehicles entering/ exiting the arterial road(s)

CTMP.6B At least two weeks prior to the Project construction works identified in condition CTMP.6 commencing, the Requiring Authority shall arrange a meeting with Auckland Transport to discuss and agree the findings of the RAMM visual condition assessment and the results of Pavement Strength Testing. The purpose of the meeting is to agree on any measures needed (if any) to manage the effects of construction traffic on the physical condition of the road(s), including limiting the volume of heavy vehicles, physical works to strengthen the road pavement before use or repairing/maintaining the road(s) in the event of damage attributable to the Project.

CTMP.6C Subject to condition CTMP.6B, the Requiring Authority shall undertake a weekly inspection of the matters identified in condition CTMP.6A or upon any complaints received, and a final inspection within one week of ceasing using each access point for construction. The inspections shall record photographic or video evidence of any damage on the road(s) and provide this to Auckland Transport upon request.

CTMP.6D Any damage identified as attributable to the Project by an appropriately qualified and experienced person in the areas identified by the inspections required in condition CTMP.6C shall be repaired within one week or within an alternative timeframe to be agreed with Auckland Transport. All repairs shall be undertaken by the Requiring Authority and shall be to the satisfaction of Auckland Transport.

Traffic noise (operation)

ON.1 For the purposes of conditions ON.2 to ON.11:

- a. BPO – means the Best Practicable Option in accordance with s16 of the RMA;
- b. NZ 6806 – means New Zealand Standard NZS 6806:2010 *Acoustics – Road-traffic noise – New and altered roads* (“NZS 6806”);
- c. Building-Modification Mitigation – has the same meaning as in NZS 6806
- d. Habitable Space – has the same meaning as in NZS 6806;
- e. Noise Assessment – means the *Assessment of Operational Noise and Vibration* submitted with the NoR;

- f. Major Construction Activity - means any construction activity that would result in an exceedance of the standards in CNV.3 and CNV.4
- g. PPFs – means Protected Premises and Facilities and has the same meaning as in NZS 6806. For the purpose of these conditions they also include all dwellings in Stage 1 of the Colliston Rise subdivision where Building Consent or Resource Consent which authorises the construction of a dwelling has been granted;
- h. Structural Mitigation – has the same meaning as in NZS 6806. For the purpose of these conditions the structural mitigation measures are low noise road surface materials and noise barriers;
- i. Work Area - means any area where construction works associated with the Project are undertaken (e.g. all active works areas and construction support areas); and
- j. The Design Year means 2031.

Structural mitigation

- ON.2 Subject to conditions ON.7 and ON.7A, the Requiring Authority shall design and construct the Project to ensure that the predicted noise levels for the Proposed Design (contained in Appendix A to these conditions) are not exceeded by more than 2dB at any PPF.

Advice Note:

The predicted noise levels for the Proposed Design (including the full noise barrier along Upper Harbour Highway as recommended in the JWS) are contained in Appendix A.

- ON.3 The Requiring Authority shall implement the following Structural Mitigation:
- a. Open Graded Porous Asphalt (or other low-noise road surfaces with equal or better noise reduction performance) on all sections of the Project except where a higher friction (for safety) or stronger surface is required; and
 - b. The following noise barriers and heights shall be provided:
 - Southern side of SH18
 - i. From the corner formed by the off ramp from SH1 to Upper Harbour Highway, westwards to the corner of Caribbean Drive and Upper Harbour Highway, height 2.4m.
 - ii. From Caribbean Drive westwards to approximate chainage 1280, height 2.4m.
 - iii. From chainage 1280 to 1410 approximately, height 3m.
 - iv. From chainage 1555 to 1765 approximately, height 2.4m.
 - v. From chainage 1880 to 1950 approximately, height 2.4m.
 - Northern side of SH18
 - vi. 40m long in front of the childcare centre in Saturn Place, height 2.4m.
 - vii. 50m long in front of the childcare centre in Omega Street, height 2.4m.

In the event that the Requiring Authority proposes to change any of the requirements of (a) and (b) above, it shall provide documentation from a suitably qualified and experienced

acoustics specialist to the Council demonstrating that condition ON.2 will continue to be complied with.

- ON.4 Within twelve months of completion of construction of the Project, the Requiring Authority shall prepare and submit a report to the Council which demonstrates compliance with conditions ON.2 and ON.3. The report shall be prepared by a suitably qualified and experienced acoustics specialist and shall contain a description of, and the results from, a computer noise model of the Project as constructed.

The report shall include the results of field measurements at a minimum of six representative PPFs within the Project. The results of the noise level monitoring shall be used to verify the computer noise model.

Field measurements shall be in accordance with NZS 6806.

- ON.5 The noise barriers shall be maintained so that they retain their designed noise reduction performance.
- ON.6 The low noise road surfaces shall be maintained so that they retain their noise reduction performance as far as practicable.

Building-Modification Mitigation

- ON.7 Prior to construction of each stage of the Project, a suitably qualified acoustics specialist approved by the Council shall identify those PPFs where, following implementation of the Structural Mitigation measures, either:
- a. Both of the following occur:
 - i. A noise level increase of more than 2dB will occur due to road-traffic noise from the Project (determined by comparing the predicted noise levels for the final design with the predicted noise levels for the Do-nothing option as contained in Appendix A to these conditions); and
 - ii. Habitable spaces are expected to receive in excess of 45dB $L_{Aeq(24hr)}$ from motorway operational noise with windows closed, in the Design Year;
 - or
 - b. Noise levels are greater than 67dB $L_{Aeq(24hr)}$ (assessed in accordance with NZS6806).

For those PPFs that (a) or (b) apply to, the Requiring Authority shall set out options as to what Building Modification Mitigation are available to achieve 40 dB $L_{Aeq(24hr)}$ for habitable spaces using the process set out in Conditions ON.8 to ON.11.

Where sites contain PPFs that are subject to resource consents requiring noise attenuation, this condition shall only apply to the extent that Project noise exceeds the noise level predicted when the resource consent was granted.

- ON.7A Prior to Major Construction Activity in the relevant Work Area, the Requiring Authority shall write to the owner of that PPF requesting entry to assess the noise reduction performance of the existing building envelope. If the owner agrees to entry within 3 months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a suitably qualified acoustics specialist to visit the building and assess the noise reduction performance of the existing building envelope, and determine what Building-Modification measures are required to achieve an operational noise level of 40 dB $L_{Aeq(24h)}$ for habitable spaces.

- ON.8 For each PPF identified under condition ON.7, the Requiring Authority is deemed to have complied with condition ON.7A if:
- a. The Requiring Authority's acoustics specialist has visited and assessed the PPF; or
 - b. The owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or
 - c. The owner did not agree to entry within three months of the date of a Requiring Authority letter seeking entry for assessment purposes (including where the owner did not respond within that period); or
 - d. The owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project or after reasonable time has not responded.

If any of (b) to (d) above applies to a PPF identified under condition ON.7, the Requiring Authority is not required to implement Building-Modification Mitigation to that PPF.

- ON.9 Subject to condition ON.8, within three months of the assessment required by condition ON.7A, the Requiring Authority shall write to the owner of each PPF identified under condition ON.7 advising:
- a. If Building-Modification Mitigation is required to achieve 40 dB $L_{Aeq(24h)}$ inside habitable spaces; and
 - b. The options for Building-Modification Mitigation to the building, if required; and
 - c. That the owner has twelve months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
- ON.10 Once an owner has confirmed which Building-Modification Mitigation option is preferred, the mitigation shall be implemented by the Requiring Authority, including obtaining any Council consents, within a mutually agreeable and reasonable timeframe, and where practicable, prior to a Major Construction Activity commencing in the relevant Work Area.
- ON.11 Where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with condition ON.10 if:
- a) The Requiring Authority has completed Building-Modification Mitigation to the PPF; or
 - b) An alternative agreement for mitigation is reached between the Requiring Authority and the owner, and that mitigation option has been completed; or
 - c) The owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with condition ON.9 (including where the owner did not respond within that period).

