

Before the Board of Inquiry
Waterview Connection Project

in the matter of: the Resource Management Act 1991

and

in the matter of: a Board of Inquiry appointed under s 149J of the Resource Management Act 1991 to decide notices of requirement and resource consent applications by the NZ Transport Agency for the Waterview Connection Project

Statement of evidence of Hugh Leersnyder (Construction Environmental Management Plan) on behalf of the **NZ Transport Agency**

Dated: 9 November 2010

REFERENCE: Suzanne Janissen (suzanne.janissen@chapmantripp.com)
Cameron Law (cameron.law@chapmantripp.com)

Chapman Tripp
T: +64 9 357 9000
F: +64 9 357 9099

23 Albert Street
PO Box 2206, Auckland 1140
New Zealand

www.chapmantripp.com
Auckland, Wellington,
Christchurch



INDEX

INTRODUCTION	3
SCOPE OF EVIDENCE	4
EXECUTIVE SUMMARY	4
BACKGROUND AND ROLE.....	5
PURPOSE OF THE CEMP	5
COMMENTS ON SUBMISSIONS	12
PROPOSED CEMP CONDITIONS.....	19
ANNEXURE A: EXAMPLE OF GIS MAP.....	21
ANNEXURE B: FIGURES 2-2, 2-3 AND 2-4 FROM THE CEMP	24
ANNEXURE C: PROPOSED CEMP CONDITIONS (AS LODGED)	28
ANNEXURE E: AMENDED PROPOSED CEMP CONDITIONS.....	33

STATEMENT OF EVIDENCE OF HUGH LEERSNYDER ON BEHALF OF THE NZ TRANSPORT AGENCY

INTRODUCTION

- 1 My full name is Hugh Leersnyder.
- 2 I am a senior environmental scientist at Beca Carter Hollings & Ferner (*Beca*). I have a Masters Degree (First Class Honours) in geography/ environmental science from the University of Auckland, a Bachelor of Agricultural Science in engineering and natural resource economics and a Bachelor of Science degree in zoology, both from Massey University. I am a member of the New Zealand Coastal Society and the Resource Management Law Association. I am a MfE accredited RMA Decision Maker (passed with Excellence).
- 3 I have 29 years experience in applied environmental management. For the past 5 years, I have been employed as a senior environmental scientist with Beca. During this time I have been involved in preparing a range of environmental management plans and assessment of environmental effects to support applications for resource consents.
- 4 Prior to joining Beca I was employed by the Auckland Regional Council (*ARC*) for a period of 17 years. I held the position of Manager, Coastal Environment for 12 years from 1993 to 2005. My responsibilities in this role included oversight of the production of the Auckland Regional Plan; Coastal, coastal consent processing, compliance monitoring and community liaison.
- 5 From 1988 to 1993 my roles with the ARC included processing and compliance monitoring of stormwater discharge consents, rural and industrial pollution abatement inspections and stormwater quality investigations. From 1981 to 1988 I worked in agricultural engineering technical advisory roles with government and private industry.
- 6 My evidence is given in support of notices of requirement and applications for resource consents lodged with the Environmental Protection Authority (*EPA*) by the NZ Transport Agency (*NZTA*) on 20 August 2010 in relation to the Waterview Connection Project (*Project*). The Project comprises works previously investigated and developed as two separate projects, being:
 - 6.1 The State Highway 16 (*SH16*) Causeway Project; and
 - 6.2 The State Highway 20 (*SH20*) Waterview Connection Project.
- 7 I am familiar with the area that the Project covers, and the State highway and roading network in the vicinity of the Project.

- 8 I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2006), and agree to comply with it. In preparing my evidence, I have not omitted to consider material facts known to me that might alter or detract from my opinions expressed.

SCOPE OF EVIDENCE

- 9 My evidence will deal with the following:
- 9.1 Executive summary;
 - 9.2 Background and role;
 - 9.3 Purpose and role of the Construction Environmental Management Plan (*CEMP*);
 - 9.4 Comments on submissions; and
 - 9.5 Proposed CEMP conditions.

EXECUTIVE SUMMARY

- 10 The CEMP specifies the structure and systems for environmental management and monitoring to be implemented during the Project's construction phase. Implementation of the CEMP will ensure that commitments given in obtaining approvals for the Project are carried out and that appropriate environmental management practices are followed.
- 11 The CEMP covers all anticipated construction elements and presents a framework of principles, environmental policy, objectives and performance standards. It establishes the relationship with the related environmental sub-management plans, (for example construction noise, traffic, and air quality), which are included as appendices to the CEMP.
- 12 A number of submitters have raised issues with respect to the potential effects on the environment generated through the Project's construction phase. These issues relate to potential effects on both people and communities and the natural and physical environment. Many submitters have also sought to be actively communicated with during the course of the construction.
- 13 Implementing the CEMP (including its sub-management plan appendices) will ensure, as far as is practicable, that any potential adverse environmental effects of the Project's construction will be appropriately avoided, remedied or mitigated. A range of proactive and reactive communication tools will be employed to ensure the community is engaged and informed. The proposed CEMP

conditions also provide flexibility to review and modify practices according to changing circumstances.

BACKGROUND AND ROLE

- 14 The NZTA retained Beca as part of a consortia team to assist with the investigation, engineering and planning of the Project and to prepare the Construction Environmental Management Plan (*CEMP*) for the Project. The *CEMP* details the methods and tools to be implemented by the construction contractors to manage, remedy and mitigate potential adverse environmental effects of the Project so as to comply with resource consent and designation conditions, relevant legislation and the NZTA's environmental objectives.
- 15 Sarah Johnstone, an Environmental Scientist at Beca prepared the *CEMP* which I reviewed. Juliet Woodward, a Senior Environmental Engineer at SKM, peer reviewed the *CEMP*.
- 16 The *CEMP* was lodged with the EPA on 20 August 2010 as part of the Project's overall Assessment of Environmental Effects (*AEE*) (specifically, Part G, Technical Report No. G.21).
- 17 In this evidence I will describe the purpose of the *CEMP* and its structure and role in respect of the Project.

PURPOSE OF THE CEMP

- 18 The purpose of the *CEMP* is to specify the structure and systems for environmental management and monitoring to be implemented during the Project's construction phase. The *CEMP* is fundamental to the assessment of environmental effects process and will ensure that commitments given in obtaining approvals for the Project are carried out at the construction stage. The *CEMP* will ensure that appropriate environmental management practices are followed during the Project's construction phase.
- 19 The *CEMP* will enable the NZTA and its contractors to construct the Project with the least adverse environmental effect. Overall, implementation of the *CEMP* will ensure:
 - 19.1 Compliance with the conditions of resource consents and designations;
 - 19.2 Compliance with environmental legislation;
 - 19.3 Adherence to the NZTA's environmental objectives; and
 - 19.4 That environmental risks associated with the Project are properly managed.

- 20 The CEMP defines details of who, what, where and when environmental management and mitigation measures are to be implemented. The CEMP covers all anticipated construction elements and presents a framework of principles, environmental policy, objectives and performance standards as well as processes for implementing good environmental management. The CEMP establishes the relationship with the related environmental sub-management plans (sub-plans) which are included as appendices to the CEMP.

Structure of the CEMP

- 21 Section 1 of the CEMP details the Project background, provides a description of the Project, outlines the scope of the CEMP and the relevant NZTA environmental policy, and environmental objectives.
- 22 Section 2 presents the social and environmental management context of the Project. The section describes, at a high level, the main construction activities of the Project, identifying the principal receiving environment and sensitive receptors within each sector. The construction activities, sequencing and timing are covered in more detail in the evidence of Mr Andre Walter.
- 23 This section also describes the process to develop an Environmental Risk Register to be populated and maintained by the contractor. An example and template are provided in Appendix A of the CEMP. The process follows a standard NZTA analysis which assesses the perceived likelihood and consequence of an environmental effect. This in turn is used to identify significant environmental aspects and risks associated with these activities. Minimum environmental management standards and specifications for managing the significant environmental aspects of the construction phase are discussed. The section also identifies the key legislative requirements applicable to the environmental aspects of the Project.
- 24 Section 3 outlines the implementation and operation of the CEMP. It details the anticipated environmental management roles and responsibilities of the NZTA, its contractors and the consent authority. The roles and responsibilities are detailed for individual positions within these organisations to ensure there is a clear line of accountability for environmental management. Related training requirements for the construction phase of the Project are also detailed for all project staff.
- 25 This section also references a series of GIS maps that have been developed to show locations of the project boundaries, construction activities, sensitive receptors, controls and mitigation measures. The maps will be updated and refined further by the contractor to reflect changes to construction activities, mitigation measures and results of monitoring. An example of one of these maps is attached to this statement of evidence as **Annexure A**.

