

**Before a Board of Inquiry
Northern Corridor Improvements Project**

Under the Resource Management Act 1991 ('the Act')

In the matter of a Board of Inquiry appointed under section 149J of the Act to consider notices of requirement for designations and resource consent applications by the New Zealand Transport Agency for the Northern Corridor Improvements Project

**Rebuttal evidence of Damien Ryan McGahan for the New Zealand
Transport Agency (Planning - resource consents)**

Dated 15 June 2017

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STATEMENT OF REBUTTAL EVIDENCE OF DAMIEN RYAN MCGAHAN FOR THE NEW ZEALAND TRANSPORT AGENCY

1 Qualifications and experience

- 1.1 My full name is Damien Ryan McGahan. I am a Technical Director of Planning at Aurecon NZ Ltd (**'Aurecon'**).
- 1.2 My qualifications and experience are set out in my Evidence in Chief (**'EIC'**) dated 20 April 2017.
- 1.3 I repeat the confirmation that I provided in the EIC that I have read, and agree to comply with the Code of Conduct for Expert Witnesses 2014.
- 1.4 My rebuttal evidence relates to the resource consent applications lodged by the New Zealand Transport Agency (**'Transport Agency'**) with the Environmental Protection Authority (**'EPA'**) on 14 December 2016 for the Northern Corridor Improvements Project (**'Project'**).

2 Scope of evidence

- 2.1 In this rebuttal evidence, I will address matters raised in the evidence of:
 - a Mr Jack Turner on behalf of Auckland Council (Planning Evidence – Resource Consents);
 - b Ms Joanna Hart on behalf of Auckland Council (Planning Evidence – Notices of Requirement (**'NoR'**));
 - c Mr Kok Chiang Lee on behalf of Auckland Council (Stormwater Evidence);
 - d Mr Alistair Lovell on behalf of Auckland Transport (Planning Evidence);
 - e Mr Martin Peake on behalf of Auckland Transport (Construction Traffic and Operations Evidence);
 - f Ms Simonne Eldridge on behalf of Auckland Council (Rosedale Closed Landfill Evidence);

- g Dr Phil Mitchell on behalf of Watercare Services Limited ('Watercare') (Planning Evidence);
 - h Mr Mark Bourne on behalf of Watercare (Corporate Evidence); and
 - i Mr Andrew Fraser and Mr Howard Trautvetter on behalf of Kiwi Self Storage; and
 - j Ms Angela Brabant on behalf of Waste Management Limited.
- 2.2 I will also address other matters relating to the proposed resource consent conditions. I do not address the evidence of Mr Craig McGarr due to his report being only recently received.
- 2.3 An updated (amended) set of resource consent conditions are attached to this rebuttal evidence as **Annexure A**.
- 2.4 The fact that this rebuttal statement does not respond to every matter raised in the evidence of submitter witnesses within my area of expertise should not be taken as acceptance of the matters raised.

3 Consistency with Objectives and Policies for Non-Complying Activities

- 3.1 In his evidence, Mr Turner states that he considers that the Project is not entirely consistent with the policy framework, in particular Objectives B7.3.1(2, 3) and E3.2(3) and Policies B7.3.2(4) and E3.3(2)(a) within the Auckland Unitary Plan Operative in Part ('AUP') on the basis that specific mitigation for the loss of stream values is not being provided.¹ These objectives and policies are contained in **Annexure B** attached to my rebuttal evidence.
- 3.2 The specific values of the stream are detailed within the EIC of **Ms Barnett** as well as her rebuttal evidence.²
- 3.3 Mitigation in the form of fish relocation, minimisation of sediment discharge and effects on surrounding aquatic environment has been recommended to mitigate the effects of the reclamation of the stream. As

¹ Paragraph 11.8 of Mr Turner's evidence.

² Paragraph 8.8 of Ms Barnett's EIC and paragraph 6.2 of Ms Barnett's rebuttal evidence.

outlined by **Ms Barnett**, biodiversity off-set compensation for the loss of stream values is not necessary or practical due to its very low value and associated short length.³

- 3.4 In respect of Objective B7.3.1 (2, 3) and Policy B7.3.2(4), I note that the loss of freshwater systems has been minimised to the extent practicable and any adverse effects resulting from the Project are avoided, remedied or mitigated, both through the design itself and through conditions. I am of the view that the Project is both necessary and critical infrastructure for the region and represents the sustainable use of land and resources to provide for growth and development. I note that Mr Turner does not disagree with this analysis. I consider that the Project will also provide for the health and safety of communities.
- 3.5 I consider that parts (c) and (d) of Policy B7.3.2(4) are also relevant. **Ms Barnett** has identified mitigation which is proposed to be implemented to address adverse effects arising from the loss of 'stream' function and value (and as discussed previously within my EIC).⁴ As mentioned above at paragraph 3.3, the value of the 'stream' has been assessed as being very low with very poor aquatic habitat. I consider the proposed mitigation to be acceptable and therefore part (d) is not applicable in my opinion. Notwithstanding my conclusion on this matter, **Ms Barnett** has indicated that new stormwater infrastructure will play an important role in enhancing local ecological values and I consider this to be a relevant consideration.⁵
- 3.6 In terms of Objective E3.2.3 and Policy E3.3.2, I consider that the Project does not result in a 'significant residual adverse effect' for the reasons given above and I reconfirm my position given in my EIC that there is no practical alternative to avoid the 'stream'. I consider that Policy E3.3.2 is achieved and that E3.3.4 is not applicable. Irrespective of this conclusion, I note **Ms Barnett's** view that the surrounding environment within the Rosedale Wastewater Treatment Plant (an operational site) also has very low (negligible) aquatic habitat value both above and below the subject 'stream'⁶ and agree that there is no further potential, above that provided

³ Paragraph 6.2 of Ms Barnett's rebuttal evidence.

⁴ Paragraph 9.12 of my EIC.

⁵ Paragraph 5.3 of Ms Barnett's rebuttal evidence.

⁶ Paragraph 6.3 of Ms Barnett's rebuttal evidence.

by the proposed wetland, to provide any enhancement to aquatic habitat in this area.

- 3.7 Overall, I maintain that the proposal is consistent with, and not contrary to, the identified objectives and policies.

4 Stormwater and Flooding

Auckland Council Stormwater Ponds (Dams), Works to Other Assets and Stormwater Strategy

- 4.1 Both Mr Lee and Mr Turner raise in their evidence that a change of conditions is necessary to the existing resource consents held for Auckland Council stormwater ponds, and a 'stormwater strategy' should be agreed between the Transport Agency and Auckland Council as part of the resource consent conditions.⁷ I agree a stormwater strategy should be confirmed and the basis of such a strategy has been discussed with Auckland Council.
- 4.2 Both ponds are currently consented under dam permits 34463 (ARC Refuse) and 34471 (Constellation Dam). The Project will see changes to these ponds (dams) in terms of the dam height, catchment area and flood volume, site location, and map reference.
- 4.3 What needs to be made clear is the proposed division between the proposed design and construction conditions and the operation and maintenance conditions for these ponds (dams). The Constellation Pond and ARC Refuse Pond will be subject to the design and construction conditions sought as part of the Project (including the certification and validation conditions SW.16 – SW.18). However, are proposed to be exempt from the operation and maintenance conditions (SW.19 and SW.20). Instead, the Constellation Pond will be subject to the conditions of the existing dam permit held by Council (as they may be amended), while the ARC Refuse Pond will be subject to the permitted activity standards in the Auckland Unitary Plan Operative in Part (15 November 2016) ('AUP') regarding ongoing operation and maintenance. While no variation is required for the ARC Refuse Pond as the relocation of this

⁷ Paragraph 10.20 of Mr Turner's evidence and paragraph 7.1(b) of Mr Lee's evidence.

pond (dam) is a permitted activity under the AUP, it may be appropriate for Council to seek a Certificate of Compliance in the future to confirm compliance with activity standards and in order to confirm operational requirements.

- 4.4 The need to confirm any other necessary authorisations for works to other Council assets has also been acknowledged, including the proposed culvert CU-NEW-13A / 13B in the Meadowood Reserve / Caribbean Road area and the channel immediately downstream of outfall 12 (OF12).
- 4.5 The basis of a stormwater strategy has been discussed with Mr Lee and Mr Turner and agreement has been reached. Amendments to the conditions have been proposed as a result of these discussions, including a requirement to develop a strategy in consultation with Council regarding this infrastructure and to secure the necessary authorisations prior to any works being able to be undertaken to that existing infrastructure (refer to amended proposed conditions NU.9 and NU.10). A key desire from Council has been to ensure that they are involved in the detailed design of this infrastructure which they are responsible for and I consider this to be appropriate.