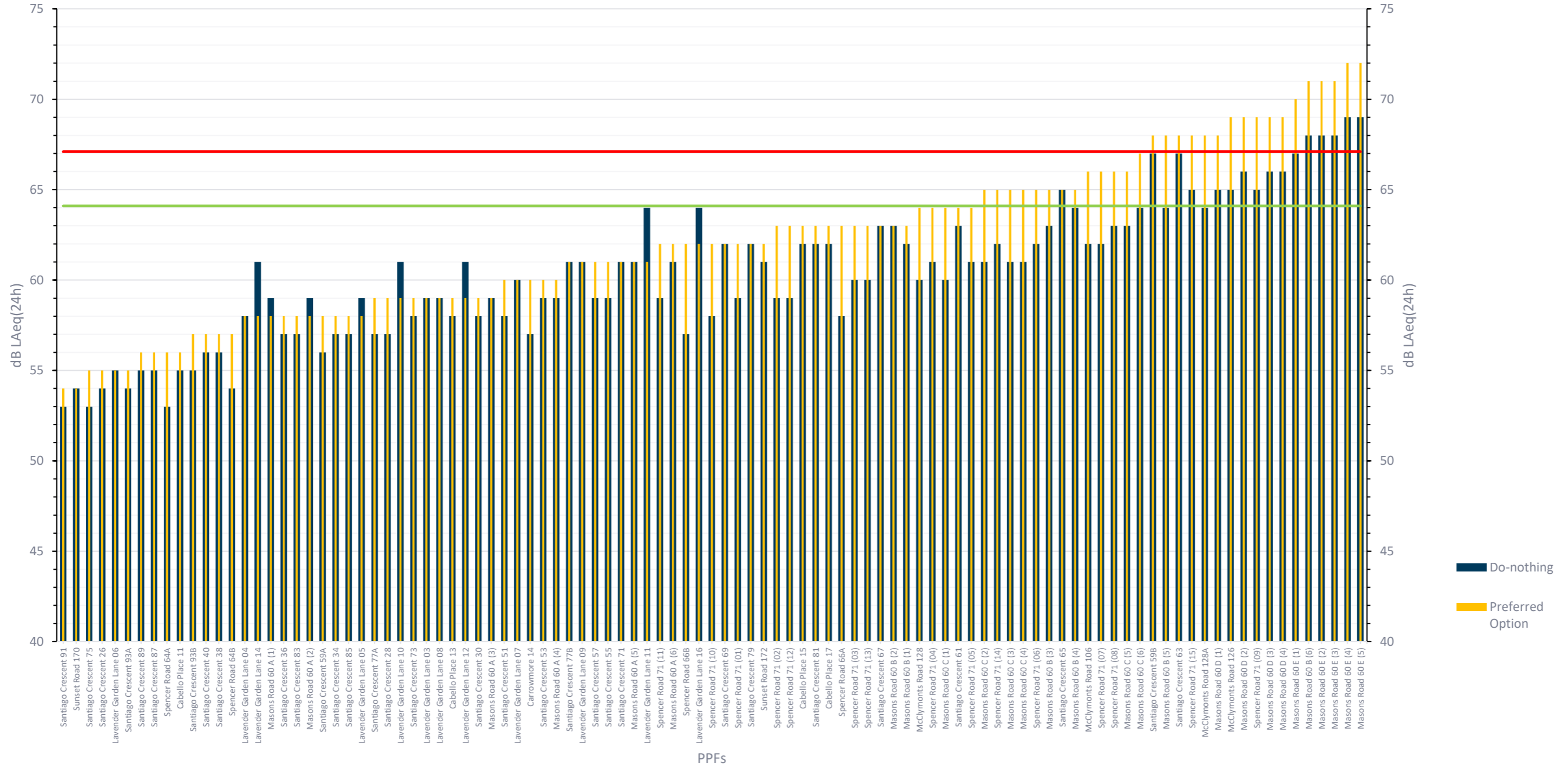
Operational Noise Conditions

Appendix A

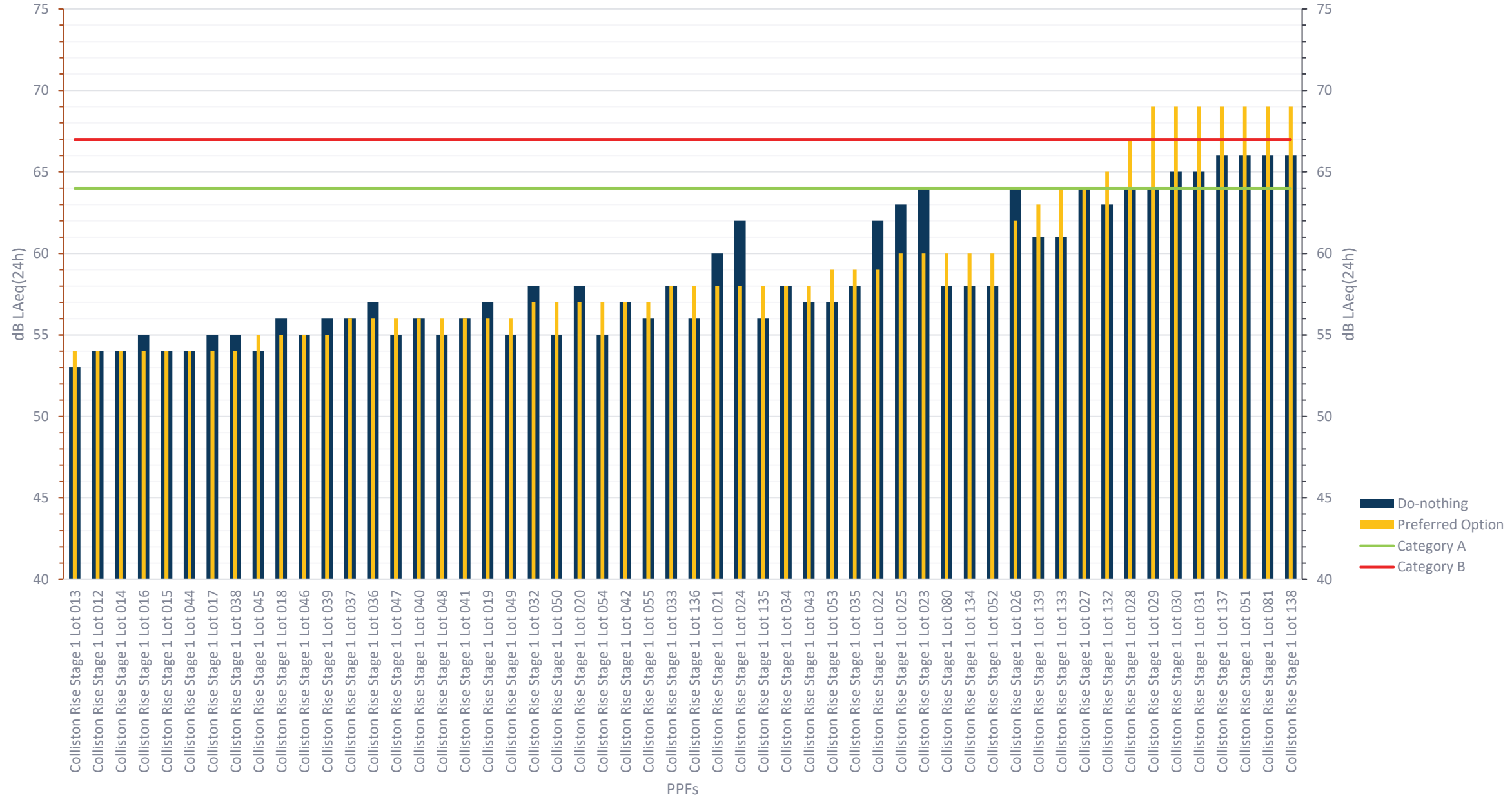
The following graphs show predicted noise levels for all PPFs identified in accordance with ON.2, and are based on the following factors:

- a) All noise levels are predicted for the design year (2031), with all structural mitigation (noise barriers and low noise road surface) implemented.
- b) All predictions are for the highest floor of each building.
- c) For Colliston Rise Stage 1, the predictions are for a nominal location 3 metres from the western boundary of each Lot, at a height of 4.5 metres above ground level, representing the second floor level.
- d) Predictions are sorted from lowest to highest for the Proposed Design.

PPFs adjacent to SH1
(Assessment areas 1 to 3)



Colliston Rise Stage 1 Lots (Assessment area 2a)



Operational Vibration

- OV.1 Vibration generated by traffic shall comply with Class C of Norwegian Standard NS8176.E:2005 *Vibration and Shock – Measurement of vibration in buildings from land-based transport and guidance to evaluation of its effects on human beings* in any lawfully established occupied building.

In the event that there is a complaint about vibration in any lawfully established occupied building, the Requiring Authority shall, subject to land owner approval, investigate whether:

- a. The vibration complies with the Standard; and
- b. It is caused by defects in the motorway.

If the vibration does not comply with the Standard and is caused by defects in the motorway, the Requiring Authority shall rectify the defects so that the Standard is complied with in the building that is the subject of the complaint.

Urban Design and Landscape

- UDL.1 The Requiring Authority shall submit an Urban Design and Landscape Plan ('**UDLP**') to the Council as part of the OP required under section 176A of the RMA.
- UDL.2 The purpose of the UDLP is to outline:
- c. The methods and measures to avoid, remedy and mitigate adverse effects on landscape amenity during the construction phase of the Project;
 - d. The requirements for the Project's permanent landscape mitigation works; and
 - e. The landscape mitigation maintenance and monitoring requirements.
- UDL.3 The UDLP shall be prepared by a suitably qualified and experienced person in accordance with:
- a. The NZ Transport Agency's *Urban Design Guidelines: Bridging the Gap* (2013) or any subsequent updated version; and
 - b. The NZ Transport Agency's *P39 Standard Specification for Highway Landscape Treatments* (2013).
- UDL.4 The Outcomes Sought set out in Chapters 5 and 6 of the UDLF (Revision 3) shall be given effect to through the UDLP in relation to the following matters:
- a. Urban design and landscape treatment of all major structures, including bridges, underpasses, retaining walls and noise walls and barriers;
 - b. Urban design and landscape treatment of the new structures at Constellation and Albany Bus Stations;
 - c. Integrated landscape treatment of permanent stormwater management ponds, wetlands and swales;
 - d. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; and
 - e. Design and treatment options on or adjacent the following properties:
 - i. The western most residences at 60B Masons Road that overlook the proposed Albany Busway overbridge;
 - ii. Lots 25, 26, 27 and 28 in Colliston Rise, directly adjacent to the proposed retaining walls;
 - iii. 33, 35, 37, 39, 41B, 43, 45 and 47 Barbados Drive, directly adjacent to the proposed Paul Matthews Road overbridge; and

- iv. The solid 2m high wall on the edge of the SUP adjacent to the Waste Management Ltd facility at 117 and 123 Rosedale Road.
 - f. Design and maintenance of lighting, including on the carriageways, bridges and other structures, busway, and shared use paths
 - g. Detailed design of the shared use path, busway and flyover adjacent to the Kiwi Storage Ltd site, with the object of minimising any adverse visual effect on that site, as far as practicable
- UDL.5 The Requiring Authority shall undertake mitigation and enhancement planting in general accordance with the requirements of Sections 5 and 6 of the UDLF (Rev. 3). The UDLP shall include details of proposed mitigation planting including as follows:
- a. Identification of vegetation to be retained, protection measures, and planting to be established along cleared edges;
 - b. Proposed planting including plant species, plant/grass mixes, spacing/densities, sizes (at the time of planting) and layout and planting methods;
 - c. The proposed staging of planting in relation to the construction programme, including provision for planting within each planting season following completion of works in each stage of the Project and detailed specifications relating to (but not limited to) the following:
 - i. Weed control and clearance;
 - ii. Pest animal management;
 - iii. Ground preparation (topsoiling and decompaction);
 - iv. Mulching;
 - ix. Plant sourcing and planting, including hydroseeding and grassing; and
 - d. Details of a proposed maintenance and monitoring programme.
- UDL.5A The Requiring Authority shall maintain and monitor the mitigation and enhancement planting for a minimum of 4 years following the planting being undertaken. The Requiring Authority shall monitor the planting in accordance with the programme required by condition UDL.5(d), including monitoring for any patches in planted areas greater than 4m² where there is multiple plant failure (either stunted growth or death) and replant these areas as necessary.
- UDL.6 The UDLP shall include a Reserve Reinstatement Plan for the following reserves (or parts thereof) directly affected by the construction works:
- a. Rook Reserve;
 - b. Arrenway Reserve; and
 - c. Meadowood Reserve.

Advice Note

Appendix A to the Board of Inquiry Decision illustrates the location of affected reserves.

- UDL.6A The Reserve Reinstatement Plans shall be prepared in consultation with Council Parks and shall include the following details (as appropriate to the subject reserve):
- a. Removal of structures, plant and materials associated with construction;
 - b. Replacement of boundary fences to the same or similar type to that removed;
 - c. Reinstatement of grassed areas to a similar condition as existed prior to construction;
 - d. Replacement of trees and other planting removed for construction on a one-for-one basis (or as otherwise agreed with Council Parks); and
 - e. Details of way finding interpretation signage within and adjacent to the reserve.

- UDL.6B The Rook Reserve Reinstatement Plan shall be prepared in consultation with Council Parks and shall include the following details:
- a. A level grassed area minimum dimensions of 30m by 30m suitable for informal ball games;
 - b. A 10m by 10m level surface located adjacent to the stormwater pond, with the dual function of providing for occasional use by stormwater pond maintenance machinery and a single basketball hoop and half court, located at the eastern end of the pond;
 - c. Amenity and screen planting along the boundary of the reserve with State highway 18;
 - d. Details of the proposed access around the stormwater pond for maintenance, including any additional necessary hard stand areas;
 - e. Grassed slopes (where possible) at the upper levels of the reserve to allow passive surveillance from neighbouring residential properties (with scattered amenity trees);
 - f. All grassed areas are to have a slope of no more than 1:5 to allow for mowing, with steeper gradients to be landscaped;
 - g. Re-contouring and landscaping of the remainder of the reserve, including features such as walkways and seating; and
 - h. Prior to commencement of construction on the reserve, the existing fitness equipment in Rook Reserve is to be removed and replaced with three new equivalent pieces of equipment in Barbados Reserve.
- UDL.6C In addition to the Reserve Reinstatement Plans above, the UDLP shall in relation to the Landfill provide boundary fencing, replace any trees and landscaping equivalent to those removed or affected by the construction of the retaining wall, provided that any landscaping does not compromise sightlines required for the new motorway and / or busway and/or the shared use path.
- UDL.7 A draft of the UDLP shall be submitted to the Council Urban Design Advisory Panel for comment before finalisation and submission with any OP in accordance with Condition UDL.1.
- UDL.8 All work shall be carried out in accordance with the UDLP.
- UDL.9 For the purpose of staging works, the Requiring Authority may prepare staged or site specific UDLPs. The Requiring Authority shall consult with the Council about the need and timing for any site-specific or staged UDLPs.
- UDL.10 The Requiring Authority may submit amendments to the UDLP to the Council. Any works in accordance with the amended UDLP shall not commence until the process under section 176A of the RMA has been completed in relation to those aspects of the UDLP that are being amended.
- UDL.11 The UDLPs shall be prepared in partnership with the Transport Agency Central Northern Iwi Integration Group ('IIG'). This consultation shall commence at least 30 working days prior to submission of each UDLP to the Council. Any comments and inputs received from the IIG shall be clearly documented within the UDLP, along with a clear explanation of where any comments or suggestions have not been incorporated and the reasons why.
- UDL.12 Any UDLP that includes land within the Watercare Designations 9310 and 9311 shall be prepared in consultation with Watercare Services Limited.