- 26 This section also includes a description of the environmental aspects of the Project along with the operational controls. Where possible, the operational controls are related to the NZTA's Environmental Plan's objectives.¹ Further descriptions of the related sub-plans and the operating procedures (including measures to mitigate the potential adverse environmental effects, which will tie in with the conditions of consent and designations) are provided.
- 27 Finally, this section details the management of emergencies and incidents, complaints and the guidelines for internal and external communications and interface.
- 28 Ensuring that the CEMP is current and relevant is fundamental to its successful implementation. Section 4 details the tools for the implementation of good environmental management including monitoring and review requirements of the CEMP, auditing procedures, corrective actions and management reviews of the CEMP.
- Role of the CEMP in respect of the Project**
- 29 The CEMP is an overarching document which supports the NZTA's applications for resource consents and designations and, ultimately, it provides a blueprint to be used by the construction contractors to manage the environmental effects of the Project. The principles and general approach to managing the environmental effects are set out in the main body of the document.
- 30 The management of specific effects (e.g. construction air quality, noise, vibration etc.) are detailed more particularly within a suite of environmental management plans (sub-plans) that are included as appendices to the CEMP. These sub-plans have been prepared by the relevant technical experts and are attached to their associated Technical Reports.²

¹ The NZTA's Environmental Plan (dated June 2008) can be found on <http://www.nzta.govt.nz/resources/environmental-policy/docs/environmental-plan.pdf>.

² See AEE, Part G.

- 31 **Table 1** identifies the suite of management plans attached to the CEMP which have been proposed for the Project:

Sub-Plan	Appendix to CEMP
Construction Noise and Vibration Management Plan (CNVMP);	Appendix D
Construction Air Quality Management Plan (CAQMP)	Appendix E
Erosion and Sediment Control Plan (ESCP)	Appendix F
Temporary Stormwater Management Plan (TSMP)	Appendix G
Ecological Management Plan (ECOMP)	Appendix H
Groundwater Management Plan (GWMP)	Appendix I
Settlement Effects Management Plan (SEMP)	Appendix J
Contaminated Soils Management Plan (CSMP)	Appendix K
Hazardous Substances Management Plan (HSMP)	Appendix L
Archaeological Site Management Plan (ASMP)	Appendix M
Construction Traffic Management Plan (CTMP)	Appendix N
Concrete Batching and Crushing Plant Management Plan (CBCPMP)	Appendix O

- 32 The relationship between the designation and resource consent conditions, the AEE, the CEMP and the sub-plans is shown in the Construction Environmental Management Framework, Figure 1-3 of the CEMP. This is included in my evidence below for ease of reference.

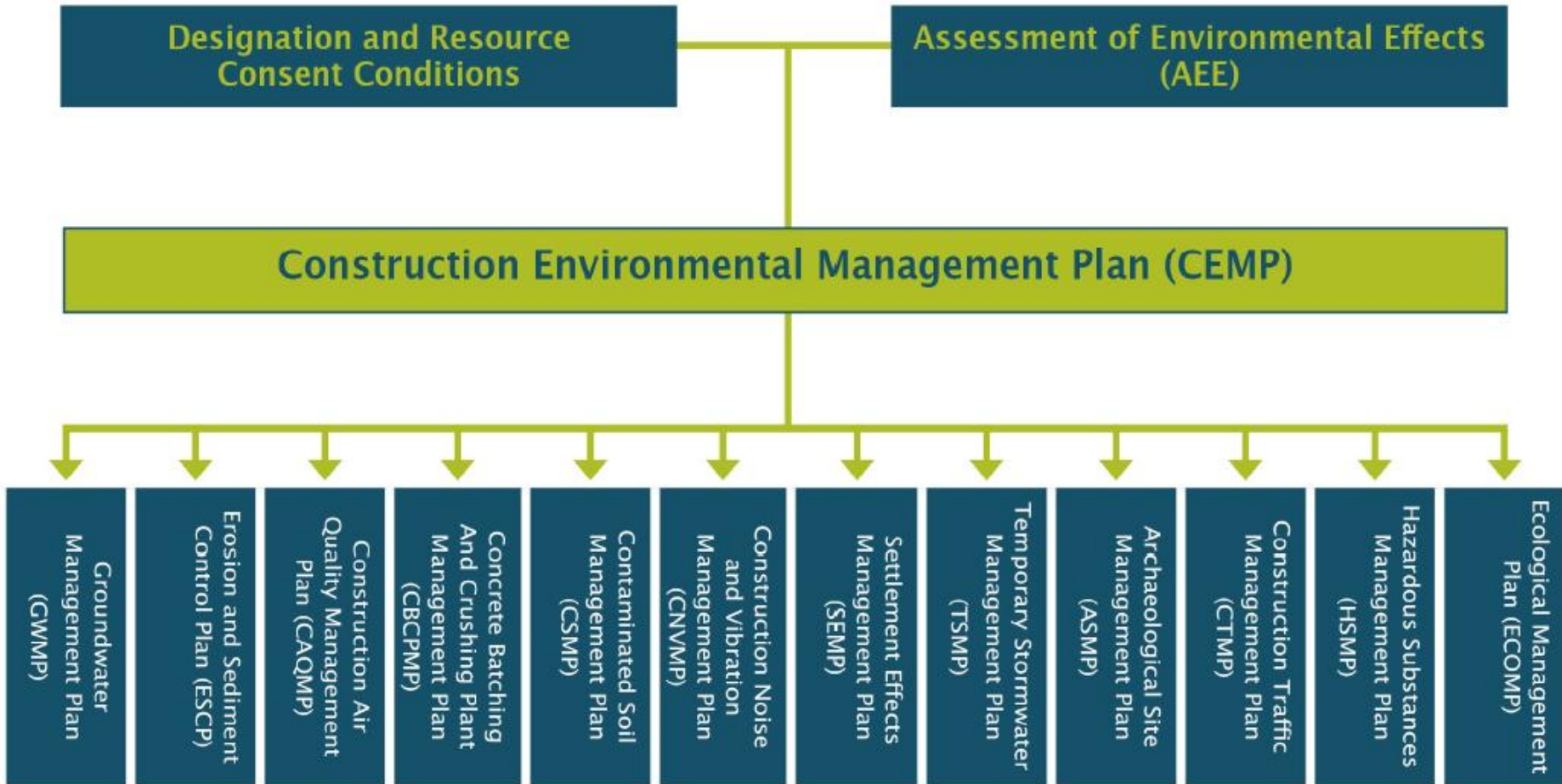


Figure 1-3: Construction Environmental Management Framework

- 33 The contractor(s) will be required to undertake all construction activities on site in accordance with the provisions of the relevant management plans as part of their contractual arrangements.
- 34 The CEMP and the various environmental sub-plans may require review and amendment during the life of the Project to reflect changes to activities, risks, mitigation measures, responsibilities and management processes. The ability to make changes to the CEMP is an important aspect of continually improving the effectiveness of the CEMP. Modification may be required once the consents and designations are obtained, contractors selected and detailed design and construction methods finalised.

Relationship with the AEE

- 35 This CEMP and its sub-plans are consistent with and complement the Project's AEE. The many technical assessment reports contained in the AEE inform the specific environmental management, monitoring and mitigation measures described within the sub-plans for the contractor to implement to manage actual and potential environmental effects during construction.
- 36 **Table 2** below identifies the technical assessment reports that relate to each sub-plan appended to the CEMP.

Table 2: AEE technical assessment reports that inform each sub-plan

Sub-Plan	Technical Assessment Report
Construction Noise and Vibration Management Plan	G.5: Assessment of Construction Noise Effects
	G.19: Assessment of Vibration Effects
Construction Air Quality Management Plan	G.1: Assessment of Air Quality Effects
Erosion and Sediment Control Plan	G.22: Erosion and Sediment Control Plan (duplicated)
Temporary Stormwater Management Plan	G.15: Assessment of Stormwater and Streamworks Effects
Ecological Management Plan	G.8: Assessment of Herpetofauna Ecological Effects
	G.3: Assessment of Avian Ecological Effects
	G.17: Assessment of Terrestrial Vegetation Effects
	G.11: Assessment of Marine Ecological Effects
	G.6: Assessment of Freshwater Ecological Effects
Groundwater Management Plan	G.7: Assessment of Groundwater Effects
Settlement Effects Management Plan	G.13: Assessment of Ground Settlement Effects
Contaminated Soils Management Plan	G.9: Assessment of Land and Groundwater Contamination
Archaeological Site Management Plan	G.2: Assessment of Archaeological Effects
Construction Traffic Management Plan	G.16: Assessment of Temporary Traffic Effects
Concrete Batching and Crushing Plant Management Plan	G.1: Assessment of Air Quality Effects
	G.15: Assessment of Stormwater and Streamworks Effects
	G.5: Assessment of Construction Noise Effects

Project phases

37 The Project will involve three main phases:

37.1 Construction: The construction phase of the Project is anticipated to take between 5 and 7 years and progress across a number of fronts to enable separate elements to be undertaken concurrently. There will be approximately six construction orientated work packages. Any consents, designations and subsequent conditions granted which are relevant only during the construction phase will not be carried through to the operational phase. This CEMP has been prepared for the construction phase.

37.2 Transition: The transition phase is the crossover period between the construction and operational phases of the Project, whereby the responsibility for the management of the environment is transferred from the construction contractor to the network operator. During this phase the construction contractor(s) will be required to work with the NZTA in finalising the construction and meet any post-construction

resource consent and designation conditions before the Project is passed to the Operations and Maintenance Contractor (OMC). The transition phase also provides for the transfer of information on conditions which remain operative (such as long term environmental monitoring).

- 37.3 Operation: Once completed, the ongoing responsibility for the operations and maintenance of the infrastructure associated with the Project will be transferred to the OMC. The NZTA will utilise an Operational Environmental Management Plan to manage environmental aspects of the operation and maintenance of the asset. The current OMC for the Auckland motorway within the Project area is the Auckland Motorway Alliance (AMA).