Flooding at Greville Road

- 4.6 As detailed within the evidence of **Mr Hughes**,⁸ there are existing flooding issues at the Greville Road interchange, with the main cause of the existing flooding situation being uncontrolled stormwater runoff from outside the Project's extent. The lodged stormwater design does not completely reduce flooding at the Greville Road interchange, rather it minimises the impact of flooding generated by the Project itself.
- 4.7 Mr Turner references Objective E36.2.2 and Policy E36.3.4 (incorrectly stated in Mr Turner's evidence as B36.3.4) in relation to the existing flooding risks around the Greville Road interchange. These objectives and policies encourage the reduction of natural hazards where practicable. Measures to reduce flooding at the Greville Road interchange area may not be practicable as part of this Project however

⁸ Paragraph 3.4 of Mr Hughes' rebuttal evidence

an advice note has been added to proposed condition NU.9 which requires the Consent Holder to consult with Council and Auckland Transport to explore reasonable and practicable opportunities, within the scope of the Project, to reduce existing flooding at this location.

- 4.8 While the Project will not make the existing situation any worse, I acknowledge that it is appropriate that solutions to this existing issue are explored, particularly given the extent of works proposed to the interchange itself and the direction provided in the policy framework. I consider an advice note to be a more appropriate mechanism in this instance given the absence of an identified solution. It is intended that the Consent Holder work collaboratively with Auckland Council to allow them to undertake the works at their cost whilst the Project is in still under construction.

5 Construction Transport and Traffic

- 5.1 In his evidence, Mr Peake proposes the modification of conditions and inclusion of additional conditions to manage construction traffic effects within the Construction Traffic Management Plan ('CTMP'). Following further discussion with AT representatives, **Mr Clark** has responded to these suggestions in his rebuttal evidence. These relate to the suggestion for additional modelling and assessments, temporary loss of parking at the Albany Station during overbridge construction and the management of effects associated with construction traffic management (measures and timing) and temporary road closures.⁹
- 5.2 I am comfortable with the recommendations made by **Mr Clark** and I consider that these reflect the ongoing discussions with Auckland Transport. I have reflected this in the amended set of conditions at **Annexure A** of my rebuttal evidence. Briefly, these include minor amendments to the CTMP conditions, including clarity around intent, the need for clarity regarding future modelling requirements, the rejection of a proposed condition relating to the Albany Park and Ride, and the inclusion of reference to the identification of over-dimension routes within the CTMP

⁹ Paragraphs 4.1-4.12 of Mr Clark's rebuttal evidence.

requirements. In addition, a minor addition is made to the Stakeholder and Communication Plan conditions.

- 5.3 In respect of the remaining matters raised in the evidence of Mr Lovell, particularly the conditions proposed in relation to the broader involvement of Auckland Transport in the detailed design phase, adjacent local roading projects, local road condition surveys and ongoing bus monitoring during construction, discussions with Auckland Transport have confirmed that these matters would be better dealt with via separate agreements. I note that **Mr Glucina** has discussed this in his rebuttal evidence.¹⁰

6 Works at the Rosedale Closed Landfill

- 6.1 Ms Eldridge and Mr Turner's evidence focusses on the risks and responsibilities of proposed works within the Rosedale Closed Landfill, with a particular focus on proposed condition LW.10, as set out in **Annexure A** of this rebuttal evidence.
- 6.2 A meeting was held with Auckland Council representatives, including Ms Eldridge to discuss the proposed conditions. It was agreed to refine the proposed conditions to reflect the need to develop a specific Landfill Management Strategy requiring the Transport Agency to specify what landfill infrastructure would need to be protected and/ or relocated including any associated monitoring equipment (and its ongoing monitoring). In addition, the strategy would require a programme for ground settlement monitoring on the western slopes of the Landfill to be defined. The requirement for a Landfill Management Strategy, to be developed in consultation with Auckland Council has been included as condition LW.1A (refer to **Annexure A**).
- 6.3 Proposed condition LW.10 has also been updated to better reflect the responsibilities in relation to ongoing monitoring which is required under the Auckland Council's existing discharge consents. The amended condition ensures there is a reference back to the Landfill Management Strategy (proposed condition LW.1A, which references ongoing operation, maintenance and monitoring requirements). It also imposes a requirement

¹⁰ Paragraph 3.3 of Mr Glucina's rebuttal evidence.

to consult with Auckland Council where the relocation of monitoring equipment is necessitated by the Project, and to confirm the responsibility of monitoring where Council monitoring points fall within the Project works area (which would need to be assumed by the Transport Agency and which would need to be consistent with Auckland Council's discharge consent obligations).

- 6.4 It is my understanding that the Transport Agency will avoid all landfill monitoring equipment. However if there is a need to make changes at a future point as a result of the Project, then the Transport Agency will be responsible for the relocation of equipment and the ongoing monitoring responsibility where it remains within the Project footprint. Where it is required to be relocated outside the Project footprint, the Council will maintain the monitoring responsibility.
- 6.5 Ms Eldridge and Mr Turner do not consider the deemed certification clause in LW.6 is appropriate for landfill works given the nature of the infrastructure and the inherent health and safety risks posed when working in this environment. At the meeting noted above at paragraph 6.2, it was agreed to amend proposed condition LW.6 to remove the "deemed certification" reference and instead include a reference that "such certification shall not be unreasonably withheld." Auckland Council representatives were comfortable with this approach.
- 6.6 I reiterate that amendments to the proposed conditions are included at **Annexure A**, which reflect the outcomes of the above discussion. Minor amendments sought by **Mr Amputch** have also been included. I understand that Ms Eldridge and Mr Turner are comfortable with the proposed amendments.

7 **Works at the Rosedale Wastewater Treatment Plant (Operation and Future Expansion)**

- 7.1 I have considered the matters raised by Watercare in the evidence of Mr Mitchell and Mr Bourne. Watercare largely supports the Project, with residual matters of concern relating to the need to ensure that the proposed conditions of resource consent expressly allow for Watercare to maintain its role in terms of the ongoing operation of the facility and to not

hinder its plans for the future expansion of the waste and wastewater infrastructure at its Rosedale plant.

- 7.2 I note that Watercare has expressed general agreement with the proposed framework, with further amendments requested to provide for greater certainty. I note that the Transport Agency has engaged in discussion with Watercare's representatives to discuss their requirements, and agreement has been reached on proposed conditions. The agreed conditions are reflected in **Annexure A** to my rebuttal evidence.

8 Kiwi Storage – Construction Considerations

- 8.1 Mr Fraser and Mr Trautvetter have raised some specific issues regarding security, vehicle manoeuvring and general health and safety during the construction of the retaining wall alongside the western extent of the Kiwi Storage property.¹¹ I consider the bulk of the matters raised are appropriate for consideration given the nature of the business and the necessary operations to conduct business on-site. I consider that many of the issues will be dealt with through the CEMP framework and Stakeholder and Communications Plan requirements (as prescribed through proposed conditions). Notwithstanding this I consider that special attention is necessary given the particular matters raised. I note that **Mr Hale** has discussed this matter in his rebuttal evidence and he has confirmed his understanding that the Transport Agency is in discussions with Kiwi Self Storage about appropriate arrangements that can be put in place to satisfy its concerns.¹²

9 Waste Management – Construction Traffic Considerations

- 9.1 I note that Ms Brabant is seeking that that the CTMP be undertaken in consultation with operators of high traffic generating activities due to their high reliance on the road network and the implications on their operations from road restrictions. **Mr Clark** has responded to this matter and I consider that proposed condition SCP.3 will address the issue raised.

¹¹ Paragraph 8.1 of Mr Fraser and Mr Trautvetter's evidence

¹² Paragraph 3.7 of Mr Hale's rebuttal evidence.