Alexandra Stream Underpass

- UDL.13 The Requiring Authority shall implement the following measures to address public safety concerns associated with the Alexandra Stream Underpass:
- a. Path realignment of the southern entrance to the underpass to suit a minimum cyclist design speed of 15km/h, provided realignment works do not impact the Alexandra Stream;
 - b. Improved lighting within the underpass; and
 - c. Inclusion of CCTV within the underpass.
- UDL.14 The measures outlined in UDL.13 shall be designed and implemented in consultation with Council Parks, Bike Auckland and Auckland Transport.

Paul Matthews Road Bridge

- UDL.15 During the detailed design phase of the Paul Matthews Road Bridge, the Requiring Authority shall consult Bike Auckland on the layout and detailed design of the shared use path on the Bridge.

Stakeholder and Communications Plan ('SCP')

- SCP.1 The Requiring Authority shall appoint a community liaison person for the duration of the construction phase of the Project to be the main point of contact for persons affected by the Project.
- SCP.2 The Requiring Authority shall ensure that the contact details (phone, postal address, and email address) of the community liaison person and the details of the complaints process set out in Condition SCP.12 are:
- a. Included in the SCP required under Condition SCP.3;
 - b. Advertised in the relevant local newspapers and community noticeboards prior to the commencement of the Project;
 - c. For each Project stage, included in a leaflet to be issued to all properties within that Project stage contained within the 45 dB LAeq Contour (Residential Night) as shown on the Construction Noise Mark Up drawings contained at Appendix E of the Assessment of Construction Noise and Vibration (9 December 2016) prior to the commencement of the relevant Project stage;
 - d. Provided at the community events required under Condition SCP.6 and
 - e. Included within the Requiring Authority's website pages for the Project.
- SCP.3 At least two months prior to the commencement of construction works for the relevant OP, the Requiring Authority shall submit a SCP to the Council.
- SCP.4 The Requiring Authority shall provide a draft SCP to the Council for comment at least three months prior to the commencement of construction. In finalising the SCP, the Requiring Authority shall detail how comments received from the Council have been addressed.
- SCP.5 The purpose of the SCP is to set out the procedures for communicating with the affected communities and key stakeholders throughout the construction period including types and regularity of engagement events and the methods proposed to avoid, remedy or mitigate, as

far as practicable, disruption to residents, businesses and schools as a result of construction activities.

SCP.6 The SCP shall contain the following:

- a. Communication methods for informing the affected community of construction progress, including the expected duration of the works and proposed hours of operation outside normal working hours and Project contact details;
- b. Identification of key stakeholders including community groups, business groups, residents' organisations, childcare groups, the Council, Auckland Transport, Watercare, Ministry of Education, Waste Management NZ Limited, the Melanesian Mission and St Johns Trust Board, the IIG and the Local Boards;
- c. Consultation processes to reach the affected communities and key stakeholders in order to foster good relationships and to provide opportunities for learning about the Project and detail on when each of these processes will be used; and
- d. Business and education disruption management processes.

SCP.7 The consultation processes required under SCP.6(c) shall provide for, as a minimum, the following:

- a. At least two months prior to construction commencing for the relevant Project stage, provision of an inaugural community information event or events, to explain the Project and outline the process to review and comment on Project mitigation and UDLPs;
- b. Briefings for key stakeholders (including emergency services, business associations, local boards and road user groups) at least quarterly, and ahead of all major milestones or road closures;
- c. Regular consultation events or information days, held as appropriate, but at least once per month when construction works are taking place, to provide the opportunity for the affected communities to have input into the Project.
- d. Targeted community events at least one month prior to construction commencing in each of the following Work Areas:
 - SH1/SH18 interchange;
 - SH18 realignment;
 - Rook Reserve;
 - Rosedale Road;
 - Constellation and Albany Bus Stations; and
 - McClymonts Road (including Albany Busway Bridge).
- e. Notification of consultation events and information days to the public and community groups.
- f. Publication and circulation of records from consultation events and information days.

- g. A requirement for the Requiring Authority to ensure that appropriate personnel attend both the stakeholder and community events to explain the Project programme and staging, how the effects are proposed to be managed and to respond to any questions.
- h. A requirement to produce a draft report summarising the main points arising from each consultation event, reporting on any social impacts unforeseen effects of the Project, along with recommendations on the measures to mitigate those effects. The Requiring Authority shall ensure that a copy of the draft report is provided to the Council and to meeting attendees within 10 working days of the event to provide an opportunity for feedback. Feedback will be provided within 5 working days of receiving the draft report.
- i. A requirement to finalise and circulate the consultation summary report within 5 working days of receiving feedback.

SCP.8 The events required under condition SCP.7(b), shall:

- a. Provide regular updates on Project progress, in particular advanced notice of upcoming works including closures and traffic management plans.
- b. Enable the effects of Project construction on the community (including businesses) to be monitored by providing regular forums through which information about the Project can be provided.
- c. Enable opportunities for feedback on proposed construction impact measures.
- d. Enable the affected communities and key stakeholders the opportunity to provide feedback on the development of, and any material changes to the UDLPs.
- e. Enable opportunities for concerns and issues to be reported to and responded to by the Requiring Authority, including opportunities for updates to the SCP.

SCP.9 The business and education disruption management processes required under condition SCP.6(d) shall include details of the measures to be implemented to avoid, remedy or mitigate, as far as reasonably practicable, disruption to businesses and education facilities as a result of construction activities including:

- a. Measures to maximise opportunities for customer and service access to businesses that will be maintained during construction;
- b. Measures to mitigate potential severance and loss of business visibility issues by way-finding and supporting signage for pedestrian detours required during construction; and
- c. Other measures to assist businesses to maintain client/customer accessibility, including but not limited to client/customer information on temporary parking or parking options for access and delivery.
- d. Measures to enable ongoing pedestrian and cycle connectivity to education facilities during the Project.

SCP.10 The Requiring Authority shall implement the SCP for the duration of the construction works and for six months following practical completion of the Project.

SCP.11 The SCP shall be reviewed six monthly for the duration of the construction works and updated as required. Any updates to the SCP shall be provided to the key stakeholders and reported at the events required under condition SCP.7(c)

Complaints process

- SCP.12 Prior to the commencement of construction, the Requiring Authority shall establish a 24 hour toll free telephone number and an email address for receipt of complaints from the community. The 24 hour toll free telephone number shall be answered at all times and shall be maintained for the duration of the Project.
- SCP.13 At all times during construction work, the Requiring Authority shall maintain a permanent register of any complaints received relating to the construction works, including the full details of the complainant and the nature of the complaint.
- SCP.14 The Requiring Authority shall respond to any complaint within 24 hours of receipt of the complaint, except where an immediate hazard is present or where the complaint relates to construction noise or vibration, in which case the Requiring Authority shall use its best endeavours to respond immediately. A formal written response shall be provided to the complainant and the Council within 10 days of complaint receipt.
- SCP.15 For the period of the construction of the Project, the Requiring Authority shall maintain a written complaints register containing the following information:
- a. The details of the complainant;
 - b. The nature of the complaint;
 - c. The investigations undertaken into the complaint; and
 - d. Any remedial actions undertaken to address the complaint.
- SCP.16 The Requiring Authority shall keep a copy of the complaints register required under SCP.15 on site and shall provide a copy to the Council once a month and more frequently upon request

Greenwich Way Shops

- SCP.17 At least two weeks prior to the closure of the off-ramp from SH18 onto Unsworth Drive, the Requiring Authority shall, in consultation with the Greenwich Way shop owners and operators and if requested by those owners and operators:
- a. Provided that all necessary approvals can be obtained from the road controlling authority, install wayfinding signage at the junction of Barbados Drive and Unsworth Drive; and
 - b. Advertise the range of services, location and trading hours of the Greenwich Way shops by:
 - i. Undertaking a leaflet drop to all properties contained between SH18, Caribbean Drive, Sunset Road and Albany Highway; and
 - ii. Placing advertisements in the relevant local newspapers.
- SCP.18 The Requiring Authority shall carry out the actions required by Condition SCP.17 (a) and (b) at least two weeks prior to closure of the off ramp from SH18 onto Unsworth Drive and repeat the advertising required by Condition SCP.17 (b) once a month for three months following the first leaflet drop and newspaper advertisements.
- SCP.19 At least two months prior to the closing of the off ramp from SH18 onto Unsworth Drive the Requiring Authority shall, in consultation with the Greenwich Way shop owners and operators, and if requested by those owners and operators, provide advice and assistance to those owners and operators to prepare a business/marketing plan for their premises,

International Hockey Facility

IHF.1 Unless otherwise agreed between the Requiring Authority and the Harbour Hockey Charitable Trust, prior to any works commencing within any part of the North Harbour Hockey Facility lease area, the Requiring Authority shall, in consultation with Harbour Hockey Charitable Trust, relocate the North Harbour Hockey facility on an equivalent basis. This shall include the following elements:

- a. Three water-based artificial hockey pitches with all fields to meet equivalent current International Hockey Federation ('**FIH**') design standards as existing fields;
- b. One grass pitch (or land prepared for installation of a fourth artificial hockey pitch);
- c. A pavilion building of similar size, quality and finish that provides clubrooms, function rooms, changing rooms, and other amenities consistent with those at the existing North Harbour Hockey Facility but shall be designed to meet current FIH and building code standards; and
- d. Lighting, car parking, public address system, storage sheds, dug-outs, and associated other facilities consistent with those at the existing North Harbour Hockey Facility.

If the replacement facility is located proximate to the existing satellite sand based pitch within Rosedale Park, suitable access from the replacement facility to the existing sand based pitch will be provided. In the event that the new hockey facility is not located sufficiently close to the existing satellite sand pitch (which is in Rosedale Park to the north of the existing North Harbour Hockey Facility) to enable convenient access, an equivalent sand based pitch shall be provided as part of the replacement facility.

If agreed with HHCT, relocation to the new North Harbour Hockey Facility may be undertaken in stages.