Management of sensitive receptors and receiving environments during construction

- 38 During the construction phase, construction activities have the potential to affect sensitive receptors (such as education and health facilities) and receiving environments (i.e. freshwater and marine aquatic and terrestrial environments). Mitigating the risk of potential adverse effects on these receptors and environments will be implemented through the CEMP. Figures 2-2, 2-3 and 2-4 of the CEMP show which of the relevant sub-plans will provide mitigation in those areas. (These Figures are attached to my evidence, as **Annexure B** for ease of reference).

Conclusions

- 39 The CEMP establishes the structure and systems to manage the potential adverse environmental effects that may arise from the Project. Careful consideration has been given to the potential effects of the construction activities relative to the values and sensitivities of the receiving environment. In conjunction with the AEE and the proposed conditions of the resource consents and designation, the CEMP (including its sub-management plan appendices) will ensure, as far as is practicable, that any potential adverse environmental effects of the Project will be appropriately avoided, remedied or mitigated. The proposed CEMP conditions also provide flexibility to review and modify practices according to changing circumstances, such that there is no greater potential adverse effect on the environment.

COMMENTS ON SUBMISSIONS

- 40 I have read submissions lodged on the Project that are relevant to the CEMP or related issues relevant to my area of expertise. In this section of my evidence, I will address issues raised in submissions to the extent not already covered in the technical reports or the preceding evidence.

Impact on Residents and Input from Community

- 41 A number of submitters have queried what is proposed for residents should they be adversely affected, and sought that specific management plans be developed to manage environmental impacts. The Auckland City Council³ supports the preparation of a CAQMP in particular and seeks that this plan be submitted to the Auckland Council for approval. Submitters have also requested ongoing committee meetings be held to review, monitor and resolve issues raised during the construction process.⁴
- 42 In response, I reiterate the purpose of the CEMP described earlier in my evidence.⁵ Implementation of the CEMP, along with the suite of complementary Management Plans will ensure, as far as is practicable, that any potential adverse environmental effects of the Project on residents will be appropriately avoided, remedied or mitigated. Any material revisions of the sub-management plans which arise from the review process will be submitted to the Auckland Council for approval.⁶
- 43 Furthermore, both proactive and reactive communication mechanisms will be in place during the construction phase. The CEMP outlines processes of public engagement and advertisement of forthcoming works, so the public will be informed of particular construction activities.⁷ This will be further developed with the preparation of a Communications Plan that sets out procedures regarding how the public will be communicated with through the construction period.
- 44 A Construction Liaison Person (*CLP*) will be appointed to interface and liaise with the public.⁸ Specifically, this person will be responsible for ensuring that residents are advised of proposed works in particular areas and will act as a conduit for disseminating information and receiving complaints and enquiries on the Project. Contact details for the CLP will be included in the finalised CEMP and will be displayed on large notice boards erected in prominent positions within the Project area.
- 45 Prior to commencement of construction, a 24 hour toll free telephone number and email address for complaints will be implemented and published.⁹ The CEMP details the process for

³ Submitter No. 111, point 241.

⁴ Including Submitter Nos. 16, 38, 46, 88, 91, 96, 124, 179, 185, 186, 191, 197, 203, 209, 213, 217, 225 and 230.

⁵ The purpose and application of the CEMP are also detailed in Section 1.2 of G.21 Construction Environmental Management Plan.

⁶ Proposed condition CEMP.13.

⁷ See section 3.6.2, page 60 of the CEMP.

⁸ See proposed public information condition PI.1.

⁹ See proposed public information condition PI.4.

managing complaints, including mediation procedures, in the event that a complaint cannot be satisfactorily resolved.¹⁰

- 46 In addition to the role of the CLP, a Community Liaison Group (*CLG*) will be established at least two months prior to construction commencing and will hold regular meetings throughout the construction period.¹¹ More detail on the make up and function of the CLG is discussed in the evidence of Ms Amelia Linzey.
- 47 The CLG shall be open to all interested parties within the Project area. Its purpose will be to provide a regular forum through which information about the Project can be disseminated and an opportunity for concerns or issues to be raised by affected parties.
- 48 An important element of the CEMP is the need and process for its review in light of improvements in best practice, the results of changes in monitoring and /or complaints. This feedback provides a process of continuous improvement.

Auckland Regional Public Health Service

- 49 The Auckland Regional Public Health Service (*ARPHS*)¹² raises concerns with respect to the public health effects of noise, vibration, potential discharges to water and emissions. ARPHS' expectation is that conditions will be implemented to ensure these effects are controlled.
- 50 Conditions are proposed that set criteria for the management of the construction effects of noise, vibration, discharges to water and emissions to air. The detail of how these effects will be managed is specified in the CEMP and its sub-plans. In particular, the Construction Noise and Vibration Management Plan (*CNVMP*), Construction Air Quality Management Plan (*CAQMP*), Erosion and Sediment Control Plan (*ESCP*), Temporary Stormwater Management Plan (*TSMP*), Contaminated Soils Management Plan (*CSMP*), and Hazardous Substances Management Plan (*HSMP*). I consider that the conditions and these plans will adequately address ARPHS' concerns.

Construction Yard 1 and Effects on Te Atatu Pony Club

- 51 A number of submitters seek commitments from the NZTA to assist the Te Atatu Pony Club in the management of Construction Yard 1, to ensure that the welfare of the horses, ponies and members is

¹⁰ See section 3.6.3, page 62 of the CEMP. These mechanisms also address the Auckland Regional Public Health Service's (Submitter No. 91) suggestion for a "hotline" mechanism.

¹¹ Proposed public information condition PI.5.

¹² Submitter No. 91.

respected.¹³ The submitters particularly note the effects of noise, dust, and night light.

- 52 Implementation of the CEMP and its sub-plans will be crucial to the management of the effects of Construction Yard 1. Of particular importance will be the Construction Noise and Vibration Management Plan and the Construction Air Quality Management Plan. (These management plans will be explained in the evidence of Ms Siiri Wilkening and Mr Gavin Fisher).
- 53 All Construction Yards will be fenced for health and safety, and security reasons. Construction Yard 1 will generally operate during the daytime from 6am to 7pm (Monday to Saturday) and 8am to 3pm on Sunday, to allow the receipt of materials and plant for the upcoming week, and to undertake maintenance work on equipment. There will, however be a need to access the site for some night time construction work in and around the Te Atatu Interchange area, in order to minimise disruption on motorway traffic. As such, perimeter lighting will be required around the Construction Yard. This will be designed to comply with relevant council bylaws and standards, as confirmed in the evidence of Mr Geoff Waller.
- 54 A range of on-site techniques will be employed to minimise dust generation. Hard surfaced areas of the construction yard areas will be vacuum swept or scraped down at least twice each week and more frequently if required. All unsealed areas of construction yards used for vehicle movement will be kept damp with water spray or water cart in dry weather conditions. Wheel wash systems will be installed to all truck exits from unpaved areas, stock piles will be located to minimise the potential for dust generation and belt conveyors for moving dry material will be fitted with water spray or be enclosed.
- 55 In my opinion, implementation of the measures proposed in the CEMP will be sufficient to manage the effects of construction activities raised by these submitters.

Effects of Construction Activities on the Waterview Community

- 56 A number of submitters are concerned with the nature and duration of the construction activities and Construction Yards and their potential effects on the local Waterview community, in particular, tertiary student accommodation.¹⁴

¹³ Including Submitter Nos. 64, 105, 145, 150, 155 and 174.

¹⁴ Including Submitter Nos. 85, 98, 101, 117, 136, 166, 175 192, 133, 132, 160, 228, 231, 232 and 240.

57 As I have explained, the construction works will be subject to the CEMP,¹⁵ its attached sub-management plans and the resource consent conditions.¹⁶ These measures will minimise the effects of the activities on the community and provide a range of prior notice and feedback mechanisms. In some circumstances it is envisaged that affected residents may need to be relocated to avoid the construction effects, in particular noise effects. This is discussed in more detail in the evidence of Ms Siiri Wilkening.

58 While the tunnel construction will progress 24 hours a day and 7 days a week, the night time work in the Construction Yards will be limited, as the majority of the work will be underground.¹⁷

Transpower NZ Ltd

59 Transpower NZ Ltd (*Transpower*)¹⁸ is concerned that the Project's construction activities could potentially affect high voltage transmission lines and associated support structures. It suggests a suite of conditions and advice notes to address its concerns.

60 The construction works will be subject to the CEMP, its attached sub-management plans and the resource consent conditions. The conditions proposed by Transpower are generally consistent with the intent of the CEMP and its conditions.¹⁹ I recommend that the CEMP be revised prior to construction to ensure that the issues raised in Transpower's submission will be appropriately addressed, by including a specific "Electrical Infrastructure Site Development and Construction Management Plan" (*EISDCMP*).

61 As a result, a new condition specific to high voltage electrical infrastructure is now proposed to be added to the CEMP conditions. This is attached as **Annexure D**.

Effects on School/Childcare Facilities

62 Submitters have raised concerns about the impacts of the construction phase on the learning and development of young children in nearby Waterview and St Francis schools and Waterview Kindergarten. Of major concern, is the potential for noise and air quality impacts during construction and children's safety around construction areas.²⁰

¹⁵ Section 1.2, G.21 Construction Environmental Management Plan describes the CEMP's purpose and application.