10 Conditions

Separation of Conditions

- 10.1 Mr Turner, Ms Hart and Mr Lovell have all expressed their disagreement with respect to the proposed separation of conditions between the resource consents and NoR. Their preference is for the resource consents to contain the regional-related consent conditions only and the NoRs to contain land use-related conditions. In summary, it is my understanding that their preference is to see the conditions relating to construction noise and vibration, construction traffic, archaeology and stakeholder and communications planning applied to the NoRs because these matters relate more directly to the function of a District Council (as prescribed under 31 of the RMA). I have previously discussed this matter at paragraphs 13.13 – 13.15 of my EIC.
- 10.2 I continue to remain of the view there is merit in the approach I have proposed which will ensure that the potential and actual effects of the Project can be appropriately managed. It is my opinion that:
- a The principal effects that are being managed are generated by activities authorised by the resource consent activities (e.g. earthworks) and do not endure for the operational life of the designation;
 - b The conditions 'go to effects' and provide a robust framework to manage the effects associated with the construction phase in an integrated fashion;
 - c The approach represents an efficiency in the way conditions are applied (and potentially monitored/ enforced) and in respect of the length of time they endure post-construction which is an important consideration when considering other motorway projects which may sit within the same designation; and
 - d The approach results in conditions relating only to the ongoing operation and maintenance of the Project sitting on the designation.

- 10.3 In addition to the above, I am not aware of a clear directive within the RMA which states that certain conditions must reside on resource consents and/ or a designation and therefore whether a statutory impediment to the approach being proposed exists. Section 108(1) of the RMA for instance simply prescribes that a resource consent may be granted on any condition that the consent authority considers appropriate. Sections 30 and 31 of the RMA provide guidance on the respective functions of regional councils and territorial authorities. Both local authority bodies are required to establish and implement objectives, policies and methods (such as rules) to achieve the integrated management of the effects of the use, development, or protection of land and guidance is provided in respect of the types of matters each will control. The approach for the Project is that it is designed to manage construction effects in an integrated way, which relate to the primary activity of earthworks (a regional council function). I agree with the Key Issues report (at paragraph 187) that where matters relate to both regional and district functions, conditions can go in either the designation or on the resource consents.
- 10.4 Notwithstanding the above, this approach does not abrogate the responsibility of the requiring authority under section 176A(3) to address localised effects that arise from detailed designs when these are submitted to councils through the outline plan process. For instance, a territorial authority will have an opportunity to request that the requiring authority make changes to the outline plan on certain aspects such as construction traffic (section 176A(3)(d)), earthworks methodologies, construction noise and vibration and archaeology (others matters, under section 176A(3)(f)). This is in addition to those matters relating to the permanent infrastructure and ultimate operation of the Project, such as landscaping and operational noise emissions. These construction related matters, in this instance, will be guided by the proposed conditions of resource consent which require that various bottom lines are met and management plans are developed and certified by Council. I do not consider there are any procedural implications associated with the approach. In fact, I would argue the Council will have a higher level of control in relation to the construction related effects in terms of monitoring

and enforcement and in relation to any future changes to conditions that may be necessary (provided for though section 127 of the RMA).

- 10.5 In terms of the structure of the consents (another matter raised through the evidence of Ms Hart), the conditions have been grouped to align with the bundled nature of the applications themselves in order to manage effects in an integrated and effective manner. I consider this to be an appropriate approach. If more definition was to be applied in relation to this structure, I consider it would be a case of shifting the conditions in question into the 'general conditions' category i.e. where they would expressly apply to all resource consents (such as the earthworks and stormwater consents for instance).
- 10.6 Following further discussion with Auckland Council, I consider that it is appropriate to apply (replicate) the proposed Stakeholder and Communications Plan suite of conditions on the proposed designation conditions, particularly given the Urban Design and Landscape Framework conditions require interaction with third parties. This has been reflected in the proposed amended conditions attached to **Mr Burn's** rebuttal evidence. I do not agree with the inclusion of a Community Liaison Group ('**CLG**') style condition as presented by Ms Hart because this is inconsistent with the approach sought for the Project. **Ms Strogen** has dealt with the reasoning behind this approach and I agree with her rebuttal evidence on the matter.

Amendments to the Proposed Conditions

- 10.7 A number of amendments are proposed in response to submitters' evidence and ongoing discussions with submitters. These are attached in **Annexure A**. While I have previously referred to a number of these amendments above, this section of my rebuttal evidence provides a high-level summary of the proposed amendments.
- 10.8 In response to Auckland Council's evidence relating to stormwater, it is proposed that two new conditions be included. Conditions NU.9 (previously NU.8) and NU.10 will require the agreement of a Stormwater Strategy between Auckland Council and the Transport Agency to address the matters raised in the evidence of Mr Turner and Mr Lee, and will

ensure that the appropriate level of engagement has occurred with Auckland Council prior to works that may require the removal, relocation or works within existing stormwater infrastructure. An advice note with respect to the Greville Road flooding issue has also been included. An advice note has been included with Condition SW.20 to exclude the Constellation Pond and ARC Refuse Pond from the operation and maintenance conditions proposed. The operation and maintenance of these ponds will be managed under the existing dam permit conditions or in accordance with the permitted activity standards within the AUP.

- 10.9 A number of amendments have been made to the Closed Landfill conditions to reflect the matters raised within Ms Eldridge's evidence. These changes predominantly relate to clarifying the responsibility of monitoring and maintaining closed landfill infrastructure within the Project designation during the construction period. I consider the inclusion of new proposed condition LW.1A, which requires the development of a Landfill Management Strategy, and the amendments to LW.1, LW.5, LW.6, LW.7 and LW.10 appropriate to address the matters raised earlier in Section 6 of my rebuttal evidence.
- 10.10 A new condition is proposed in response to the matters raised by Auckland Council in regards to construction traffic and the effects on over-dimension and over-weight vehicles. I consider CTMP.5 appropriate to manage those effects, which requires the identification of alternative routes for such vehicles. Additional changes have been made to CTMP.2 and CTMP.3 to clarify the purpose of the CTMP and its contents, including the requirement to minimise the adverse effects of construction on buses and general traffic, as well as requiring at least one vehicular lane and footpath be provided on Rosedale Road under SH1 during construction.
- 10.11 In response to discussions with Watercare, changes are proposed to resource consent conditions NU.8 (previously NU.7) to provide further clarity and detail regarding works within the Watercare designations. These changes address the matters raised in the evidence of Mr Mitchell and Mr Bourne. Changes are also proposed to EW.8 in response to Watercare's evidence. The amendment to Condition DC.5 are covered in

the evidence of **Mr Burn**. I note that agreement has been reached with Watercare on relevant conditions following further discussions.

10.12 Ms Brabant on behalf of Waste Management New Zealand Ltd proposed an amendment to Condition CTMP.4 regarding the management of traffic during the construction period along Rosedale Road and the mitigation of any necessary partial closure of the road. Ms Brabant states in her evidence that this can be managed through additional requirements for the CTMP. In response, I have amended Condition CTMP.3(d)(v) to ensure that at least one traffic lane is provided on Rosedale Road under SH1. As discussed earlier in my evidence, I consider SCP.3 and its subsequent amendments will be sufficient to ensure consultation occurs with affected parties through the duration of construction.

11 Conclusion

11.1 I concluded in my EIC that the Project will be consistent with relevant objectives and policies, and any actual and potential adverse effects can be appropriately avoided, remedied or mitigated. I remain of this view. I consider that the matters raised in the evidence of submitters relevant to the resource consents have been appropriately addressed in evidence and this is reflected in the attached amended conditions of consent.

11.2 In addition, I consider the proposed approach in terms of the separation of conditions between the resource consents and designation to be appropriate and sets a sound framework for the integrated management of actual and potential effects associated with the Project.



Damien McGahan

15 June 2017

Annexure A – Proposed Resource Consent Conditions

PROPOSED RESOURCE CONSENT CONDITIONS (15 June 2017)

Changes lodged as part of evidence in chief (20 April 2017) shown in [blue tracked changes](#)

Changes lodged as part of rebuttal evidence (15 June 2017) shown in [red tracked changes](#)

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 Improvement Project \('NCI Project'\)](#) works shall be carried out in general accordance with the General Arrangements Sheets 1 – 2 ([Revised Albany Busway Bridge – Rev I](#)), 3 – 10 ([Consent Issue – Rev H250310-3PRE-3DES-DRG-0201-G](#)) and all referenced as consent numbers [\[insert numbers\]](#).~~
- RC.2 Where there is inconsistency between [the General Arrangements referred to in Condition RC.1 above and these conditions, these conditions shall prevail.](#):
- ~~a. The General Arrangements referred to in Condition RC.1 above and these conditions, these conditions shall prevail;~~
- ~~b. The General Arrangements referred to in Condition RC.1 and further information presented post lodgement and/or at the Hearing, the most recent information and plans shall prevail.~~

Lapse date

- RC.3 Under section 125 of the [RMA-Resource Management Act 1991](#), these consents shall lapse seven years after the date they are granted unless:
- c. The consents ~~is~~[are](#) given effect to; or
- d. 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 [Auckland](#) 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 ~~resource~~ consents, the Consent Holder shall submit a CEMP for the relevant [NCI Project](#)~~project~~ stage, or specific construction activity, to the Council (Team Leader Northern Monitoring),

to certify compliance and consistency with the conditions of the consent.