RESOURCE CONSENT CONDITIONS

Acronym/Abbreviation	Full Term or Definition
AMP	Avian Conditions and Avifauna Management Plan
ANZECC	Australian and New Zealand Environment Conservation Council
ARC	Archaeology Conditions
ARI	Annual Recurrence Interval
AUP	Auckland Unitary Plan
BPO	Best Practicable Option
CEMP	Construction Environmental Management Plan Conditions and Construction Environmental Management Plan
CESCP	Construction Erosion and Sediment Control Plan
CL	Contaminated Land Conditions
CLCLR	Closed Landfill and Contaminated Land Response
Council	Auckland Council
Commencement of construction or construction works	In all conditions which refer to 'commencement of construction', construction includes work such as earthmoving and earthworks excavation; and the construction, erection, installation, carrying out, alteration, repair, restoration, renewal, maintenance, extension, demolition, removal, or dismantling of any building or structure.
CSMP	Contaminated Site Management Plan
DMP	Dust Management Conditions and Dust Management Plan
DOC	Department of Conservation
EC	Ecology Conditions
EIMP	Electricity Infrastructure Management Plan
EW	Earthworks Conditions
FIDOL	Frequency, intensity, duration, offensiveness and location
GW	Groundwater Conditions
IIG	Iwi Integration Group
Landfill	Rosedale Closed Landfill
LCMS	Landfill Construction Management Statement
LHSP	Landfill Health and Safety Plan
LM	Lizard Management Conditions
LMS	Landfill Management Strategy
LRWP	Landfill Reinstatement Works Plan

LW	Rosedale Closed Landfill Conditions
NU	Network Utilities Conditions
Potential Nesting Sites	Refers to sites identified as potential dotterel nesting sites in the Assessment of Terrestrial Ecology Effects Report (9 December 2016)
PPE	Protective Personal Equipment
Project	The Northern Corridor Improvements Project.
Project Archaeologist	A suitably qualified and experienced archaeologist (recognised by Heritage New Zealand Pouhere Taonga) appointed as part of the Project.
Proposed Design	The design of the project as indicated on General Arrangements Sheets 1 – 2 (Revised Albany Busway Bridge – Rev J), 3 – 8 (Consent Issue – Rev H), 9 – 10 (Revised Alteration to Designation Boundary – Bluebird Reserve)
RC	General Resource Consent Conditions
RMA	Resource Management Act 1991
RTS	Refuse Transfer Station
RV	Review Condition
RWWTP	Rosedale Wastewater Treatment Plant
SUP	Shared Use Path
SW	Stormwater Conditions
TP10	Auckland Council's Stormwater Treatment Devices: Design Guidelines Manual
Transport Agency	New Zealand Transport Agency
TSP	Total Suspended Particulate
TSS	Total Suspended Solids
UV	Ultraviolet
Watercare	Watercare Services Limited
WMNZ	Waste Management NZ Limited

These conditions relate to the following resource consents:

EPA Reference	Lapse period	Duration granted
Land Use Consents		
NSP39/007 Vegetation alteration or removal within the riparian margins of Lucas Creek, Alexandra Stream and Oteha Stream in relation to the operation, maintenance, renewal, repair, construction and removal of stormwater outfalls.	7 years	7 years
NSP39/008 Vegetation alteration or removal within a Significant Ecological Area at the Rosedale Wastewater Treatment Plant in relation to the operation, maintenance, renewal, repair, construction and removal of network utilities.	7 years	7 years
NSP39/009 Earthworks greater than 50,000m ² where land has a slope less than 10 degrees outside the Sediment Control Protection Area.	7 years	7 years
NSP39/010 Earthworks greater than 2,500m ² where the land has a slope equal to or greater than 10 degrees.	7 years	7 years
NSP39/011 Earthworks greater than 2,500m ² within the Sediment Control Protection Area.	7 years	7 years
NSP39/012 Earthworks from 10m ² to 2,500m ² and from 5m ³ to 2,500m ³ within a Significant Ecological Area (SEA_T_8364).	7 years	7 years
NSP39 /013 Earthworks for infrastructure greater than 2500m ² or 2,500m ³ within a Significant Ecological Area (SEA_T_8365).	7 years	7 years
Land Use Consents and Water Permits		
NSP39/014 Activities in, on, under or over the bed of a lake – replacement, upgrading or extension of an existing structure in a Significant Ecological Area (including associated bed disturbance or depositing any substance, diversion of water and incidental temporary damming of water).	7 years	35 years
NSP39/015 Activities in, on, under or over the bed of a river – activities involving works on existing structures (including associated bed disturbance or depositing any substance, diversion of water and incidental temporary damming of water).	7 years	35 years
NSP39/016 Activities in, on, under or over the bed of a lake – Stormwater outfall in a Significant Ecological Area (SEA_T_8365) (including associated bed disturbance or depositing any substance, reclamation, diversion of water and incidental temporary damming of water).	7 years	35 years
NSP39/017 Activities in, on, under or over the bed of a lake – Surface water intake structure in a Significant Ecological Area (SEA_T_8364) (including associated bed disturbance or depositing any substance, reclamation, diversion of water and incidental temporary damming of water).	7 years	35 years
NSP39/018 Activities in, on, under or over the bed of a river – Reclamation / drainage of the watercourses south of Pond 1 at the Rosedale Wastewater Treatment	7 years	35 years

Plant (including associated structures, bed disturbance or depositing any substance, diversion of water and incidental temporary damming of water).		
Water Permits		
NSP39/019 Diversion of surface water during operation.	7 years	35 years
NSP39/020 Diversion of surface water during construction.	7 years	7 years
NSP39/021 Dewatering and groundwater level control associated with groundwater diversion.	7 years	7 years
NSP39/022 Diversion of groundwater caused by excavations.	7 years	35 years
Water Permit and Discharge Permit		
NSP39/023 Diversion and discharge of stormwater during operation.	7 years	35 years
Discharge Permits		
NSP39/024 Stormwater discharge from the development or redevelopment of existing high use roads.	7 years	7 years
NSP39/025 Stormwater discharge from the development or redevelopment of new or existing impervious areas greater than 50m ² within a Stormwater Management Area – Flow 1 or Flow 2 control.	7 years	7 years
NSP39/026 Stormwater discharge from the development or redevelopment of new or existing impervious areas greater than 5,000m ² for a road, motorway, or State highway within a Stormwater Management Area – Flow 1 or Flow 2 control.	7 years	7 years
NSP39/027 Discharge of water and contaminants into or onto land or water from the construction, repair, maintenance, upgrade or removal or network utility infrastructure.	7 years	7 years
NSP39/028 Discharges to air from earthworks and the construction, maintenance and repair of public roads.	7 years	7 years
NSP39/029 Discharges of contaminants to air from waste processes at the Rosedale Closed Landfill.	7 years	7 years
NSP39/030 Discharges of contaminants to air, land or water from contaminated land.	7 years	7 years
National Environmental Standards		
NSP39/031 Disturbance and removal of soils from contaminated or potentially contaminated land under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.	7 years	7 years

General Conditions

These conditions apply to all resource consents.

- RC.1 Except as modified by the conditions below, and subject to final design, the Northern Corridor Improvements Project ('Project') shall be carried out in general accordance with:
- a. *General arrangements drawings*
 Sheets 1 and 2, DRG 0201 – 0202, Rev J
 Sheets 3 – 8, DRG 0203 – 0208, Rev H
 Sheets 9 – 10, DRG 0209 – 0210, Rev I (Revised Alteration to Designation Boundary – Bluebird Reserve)
 - b. *Typical cross sections*
 Sheets 1 to 9, DRG 0301 - 0309, Rev F
 Sheet 10, DRG 0310, Rev C
 - c. *Plan and long section SH1 Mainline*
 Sheets 1 – 7, DRG 0401 – 0407, Rev. A
Plan and long section SH18 Westbound
 Sheets 1 – 4, DRG 0415 – 0418, Rev. A
 - d. *Civil structures*
 DRG 1310 (Rev. C), and 1315, 1320, 1325, 1330, 1335, 1340, 1345, 1350, 1355, 1365, 1370, 1375 (all Rev. B).
 - e. *Stormwater layout plans*
 Sheets 1 – 10, DRG 1401 – 140, Rev B
 - f. *Stormwater catchment plan*
 Sheets 1 – 10, DRG 1451 – 1460, Rev B
 - g. *Conceptual construction water management plan*
 Sheets 1 – 10, DRG 1601 – 1610, Rev B
 - h. *Erosion and sediment control standard details*
 Sheets 1 – 2, DRG 1620 - 1621, Rev A
 - i. The notice of requirement plans DRG 2001 Rev C, 2002 Rev C, DRG 2003-2008 Rev B, DRG 2009 Rev C, DRG 2010 Rev C and DRG 2011 Rev C.
- RC.2 Where there is inconsistency between the General Arrangements referred to in Condition RC.1 above and these conditions, these conditions shall prevail.

Lapse date

- RC.3 Under section 125 of the Resource Management Act 1991 ('**RMA**'), these consents shall lapse seven years after the date they are granted unless:

- a. The consents are given effect to; or
- b. The Council extends the period after which the consent lapses.

Site Access

RC.4 Subject to compliance with the Consent Holder's health and safety requirements and provision of reasonable notice, the servants or agents of the Council shall be permitted to have access to relevant parts of the construction sites controlled by the Consent Holder at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements and/or to take samples.

Construction Environmental Management Plan ('CEMP')

- CEMP.1 At least 20 working days prior to the commencement of the construction works authorised by these consents, the Consent Holder shall submit a CEMP for the relevant Project-stage, or specific construction activity, to the Council, to certify compliance and consistency with the conditions of the consent.
- CEMP.1A The purpose of the CEMPs is to 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.
- CEMP.2 If the Consent Holder has not received a response from the Council within 20 working days of submitting the CEMP or a site-specific CEMP, the Consent Holder will be deemed to have certification and may commence the construction activity to which the CEMP relates.
- CEMP.3 For the purpose of staging works, the Consent Holder may provide staged or site-specific CEMPs for those works to the Council. The Consent Holder shall consult with the Council about the need and timing for any other site-specific or staged CEMPs. The Consent Holder shall provide any required site-specific or staged CEMPs to the Council to certify compliance and consistency with the conditions of this consent at least 20 working days prior to commencement of the specific stage or site works.
- CEMP.4 Where minor enabling works or isolated works are to be undertaken prior to commencement of the main construction works, a site-specific CEMP commensurate with the scale and effects of the proposed works, may be submitted for certification by the Council.
- CEMP.5 At least 20 working days prior to the lodgement of the CEMP with the Council, the Consent Holder shall provide a copy of the draft CEMP to the Transport Agency Northern Mana Whenua Iwi Integration Group ('IIG') and seek feedback on the draft CEMP during at least one hui with the IIG. In finalising the CEMP, the Consent Holder shall detail how IIG feedback has been addressed.
- CEMP.6 All CEMPs shall be prepared in accordance with the Transport Agency's *Guideline for preparing Environmental and Social Management Plans* (April 2014) and shall include:
- a. The roles and responsibilities of construction management staff, including the manager responsible for the erosion and sediment control;
 - b. The name of the Consent Holder's representative on the Project;

- c. Identification of locations for notice boards that clearly identify the Consent Holder and the Project name, together with the name, telephone number and email address of the Consent Holders representative identified in (b);
- d. General site layout;
- e. An outline of the Project's construction programme, including construction hours of operation;
- f. A description of the training and education programme for all site personnel, including training for construction water management;
- g. A requirement for a cultural induction programme for appropriate contractor's staff prior to work commencing;
- h. A requirement for cultural monitoring of construction works through the presence of iwi representatives on site where requested by the IIG;
- i. Procedures for the identification and control of hazards, including fire hazard, identification and control;
- j. The details of at least two emergency contact people and responses who shall be contactable 24 hours 7 days a week during construction who shall have authority to initiate immediate response actions;
- k. The details of the Council Landfill and Contaminated Response ('**CLCLR**') Rosedale Landfill Site Manager and the Gas Technician responsible for the Landfill gas extraction system as Emergency Response contacts for the Landfill.
- l. Methods for ensuring that earthworks are designed and undertaken in a manner that ensures the safety of the public and the stability of surrounding land, buildings, and structures.
- m. Methods for amending and updating the CEMP as required;
- n. The management plans set out in condition CEMP.7 below;
- o. Details of appropriate site security measures to be maintained to neighbouring properties during construction in consultation with affected owners, including Kiwi Self Storage.
- p. The design of temporary lighting for construction works and construction support areas.
- q. A requirement that the provision of Conditions ARC.1-5 and the NZTA Z22 Accidental Discovery Protocol, will apply with respect to the discovery of unrecorded archaeological sites.

CEMP.6A All earthworks shall be designed and undertaken in a manner that ensures the stability and safety of surrounding land, buildings and structures.