¹⁶ Proposed conditions CEMP.1, CEMP.2 and CEMP.7.

¹⁷ Section 2.1.3, G.21 Construction Environmental Management Plan.

¹⁸ Submitter No. 52.

¹⁹ G.21 Construction Environmental Management Plan and proposed CEMP conditions 1, 2, 4, 7, 12 and 13.

²⁰ Submitter Nos. 104 and 150.

- 63 The management of construction effects is covered in the CEMP and its sub-plans shown in Figure 1-3: Construction Environmental Management Framework.
- 64 In addition to these measures, particular attention is given to the location of schools and childcare facilities as sensitive receptors. A specific Consultation and Communications Plan is to be developed for communication with Waterview Primary School and Kindergarten²¹ and an Educational Liaison Group (*ELG*) will be established as a condition of consent²² to, amongst other things, provide a forum through which:
- 64.1 Relevant monitoring data can be provided (e.g. air quality monitoring);
 - 64.2 Advance notice can be provided to schools and childcare facilities advising when particularly noisy activities will occur in close proximity; and
 - 64.3 Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed.
- 65 The ELG will be established at least two months prior to construction commencing and will meet regularly throughout the construction period and at least 12 months following completion so that monitoring data can continue to be disseminated. More specific detail on the role of the ELG is discussed in the evidence of Ms Amelia Linzey.
- 66 Where noisy construction activities (those exceeding the noise criteria in the CNVMP) are to be undertaken in close proximity or adjacent to schools and / or childcare facilities, specific noise control measures are proposed. The detail of these is presented in the evidence of Ms Siiri Wilkening.
- Friends of Oakley Creek – Te Auaunga**²³
- 67 This submitter raises a number of issues relevant to the CEMP. In addition to matters already covered in my evidence, the submitter seeks that:
- 67.1 Existing native plantings in reserves should be protected during construction;
 - 67.2 A litter trap should be installed in Oakley Creek, in the lower Alan Wood Reserve, to collect litter as close to the source as possible; and

²¹ As proposed in Section 3.6.2.1 of the CEMP.

²² Proposed social condition SO.5.

²³ Submitter No. 179.

- 67.3 The Friends of Oakley Creek should be notified directly, a minimum of 20 days in advance, of any construction activity taking place that will limit access to Oakley Creek.
- 68 The CEMP and consent conditions²⁴ require that the removal of existing vegetation from the Project be kept to a minimum. An Auckland Council approved Project Arborist will meet the contractor on site prior to site works commencing to confirm the trees to be removed. All Amenity Trees currently identified by the Project Arborist as being "at risk" from the construction works will be appropriately protected, including the use of temporary fencing. The Project Arborist will monitor the identified trees to assess any construction impacts on the trees and advise on any remedial measures to be implemented.
- 69 The CEMP²⁵ identifies a suite of measures to avoid or minimise the impacts of waste generation, handling and disposal. These include education of contractors to be tidy and to reduce, recycle and dispose of waste responsibly; to store any materials appropriately; to locate waste disposal sites away from sensitive receiving environments; to ensure waste bins have lids and are emptied regularly. Employing these measures will ensure litter is not discharged to Oakley Creek and therefore, a litter trap within the Creek will not be required to manage the litter effects from the Project.
- 70 The Community Liaison Person, Community Liaison Group and Communications Plan all have roles to inform the community of forthcoming activities and provide mechanisms on the construction management process to be communicated. This could include the opportunity, where it is practicable and reasonable, for the Friends of Oakley Creek and the Auckland Tree Council to be advised in advance of any activity taking place that will limit access to the Creek. For example, where access is to be disrupted for more than 3 days, or over a weekend, or there is no provision for a walkway detour, then at least 20 days prior notification seems reasonable. However, if the disruption is of shorter duration, or an emergency situation, then such notice would not be practicable nor reasonable. This request for advance notice has been given effect to with the addition of proposed public information condition PI.7 which is attached to Ms Amelia Linzey's evidence.
- 71 Post construction, the NZTA will contract the operational maintenance of the Project to ensure that it fulfils its ongoing maintenance obligations, as part of the motorway network. This will

²⁴ See Section 3.4.10.1 G.21 Construction Environmental Management Plan and proposed vegetation conditions V.4, 5, 6 and 7.

²⁵ Waste Management, Section 3.4.11.1 of the CEMP.

include maintenance of planting and pest management within areas of its jurisdiction.

PROPOSED CEMP CONDITIONS

- 72 In the documentation lodged with the AEE, the NZTA included a set of Proposed Consent Conditions (see Part E, Appendix E.1). This included proposed CEMP conditions which I recommended would be appropriate to attach as conditions to the designations sought. A copy of the proposed conditions is contained in **Annexure C** to my evidence.
- 73 Following review of relevant submissions on the Project, I consider that those conditions remain appropriate, subject to two amendments:
- 73.1 The inclusion of an additional CEMP condition (and related references) which respond to the Transpower submission. This is shown as proposed condition CEMP.14 in **Annexure E (Amended proposed CEMP conditions)**; and
- 73.2 Clarification of the wording in proposed condition CEMP.1 to require the updated CEMP (once finalised) to be provided to the Manager, Major Consents (Auckland Council) for review at least 20 working days prior to the commencement of works to ensure compliance with the conditions approved by the Board of Inquiry.²⁶



Hugh Leersnyder
November 2010

²⁶ The extent of the approval shall be to confirm compliance with the Board of Inquiry's conditions. This process and the consequential change to proposed condition CEMP.1 are discussed in more detail in Ms Amelia Linzey's evidence.

Annexures:

A – Example of GIS map (taken from Appendix C to CEMP)

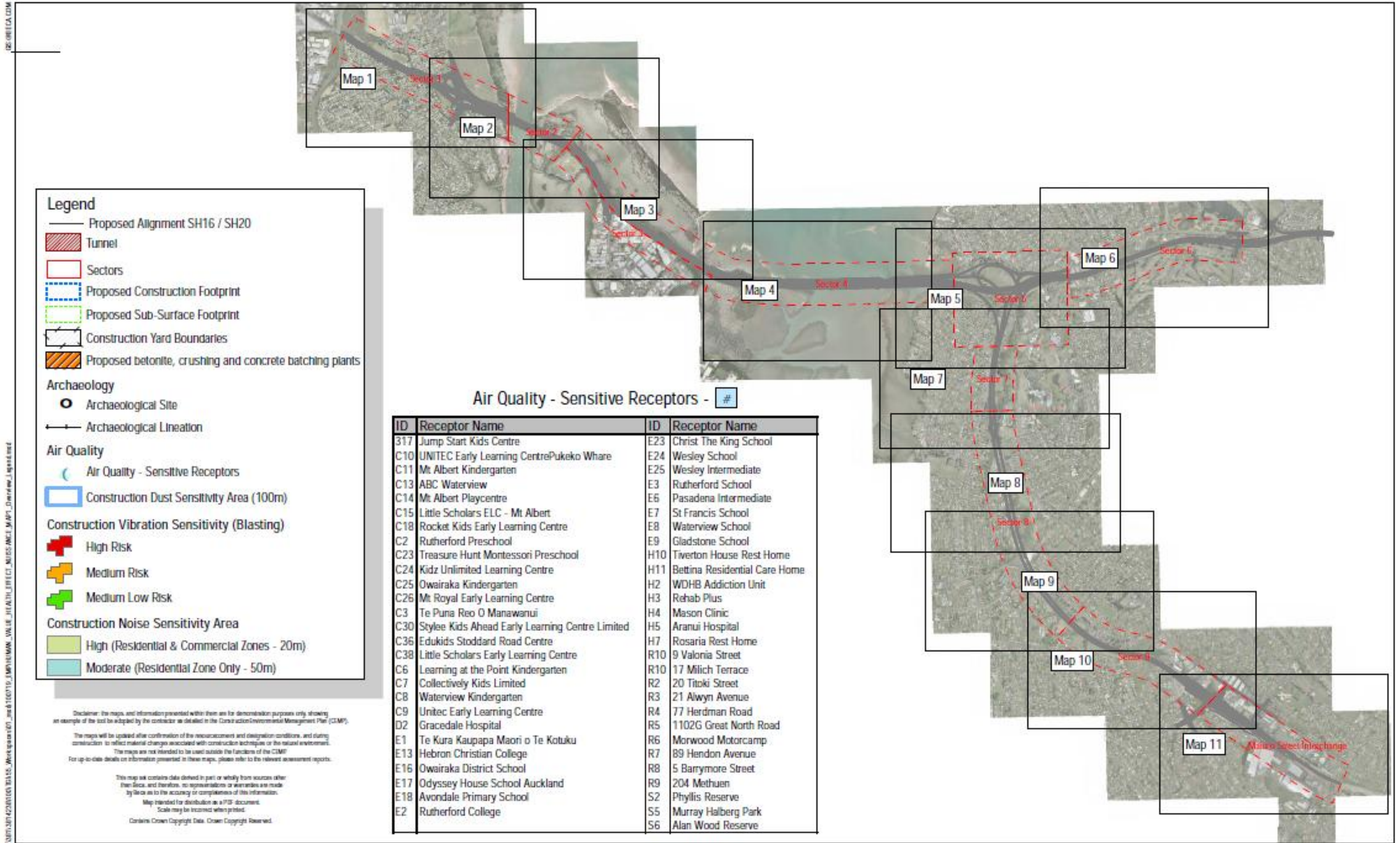
B – Figures 2-2, 2-3 and 2-4 from the CEMP