- CEMP.2 If the Consent Holder has not received a response from the Council (Team Leader Northern Monitoring) within 20 working days of submitting the CEMP or a site-specific CEMP, the Consent Holder will be deemed to have ~~approval~~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 (Team Leader Northern Monitoring). The Consent Holder shall consult with the Council (Team Leader Northern Monitoring) 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 (Team Leader Northern Monitoring) 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 ~~the approval~~certification by ~~of~~ the Council (Team Leader Northern Monitoring).
- CEMP.5 At least ~~10 working days~~ ~~two weeks~~ ~~month~~ prior to the lodgement of the CEMP with the Council (Team Leader Northern Monitoring), the Consent Holder shall provide a copy of the draft CEMP to the NZ Transport Agency Northern Mana Whenua Iwi Integration Group (IIG) and seek feedback on the draft CEMP during at least one hui with the IIG.
- CEMP.6 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.7 All CEMPs shall be prepared in accordance with the NZ 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 NCI Project;
 - c. A description of the training and education programme for all site personnel, including training for construction water management, that will be implemented to ensure compliance with conditions;
 - d. A requirement for a cultural induction programme for appropriate contractor's staff prior to work commencing;

- e. A requirement for cultural monitoring of construction works through the presence of iwi representatives on site where requested by the IIG;
- f. Procedures for hazards, including fire hazard, identification and control;
- g. 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;
- h. The details of the Council Closed 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.
- ~~i.h.~~ Methods for amending and updating the CEMP as required; and
- ~~i.i.~~ The management plans set out in condition CEMP.8 below.

Advice Note

Where access to any privately owned property is required, the NZ Transport Agency shall undertake consultation with the property owner to determine an appropriate site access protocol in respect of obtaining access to the site.

In respect of any privately owned property, the NZ Transport Agency and/or its agents shall provide ~~3 weeks~~ (15 working days) notice of the intention to commence construction.

- CEMP.8 The management of the potential adverse environmental effects associated with the construction phase of the NCI Project shall be addressed within the following management plans to be included in the CEMP:
- a. Construction Noise and Vibration Management Plan ('CNVMP') prepared in accordance with conditions CNV.1 to CNV.6;
 - b. Construction Traffic Management Plan ('CTMP') prepared in accordance with conditions CTMP.1 to CTMP.3;
 - c. Dust Management Plan ('DMP') prepared in accordance with conditions DMP.1 to DMP.4;
 - d. Lizard Management Plan ('LMP') prepared in accordance with conditions LMP.1 to LMP.3;
 - e. Avifauna Management Plan ('AMP') prepared in accordance with conditions AMP.1 to AMP.4;
 - f. Contaminated Site Management Plan ('CSMP') prepared in accordance with conditions CL.1 to CL.32;

- g. Construction Erosion and Sediment Control Plan ('CESCP') prepared in accordance with conditions EW.1 to EW.13; and
- h. Landfill Reinstatement Works Plan ('LRWP') prepared in accordance with conditions LW.1 to LW.10.

CEMP.9 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 (Team Leader Northern Monitoring) 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.10 All certified CEMPs shall be implemented and maintained for the relevant stage of works throughout the entire construction period.

Construction Noise and Vibration (CNV)

- CNV.1 A ~~Construction Noise and Vibration Management Plan (CNVMP)~~ shall be prepared by an appropriately qualified person, and shall be submitted as part of the CEMP.
- CNV.2 The purpose of the CNVMP is to provide a framework for the development and implementation of measures to avoid, remedy or mitigate adverse construction noise and vibration effects, and to minimise any exceedance of the criteria set out in Conditions CNV.5 and CNV.6.
- CNV.3 The CNVMP shall be prepared in accordance with the Noise Management Plan requirements of Annex E2 of *New Zealand Standard NZS 6803:1999 'Acoustics – Construction Noise'* (NZS 6803:1999) and shall describe the measures adopted to, as far as practicable, meet the criteria in conditions CNV.5 and CNV.6. The CNVMP shall also be prepared in accordance with the NZ Transport Agency's *State highway construction and maintenance noise and vibration guide* (version 1.0, 2013).
- CNV.4 The CNVMP shall identify which mitigation measures required by conditions ON.1 to ON.14 imposed on the designations for the NCI Project would also attenuate construction noise. Where practicable, those measures shall be implemented prior to commencing major construction works that generate noise in the vicinity.
- CNV.5 Noise arising from construction activities on land shall be measured and assessed in accordance with NZS 6803:1999 Acoustics - Construction Noise and shall comply, as far as practicable, with the noise limits set out Table CNV1:

Table CNV1: Construction noise limits

Day	Time	L _{Aeq(15min)}	L _{AFmax}
Residential buildings			
Weekdays	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 - 0730h	45 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sundays and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Commercial and industrial receivers			
All	0730h – 1800h	70dB	
	1800h – 0730h	75dB	

Advice Note:

There may be occasions when it is not practicable for construction activity to achieve the guideline criteria in the standard. In such circumstances, mitigation that is consistent with the best practicable option shall be adopted in accordance with [CNV.76](#).

- CNV.6 Construction vibration 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, as far as practicable, comply with the Category A construction vibration criteria in Table CNV2 or for pipework, the construction vibration criteria in Table CNV3.

Table CNV2: Construction vibration criteria

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	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	Vibration - transient	5mm/s ppv	BS 5228-2** Table B2
	Vibration - continuous		BS 5228-2** 50% of table B2 values

* For vibration, protected premises and facilities (PPFs) are 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).

** BS 5228-2:2009 'Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration'

- a. If measured or predicted vibration from construction activities exceeds the Category A criteria, a suitably qualified person must assess and manage construction vibration during those activities.
- b. If measured or predicted vibration from construction activities exceeds the Category B criteria, those activities may only proceed if vibration effects on affected buildings are assessed, monitored and mitigated by a suitably qualified person.

Table CNV3: Construction vibration criteria (pipework) (from DIN 4150-3:1999)

<u>Line</u>	<u>Pipe material</u>	<u>Guideline values for PPV measured on the pipe, in mm/s</u>
<u>1</u>	<u>Steel (including welded pipes)</u>	<u>100</u>
<u>2</u>	<u>Clay, concrete, reinforced concrete, pre-stressed concrete, metal (with or without flange)</u>	<u>80</u>
<u>3</u>	<u>Masonry, plastic</u>	<u>50</u>

- CNV.7 If measured or predicted noise and vibration from a construction activity exceeds the criteria in conditions CNV.5 or CNV.6, a Schedule to the CNVMP for that activity shall be prepared in accordance with the NZ Transport Agency's *State highway construction and maintenance noise and vibration guide* (version 1.0, 2013). The Schedule shall, where practicable, be provided to the Council (Team Leader Northern Monitoring) for certification at least five working days in advance of the activity commencing. Where no response is received from the Council within three working days, the Schedule shall be deemed to have been certified and work may commence. The Schedule shall provide details of the best practicable option for noise mitigation to be implemented for the construction activity.
- CNV.8 If any vibration-induced damage is shown to have occurred as a result of [the NCI Project](#) construction activities, any such damage shall be remedied by the Consent Holder.

Construction Traffic Management

- CTMP.1 A CTMP shall be prepared by a suitably qualified person and shall be submitted as part of the CEMP.
- CTMP.2 The purpose of the CTMP is to manage the various traffic management, safety and efficiency effects associated with the construction works to: potential impacts of the construction of the NCI Project on the transportation network during the construction period.
- 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; and
 - c. Inform the public about any potential impacts on the road network.
- CTMP.3 The CTMP shall describe the methods for avoiding, remedying or mitigating the local and network wide transportation effects resulting from construction of the NCI Project, and will address, as far as practicable, the following matters:
- a. Methods to avoid, remedy or mitigate the local and network wide effects of the construction of individual elements of the [NCI Project](#) (e.g. intersections/overbridges) and the use of staging to allow sections of the [NCI 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 as far as reasonably practicable and minimise adverse effects, especially including on bus services and bus travel

times, at peak traffic periods during weekdays (06:30 to 09:30 and 16:00 to 19:00), including:

- 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), ~~as far as reasonably practicable~~ and subject to the requirement 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, as far as reasonably practicable and subject to the requirement 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, as far as reasonably practicable and subject to the requirement 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, as far as reasonably practicable. This single traffic lane is to allow two way traffic, with signalised shuttle working.
- e. Measures to maintain existing vehicle access to private properties, as far as possible, 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 Council (Team Leader Northern Monitoring) 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, where practicable (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.