CEMP.7 The management of the potential adverse environmental effects associated with the construction phase of the Project shall be addressed within the following management plans to be included in the CEMP:

- a. Dust Management Plan ('**DMP**') prepared in accordance with conditions DMP.1 to DMP.4;

- b. Avifauna Management Plan ('AMP') prepared in accordance with conditions AMP.1 to AMP.5;
 - c. Contaminated Site Management Plan ('CSMP') prepared in accordance with conditions CL.1 to CL.3;
 - d. Construction Erosion and Sediment Control Plan ('CESCP') prepared in accordance with conditions EW.1 to EW.13; and
 - e. Landfill Reinstatement Works Plan ('LRWP') prepared in accordance with conditions LW.1 to LW.12.
- CEMP.8 The Consent Holder may request amendments to any of the management plans required by these conditions by submitting material amendments in writing to the Council for certification at least 10 working days prior to any changes taking effect. Any changes to management plans shall remain consistent with the overall intent of the relevant management plan and shall be consistent with the requirements of the relevant conditions of these consents.
- CEMP.9 All certified CEMPs shall be implemented and maintained for the relevant stage of works throughout the entire construction period.

Dust Management

- DMP.1 Dust arising from the construction phase of the Project shall not cause an offensive or objectionable effect at any point beyond the designation boundary, as assessed using the FIDOL factors (as defined in the *Good Practice Guide for Assessing and Managing Dust*, Ministry for Environment, 2016).
- DMP.1A The Consent Holder shall ensure that:
- a. 1-hour average concentration of Total Suspended Particulate ('TSP') at any point beyond the designation boundary do not exceed 250 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$); and
 - b. 24-hour average concentration of TSP, measured midnight to midnight, at any point beyond the designation boundary do not exceed 80 $\mu\text{g}/\text{m}^3$.
- DMP.1B The Consent Holder shall monitor dust generated by construction activities and Construction Support Areas. As a minimum, the Consent Holder shall undertake visual monitoring of dust discharges. Continuous monitoring of TSP and wind speed and wind direction shall be undertaken when sensitive receivers are identified in close proximity to construction sites or support areas. The methods used for visual and continuous monitoring and assessing dust shall be defined in DMP.3(d).

Dust Management Plan ('DMP')

- DMP.2 Notwithstanding the requirements in DMP.1 and DMP.1A above, as part of the CEMP prepared in accordance with condition CEMP.1, the Consent Holder shall prepare a DMP. The DMP shall be prepared by a suitably qualified and experienced person with the purpose of avoiding offensive and objectionable dust, and shall include the matters set out in DMP.3.
- DMP.3 The DMP shall contain:
- a. A description of the works, anticipated equipment/processes, time periods and duration which may generate dust;

- b. Identification of highly sensitive receivers as defined in the Ministry for the Environment's Good Practice Guide for Assessing Discharges to Air from Industry (MfE 2016);
- c. Procedures to record and respond to any complaints;
- d. Methods for monitoring and assessing dust during construction in accordance with DMP.1B, including the use of FIDOL factors and continuous monitoring of TSP and wind speed and wind direction. The TSP monitoring shall be undertaken in general accordance with the *Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for the Environment, 2009c*.
- e. Methods to ensure that the obligations under DMP.1 and DMP.1A are met, including the mitigation measures that are to be undertaken if:
 - i. The dust discharge causes offensive or objectionable effects at any point beyond the designation boundary; or
 - ii. If the monitoring required by DMP.1B shows that concentrations of TSP in ambient air at or beyond the designation boundary exceed the trigger concentrations defined in DMP.1A(a) and (b).
- f. Measures to remedy adverse effects of objectionable and/or offensive dust deposits resulting from the Project's construction activities. Remediation measures may include (but not be limited to) options such as cleaning:
 - i. Exterior surfaces of houses, other buildings and infrastructure;
 - ii. Driveways;
 - iii. Air intakes of building ventilation systems; and
 - iv. Local sealed road surfaces, in agreement with Auckland Transport.

DMP.4 The Consent Holder shall hold onsite a record of condition DMP.3 monitoring results which are to be available on request to the Council.

Lizard Management

- LM.1 The Consent Holder shall appoint a herpetologist to oversee vegetation removal at Site 1, Figure 10, Assessment of Terrestrial of Ecological Effects Report (9 December 2016) and Site 4, Figure 11, Assessment of Terrestrial of Ecological Effects Report (9 December 2016).
- LM.2 The Consent Holder shall ensure that the appointed herpetologist implements a lizard capture and release programme during vegetation removal within Site 1 and Site 4 for 'At Risk' and 'Not Threatened' lizard species.
- LM.3 The capture and release programme shall be carried out in suitable weather conditions.
- LM.4 The IIG shall be consulted and offered the opportunity to participate in the lizard capture and release programme.

Avifauna

- AMP.1 An AMP shall be prepared by a suitably qualified and experienced avian ecologist and shall be submitted as part of the CEMP.
- AMP.2 The purpose of the AMP is to ensure that:
 - a. Dotterels are deterred from nesting in the locations identified as potential dotterel nesting sites at Table 7 of the Assessment of Terrestrial Effects Report (9 December 2016) ('**Potential Nesting Sites**') during the construction period; and

- b. The potential effects of construction on nesting native birds within the Rosedale Wastewater Treatment Plant are appropriately managed by avoiding vegetation clearance during the nesting season.

AMP.3 The AMP shall contain the following:

- a. Details of the measures to be used to deter dotterels from nesting at the locations identified in condition AMP.2. consistent with the methods set out at Table 6 of the Assessment of Terrestrial Ecology Effects Report (9 December 2016);
- b. A requirement that the deterrent measures described in AMP.3(a) shall be deployed at the Potential Nesting Sites from July immediately prior to construction activity commencing in those areas and shall be maintained as necessary until the end of the construction period;
- c. Procedures for the management or relocation of any dotterels found nesting within the construction areas during the construction period.
- d. Identification of how and when the IIG are to be consulted and offered the opportunity to participate in the management or relocation of any dotterels found nesting within the construction areas during the construction period.

AMP.4 All measures and procedures relating to dotterels contained within the AMP shall be in general accordance with the Transport Agency's *Guidance in Relation to New Zealand Dotterels on NZTA Land* (2012).

AMP.5 Vegetation clearance is to be undertaken from 1 March to 31 July within the area adjacent to the Rosedale Wastewater Treatment Ponds where construction activities will occur as identified at Table 7 of the Assessment of Terrestrial Ecology Report (9 December 2016).

Contaminated land

- CL.1 Prior to excavation and construction works commencing, the Consent Holder shall update the draft CSMP (9 December 2016), as provided at Appendix B to the Assessment of Contaminated Land Contamination Effects Report (2 December 2016), to include a summary of the findings of the Detailed Site Investigations. The updated CSMP shall be submitted to the Council as part of the CEMP. The CSMP shall reference the LRWP prepared in accordance with consent conditions LW.1 to LW.12.
- CL.2 The purpose of the CSMP is to identify measures to ensure that discharges from the construction areas to air, land or water are avoided where practicable, and otherwise controlled or mitigated to ensure adverse effects on the health of workers on the site and nearby sites are avoided, and any adverse effects on groundwater are less than minor.
- CL.3 The updated CSMP shall describe how land disturbance activities on contaminated sites will be undertaken, including:
 - a. Health and safety requirements (including use of appropriate PPE and decontamination);
 - b. Protocols for accidental discovery;
 - c. Methods for managing excavation and storage of soil (including erosion and sediment controls, dust and odour controls, surface water control and monitoring, imported fill requirements, and stockpile management);

- d. Methods for managing contaminated groundwater encountered during construction including monitoring and discharge (noting that condition GW.1 addresses removal of perched groundwater)
- e. Procedures to justify allowing any contamination that is encountered and proposed to remain in place during Project construction. This includes demonstrating that doing so will not result in more than minor adverse effects on the receiving environment and preparation of a management plan for ongoing monitoring and management should this be required.
- f. Methods for classifying and managing transport, disposal (at an appropriate facility) and tracking of spoil and other material taken away from site;
- g. How any spills and emissions will be managed; and
- h. Site validation reporting requirements.

Groundwater

- GW.1 Any perched groundwater, or surface water run-off, encountered within the excavation areas requiring removal shall be considered as potentially contaminated, and shall be:
- a. Disposed of by a licensed liquid waste contractor; or
 - b. Pumped to sewer, providing relevant permits are obtained; or
 - c. Discharged to the stormwater system, provided testing demonstrates the water quality is at least 50 times better than the Australian and New Zealand Environment Conservation Council ('ANZECC') Guidelines for Fresh and Marine Water Quality (2000) for the protection of 95 percent of marine water species, and is free from petroleum hydrocarbons.
- GW.2 Should Albany Conglomerate be encountered during the excavation, any visible outflow in excess of 50m³/day should be sealed as soon as practicable (using cement/ bentonite grout or equivalent barrier treatment).

Damage Avoidance

- GW.3 All excavation, dewatering systems, retaining structures, and other works associated with the diversion or taking of groundwater, shall be designed, constructed and maintained so as to avoid any damage to public services or utilities within the Project area site and buildings, structures, paved areas and services on adjacent properties, unless otherwise agreed in writing with the asset owner.

Earthworks

General

- EW.1 During the Project earthworks the Consent Holder shall take all practicable measures to minimise erosion and minimise the discharge of sediment beyond the boundaries of the site.

- EW.2 The Consent Holder shall ensure that the erosion and sediment control measures are constructed and maintained in accordance with Auckland Council's *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Regional, June 2016, Guideline Document 2016/005 (GD05)* and any amendments to this document and the Transport Agency's *Erosion and Sediment Control Guidelines for State Highway Infrastructure 2014*.

Pre-construction meeting

- EW.3 Prior to the commencement of the earthworks activity or vegetation clearance (either for the whole site or for each stage of works), the Consent Holder shall hold a pre-start meeting that:
- a. Is located on the subject site;
 - b. Is scheduled not less than five days before the anticipated commencement of earthworks;
 - c. Includes Council representatives; and
 - d. Includes representation from the contractors who will undertake the works and the supervising engineers.

The purpose of the pre-start meeting shall be to discuss the erosion and sediment control measures, the earthworks methodology and shall ensure all relevant parties are aware of, and familiar with, the necessary conditions of this consent.