C - Proposed CEMP Conditions (as lodged)

D - New condition regarding high voltage electrical infrastructure

E – Amended proposed CEMP conditions

ANNEXURE A: EXAMPLE OF GIS MAP



Legend

- Proposed Alignment SH16 / SH20
- Tunnel
- Sectors
- Proposed Construction Footprint
- Proposed Sub-Surface Footprint
- Construction Yard Boundaries
- Proposed betonite, crushing and concrete batching plants

Archaeology

- Archaeological Site
- Archaeological Lineation

Air Quality

- Air Quality - Sensitive Receptors
- Construction Dust Sensitivity Area (100m)

Construction Vibration Sensitivity (Blasting)

- High Risk
- Medium Risk
- Medium Low Risk

Construction Noise Sensitivity Area

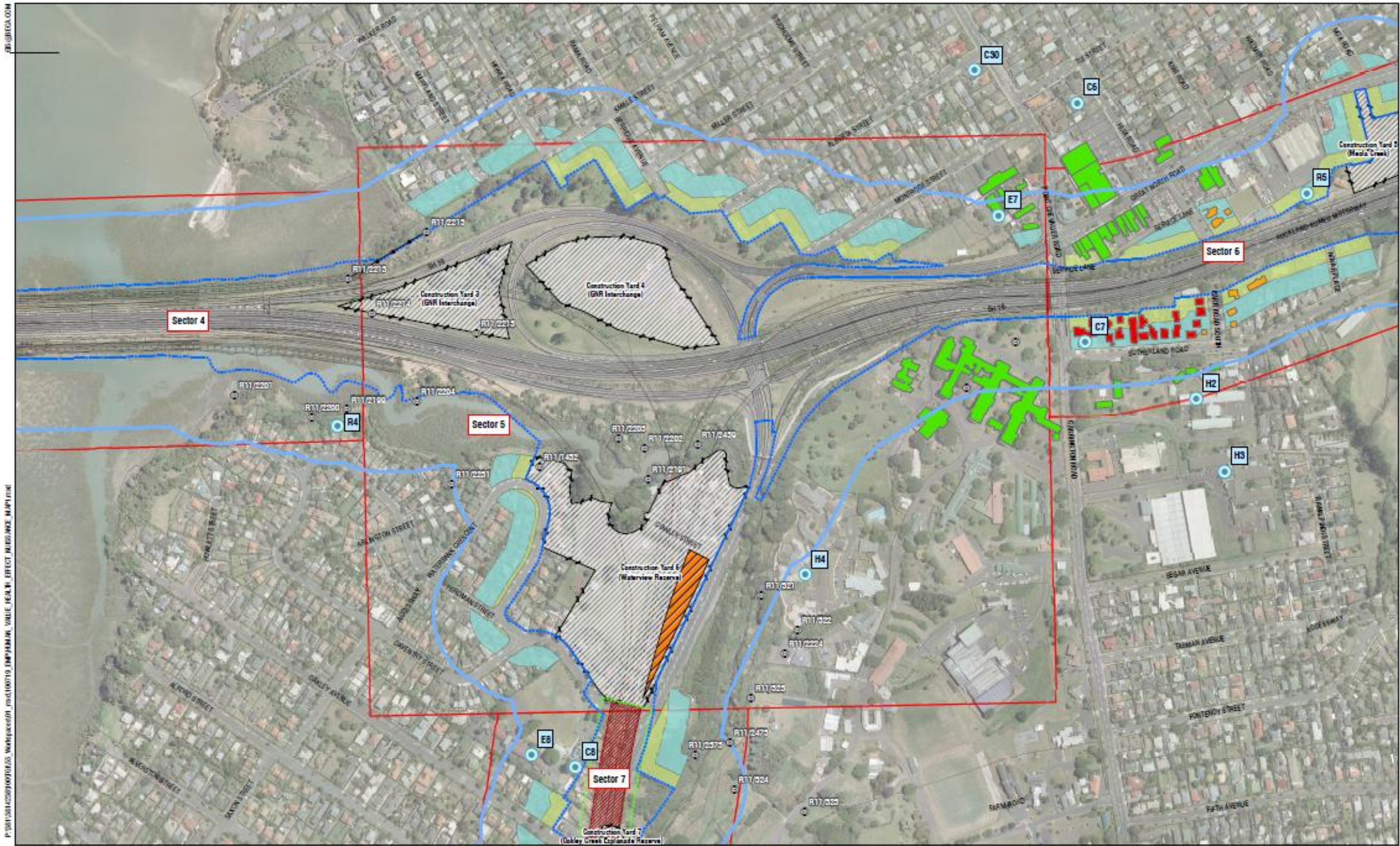
- High (Residential & Commercial Zones - 20m)
- Moderate (Residential Zone Only - 50m)

Air Quality - Sensitive Receptors - #

ID	Receptor Name	ID	Receptor Name
317	Jump Start Kids Centre	E23	Christ The King School
C10	UNITEC Early Learning CentrePukeko Whare	E24	Wesley School
C11	Mt Albert Kindergarten	E25	Wesley Intermediate
C13	ABC Waterview	E3	Rutherford School
C14	Mt Albert Playcentre	E6	Pasadena Intermediate
C15	Little Scholars ELC - Mt Albert	E7	St Francis School
C18	Rocket Kids Early Learning Centre	E8	Waterview School
C2	Rutherford Preschool	E9	Gladstone School
C23	Treasure Hunt Montessori Preschool	H10	Tiverton House Rest Home
C24	Kidz Unlimited Learning Centre	H11	Bettina Residential Care Home
C25	Owairaka Kindergarten	H2	WDHB Addiction Unit
C26	Mt Royal Early Learning Centre	H3	Rehab Plus
C3	Te Puna Reo O Manawanui	H4	Mason Clinic
C30	Stylee Kids Ahead Early Learning Centre Limited	H5	Aranui Hospital
C36	Edukids Stoddard Road Centre	H7	Rosaria Rest Home
C38	Little Scholars Early Learning Centre	R10	9 Valoria Street
C6	Learning at the Point Kindergarten	R10	17 Milich Terrace
C7	Collectively Kids Limited	R2	20 Titoki Street
C8	Waterview Kindergarten	R3	21 Alwyn Avenue
C9	Unitec Early Learning Centre	R4	77 Herdman Road
D2	Gracedale Hospital	R5	1102G Great North Road
E1	Te Kura Kaupapa Maori o Te Kotuku	R6	Morwood Motorcamp
E13	Hebron Christian College	R7	89 Hendon Avenue
E16	Owairaka District School	R8	5 Barrymore Street
E17	Odyssey House School Auckland	R9	204 Methuen
E18	Avondale Primary School	S2	Phyllis Reserve
E2	Rutherford College	S5	Murray Halberg Park
		S6	Alan Wood Reserve

Disclaimer: the maps and information presented within them are for demonstration purposes only, showing an example of the tool to be adopted by the contractor as detailed in the Construction Environmental Management Plan (CEMP).
 The maps will be updated after confirmation of the re-assignment and designation conditions, and during construction to reflect material changes associated with construction techniques or the natural environment.
 The maps are not intended to be used outside the functions of the CEMP.
 For up-to-date details on information presented in these maps, please refer to the relevant assessment reports.
 This map will contain data derived in part or wholly from sources other than Beca, and therefore, no representations or warranties are made by Beca as to the accuracy or completeness of this information.
 Map intended for distribution as a PDF document.
 Scale may be incorrect when printed.
 Contains Crown Copyright Data. Crown Copyright Reserved.

<p>Scale 1:30,000 at A3</p>		<table border="1"> <tr> <th>Revision</th> <th>By</th> <th>Initial</th> <th>Appd</th> <th>Date</th> <th>Title</th> </tr> <tr> <td>1</td> <td>SD</td> <td>KP</td> <td>AW</td> <td>28/01/20</td> <td></td> </tr> </table>	Revision	By	Initial	Appd	Date	Title	1	SD	KP	AW	28/01/20		<p>Waterview Connection Location of Construction Activities relative to Human Health and Nuisances Values</p>	<p>Client: NZTA</p>		<p>Discipline: GIS</p>
		Revision	By	Initial	Appd	Date	Title											
1	SD	KP	AW	28/01/20														
<p>Overview</p>	<p>Project: SH16 / SH20 Waterview Connection Combined Surface Tunnel</p>	<p>Drawing No: GIS-3814238-26</p>																



P:\3814238\GIS\Map\Map_05_100710_EMP\Map_05_100710_EMP_Human_Health_Effect_Maps\Map_05_100710

<p>Scale 1:5,000 at A3</p> <p>Meters</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Revision</th> <th>By</th> <th>Verified</th> <th>Appd</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SD</td> <td>JP</td> <td>JH</td> <td>26/07/10</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Revision	By	Verified	Appd	Date	1	SD	JP	JH	26/07/10											<p>Waterview Connection Location of Construction Activities relative to Human Health and Nuisances Values</p> <p>Map No: 5 of 11</p>	<p>Client: NZTA</p> <p>Project: SH16 / SH20 Waterview Connection Combined Surface Tunnel</p>		<p>Discipline: GIS</p> <p>Drawing No: GIS-3814238-26</p>
Revision	By	Verified	Appd	Date																						
1	SD	JP	JH	26/07/10																						