CTMP.4 The Consent Holder shall ensure that, when developing the CTMP, the suitably qualified person preparing the CTMP shall:

- a. Use best practice to better understand the effects of construction of the NCI Project or NCI Project stage on the affected road network, which may include the use of traffic modelling tools. Any such assessment should be undertaken in consultation with Auckland Transport, and have the ability to simulate lane restrictions and road closures; and
- b. As far as practicable, include measures to avoid road closures and also the restriction of vehicle, cycle and pedestrian movements, in particular, the restriction of cycle and pedestrian connectivity to schools on which consultation with the Ministry of Education should be undertaken.

CTMP.5 The Consent Holder shall 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.

Dust Management Plan

DMP.1 A DMP shall be prepared by an appropriately qualified person and shall be submitted as part of the CEMP.

DMP.2 The purpose of the DMP is to describe the measures to be adopted to ensure the dust arising as a result of the NCI Project does not cause an offensive or objectionable effect at any point beyond the designation boundary (as defined in the Guide to Assessing Air Quality Impacts from State Highway Projects (NZTA 2015)).

DMP.3 The DMP shall include the following:

- a. A description of the measures to be adopted that, so far as practicable, seek to:
 - i. Reduce the dust arising as a result of the NCI Project at any point beyond the designation boundary that borders a highly sensitive receiver;
 - ii. Ensure that the 1-hour average of Total Suspended Particulate (TSP) at any point beyond the designation boundary that borders a highly sensitive receiver does not exceed 250 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$); and
 - iii. Ensure that the 24-hour average concentration, measured midnight to midnight, of ~~Total Suspended Particulate (TSP)~~ at any point beyond the designation boundary that borders a highly sensitive receiver does not exceed 80 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$);

- b. A description of the works, anticipated equipment/processes and duration;
- c. A description of the periods of time when emissions of dust might arise from construction activities;
- d. Identification of highly sensitive receivers likely to be adversely affected by emissions of dust from construction activities;
- e. Methods for mitigating dust that may arise from ground disturbing construction activities and construction support areas;
- f. Methods for monitoring the state of air quality during construction, including continuous monitoring of ~~Total Suspended Particulate~~ (TSP) and wind speed and wind direction in general accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for Environment, 2009c; and
- g. A requirement for log books to be maintained containing information regarding dust monitoring required by the DMP and any dust complaints received.

Advice Note:

The DMP shall describe the methods that can be applied to achieve the standard in DMP.3(a)(ii) and (iii). However, there may be occasions where despite all practicable measures being adopted the specified standard is not achieved.

- DMP.4 If the monitoring required by the DMP shows that concentrations of TSP in ambient air at or beyond the boundary of the site exceed:
- a. 80 micrograms/m³ as a 24-hour average; or
 - b. 250 micrograms/m³ as a 1-hour average

the Consent Holder shall undertake an investigation into the cause of the exceedance in accordance with the DMP.

A report into the outcome of any investigation required by this condition shall be forwarded to ~~Auckland the~~ Council (Team Leader Northern Monitoring) within 10 working days of the exceedance. If the cause of the exceedance is identified as being an activity undertaken on the site, the report shall also identify additional measures to be taken to reduce discharges of particulate matter into air from that activity.

Lizard Management Plan

- LM.1 A LMP shall be prepared by a herpetologist with Department of Conservation ('DOC') authority and shall be submitted as part of the CEMP.
- LM.2 The purpose of the LMP is to ensure the relocation of any rare and endangered lizard species found in the locations identified in the

Assessment of Terrestrial Effects Report as having the potential to contain lizard species (Potential Lizard Sites) from the works area prior to the commencement of site works.

- LM.3 The LMP shall include details of the measures to be executed to capture and relocate rare and endangered lizards from within the Potential Lizard Sites prior to the commencement of construction work where reasonably practicable. The LMP shall include the following requirements:
- a. The LMP shall be implemented by a herpetologist with DOC authority;
 - b. The capture of rare and endangered lizards shall occur at the time vegetation is removed from the site prior to construction activity commencing;
 - c. The capture shall be carried out in suitable weather conditions; and
 - d. The relocation of any lizards captured, and where necessary the storage of lizards prior to relocation, shall be undertaken by the ~~project~~ [NCI Project](#) herpetologist or an equivalent person with DOC authority.

Avifauna

- AMP.1 An AMP shall be prepared by an 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 in the Assessment of Terrestrial Effects Report (**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 as potential dotterel nesting sites in the Assessment of Terrestrial Ecology Effects Report;
 - b. A requirement that the deterrent measures described in AMP.2(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. A requirement for vegetation clearance to be undertaken from 1 March to 31 July within ~~that~~ the area adjacent to the Rosedale Wastewater Treatment Ponds where construction activities will occur as identified within Assessment of Terrestrial Ecology Report;
- e. Procedures for managing any native birds found nesting within the Moro Pond area of the Rosedale Wastewater Treatment Ponds.

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

Contaminated land

CL.1 Prior to excavation and construction works commencing, the Consent Holder shall update the draft ~~Contaminated Site Management Plan (CSMP)~~ to include a summary of the findings of the Detailed Site Investigations. The updated CSMP shall be submitted to the Council (Team Leader Northern Monitoring) as part of the CEMP. The CSMP shall reference the LRWP prepared in accordance with conditions LW.1 to LW.10.

CL.2 The purpose of the CSMP is to identify mitigation measures to ensure that discharges from the construction areas to air, land or water are minimised, and to ensure that potential effects on the health of workers on the site and nearby sites can be appropriately managed.

CL.32 The updated CSMP shall describe how land disturbance activities on contaminated sites will be managed, 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 classifying and managing transport, disposal (at an appropriate facility) and tracking of spoil and other material taken away from site;
- e. How any spills and emissions will be managed; and
- f. 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 compliance with 50 times 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.

Earthworks

General

- EW.1 During the NCI 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 Regional Council's Technical Publication 90: Erosion and Sediment Control Guidelines for Soil Disturbing Activities in the Auckland Region and any amendments to this document and the NZ 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 Auckland 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) (~~CESCP~~)

- EW.4 A CЕСCP shall be prepared by an appropriately 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 (Team Leader Northern Monitoring) prior to works commencing for that specific CЕСCP.
- EW.5 The purpose of the CЕСCP 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 CЕСCP shall be prepared in general accordance with the principles set out in section 5 of the Construction Water Management Report 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 CЕСCP 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)~~works that will be implemented (including 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 Construction Water Management Report, 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

and

- ~~vii.vi.~~ The responses to be adopted in relation to various monitoring outcomes;

- 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 Note:

'Organic flocculants' means flocculants that are derived from living matter and contain carbon, including but not limited to Polyamine and PolyDAMAC.

EW.7 The operational effectiveness and efficiency of all erosion and sediment control measures set out in the CЕСCP shall be maintained throughout the duration of earthworks activity, or until the site is stabilised against erosion.

EW.8 Prior to submission of any CЕСCP for the causeway works between Watercare's Ponds 1 and 2 to the Council (Team Leader Northern Monitoring), the Consent Holder shall consult with Watercare. ~~The details and outcome of that consultation shall be included in the CЕСCP.~~

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.7(f), shall be included in the CЕСCP.