Construction Erosion and Sediment Control Plan(s)

- EW.4 A CЕССР shall be prepared by a suitably qualified and experienced person and shall be submitted as part of the CEMP for each area of work or activity for certification by the Council prior to works commencing for that specific CЕССР.
- EW.5 The purpose of the CЕССР is to set out the measures to be implemented during the construction period to minimise erosion and the discharge of sediment beyond the boundaries of the construction areas.
- EW.6 The CЕССР shall be prepared in general accordance with the principles set out in section 5 of the Assessment of Construction Water Management Report (9 December 2016) and include the following matters:
- a. Identification of the construction zones and construction support areas;
 - b. A risk assessment of the sediment yield from that particular area of works or activity that is the subject of the CЕССР including slope angle and length, receiving environment, soil types and duration of the works;
 - c. Details of the specific erosion and sediment control including but not limited to concrete and fuel management and erosion and sediment control works that will be implemented (including, where appropriate, location, dimensions and capacity);
 - d. Supporting calculations and design drawings for all erosion and sediment controls;
 - e. A plan showing the catchment boundaries of the works and the control measures;
 - f. Timing and duration of construction and operation of control works (in relation to the staging and sequencing of earthworks);

- g. Details relating to the management of exposed areas (e.g. grassing, mulching);
- h. A requirement for a manually raised decant devices on sediment retention ponds where installed;
- i. Details of the flocculation treatment to be implemented including:
 - i. Specific design details of the flocculent treatment system based on a rainfall activated methodology for the site's sediment retention ponds and batch dosing for decanting earth bunds;
 - ii. Monitoring, maintenance (including post storm) and contingency programme (including a record sheet) for the flocculation management;
 - iii. Use of organic flocculants where practicable provided that the most effective flocculant in terms of sediment removal shall be selected;
 - iv. Details of optimum dosage (including assumptions);
 - v. Results of initial treatment trials;
 - vi. A spill contingency plan; and
 - vii. Details of the person or bodies that will hold responsibility for the long term operation and maintenance of the flocculant management system;
- j. Details of the erosion and sediment control monitoring to be implemented consistent with the requirements set out in section 6.2 of the Assessment of Construction Water Management Report (9 December 2016), including:
 - i. Pre-construction monitoring;
 - ii. Rainfall monitoring;
 - iii. Routine device monitoring;
 - iv. Triggered device monitoring;
 - v. Flocculent treatment monitoring;
 - vi. Receiving environment water quality monitoring at the Project baseline monitoring sites;
 - Site 1: Oteha Stream – South tributary (access from Rosedale Road)
 - Site 2: Oteha Stream – Tawa Reserve (access from Tawa Drive)
 - Site 2A: Oteha Stream – Greville (access from Tawa Drive) – 2.4m pipe
 - Site 2B: Oteha Stream – Greville (access from Tawa Drive) – 3.0m pipe
 - Site 3: Alexandra Stream
 - Site 4: Lucas Creek

Monitoring parameters for analysis shall include:

- Turbidity
- NTU

- Total Suspended Solids g/m³
 - pH
 - Aluminium mg/m³
- vii. Identified trigger levels for each of the above parameters which will necessitate a review of the erosion and sediment control methods and the associated response. These trigger levels shall be developed with reference to the ANZECC Guidelines for water quality where applicable;
- viii. The responses to be adopted in relation to any exceedence of monitoring trigger levels and outcomes which includes, but is not limited to consideration of:
- Further staging of earthworks;
 - Stabilisation of key risk locations;
 - Amendment to existing erosion and sediment controls;
 - Installation of further erosion and sediment controls; and
 - Consideration of flocculation alternatives.
- and
- ix. The methods and procedures for investigating and reporting sediment (water quality) discharge monitoring results to the Council.
- k. Methods for ensuring contracting staff are aware of the erosion and sediment controls employed and do not remove them without seeking appropriate approval.

Advice Notes:

1. *'Organic flocculants' means flocculants that are derived from living matter and contain carbon, including but not limited to Polyamine and PolyDAMAC.*
 2. *Sampling undertaken for parameters identified in condition EW.6(j)(vi) will be undertaken using a grab sampling methodology during rain events. If sampling cannot occur during the rain event then sampling shall occur as soon as possible following the rain event and within a maximum of 12 hours.*
- EW.7 The operational effectiveness and efficiency of all erosion and sediment control measures set out in the CЕСP for each area of work shall be maintained throughout the duration of earthworks activity, or until the site is stabilised against erosion.
- EW.8 Prior to submission of any CЕСP for the causeway works between Watercare Services Limited's (**'Watercare'**) Ponds 1 and 2 to the Council, the Consent Holder shall consult with Watercare.

The purpose of this consultation shall be to determine how Watercare's interests are to be provided for during the construction period, in particular, to agree to mitigation measures that will ensure that the construction activities will not adversely affect water quality within the Rosedale Wastewater Treatment Ponds 1 and 2.

The details and outcome of that consultation, including identification of how the construction activities will ensure that there is compliance with Condition NU.9A(a), shall be included in the CЕССР.

Certification of Erosion and Sediment Controls

- EW.9 Prior to earthworks commencing, a certificate signed by a qualified and experienced person shall be submitted to the Council, to certify that the erosion and sediment controls have been constructed in accordance with the certified CЕССР(s) as required by Condition EW.6 of this consent.
- EW.10 Certified controls shall include the diversion bunds, silt fences, super silt fences, sediment retention ponds, decanting earth bunds and flocculation management systems. The certification for these controls shall be supplied prior to the commencement of the works for that area or activity. Information supplied, if applicable, shall include:
- a. Compliance with the conditions of this consent;
 - b. Contributing catchment area;
 - c. Shape of structure (dimensions of structure);
 - d. Position of inlets/outlets; and
 - e. Stabilisation of the structure.
- EW.11 Each area of earthworks shall be progressively stabilised against erosion, and earthworks shall be sequenced to minimise the discharge of contaminants to groundwater or surface water.

Advice Note:

Earthworks shall be progressively stabilised against erosion during all stages of the earthwork activity. Interim stabilisation measures may include:

- i. The use of waterproof covers, geotextiles, or mulching; and*
 - ii. Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*
- EW.12 If areas of exposed soil are not subject to earthworks for a 10 day period, the area of exposed soil shall be stabilised until such a time as further earthworks occurs in that specific area.

Retaining walls

- EW.13 All retaining wall construction activities shall be undertaken from hard stand stabilised areas. Any spoil generated through the retaining wall activity shall be disposed of offsite and if required to be stockpiled shall be done so on a temporary basis only within the contributing catchments of the sediment retention devices.

Landfill conditions

General

The purpose of the following LW conditions is to allow for the safe management of the Landfill within the area affected by the Project by the Consent Holder during the construction of the Project and to allow for the design to take into account the effect on the Landfill's ongoing operation post-construction.

- LW.1 No works are to occur within the Landfill until such time as all necessary approvals in accordance with the RMA have been obtained to authorise removal and/ or relocation of existing control and monitoring assets that may be affected by the construction works.
- LW. 1A For the purposes of the landfill conditions, a suitably qualified person (or persons) means a Chartered Professional Engineer with a minimum of 10 years' relevant Landfill experience, who is acceptable to the Council.

Landfill Management Strategy

- LW.1B A Landfill Management Strategy ('**LMS**') shall be prepared by a suitably qualified person(s) in consultation with the Auckland CLCLR team (as the Consent Holder of consents 34031, 34032, 34033 and 41939 for the operation, maintenance and monitoring of the Landfill) for Council's certification.

The purpose of the LMS is to document how the consents listed above continue to be complied with, the environmental outcomes authorised by the consents continue to be achieved, and the operational integrity of the Landfill is secured.

The LMS shall be consistent with the Project Alliance Agreement Appendix A14 Landfill (19 April 2017) as may be modified from time to time by agreement between the Council and the Consent Holder, in relation to outcomes to be achieved to avoid, remedy or mitigate adverse effects on the environment from changes to the Landfill as a result of the Project.

- LW.1C The LMS must include, as a minimum, measures for the Consent Holder to locate, protect and/or relocate the following landfill infrastructure:
- a. Toe bund/retaining wall;
 - b. Side wall and base liner;
 - c. Cap/cover;
 - d. The landfill gas management system, including any additional requirements for isolation of the extraction system from the Project area, and any potential impact on the operation of the Landfill gas flares(s);
 - e. The leachate management system, including the leachate terminal manhole and leachate discharge pipe under the Project area;
 - f. The landfill monitoring infrastructure including groundwater, leachate, landfill gas and surface water. If relocation of any landfill monitoring infrastructure is required, a programme shall be developed which allows for decommissioning and replacement of monitoring points including continuity in monitoring data; and

- g. The stormwater management system (including any flow on effects associated with any increase in inundation and infiltration), including Stormwater Pond 7 and the associated underground box culvert.

LW.1D The LMS shall take into account the need for pre, during and post-construction settlement monitoring of the western landfill slopes and identify the remedial measures that will be undertaken in the event that there is an unacceptable risk to Landfill stability.

LW.1E The LMS shall outline the necessary authorisations needed for the works identified in the LMS required by Condition LW.1B, associated implementation timeframes and responsibilities.

Landfill Reinstatement Works Plan ('LRWP')

LW.2 A LRWP shall be prepared by a suitably qualified person and submitted as part of the CEMP. The LRWP shall reference, and be consistent with, to the extent relevant, the CSMP prepared in accordance with conditions CL.1 to CL.3.

LW.3 The purpose of the LRWP is to:

- a. Avoid or minimise all adverse effects associated with working in the Landfill; and
- b. Avoid adverse effects on human health and safety offsite.

The LRWP shall include, but is not limited to, the matters listed in condition LW.4.

LW.4 The LRWP shall include the following information in relation to the works to be carried out on the Landfill, including:

- a. The measures to be undertaken to minimise potential odour effects to ensure that there is no noxious, dangerous, offensive or objectionable odour arising from the works beyond the northern, eastern and southern Landfill boundaries;
- b. The dust control measures to be undertaken to avoid or mitigate the potential effects on on-site and off-site receptors;
- c. Asbestos management and removal measures in accordance with the Health and Safety at Work (Asbestos) Regulations;
- d. The measures to avoid or mitigate any leachate and contaminated stormwater generated on site during the works;
- e. The measures to avoid or mitigate the impact of the works on upstream groundwater and leachate levels, and the potential increase in risk of future seeps;
- f. The measures to avoid or mitigate the impact of the works on landfill stability;
- g. Measures to be adopted to ensure that retained or removed refuse and contaminated soils are appropriately managed in order to avoid or mitigate adverse environmental and/or health and safety effects. Should it be necessary, this includes the appropriate handling, transport and disposal of refuse and contaminated soils offsite at an appropriate facility;

- h. Use of plant and equipment appropriately rated and protected for use in a Hazardous Atmospheric Zone;
 - i. Methods for undertaking continuous landfill gas monitoring. Monitoring shall be for methane, carbon dioxide, carbon monoxide, oxygen, hydrogen sulphides and organic vapours;
- LW.4A The landfill reinstatement construction works shall be undertaken under the direction of a suitably qualified person, taking into account the requirements of the IPENZ Practice Note for Construction Monitoring.
- LW.5 The LRWP shall also include:
- a. A Landfill Risk Assessment (LRA) (prepared by a suitably qualified and experienced person(s)) specifically for construction workers, landfill staff and public during construction. The LRA shall recommend health and safety measures including action levels that ensure:
 - i. Personnel shall not be exposed to a danger of fire or explosion, toxicity or asphyxiation; and
 - ii. Personnel shall not be exposed to concentrations of chemicals which exceed the New Zealand Workplace Exposure Standards.
 - b. A Landfill Health and Safety Plan ('LHSP') prepared after consultation with the Council CLCLR team for the purpose of avoiding adverse effects on health and safety of construction workers and landfill staff. The LHSP shall contain a description of measures (as identified in the LRA) which will:
 - i. Avoid any health and safety risks associated with hazardous materials, landfill gas and leachate;
 - ii. Provide for training and supervision of construction workers and Landfill staff;
 - iii. Emergency contacts and procedures. Emergency Response contacts for the Landfill shall include the details of the Council CLCLR Rosedale Landfill Site Manager-

Landfill Construction Method Statements

- LW.6 Prior to excavation and construction works commencing in the vicinity of the Landfill the Consent Holder shall submit Landfill Construction Method Statements ('LCMS') prepared by a suitably qualified person, and submitted to the Council CLCLR team-for certification. The LCMS shall be prepared and submitted after consultation with the Council CLCLR team. Certification shall be obtained from Council prior to the commencement of any works that have the potential to impact upon landfill infrastructure.
- LW.7 The Consent Holder shall reinstate the Landfill once works are complete, including:

- a. The Landfill sidewall, including liner and cap/cover;
 - b. The Landfill infrastructure (leachate, gas, stormwater, access track); and
 - c. The Landfill monitoring infrastructure.
- LW.8 The LCMS shall include information, including but not limited to engineering drawings, specifications and calculations, about how works are to be carried out within the Landfill including:
- a. Temporary works including temporary reconfiguration of leachate, gas and stormwater infrastructure;
 - b. Temporary support of the excavated refuse profile;
 - c. Reinstatement of the Landfill sidewall, including liner and cap/ cover;
 - d. Reinstatement of the Landfill infrastructure (leachate, gas, stormwater, access track);
 - e. Reinstatement of the Landfill monitoring infrastructure including new gas migration monitoring probes and new groundwater monitoring wells;
 - f. Construction of protection measures (such as a gas interception trench) to mitigate Landfill gas effects;
 - g. Commissioning of the reinstatement works;
 - h. How the works will achieve the acceptable factors of safety against instability in the relevant codes and standards;
 - i. How the design has considered and incorporated the results and / or other outputs of Project specific landfill site investigations (geotechnical and environmental) in the detailed design.
- LW.9 Landfill reinstatement works shall be carried out in accordance with the certified LCMS required under condition LW.6.