ANNEXURE B: FIGURES 2-2, 2-3 AND 2-4 FROM THE CEMP

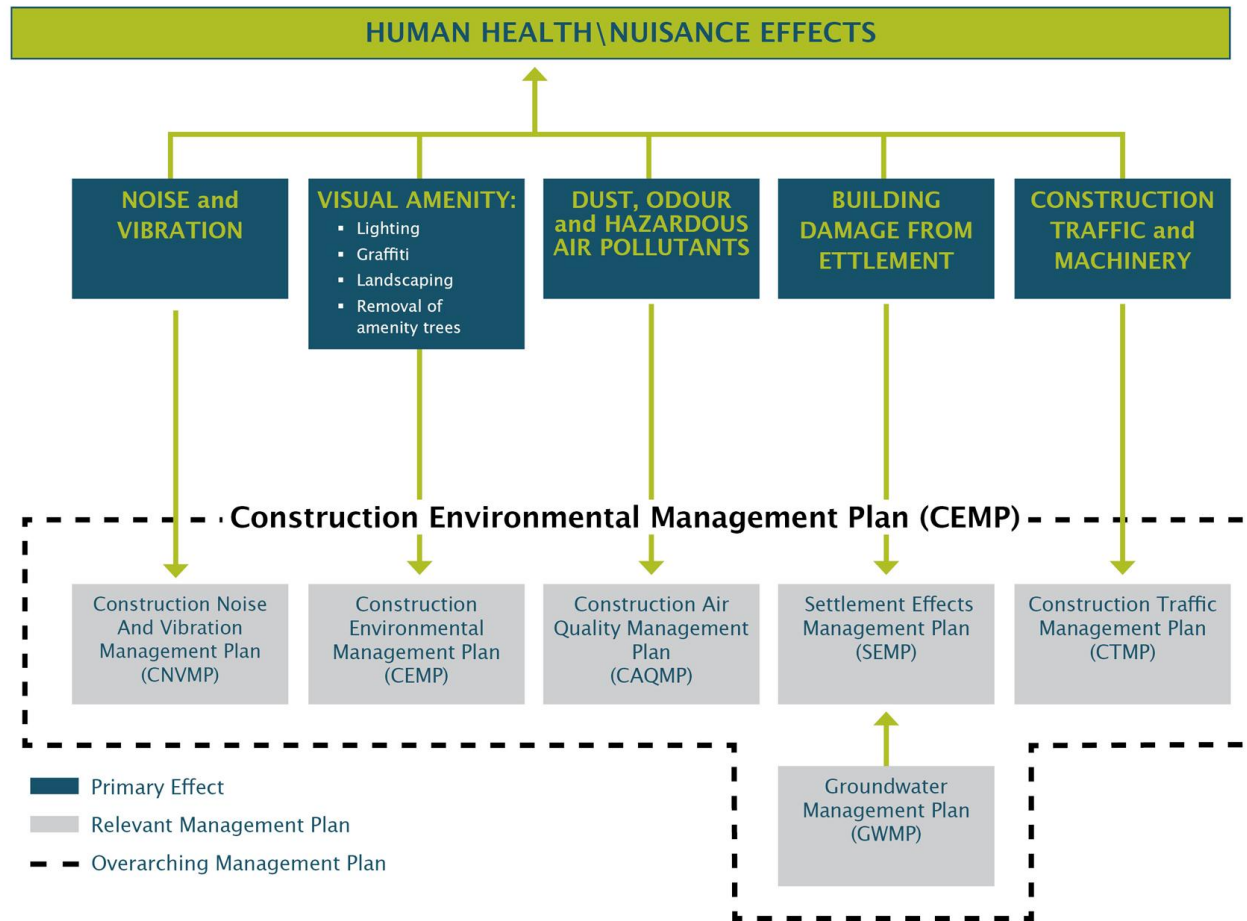


Figure 2-2 Relevant sub-plans which detail mitigation of potential impacts from construction activities on sensitive receptors

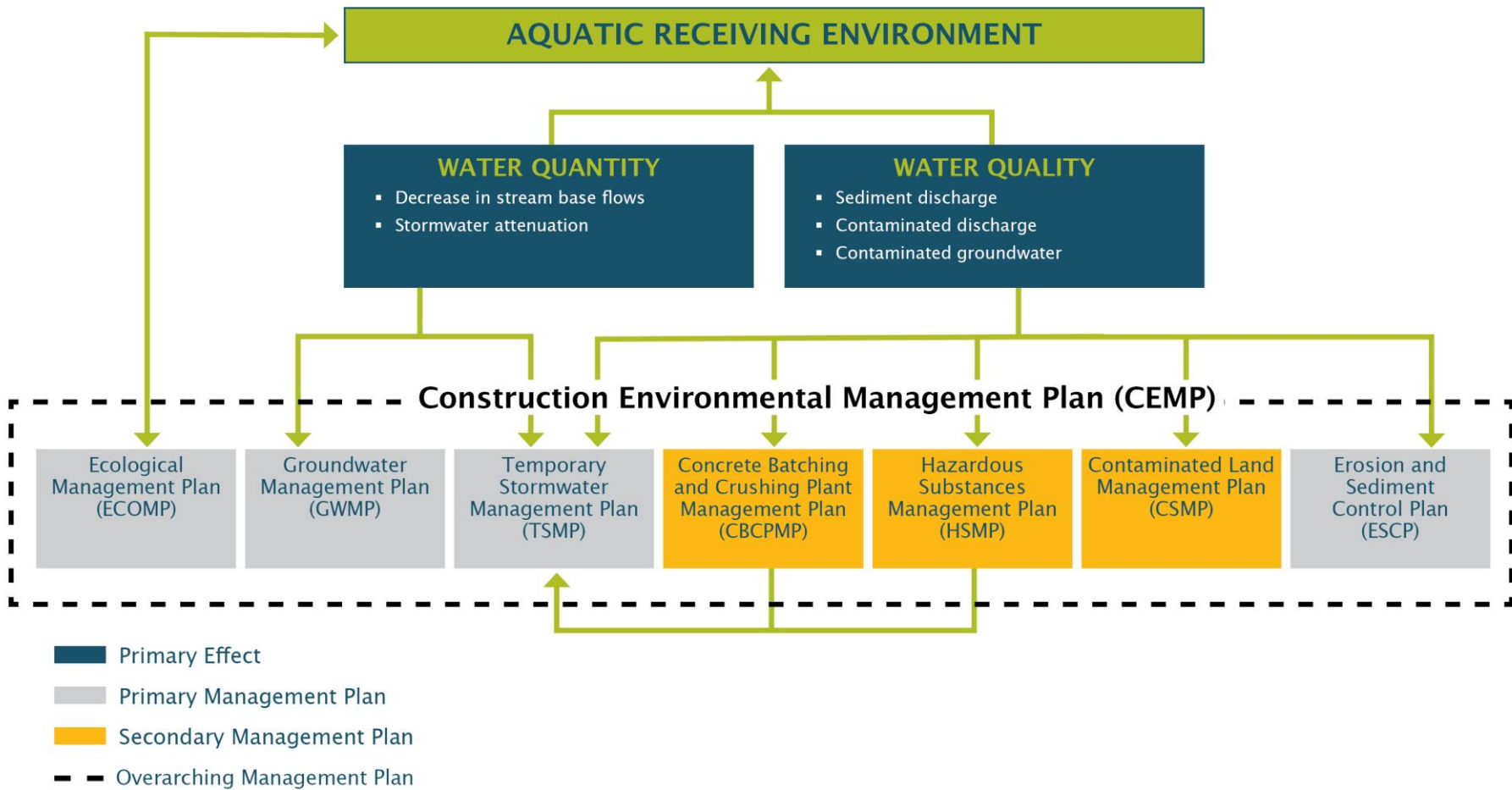


Figure 2-3 Relevant sub-plans which detail mitigation of potential impacts from construction activities on the aquatic receiving environment