Certification of Erosion and Sediment Controls

EW.9 Prior to earthworks commencing, a certificate signed by an appropriately qualified and experienced person shall be submitted to the Council (Team Leader Northern Monitoring), to certify that the erosion and sediment controls have been constructed in accordance with the certified ~~Construction Erosion and Sediment Control Plan(s)~~ CЕСCP(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 104 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

LW.1 ~~No works are to occur within the Closed Landfill until such time as all necessary approvals in accordance with the Resource Management Act 1991 have been obtained to authorise removal and/ or relocation of existing control and monitoring assets that may be affected by the construction works. The Consent Holder shall agree an appropriate strategy with the Council (Closed Landfill and Contaminated Land Response Team)(as the Consent Holder for the operation, maintenance and monitoring of the Closed Landfill) and implement the agreed strategy in agreement with and on behalf of the Auckland Council.~~

LW.1A ~~The Consent Holder shall develop a Landfill Management Strategy in consultation with the Auckland CLCLR team (as the Consent Holder consents 34031, 34032, 34033 and 41939 for the operation, maintenance and monitoring of the Closed Landfill) for Auckland Council's certification. The Landfill Management Strategy must address, as a minimum, the requirement for the Consent Holder to locate protect and/or relocate the following landfill infrastructure:~~

- a. The landfill liner system;
- b. The landfill gas management system;
- c. The leachate management system, including the leachate terminal manhole and leachate discharge pipe under the motorway;
- d. The landfill groundwater, leachate, landfill gas and surface water monitoring infrastructure; and
- e. The stormwater management system (including any flow on effects associated with any increase in inundation and infiltration), including Stormwater Pond 7 and the underground box culvert.

The Landfill Management Strategy must also take into account the need for pre, during and post-construction settlement monitoring of the western landfill slopes to assist in the understanding of the impact of the construction works on the landfill's stability.

The Landfill Management Strategy shall outline the necessary authorisations needed of the works identified in Condition LW.1A, associated implementation timeframes and responsibilities.

Landfill Reinstatement Works Plan ('LRWP')

- LW.21 A LRWP shall be prepared by a suitably qualified person and submitted as part of the CEMP. The LRWP shall reference the CSMP prepared in accordance with conditions CL.1 to CL.3.
- LW.32 The purpose of the LRWP is to manage the potential adverse effects on the environment of working within the ~~Rosedale~~-Landfill.
- LW.43 The LRWP shall include the following information in relation to the works to be carried out on the ~~Rosedale~~-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 beyond the northern, eastern and southern site boundaries;
 - b. The dust control measures to be undertaken to control 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 manage any leachate and contaminated stormwater generated on site during the works;
 - e. The measures to manage the impact of the works on upstream groundwater and leachate levels, and the potential increase in risk of future seeps;

f. The measures to manage the impact of the works on waste stability;

g.e. Measures relating to the management of refuse including appropriate handling, transport and disposal offsite at an appropriate facility;

h.f. Use of plant and equipment appropriately rated and protected for use in a Hazardous Atmospheric Zone;

i.g. Continuous Landfill gas monitoring for the duration of the construction works in the vicinity of the Rosedale Landfill and access to these monitoring and inspection points for Auckland Council, or their agent;

j.h. Landfill gas trigger values for the cessation of works within the works area. Works may not recommence until advice has been sought from a suitably qualified landfill gas specialist;

k.i. The requirement for the landfill reinstatement construction works to be undertaken:

- i. under the direction of a New Zealand Chartered Professional Engineer with a minimum of 10 years' experience in geotechnical engineering and landfill engineering with specific experience in landfill rehabilitation or landfill remediation; and
- ii. in accordance with the IPENZ Practice Note for Construction Monitoring as follows:
 1. Level CM5 for the engineered barrier/side wall liner and any gas protection measures; and
 2. Level CM3 for all other components of the landfill reinstatement works.

LW.54 The LRWP shall also include a Landfill Health and Safety Plan prepared after consultation with the Auckland Council ~~CLCLR (Closed Landfill and Contaminated Land Response Team)~~ and including information regarding:

- a. Management of the risk of gas from refuse and leachate;
- b. Management of excavations and works in confined spaces;
- c. Training and supervision of construction workers and Landfill staff;
- d. Measures relating ~~to the~~ exposure of construction workers and staff to hazardous materials, refuse and leachate including:
 - iii. Identifying hazardous materials;

- iv. Requiring person protective equipment including full face respirators, chemical resistant overalls and gloves;
 - v. Requiring the use of observers;
 - vi. Providing shower and boot wash facilities onsite;
 - vii. Requiring breaks in skin (cuts and abrasions) to be disinfected immediately and covered;
 - viii. Prohibiting food or drink consumed within the construction area; ~~and~~
- e. Emergency contacts and procedures. Emergency Response contacts for the Landfill shall include the details of the Council Closed Landfill and Contaminated Response ('CLCLR') Rosedale Landfill Site Manager and the Gas Technician responsible for the Landfill gas extraction system.
- f. The Consent Holder shall work closely with the Council CLCLR team prior to construction commencing to ensure that the safe isolation of the landfill gas system can be achieved.

Landfill Construction Method Statements

LW.65 Prior to excavation and construction works commencing in the vicinity of the Landfill the Consent Holder shall submit Landfill Construction Method Statements ('LCMS') to ~~the~~ Council CLCLR team (Team Leader Northern Monitoring) for certification. Such certification shall be obtained prior to the commencement of any works that have the potential to impact upon landfill infrastructure. Such certification shall not be unreasonably withheld. If the Consent Holder has not received a response from the Council within 10 working days following submission of the LCMS, the Consent Holder will be deemed to have certification and can commence site works.

LW.76 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 ~~Rosedale~~ Landfill including:

- a. How the landfill will be reinstated once the works are complete;
- b. Temporary works including temporary reconfiguration of leachate, gas and stormwater infrastructure;
- c. Temporary support of the excavated refuse profile;
- d. Reinstatement of the Landfill ~~Rosedale~~ sidewall, including liner and cap/ cover;
- e. Reinstatement of the ~~Rosedale~~ Landfill infrastructure (leachate, gas, stormwater, access track);

- f. Reinstatement of the ~~Rosedale~~ Landfill monitoring network stations including new gas migration monitoring probes and new groundwater monitoring wells;
- g. Construction of protection measures (such as a gas interception trench) to mitigate Landfill gas effects;
- h. Commissioning of the reinstatement works;
- i. How the works will achieve the factors of safety against instability in the relevant codes and standards;
- j. The requirement for reinstatement works to be supervised by a New Zealand Chartered Professional Engineer with experience in geotechnical engineering and landfill engineering required under condition LW.4 k;
- k. 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; and
- l. A Safety in Design review of the proposed reconfiguration of all landfill gas infrastructure by an appropriately qualified and experienced person.

LW.87 The LCMS shall be prepared and submitted after consultation with the Auckland Council CLRLR team ~~(Closed Landfill and Contaminated Land Response Team)~~.

LW.98 Landfill reinstatement works shall be carried out in accordance with the certified LCMS required under condition LW.7.

Monitoring and Risk Management

LW.10 The Consent Holder shall ensure that the monitoring programme is implemented within the NCI Project area in accordance with the strategy, required by condition LW.1A in a way that is consistent with the resource consents held by Auckland Council. The monitoring programme should ensure the following: ~~The Consent Holder is to ensure the following are met to allow for Auckland Council (as the Consent Holder for the operation, maintenance and monitoring of the Closed Landfill) to fulfil its resource consent obligations at the landfill and manage risk:~~

- a. Monitoring of discharges shall be consistent with the requirements of the discharge consents referred to above and the results of such monitoring shall be supplied to the Council CLCLR team such that they can be used to demonstrate compliance with the discharge consents;
- ~~b.a.~~ The Consent Holder, with Auckland Council agreement, is to undertake inspections during construction within the landfill to mitigate the potential health and safety risk;

c.b. Where monitoring bores / points fall within the construction area, the Consent Holder shall be responsible for all monitoring for the duration of the construction works and shall pass on the results of the monitoring to the Council CLCLR team within two working days;

d.b. The Consent Holder is to provide for access for Auckland 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;

e.d. Where the construction works require the removal of existing Auckland Council closed landfill monitoring infrastructure, the Consent Holder shall relocate the monitoring infrastructure in consultation with Auckland Council. Prior to undertaking any works in relation to the infrastructure the Consent Holder must obtain Auckland Council's agreement to:

- i. Design, location and access requirements; and
- ii. A programme which allows for progressive decommissioning and replacement of monitoring points including, as far as is practicable, continuity in monitoring data.

e. The Consent Holder is to provide for access for Auckland Council, or their agent, to monitoring or inspection points in the design;

f.d. The Consent Holder shall obtain certification from Auckland Council for the location and design of, including access to:

- i. The replacement gas ring main;
- ii. Leachate collection system;
- iii. Gas interception trench;
- iv. The access roading running along the bund edge and alongside the retaining wall; and
- v. Any replacement monitoring points required.

g.e. The detailed design is to mitigate the impact of the works on the upstream groundwater and leachate levels and potential increase in the risk of future seeps, and the impacts on waste stability; and

h.f. The Consent Holder is to be responsible for the disposal of all refuse materials and contaminated soils excavated during construction works.