Monitoring and Risk Management

- LW.10 The Consent Holder shall undertake continuous monitoring for the duration of the construction works in the vicinity of the Landfill, in accordance with the LMS required by condition LW.1B.
- LW.11 The results of all monitoring shall be supplied within two working days to the Council CLCLR team.
- LW.12 The Consent Holder is to provide for access for the Council, or their agent, during construction, to any equipment required to be inspected, maintained or adjusted for the purposes of managing gas risk on or off-site, and to meet operational requirements.

Ecology

Fish recovery and relocation

- EC.1 Prior to the commencement of works within any waterbody that supports a population of native fish, the Consent Holder shall:
- a Appoint a suitably qualified and experienced ecologist to conduct native fish recovery and relocation;
 - b Provide an opportunity for the IIG to appoint a representative to be present on site during the native fish recovery and relocation;
 - c Install fish movement barriers in the watercourse at the lower and upper extents of required stream works or at the inlet and outlet to stormwater ponds to prevent fish from recolonising within the stream works area;
 - d Following consultation with and confirmation from the appointed ecologist, dewater stormwater ponds to a depth of no more than 0.5m.
- EC.1A As a minimum, native fish recovery and relocation shall be carried out prior to commencement of any works in the following water bodies
- i The Alpurt channel near Masons Road
 - ii Eel recovery for the stormwater drain near Arrenway Reserve, discharge channel from the ARC Refuse pond and the channels within the RWWTP south of Pond 1.
- EC.2- Once the appropriate fish movement barriers are installed for any given waterbody, the recovery of native fish shall occur over a two day period for a water course and over a two to four day period for a stormwater pond, and shall use the following methods:
- i Gee-minnow traps and fyke nets, where sufficient water is present, placed at appropriate intervals over the length of the watercourse and throughout the margins of the stormwater ponds. These shall be left overnight and checked and cleared the following morning;
 - ii Using an electric fishing machine (EFM300), several electric fishing runs of the watercourse and wadeable margins of the stormwater pond or wetland shall occur each day; and
 - iii During the dewatering process, any remaining freshwater fish shall be captured and relocated.
- EC.3 The following methodologies shall be employed during native fish relocation:
- a All captured native fish shall be relocated on the same day to a suitable, similar habitat immediately downstream of the works area within the same catchment.
 - b Native fish shall be transferred into closed containers, kept cool and transported to the relocation site; and
 - c Any exotic fish capture shall be humanely euthanised and disposed of appropriately.
- EC.4 The Consent Holder shall provide the Council with a report outlining the number and species of native fish that were recovered and relocated prior to and during stream weeks within 20 working days of the final fish recovery and relocation being completed.

Archaeology

- ARC.1 A suitably qualified and experienced archaeologist shall be appointed as part of the Project ('**Project Archaeologist**'). The role of the Project Archaeologist will be to:
- a. Provide a contractors' briefing;
 - b. Identify specific areas of archaeological risk (if any);
 - c. Oversee earthworks at areas identified at (b) above;
 - d. Advise on statutory requirements if archaeological (historic heritage) sites are exposed unexpectedly during earthworks; and
 - e. Undertake any required recording and reporting associated with the discovery of any unrecorded archaeological (historic heritage) sites.
- ARC.2 A contractors' briefing shall be provided to all contractors by the Project Archaeologist prior to the commencement of the Project. The briefing shall provide information to the contractors regarding the following:
- a. What constitutes archaeological / historic heritage materials;
 - b. The legal requirements relating to unanticipated archaeological discoveries;
 - c. The appropriate procedures to follow if archaeological or historic heritage materials are uncovered when the Project Archaeologist is not on site to safeguard the materials; and
 - d. The contact information of the relevant agencies (including the Project Archaeologist, the Council (Heritage Unit) and Heritage New Zealand Pouhere Taonga) and mana whenua.
- ARC.3 Documentation demonstrating that the contractor briefing has occurred shall be forwarded to the Council.
- ARC.4 Should any unrecorded historic heritage sites (i.e. sites that meet the RMA definition of 'historic heritage') be exposed as a result of an activity associated with the consented proposals, then these sites shall be recorded within the Council Cultural Heritage Inventory by the Project Archaeologist.
- ARC.5 Site record forms in the Council Cultural Heritage Inventory (www.chi.net/Home.aspx) shall be updated by the Project Archaeologist within 20 working days of completion of on-site earthworks. Electronic copies of all historic heritage reports relating to historic heritage investigations (e.g. evaluation, excavation and monitoring etc.) shall be submitted by the Project Archaeologist to the Council Cultural Heritage Inventory within 12 months of the completion of on-site earthworks.

Network Utilities (as defined in s.166 of the RMA)

- NU.1 The Consent Holder shall ensure that construction work does not adversely impact on the safe and efficient operation of network utilities. The scope and timing of necessary utility relocation and protection works shall be developed and agreed between the Consent Holder and network utility providers to mitigate any safety hazards and provide cost efficiency for the required works.

Transpower

- NU.2 No works are to occur within the existing Transpower designation until such time as all necessary RMA approvals have been obtained to authorise the installation of two 220kV circuits (three cables each), any protective tunnel structure and, any necessary practical access requirements and jointing requirements.
- NU.3 This infrastructure is intended to be provided for within the Transpower designation, or, if that is not feasible, within the Project designation. If a location within the Project designation is not feasible, a solution may be required that bypasses all or part of the Project designation. If this is the case, no works are to occur within the existing Transpower designation (without the prior approval of Transpower), until such time as all necessary authorisations for Transpower's alternative works have been obtained. In addition, should it be necessary to construct Transpower cables and any protective structure outside the existing Transpower designation, no works are to occur within the Transpower designation (without the prior approval of Transpower) until these cables have been constructed and commissioned, and the existing cables decommissioned.
- NU.4 The Consent Holder shall ensure that the detailed design for the Project makes provision for a conduit that is sufficient to allow Transpower to install, operate and maintain two 220kV circuits through the Project area, unless it is found not to be practicable to do so, in which case a solution to bypass all or part of the Project area shall be provided for in the detailed design insofar as it affects the Project area.
- NU.5 At least 20 working days prior to the commencement of construction, an Electricity Infrastructure Management Plan ('EIMP') prepared in consultation with Transpower New Zealand Limited shall be submitted to the Council for certification. A summary of the feedback received from Transpower shall be included within the EIMP.
- NU.6 The Consent Holder shall carry out works in accordance with the certified EIMP.
- NU.7 The EIMP shall include methods and measures to ensure that the Project provides for Transpower's two 220kV circuits as follows:
- a. Construction of a protective structure for the installation of the two 220kV circuits that does not adversely affect the existing 220kV circuit;
 - b. Provision of 24/7 access to the cables and the cable joint bays (options include the implementation of a cut and cover protective tunnel); and
 - c. Retention of the ability to maintain a 30-minute thermal transient rating of 2000 MVA and a thermal continuous rating of 670 MVA thereafter.
- NU.8 The EIMP shall also include the following details:
- a. Procedures to be employed when working within proximity of Transpower's cables;
 - b. Notice periods to be provided to enable Transpower representatives to observe construction works in proximity of Transpower's existing cables; and
 - c. Methods for ensuring that access to Transpower's existing 220kV cables is maintained during the construction period.

Watercare Services Ltd

NU.9 No construction works are to occur within Watercare Designations 9310 and 9311 until such time as the Consent Holder has, following consultation with Watercare, implemented the following:

- a. Reasonable vehicular access between Pond 1 and Pond 2 (under SH1); and
- b. Reasonable vehicular access around the southern edge of Pond 1.

These measures shall be implemented for the period of construction within Watercare's Designations 9310 and 9311.

NU.9A Prior to construction works starting within the Watercare Designations 9310 and 9311, and following consultation with Watercare, the Consent Holder shall identify the:

- a. Measures to ensure sediment release, including any temporary stormwater discharges, into either Ponds 1 or 2 during the construction period are managed in order to avoid non-compliance with the TSS or pathogen levels at the compliance measuring point (at the outlet of the UV plant at the eastern end of Pond 2), set by Watercare's discharge permit to Mairangi Bay (Permit No. 23799). As part of this process, the draft CESCOP for the Project causeway widening shall be provided to Watercare for review prior to submission to Council. The final CESCOP shall identify how any Watercare comments have been addressed by the Consent Holder. These measures shall be implemented for the duration of the works within the Watercare's Designations 9310 and 9311;
- b. Design and construction standards for the transmission sewer diversion for the Wairau Valley Branch Sewer (TS5) and the East Coast Bays Branch Sewer (TS7); and
- c. Utility corridors within the areas of the Project works to enable the future installation and maintenance of the East Coast Bays Link Sewer being planned by Watercare.

NU.9B All construction works in and around Watercare's ponds and pond link infrastructure shall be undertaken in a manner that ensures the integrity of the ponds and pond link infrastructure is maintained at all times.

NU.9C Prior to the completion of the construction works within the Watercare Designations 9310 and 9311, the Consent Holder shall, following consultation with Watercare, implement the following permanent measures:

- a. Vehicular access along the western edge of Pond 2 to provide access to the forestry area on the northern bank of Pond 2. Where access is unable to be achieved along the western edge of Pond 2, an alternative access arrangement shall be confirmed and provided; and
- b. Vehicular access between the existing vehicle access along the southern edge of Pond 1, the new vehicle link beneath SH1 and the existing vehicle access to Pond 2, in order to provide access to Pond 2 and the UV disinfection facility at the eastern end of Pond 2; and
- c. Relocation of the existing boat ramp at Pond 2 and the subsequent removal of the existing boat ramp; and
- d. A secure perimeter barrier where any of the Project works areas abut the existing Watercare designations. The purpose of this barrier to prevent the public accessing Watercare's land from the land subject to the NCI designation.

Advice Note

In the event that no agreement is reached, the Consent Holder will proceed in accordance with s 176 and/or s 178 of the RMA.

Council (Healthy Waters)

NU.10 No works that affect the existing stormwater infrastructure listed in paragraphs a, b, and c below are to occur until such time as all necessary approvals in accordance with the Stormwater Strategy as set out in Condition NU.11 have been obtained to authorise the removal of, relocation of and / or works within the following existing stormwater infrastructure:

- a. The 'ARC' Refuse Pond' (existing and replacement), the 'Moro Pond' (existing), and the 'Constellation Pond' (existing and replacement) – including the proposed design and consenting of these assets, as well as long-term physical and legal access arrangements;
- b. Proposed culvert CU-NEW-13A / 13B as shown on Stormwater Layout Plan 250310-3PRE-3DES-DRG-1408-B that crosses SH18 and affects existing 100 -year ARI flood levels in the Meadowood Reserve / Caribbean Road area; and
- c. The channel bend immediately downstream of the proposed stormwater pipe outfall 'OF12' as shown on Stormwater Layout Plan 250310-3PRE-3DES-DRG-1405-0B (Plan A).

NU.10A The Consent Holder shall work collaboratively with the Council (Healthy Waters) and Auckland Transport to explore all reasonable and practicable opportunities to reduce the existing 10-year and 100-year ARI flood events around the Greville Road interchange during the detailed stormwater design for the Project in this area.