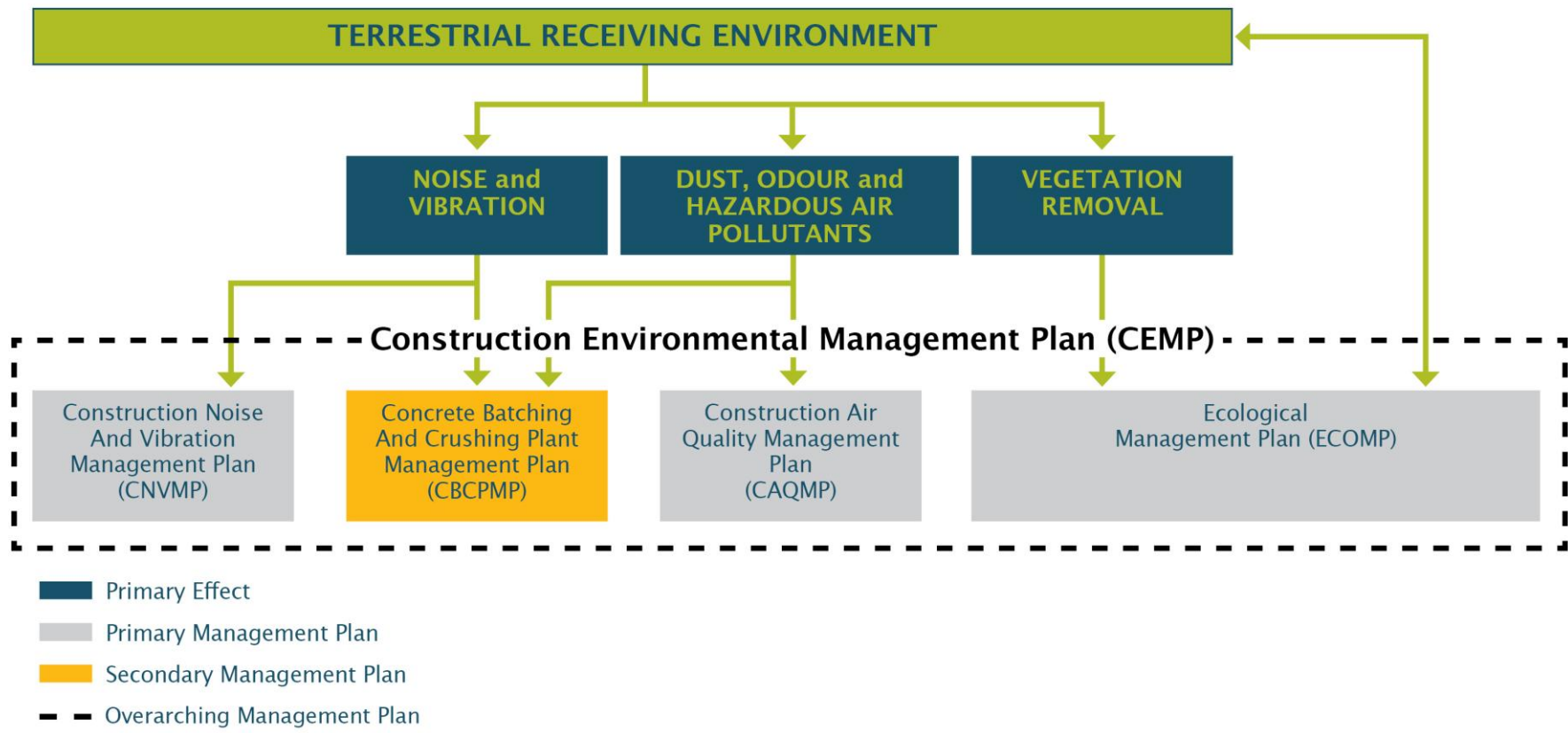


Figure 2-4 Relevant sub-plans which detail mitigation of potential impacts from construction activities on the terrestrial receiving environment

ANNEXURE C: PROPOSED CEMP CONDITIONS (AS LODGED)²⁷

CEMP.1	The NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) submitted with this application to ensure compliance with the [consent and designation] conditions imposed by the Board of Inquiry. The CEMP shall be provided to the [Auckland Council] at least 20 working days before construction commences.
CEMP.2	The CEMP shall include, but not be limited to, details of: <ul style="list-style-type: none"> (a) Staff and contractors' responsibilities; (b) Training requirements for employees, sub-contractors and visitors; (c) Environmental incident and emergency management; (d) Communication and interface procedures; (e) Environmental complaints management; (f) Compliance monitoring; (g) Reporting; (h) Environmental auditing; (i) Corrective Action.
CEMP.3	Complaints shall be managed in accordance with the environmental complaints section detailed in the CEMP. A record of any complaints received in relation to the construction activities and the responses made shall be provided on a three monthly basis to the [Auckland Council].
CEMP.4	The management of key environmental effects associated with the construction phase of the Project shall be detailed within environmental management plans that are included in the appendices to the CEMP. This suite of management plans shall be: <ul style="list-style-type: none"> (a) Construction Noise and Vibration Management Plan (CNVMP); (b) Construction Air Quality Management Plan (CAQMP); (c) Erosion and Sediment Control Plan (ESCP); (d) Temporary Stormwater Management Plan (TSMP); (e) Ecological Management Plan (ECOMP); (f) Groundwater Management Plan (GWMP); (g) Settlement Effects Management Plan (SEMP); (h) Contaminated Soils Management Plan (CSMP); (i) Hazardous Substances Management Plan (HSMP); (j) Archaeological Site Management Plan (ASMP); (k) Construction Traffic Management Plan (CTMP); (l) Concrete Batching and Crushing Plant Management Plan (CBCPMP).
CEMP.5	The CEMP shall be implemented and maintained throughout the entire construction period.
CEMP.6	A copy of the CEMP shall be held on the construction site at all times and be available for inspection on request by the [Auckland Council].
CEMP.7	The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project, including: <ul style="list-style-type: none"> (a) Details of the site or project manager and the construction liaison person, including their contact details (phone, facsimile, postal address, email address); (b) The location of large notice boards that clearly identify NZTA and the Project name, together with the name, telephone, email address and address for service of the site or project manager and the construction liaison person;

²⁷ Contained in AEE, Appendix E.1, pages 3 to 6.

	<ul style="list-style-type: none"> (c) An outline construction programme of the work indicating in particular likely time periods for road closures and anticipated traffic diversion effects; (d) The hours of work, which should reflect the need to ensure that residents enjoy reasonable freedom from noisy or intrusive construction activity in their neighbourhood at nights, on Sunday and during public holidays; (e) Measures to be adopted to maintain the land affected by the works in a tidy condition in terms of disposal/ storage of rubbish, storage and unloading of building materials and similar construction activities; (f) Location of workers offices and conveniences (e.g. porta-loos); (g) Procedures of controlling sediment run-off, dust and the removal of soil, debris and demolition and construction materials from public roads or places. Dust mitigation measures should include use of water sprays to control dust nuisance on dry or windy days; (h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007); (i) Procedures for ensuring that residents in the immediate vicinity of construction areas are given notice of the commencement of construction activities and are informed about the expected duration of the works, potentially through the construction liaison person; (j) Procedures to be followed to ensure that those working in the vicinity of identified heritage and ecological features are aware of the heritage or ecological values of these features and the steps which need to be taken to meet the conditions applying to work on the site; (k) Means of ensuring the safety of the general public; (l) Procedures for the construction liaison person to receive and respond to complaints about construction activities, including dust and odour from the works; (m) Methods of mitigating the local and network wide effects of construction of individual elements of the Project, including measures to ensure that parking of staff vehicles on surrounding streets is restricted; (n) The layout of the 12 Construction Yards, including associated buildings, fencing and site access, in accordance with Waterview Connection Project Construction Yards Drawing Nos. 20.1.11-3-D-C-913-101 to 112. The layout drawings shall, as far as practicable, incorporate the following: <ul style="list-style-type: none"> i) The main access to the construction yards to be located as far as practicable from residential dwellings, in the locations shown on Waterview Connection Project Construction Yards Drawing No.s 20.1.11-3-D-C-913-101 to 112; ii) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; iii) Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees; iv) Temporary acoustic fences and visual barriers; v) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings. (o) All temporary boundary/ security fences shall be maintained in good order, with any graffiti removed as soon as possible; (p) Methods to minimise and protect trees identified in Schedule E.7 of the Waterview Connection Assessment of Environmental Effects.
CEMP.8	All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
CEMP.9	Temporary protection shall be installed to prevent vehicles damaging drains, footpaths, berms, kerbs, vehicle crossings and the roads during the site preparation and construction phase of the Project. Any damage to the drains, footpaths, berms, kerbs, vehicle crossings and the road attributable to any vehicle associated with construction activities shall be repaired to the same or similar standards as existed prior to such damage at no cost to the [Auckland Council]

CEMP.10	The NZTA shall finalise and implement a Hazardous Substances Management Plan (HSMP) (through the CEMP) submitted with this application, prior to works commencing on site. The HSMP shall clearly identify the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project.
CEMP.11	The NZTA shall develop and implement a Waste Management Plan in general accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the [Auckland Council] and be implemented throughout the entire construction period.
CEMP.12	<p>The CEMP shall be reviewed by the NZTA at least annually or as a result of a material change to the Project. The review shall take into consideration:</p> <ul style="list-style-type: none"> (a) Compliance with designation and consent conditions; (b) Any changes to construction methods; (c) Key changes to roles and responsibilities within the project; (d) Changes in industry best practice standards; (e) Changes in legal or other requirements; (f) Results of inspections, monitoring, incidents, corrective actions, internal or external assessments; and (g) Public complaints. <p>A summary of the review process undertaken shall be kept by the NZTA and made available to the [Auckland Council] upon request.</p>
CEMP.13	Following the review process, the CEMP may require updating. Any material changes proposed to the CEMP (such as changes to the complaints procedure or changes to the construction methodology) shall be submitted for the approval of the [Auckland Council] at least 10 working days prior to the proposed changes taking effect. (Note: For clarity, changes to personnel and contact schedules do not constitute a material change).