Advice Note for Conditions LW.1, LW.1A and LW.10:

The combined intent of Conditions LW.1, LW.1A and LW.10 is to transfer responsibility for the management of the landfill within the area affected by the NCI project to the Consent Holder for the duration of construction.

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 implement the following:
- a A suitably qualified ecologist shall be appointed to conduct native fish recovery and relocation;
 - b The IIG shall be given the opportunity to appoint a representative to be present on site during the native fish recovery and relocation;
 - c A fish movement barrier shall be installed at the lower and upper extents of the stream works to prevent fish from recolonising within the stream works area;
 - d Stormwater ponds shall be dewatered to a depth of no more than 0.5m and fish movement barriers shall be installed over the inlet and outlets of the pond or wetland;
 - e Once the appropriate fish movement barriers are installed, the recovery of native fish shall occur over a two day period, and shall use the following methods:
 - i Gee-minnow traps and fyke nets, placed at appropriate intervals over the length of the watercourse. These shall be left overnight where possible, and checked and cleared the following morning;
 - ii Using an electric fishing machine (EFM300), several electric fishing runs of the watercourse, stormwater pond or wetland shall occur each day;
 - iii During the dewatering process, any remaining freshwater fish shall be captured and relocated;
 - f 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;
 - g Native fish shall be transferred into closed buckets, kept at an appropriate ~~temperature~~temperate and transport to the relocation site;
 - h Any exotic fish capture shall be humanely euthanised and disposed of appropriately; and
 - i The Consent Holder shall provide the Council (Team Leader Northern Monitoring) 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 fish recovery and relocation being completed.

Stakeholder and Communications Plan

- SCP.1 At least two months prior to the commencement of construction works, the Consent Holder **Authority** shall submit a Stakeholder and Communications Plan ('**SCP**') to the Council (Team Leader Northern Monitoring), to certify compliance and consistency with the conditions of this consent. If the Consent Holder has not received a response from the Council within ~~4~~20 working days following the submission of the SCP, the Consent Holder will be deemed to have certification and can commence construction.
- SCP.2 The purpose of the SCP is to set out the procedures for communicating with the public and stakeholders throughout the construction period and the methods proposed to avoid, remedy or mitigate, as far as practicable, disruption to businesses and schools as a result of construction activities.
- SCP.3 The SCP shall contain the following:
- a. Methods for informing the community of construction progress, including proposed hours of operation outside normal working hours and Project contact details;
 - b. Identification of key stakeholders such as community groups, business groups, residents organisations, Auckland Council, Watercare Services Limited, Ministry of Education, the IIG and the local boards;
 - c. The requirement to establish consultation processes involving:
 - i. Briefings for key stakeholders (including emergency services, business associations, local boards and road user groups) at least quarterly, ahead of all major milestones or road closures;
 - ii. Regular consultation events or information days, held as appropriate, to provide the opportunity for the community to have input into the NCI Project and construction impact strategies, and to also be informed in advance of upcoming works including closures and traffic management plans;
 - iii. The establishment of a Charter in accordance with the IAP2 guidelines to guide the role, timings and structure of the consultation events and information days;

- iv. Notification of consultation events and information days to the public and community groups;
- v. A requirement to publish and circulate records of consultation events and information days; and
- vi. A requirement for the Consent Holder to ensure that appropriate personnel attend both the stakeholder and community events to explain the NCI Project programme and staging, how the effects are proposed to be managed and to respond to any questions.
- vii. A requirement to produce a report summarising the main points arising from each consultation event, reporting on any social impacts of the Project, along with recommendations on the measures to mitigate those effects. The Consent Holder shall ensure that a copy of the report is provided to the Council and to meeting attendees within 10 working days of the event.

d.e. Details of the Community Liaison Manager to be appointed by the Consent Holder; and

e.d. Details of the proposed engagement with the community in order to foster good relationships and to provide opportunities for learning about the NCI Project.

SCP.4 The SCP shall include details of the measures to be implemented to avoid, remedy or mitigate, as far as reasonably practicable, disruption to businesses 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.

SCP.5 The Consent Holder shall provide a draft SCP to the Council (Team Leader Northern Monitoring)~~insert Council person~~ for comment at least three months prior to the commencement of construction. The Consent Holder shall consider any comments received from the Council (Team Leader Northern Monitoring)~~insert Council person~~ when finalising the SCP.

SCP.6 The Consent Holder shall implement the SCP for the duration of the Construction Works ~~W~~works and for six months following construction.

SCP.7 At all times during construction work, the Consent Holder shall maintain a permanent register of any complaints received relating to the construction works.

SCP_{spc}.8 The Consent Holder shall respond to any complaint within 48 hours of the complaint, except where an immediate hazard is present, in which case the Consent Holder shall use its best endeavours to respond within 2 hours.

SCP_{spc} 9 The Consent Holder shall also maintain a record of its responses and any remedial actions undertaken, such record to also contain the responses and actions taken.

SCP_{spc} 10 This record (to be included in the register) shall be maintained on site and shall be made available to the Council (Team Leader Northern Monitoring)~~[Council person]~~, upon request. The Consent Holder shall provide the Council (Team Leader Northern Monitoring)~~[Council person]~~ with a copy of the complaints register every month.

Archaeology

ARC.1 A suitably qualified archaeologist shall be appointed to oversee the earthworks, as appropriate, required as part of the NCI Project ('Project Archaeologist').

ARC.2 A contractors' briefing shall be provided to all contractors by the Project Archaeologist prior to the commencement of the NCI 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 pProject aArchaeologist, the Auckland Council (Heritage Unit) and Heritage New Zealand Pouhere Taonga) and mana whenua.

ARC3. Documentation demonstrating that the contractor briefing has occurred shall be forwarded to the Council (Team Leader Northern Monitoring).

ARC.4 Should any unrecorded historic heritage sites (i.e. sites that meet the Resource Management Act 1991 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 Auckland Council Cultural Heritage Inventory by the Project Archaeologist.

- ARC.5 Site record forms in the Auckland 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 ~~Auckland~~ Council Cultural Heritage Inventory within 12 months of the completion of on-site earthworks.

Network Utilities

- 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 Resource Management Act 1991 approvals have been obtained to authorise the installation of two 220kV circuits (three cables each) ~~on the same general alignment as the existing 220kV circuit~~, 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 NCI Project designation. If a location within the NCI Project designation is not feasible, a solution may be required that bypasses all or part of the NCI 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.3 The Consent Holder shall ensure that the detailed design for the NCI Project makes provision for a conduit that is sufficient to allow Transpower to install, operate and maintain two 220kV ~~cables in the same general alignment as the existing 220kV circuit that traverses through the NCI 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 NCI Project area shall be provided for in the detailed design insofar as it affects the NCI Project area.

NU.43 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 (Team Leader Northern Monitoring) for certification. A summary of the feedback received from Transpower shall be included within the EIMP.

NU.44 The Consent Holder shall carry out works in accordance with the certified EIMP.

NU.65 The EIMP shall include methods and measures to ensure that the NCI Project provides for Transpower's two 220kV circuits ~~on the same general alignment as the existing 220kV circuit~~ 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.76 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 is maintained during the construction period.

Watercare Services Ltd

NU.87 The Consent Holder shall agree the following with Watercare Services Ltd and implement the agreed measures prior to construction works starting within the Watercare Services Ltd Designations 9310 and 9311:

- a. Reasonable vehicular access between Pond 1 and Pond 2 (under SH1) during construction works;
- b. Reasonable vehicular access around the southern edge of Pond 1 during construction works;
- c. ~~The provision for~~ vehicular A ~~access~~ at the completion of the construction works;

- a Along the western edge of Pond 2 or the provision of an alternative access arrangement, to provide access to the forestry area on the northern bank of Pond 2; and
 - B Between the existing vehicle access along the southern edge of Pond 1, the new vehicle link beneath the motorway and the existing vehicle access to Pond 2 to provide access to Pond 2 and the UV disinfection facility at the eastern end of Pond 2. ~~during construction works;~~ and
- d. The relocation of the existing boat ramp at Pond 2 prior to the removal of the existing boat ramp, which is to be agreed with Watercare, prior to construction works starting within Watercare's land.
- e. Where any of the NCI Project areas abut the existing Watercare designations, there shall be provision for a secure perimeter barrier~~The construction of security barriers~~ to prevent the public accessing Watercare's land at all times. (particularly Pond 2) from the new shared use path;
- f. Measures to ensure sediment release, including any temporary stormwater discharges, into either Ponds 1 or 2 during the construction period will be 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, a draft CESCOP for the NCI Project causeway widening shall be provided to Watercare for review prior to submission to Auckland Council. The CESCOP shall identify how any Watercare comments have been addressed;
- g. Agreed 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~~
- h. The provision of 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.;
- i. All construction works in and around Watercare's ponds and pond link infrastructure shall be undertaken to ensure that the integrity of the ponds and pond link infrastructure is maintained / protected at all times;

Auckland Council (Healthy Waters)

NU.9 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 Resource Management Act 1991 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).