Advice Note 1:

The Consent Holder is advised that approval from the Council (Healthy Waters) is required prior to any works being undertaken that may affect the Council's ability to comply with its network discharge resource consent requirements.

NU.11 Prior to works commencing, the Consent Holder shall develop and implement a Stormwater Strategy for the works identified in condition NU.10 in consultation with the Council (Healthy Waters) as the Consent Holder for the operation, maintenance and monitoring of the public stormwater infrastructure) for Council's acceptance, which shall not be unreasonably withheld. The Stormwater Strategy shall include, but not limited to:

- a. Agreed timeframes and stages for design input by the Council (Healthy Waters); and
- b. A framework to identify and manage existing and additional resource consent requirements.

The Stormwater Strategy shall be implemented by the Consent Holder. Any changes to the agreed Stormwater Strategy shall require the agreement of the Council, which shall not be unreasonably withheld.

Stormwater

General

SW.1 Unless otherwise specified, all conditions relating to stormwater management devices apply in relation to both the Transport Agency's and the Council's assets that will be affected by the proposed design.

Stormwater management devices

SW.2 The Consent Holder shall ensure that all Transport Agency stormwater treatment, detention and attenuation devices are designed and constructed in general accordance with the Stormwater Layout Plans (250310-3PRE-3DES-DRG-1401 to 1410 Rev B) to achieve the following design requirements in accordance with TP10 and TR2013/035:

Motorway Catchment	Receiving Environment	Minimum Design Requirements		
		Total High Use Road Area (new and existing) to be treated	Detention for difference of pre- and post-development volume	Peak Flow Attenuation to Pre-Development Flow Rates at the Receiving Environment (with climate change adjustment to 2121)
Oteha Valley to McClymonts (OV2M)	Lucas Creek	3.45ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF1 (37mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs)
McClymonts to Spencer (M2S)	Open channel upstream of the Albany Lakes Reserve	1.59ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF1 (37mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs) 100-year ARI (270mm/24hrs)
Spencer to Rosedale (S2R)	Oteha Stream	9.42ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF2 (26mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs) 100-year ARI (270mm/24hrs)
Rosedale to Constellation (R2C)	Open channel north of WSL Pond 1	6.54ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF2 (26mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs) 100-year ARI (270mm/24hrs)
Constellation to Paul Matthews (C2PM)	Open channel south of WSL Pond 1	3.37ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF2 (26mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs) 100-year ARI (270mm/24hrs)
Paul Matthews to Albany Highway (PM2AH)	Alexandra Stream	4.57ha to 75% TSS removal (10mm/hr or 26mm/24hrs)	SMAF2 (26mm/24hrs)	2-year ARI (89mm/24hrs) 10-year ARI (169mm/24hrs)

- SW.3 Where existing Consent Holder stormwater management devices are to be removed as part of the Project, the equivalent Water Quality Volume and Detention Volume shall be replaced in the proposed stormwater management devices. For the existing Council ponds that are to be removed as part of the Project, the replacement ponds must provide for the following volumes:
- a. ARC Refuse Pond – 1,800m³ Water Quality Volume; and
 - b. Constellation Pond – 8,500m³ Peak Flow Attenuation Volume (offline configuration).
- SW.4 The Consent Holder shall ensure that the design of stormwater management devices constructed in accordance with Condition SW.2 and SW.3 do not result in the following:
- a. No greater than 50mm increase in peak flood levels at all upstream and downstream properties in rainfall events up to and including the 10-year Average Recurrence Interval (ARI) event (excluding the properties on Tait Place where peak flood levels are permitted to increase by up to 80mm in the 10-year ARI event); and
 - b. No increase in peak flood levels at all upstream and downstream buildings within the 100-year ARI floodplain.
- SW.5 The Consent Holder shall ensure that the design of stormwater management devices constructed in accordance with Condition SW.2 and SW.3 do not result in an increase greater than 10% in the 2-year, 10-year and 100-year ARI events for:
- a. Peak flow depths and velocities at the Alexandra Shared-Use Path Underpass; and
 - b. Peak flow rates and velocities at the modified channel downstream of OF12.
- SW.6 Notwithstanding SW.5 the Consent Holder shall ensure that the design of stormwater management devices constructed in accordance with Condition SW.2 do not result in a change in the frequency of flooding of the Alexandra Shared-Use Path Underpass.
- SW.7 Existing Council stormwater management devices that are to be removed as part of the Project must remain operational, have retained access and be protected during construction works, until the commencement of the operation of the proposed replacement stormwater management system.

Detailed designs

- SW.8 The Consent Holder shall ensure that the detailed design, including drawings, specification, design report and calculations for the stormwater management devices are submitted to the Council (Senior Stormwater / ITA Specialist – Compliance) for certification at least 30 days prior to initiation of construction of the proposed stormwater management devices. If the Consent Holder has not received a response from the Council within 20 working days following the submission of the detailed design, the Consent Holder will be deemed to have certification and can commence construction. The purpose of the certification is to confirm that the final design meets the conditions set out in Condition SW.2 and SW.3, and should address the following:
- a. Design drawings and calculations for all stormwater structures, culverts, outfalls, erosion protection measures, bypass devices, wetlands and ponds, proprietary treatment devices, swales, access provisions, and overland flow paths; and
 - b. Catchment plans detailing the area contributing to each stormwater management device.

- SW.9 Minor modifications to the stormwater treatment, detention and attenuation devices shown on the Stormwater Layout Plans (250310-3PRE-3DES-DRG-1401 to 1410 Rev B) are permitted, provided that the requirements set out in Condition SW.2 and SW.3 are met. The information required for the Council to accept a modified design is listed under Condition SW.8, and it must be provided to the Council at least 30 days prior to initiation of construction of the proposed stormwater management devices.

If the Consent Holder has not received a response from the Council within 20 working days following the submission of the modified design, the Consent Holder will be deemed to have had the modification accepted.

Advice Note:

Any proposed change under Condition SW.9 must be discussed with the Council (Senior Stormwater / ITA Specialist – Compliance) prior to the modified design being submitted to Council for acceptance. A modified design under Condition SW.9 which reduces the treatment, detention and attenuation capacity or performance of the stormwater management system as required under Condition SW.2 and SW.3, may require an application to the Council pursuant to Section 127 of the RMA.

Examples of minor modifications are: changes to the type, shape, size, location, or the total number of stormwater treatment, detention and attenuation devices.

- SW.10 The Consent Holder shall notify the Council in writing at least 10 working days prior to the start date of the works authorised by the discharge consent.

Overland flow paths

- SW.11 The Consent Holder shall ensure that for stormwater flows in excess of the capacity of the primary drainage systems, overland flow paths shall be provided and maintained to allow surplus stormwater from critical storms (up to the 100 year ARI event), to discharge with the minimum of nuisance and damage. Overland flow paths shall be kept free of all obstructions.
- SW.12 The Consent Holder shall ensure that secondary flow paths are kept free from obstructions such as buildings and solid fences.

Planting

- SW.13 The Consent Holder shall submit a planting plan(s) for all planted stormwater management devices (including treatment / conveyance swales) to the Council (Senior Stormwater / ITA Specialist – Compliance) for certification at least 30 days prior to initiation of construction of the proposed stormwater management devices. If the Consent Holder has not received a response from the Council (Senior Stormwater / ITA Specialist – Compliance) within 20 working days of submitting the plan(s), the Consent Holder will be deemed to have certification and can commence construction.
- SW.14 Planting for stormwater management devices (including treatment / conveyance swales) shall be provided in accordance with *TP10*. The planting plan(s) required by Condition SW.13 shall include, but not be limited to, the following:
- a. Details of plant species, plant numbers, density and distribution; and
 - b. Details of ongoing pest and weed management.

- SW.15 All planting of stormwater management devices (including treatment / conveyance swales) shall be undertaken in accordance with the certified planting plan(s).

Certification of stormwater management works (as-built plans and Validation Report)

- SW.16 The Consent Holder shall supply as-built plans and a Validation Report for the stormwater management devices to the Council (Senior Stormwater / ITA Specialist – Compliance) within 30 working days of the practical completion of the stormwater management works.

- SW.17 The as-built plans shall be signed off by a Chartered Engineer and shall include:

- a. The surveyed location (to the nearest 0.1m) and level (to the nearest 0.01m) of the discharge structures, with co-ordinates expressed in terms of NZTM and NZGD2000 (Mt Eden circuit); and
- b. Plans and cross sections of all stormwater management devices, including confirmation of the water quality volume, detention / attenuation volumes, and levels / sizes of all outflow control structures and discharge outlets.

- SW.18 The Validation Report shall be signed off by a Chartered Engineer and shall include details of:

- a. The type and performance of the constructed stormwater management devices in relation to the design requirements in Condition SW.2 and SW.3;
- b. The contributing catchment areas serviced by each stormwater management device;
- c. The provision of access to each stormwater management device, outflow control structure and discharge outlet; and
- d. Plans showing the delineation between the stormwater management infrastructure to be maintained by the Consent Holder and the infrastructure to be vested in the Council.

Contents and submission of operation and maintenance plan

- SW.19 A Stormwater Operation and Maintenance Plan shall be submitted to the Council (Senior Stormwater / ITA Specialist – Compliance) for certification 20 working days prior to the commencement of the operation of the stormwater management system. The Stormwater Operation and Maintenance Plan shall include:

- a. Details of the person or organisation that will hold responsibility for long-term maintenance of the stormwater management system;
- b. A programme for regular maintenance and inspection of the stormwater management system;
- c. A programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices;
- d. Procedures for post storm inspection and maintenance;
- e. A programme for inspection and maintenance of the outfalls;
- f. General inspection checklists for all aspects of the stormwater management system, including visual checks;

- g. A programme for inspection and maintenance of vegetation associated with the stormwater management devices; and
- h. A requirement to retain records of all inspections and maintenance for the stormwater management system for 3 years following the end of the defects liability period, in the first instance, and thereafter, for the proceeding 3 years.

If the Consent Holder has not received a response from the Council (Senior Stormwater / ITA Specialist) within 10 working days following the submission of the Stormwater Operation and Maintenance Plan, the Consent Holder will be deemed to have certification.

- SW.20 The Consent Holder shall ensure that the stormwater management system is managed in accordance with the certified Stormwater Operation and Maintenance Plan.

Advice Note:

The 'Constellation Pond' and 'ARC Refuse Pond' are exempt from Conditions SW.19 and SW.20. The operation and maintenance 'Constellation Pond' is managed by the Council in dam permits #34471.

Amendments to the Stormwater Operation and Maintenance Plan

- SW.21 Any alterations to the Stormwater Operation and Maintenance Plan shall be submitted to the Council (Senior Stormwater / ITA Specialist – Compliance) in writing for certification 20 working days prior to implementation. If the Consent Holder has not received a response from the Council (Senior Stormwater / ITA Specialist-Compliance) within 10 working days following the submission of the proposed amendments or alterations, the Consent Holder will be deemed to have certification.

Review Condition

- RV.1 Pursuant to section 128 of the RMA the conditions of this consent may be reviewed by the Council at the Consent Holder's cost:
- a. As necessary following commencement of consent in order:
 - i. To deal with any adverse effects on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage.
 - ii. To alter erosion and sediment control requirements as a result of previous monitoring outcomes, and/or in response to changes to the environment and/or hydro-geological knowledge, and/or changes to industry best practice.
 - iii. To deal with any adverse effects on the environment associated with peak flood level increases (in excess of those permitted by these conditions) which may have arisen through the exercise of this consent.
 - b. At any time, if it is found that the information made available to the Council in the application contained inaccuracies which materially influenced the decision and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.

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