ANNEXURE D: NEW CONDITION REGARDING HIGH VOLTAGE ELECTRICAL INFRASTRUCTURE

- 1 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). That Plan is to include:
 - 1.1 Methods and measures:
 - (a) To ensure that the existing high voltage infrastructure can be accessed for maintenance at all reasonable times, or emergency works at all times, during and after construction activities.
 - (b) To appropriately manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear, to the overhead transmission lines
 - (c) To ensure that no activity is undertaken during construction that would result in ground vibrations and/or ground instability likely to cause material damage to the transmission lines, including support structures.
 - (d) To ensure that changes to the drainage patterns and runoff characteristics do not result in adverse effects from stormwater on the foundations for any high voltage transmission line support structure.
 - 1.2 Sufficient detail to confirm that new planting and maintenance of vegetation will comply with the New Zealand Electricity (Hazard from Trees) Regulations 2003, including, but not limited to, the provisions of Schedule (Growth Limit Zones) to those Regulations.
 - 1.3 Sufficient detail to confirm that the works will comply with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001), including, but not limited to, the provisions of:
 - (a) Clause 2.2 with respect to excavations near overhead support structures;
 - (b) Clause 2.4 with respect to buildings near overhead support structures;
 - (c) Section 3 with respect to minimum separation between buildings and conductors;

- (d) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
- (e) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.

Note: With respect to clause (c), specific consideration must be given to the height and location of temporary structures (such as project offices and other construction site facilities) and permanent structures (such as lighting poles, signage, gantries and acoustic barriers).

ANNEXURE E: AMENDED PROPOSED CEMP CONDITIONS

CEMP.1	The NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) submitted with this application to ensure compliance with the [consent and designation] conditions imposed by the Board of Inquiry. The CEMP shall be provided to the <u>Manager, Major Consents</u> , [Auckland Council] <u>for review</u> at least 20 working days <u>prior to the commencement of works to ensure compliance and consistency with the conditions before construction commences</u> .
CEMP.2	The CEMP shall include, but not be limited to, details of: (a) Staff and contractors' responsibilities; (b) Training requirements for employees, sub-contractors and visitors; (c) Environmental incident and emergency management; (d) Communication and interface procedures; (e) Environmental complaints management; (f) Compliance monitoring; (g) Reporting; (h) Environmental auditing; (i) Corrective Action.
CEMP.3	Complaints shall be managed in accordance with the environmental complaints section detailed in the CEMP. A record of any complaints received in relation to the construction activities and the responses made shall be provided on a three monthly basis to the [Auckland Council].
CEMP.4	The management of key environmental effects associated with the construction phase of the Project shall be detailed within environmental management plans that are included in the appendices to the CEMP. This suite of management plans shall be: (a) Construction Noise and Vibration Management Plan (CNVMP); (b) Construction Air Quality Management Plan (CAQMP); (c) Erosion and Sediment Control Plan (ESCP); (d) Temporary Stormwater Management Plan (TSMP); (e) Ecological Management Plan (ECOMP); (f) Groundwater Management Plan (GWMP); (g) Settlement Effects Management Plan (SEMP); (h) Contaminated Soils Management Plan (CSMP); (i) Hazardous Substances Management Plan (HSMP); (j) Archaeological Site Management Plan (ASMP); (k) Construction Traffic Management Plan (CTMP); (l) Concrete Batching and Crushing Plant Management Plan (CBCPMP); (m) <u>Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP)</u> .
CEMP.5	The CEMP shall be implemented and maintained throughout the entire construction period.
CEMP.6	A copy of the CEMP shall be held on the construction site at all times and be available for inspection on request by the [Auckland Council].
CEMP.7	The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project, including: (a) Details of the site or project manager and the construction liaison person, including their contact details (phone, facsimile, postal address, email address); (b) The location of large notice boards that clearly identify NZTA and the Project name, together with the name, telephone, email address and address for service

	of the site or project manager and the construction liaison person;
	<p>(c) An outline construction programme of the work indicating in particular likely time periods for road closures and anticipated traffic diversion effects;</p> <p>(d) The hours of work, which should reflect the need to ensure that residents enjoy reasonable freedom from noisy or intrusive construction activity in their neighbourhood at nights, on Sunday and during public holidays;</p> <p>(e) Measures to be adopted to maintain the land affected by the works in a tidy condition in terms of disposal/ storage of rubbish, storage and unloading of building materials and similar construction activities;</p> <p>(f) Location of workers offices and conveniences (e.g. portaloos);</p> <p>(g) Procedures of controlling sediment run-off, dust and the removal of soil, debris and demolition and construction materials from public roads or places. Dust mitigation measures should include use of water sprays to control dust nuisance on dry or windy days;</p> <p>(h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007);</p> <p>(i) Procedures for ensuring that residents in the immediate vicinity of construction areas are given notice of the commencement of construction activities and are informed about the expected duration of the works, potentially through the construction liaison person;</p> <p>(j) Procedures to be followed to ensure that those working in the vicinity of identified heritage and ecological features are aware of the heritage or ecological values of these features and the steps which need to be taken to meet the conditions applying to work on the site;</p> <p>(k) Means of ensuring the safety of the general public;</p> <p>(l) Procedures for the construction liaison person to receive and respond to complaints about construction activities, including dust and odour from the works;</p> <p>(m) Methods of mitigating the local and network wide effects of construction of individual elements of the Project, including measures to ensure that parking of staff vehicles on surrounding streets is restricted;</p> <p>(n) The layout of the 12 Construction Yards, including associated buildings, fencing and site access, in accordance with Waterview Connection Project Construction Yards Drawing No.s 20.1.11-3-D-C-913-101 to 112. The layout drawings shall, as far as practicable, incorporate the following:</p> <ul style="list-style-type: none"> i) The main access to the construction yards to be located as far as practicable from residential dwellings, in the locations shown on Waterview Connection Project Construction Yards Drawing No.s 20.1.11-3-D-C-913-101 to 112; ii) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; iii) Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees; iv) Temporary acoustic fences and visual barriers; v) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings. <p>(o) All temporary boundary/ security fences shall be maintained in good order, with any graffiti removed as soon as possible;</p> <p>(p) Methods to minimise and protect trees identified in Schedule E.7 of the Waterview Connection Assessment of Environmental Effects.</p>
CEMP.8	All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
CEMP.9	Temporary protection shall be installed to prevent vehicles damaging drains, footpaths, berms, kerbs, vehicle crossings and the roads during the site preparation and construction phase of the Project. Any damage to the drains, footpaths, berms, kerbs, vehicle crossings and the road attributable to any vehicle associated with construction activities shall be repaired to the same or similar standards as existed prior to such damage at no cost to the [Auckland Council]

CEMP.10	The NZTA shall finalise and implement a Hazardous Substances Management Plan (HSMP) (through the CEMP) submitted with this application, prior to works commencing on site. The HSMP shall clearly identify the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project.
CEMP.11	The NZTA shall develop and implement a Waste Management Plan in general accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the [Auckland Council] and be implemented throughout the entire construction period.
CEMP.12	<p>The CEMP shall be reviewed by the NZTA at least annually or as a result of a material change to the Project. The review shall take into consideration:</p> <ul style="list-style-type: none"> (a) Compliance with designation and consent conditions; (b) Any changes to construction methods; (c) Key changes to roles and responsibilities within the project; (d) Changes in industry best practice standards; (e) Changes in legal or other requirements; (f) Results of inspections, monitoring, incidents, corrective actions, internal or external assessments; and (g) Public complaints. <p>A summary of the review process undertaken shall be kept by the NZTA and made available to the [Auckland Council] upon request.</p>
CEMP.13	Following the review process, the CEMP may require updating. Any material changes proposed to the CEMP (such as changes to the complaints procedure or changes to the construction methodology) shall be submitted for the approval of the [Auckland Council] at least 10 working days prior to the proposed changes taking effect. (Note: For clarity, changes to personnel and contact schedules do not constitute a material change).
CEMP.14	<p><u>The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). That Plan is to include:</u></p> <ul style="list-style-type: none"> i. <u>Methods and measures:</u> <ul style="list-style-type: none"> (a) <u>To ensure that the existing high voltage infrastructure can be accessed for maintenance at all reasonable times, or emergency works at all times, during and after construction activities.</u> (b) <u>To appropriately manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear, to the overhead transmission lines</u> (c) <u>To ensure that no activity is undertaken during construction that would result in ground vibrations and/or ground instability likely to cause material damage to the transmission lines, including support structures.</u> (d) <u>To ensure that changes to the drainage patterns and runoff characteristics do not result in adverse effects from stormwater on the foundations for any high voltage transmission line support structure.</u> ii. <u>Sufficient detail to confirm that new planting and maintenance of vegetation will comply with the New Zealand Electricity (Hazard from Trees) Regulations 2003, including, but not limited to, the provisions of the Schedule (Growth Limit Zones) to those Regulations.</u> iii. <u>Sufficient detail to confirm that the works will comply with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001), including, but not limited to, the provisions of:</u> <ul style="list-style-type: none"> (a) <u>Clause 2.2 with respect to excavations near overhead support structures;</u> (b) <u>Clause 2.4 with respect to buildings near overhead support structures;</u> (c) <u>Section 3 with respect to minimum separation between buildings and conductors;</u> (d) <u>Section 5 with respect to minimum safe distances for the operation of mobile plant; and,</u> (e) <u>Table 4 with respect to minimum safe separation distances between the</u>

	<p><u>ground and the overhead conductors.</u></p> <p><u>Note: With respect to clause (c), specific consideration must be given to the height and location of temporary structures (such as project offices and other construction site facilities) and permanent structures (such as lighting poles, signage, gantries and acoustic barriers).</u></p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------