Advice Note 1:

The Consent Holder will work collaboratively with 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 NCI Project in this area.

Advice Note 2:

The Consent Holder is advised that approval from 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.10 The Consent Holder shall develop a Stormwater Strategy for the works identified in condition NU.9 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 certification. The Stormwater Strategy shall outline the necessary authorisations needed for the works identified in condition NU.9, associated implementation timeframes and responsibilities.

Stormwater

General

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

Stormwater management devices

SW.2⁴ The Consent Holder shall ensure that **all NZ Transport Agency stormwater treatment, detention and attenuation devices ~~stormwater management 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: as set out in the table below:

Motorway Catchment	Receiving Environment	Minimum Design Requirements		
		Total High Use Road Area (new and existing) to be treated in accordance with TP10	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 (<u>10mm/hr or 26mm/24hrs</u>)	SMAF1 (37mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>)
McClymonts to Spencer (M2S)	Open channel upstream of the Albany Lakes Reserve	1.59ha to 75% TSS removal (<u>10mm/hr or 26mm/24hrs</u>)	SMAF1 (37mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>) 100-year ARI (<u>270mm/24hrs</u>)
Spencer to Rosedale (S2R)	Oteha Stream	9.42ha to 75% TSS removal (<u>10mm/hr or 26mm/24hrs</u>)	SMAF2 (26mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>) 100-year ARI (<u>270mm/24hrs</u>)
Rosedale to Constellation (R2C)	Open channel north of WSL Pond 1	6.54ha to 75% TSS removal (<u>10mm/hr or 26mm/24hrs</u>)	SMAF2 (26mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>) 100-year ARI (<u>270mm/24hrs</u>)
Constellation to Paul Matthews (C2PM)	Open channel south of WSL Pond 1	3.37ha to 75% TSS removal (<u>10mm/hr or 26mm/24hrs</u>)	SMAF2 (26mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>) 100-year ARI (<u>270mm/24hrs</u>)
Paul Matthews to Albany Highway (PM2AH)	Alexandra Stream	4.57ha to 75% TSS removal (<u>10mm/hr or 26mm/24hrs</u>)	SMAF2 (26mm/24hrs)	2-year ARI (<u>89mm/24hrs</u>) 10-year ARI (<u>169mm/24hrs</u>)

SW.32 Where existing Consent Holder stormwater management devices are to be removed as part of the NCI 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 NCI 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.43 The Consent Holder shall ensure that the design of stormwater management devices measures constructed in accordance with

Condition SW.24 and SW.3 do not result in the following: an increase of flood levels greater than 50mm:

- 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 Annual Average Recurrence Interval (ARI) event (excluding the properties on Tait Place where peak flood levels shall increase 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 ~~on properties~~ 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 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.7.4 ~~Stormwater management devices or systems must be fully operational prior to use of the impervious area.~~ 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.85 The Consent Holder shall ensure that the detailed design, including drawings, specification, design report and calculations for the stormwater management devices are submitted to Council (Senior Stormwater / ITA Specialist – Compliance) for certification ~~and~~ 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.96 ~~The Consent Holder may make modifications to the stormwater management system shown on the General Arrangements Sheets 1–10, including the use of alternative Council approved stormwater management devices, provided that the Consent Holder ensures that equivalent performance and compliance with the requirements of SW.1 is achieved. 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 Council (Team Leader Northern Monitoring) to accept a modified design is listed under Condition SW.8, and it must be provided to 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 (Team Leader Northern Monitoring) 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 Council pursuant to Section 127 of the Resource Management Act 1991.

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 is to notify the Council (Team Leader Northern Monitoring) in writing at least 10 working days prior to the start date of the works authorised by the consent.~~

Overland flow paths

SW.117 ~~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.12⁸ The Consent Holder shall ensure that secondary flow paths are kept free from obstructions such as buildings and solid fences.

Planting

SW.13⁹ The Consent Holder shall submit a planting plan(s) for ~~the~~ 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 ~~proposed stormwater works~~. 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.14¹⁰ Planting for stormwater management devices (including treatment / conveyance swales) shall be provided in accordance with TP10. The planting plan(s) required by Condition SW.13⁹ 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.15¹¹ 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.16¹² 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.17¹³ The as-built plans shall be signed off by a Chartered Engineer and include, but not be limited to:

- 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.18¹⁴ 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.24 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 Auckland Council.

Contents and submission of operation and maintenance plan

SW.19¹⁵ A Stormwater Operation and Maintenance Plan shall be submitted to Council (Senior Stormwater / ITA Specialist – Compliance) for certification 520 working days prior to the commencement of the operation of the stormwater management system. The Stormwater Operation and Maintenance Plan shall include, but not be limited to:

- 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. ~~for the preceding three 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.20¹⁷ 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 Auckland Council in dam permits #34471.

Amendments to the Stormwater Operation and Maintenance Plan

SW.21¹⁸ Any alterations to the Stormwater Operation and Maintenance Plan shall be submitted to 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 Resource Management Act 1991 the conditions of this consent may be reviewed by the Council (Team Leader Northern Monitoring) at the eConsent HHolder'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.

Annexure B – AUP Objectives and Policies

AUP OBJECTIVES AND POLICIES REFERRED TO IN REBUTTAL EVIDENCE

B7.3. Freshwater systems

B7.3.1. Objectives

- (2) Loss of freshwater systems is minimised.
- (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated.

B7.3.2. Policies

Management of freshwater systems

- (4) Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply:
 - (a) it is necessary to provide for:
 - (i) the health and safety of communities; or
 - (ii) the enhancement and restoration of freshwater systems and values; or
 - (iii) the sustainable use of land and resources to provide for growth and development; or
 - (iv) infrastructure;
 - (b) no practicable alternative exists;
 - (c) mitigation measures are implemented to address the adverse effects arising from the loss in freshwater system functions and values; and
 - (d) where adverse effects cannot be adequately mitigated, environmental benefits including on-site or off-site works are provided.

E3. Lakes, rivers, streams and wetlands

E3.2. Objectives

- (3) Significant residual adverse effects on lakes, rivers, streams or wetlands that cannot be avoided, remedied or mitigated are offset where this will promote the purpose of the Resource Management Act 1991.

E3.3. Policies

General

- (2) Manage the effects of activities in, on, under or over the beds of lakes, rivers, streams or wetlands outside the overlays identified in Policy E3.3(1) by:
 - (a) avoiding where practicable or otherwise remedying or mitigating any adverse effects on lakes, rivers, streams or wetlands; and

- (b) where appropriate, restoring and enhancing the lake, river, stream or wetland.
- (4) Restoration and enhancement actions, which may form part of an offsetting proposal, for a specific activity should:
 - (a) be located as close as possible to the subject site;
 - (b) be 'like-for-like' in terms of the type of freshwater system affected;
 - (c) preferably achieve no net loss or a net gain in the natural values including ecological function of lakes, rivers, streams or wetlands; and
 - (d) consider the use of biodiversity offsetting as outlined in Appendix 8 Biodiversity offsetting.

E36. Natural hazards and flooding

E36.2. Objectives

- (2) Subdivision, use and development, including redevelopment in urban areas, only occurs where the risks of adverse effects from natural hazards to people, buildings, infrastructure and the environment are not increased overall and where practicable are reduced, taking into account the likely long term effects of climate change.

E36.3. Policies

General

- (4) Identify and control subdivision, use and development of land that is subject to natural hazards so that the proposed activity does not increase, and where practicable reduces, risk associated with all of the following adverse effects:
 - (a) accelerating or exacerbating the natural hazard and/or its potential impacts;
 - (b) exposing vulnerable activities to the adverse effects of natural hazards;
 - (c) creating a risk to human life; and
 - (d) increasing the natural hazard risk to neighbouring properties or infrastructure.