

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

Memorandum of Counsel on behalf of the **NZ Transport Agency** in response to Minute from the Board concerning important matters that NZTA should respond to

Dated: 6 February 2011

Hearing start date: 7 February 2011

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



MEMORANDUM OF COUNSEL ON BEHALF OF THE NZ TRANSPORT AGENCY IN RESPONSE TO MINUTE FROM THE BOARD CONCERNING IMPORTANT MATTERS THAT NZTA SHOULD RESPOND TO

INTRODUCTION

- 1 This Memorandum is provided in response to the Board's Minute dated 28 January 2011 concerning important matters that the NZTA should respond to. The Board requested a "*concise response by way of a single document lodged at the time the case opens, with an indication of where more detailed responses may be found*" (para 2).
- 2 The issues noted by the Board are addressed in the order raised.

ISSUES

- A. **What is the state of the play concerning approvals being available under S 177 RMA from existing holders of designations? (see for instance Para 6.2.5 of EMS Report 7 December).**
- 3 The necessary approvals under s177 RMA are expected to be obtained from those parties who hold pre-existing designations. Those parties, and an update, are:
 - 3.1 *KiwiRail*. Approval in principle has been provided (as confirmed in the evidence of Mr Neil Buchanan, paragraph 3.10(c));
 - 3.2 *Vector*. Discussions between the NZTA and Vector are ongoing. During the most recent meetings in December 2010, nothing was identified that indicated a reason for such approval to be withheld;
 - 3.3 *Watercare Services*. Approval has been provided and is attached to this Memorandum (**Annexure A**);
 - 3.4 *Auckland Council*. Approval in principle has been provided, subject to Road Opening Notices;¹
 - 3.5 *Ministry of Education*. Approval in principle has been verbally provided (4 February 2011). The Ministry of Education proposes to uplift this designation at the same time as varying its designation to provide for the NZTA mitigation package proposed for the Waterview Primary School.

¹ This is Council's standard procedure for providing its approvals for works on their transport designations.

- 4 More detailed response:
- 4.1 Amelia Linzey EIC (Planning) (paras 13, 45-47 and Annexure D); and
- 4.2 Opening legal submissions.
- B. (Probably attended to pursuant to earlier requisition from the Board). Need for drawings and descriptions of existing and proposed pedestrian and cycleways; bus lanes, and priority measures for the whole project in an holistic form. See for instance EMS Report 7 December, para 7.2.23 and EMS Report 20 December, para 3.6.3.**
- 5 A set of drawings headed "PT & Active Mode Transport Routes Existing and Proposed" (Key Plan and Sheets 1-19) was provided to the EPA for the Board on 28 January 2011².
- 6 The set of drawings was made available via the NZTA website for the Project on 31 January 2011, and was mailed out to parties requiring hard copies with the NZTA's rebuttal evidence on 4 February 2011.
- 7 More detailed response:
- 7.1 Expert Caucusing Joint Report to the Board of Inquiry – Topic Open Space, paras 29 and 30.
- C. A response on the issue of analysis of alternatives raised in EMS Report 7 December, para 8.8.**
- 8 The EMS Report stated (at paras 8.7-8.8) the following:
- 8.7 Mindful of recent caselaw on this matter we note that the assessment has been comprehensive crossing several territorial boundaries and presents evidence that the Project is appropriate while it is not necessary to show that it is the "best". We do note however that there is no specific Options Report that records or references supporting assessments or presents a single evaluation framework for the options assessments. Notwithstanding this, in our opinion the assessments that are summarised demonstrate that adequate consideration has been given to alternative sites and routes.
- 8.8 However, we suggest the Applicant provide further fuller documentation to the Board to confirm the adequacy of

² Draft sets had been made available and used during the non-expert open space and social impact caucusing sessions and revised subsequently for the final set.

the multi-disciplinary options analysis of alternatives carried out.

- 9 The NZTA does not consider it necessary to provide "*further fuller documentation*" as EMS suggests, nor would it be possible (or necessary) to produce one "*specific Options Report*" that presents a single evaluation framework for the options assessments.
- 10 As described in the Application and NZTA evidence, the Project initially commenced as two separate projects (both large in themselves) which were then combined into the Waterview Project.
- 11 As noted in Section 9 of the AEE (Overview), considerable evaluation of options was undertaken spanning four phases of investigation over a ten year period. This has been comprehensive and compliant with s171(1)(b) of the RMA. Section 11.3 of the AEE further details this evaluation process, providing a summary of the large volume of assessment undertaken over this extensive time period.
- 12 It is noted that evidence of the multi-disciplinary options analysis for design options is provided in the lodged documentation in respect of the operation noise mitigation (Technical Report G.12: Assessment of Operational Noise Effects, Appendix F).
- 13 More detailed response:
- 13.1 Michael Foster rebuttal evidence (paras 21-37);
- 13.2 Amelia Linzey rebuttal evidence (Planning) (paras 77-84, with a summary of options assessments undertaken in response to submitters' evidence provided in Annexure B);
- 13.3 Technical Report G.12: Assessment of Operational Noise Effects, Appendix F (as an example of design option evaluation matrices); and
- 13.4 Opening legal submissions.
- D. Does the applicant (and do other parties) accept that NZCPS 2010 Policy 29(3) means that on a transitional basis the Board still needs to provide a recommendation to the Minister of Conservation about reclamation aspects (see for instance EMS Report 7 December, para 9.5.2).**
- 14 The NZTA does not accept this interpretation. The Board is not required to make a recommendation to the Minister of Conservation about the reclamation aspects; it is for the Board to make that determination.
- 15 The EMS Report's reference (para 9.5.2) to making a recommendation to the Minister of Conservation for restricted

coastal activities (RCAs) appears to refer to the former procedure for RCA applications that was in place prior to 1 October 2009 (where the Minister of Conservation decided RCA applications following a recommendation from the regional council). Since 1 October 2009, RCA applications are determined by regional councils, except if the application is made to the EPA under section 145.³ The RMA no longer provides for RCA applications to be determined by the Minister of Conservation.

- 16 Policy 29 of the NZCPS provides for the removal of RCA status from regional coastal plans. Where an application for a coastal permit for an RCA is notified prior to planning documents being amended to give effect to Policy 29, that application shall continue to be treated as an RCA application under s117 of the RMA.⁴ As noted above, however, section 117 of the RMA provides that an application for an RCA must be made to the regional council for the relevant region, except if the application is made to the EPA under section 145.⁵ As the RCA applications in this case were lodged with the EPA, and publicly notified prior to the NZCPS 2010 coming into force (and therefore prior to any regional plan amendments to give effect to Policy 29), it is for the Board to continue to determine the applications as RCAs.
- 17 More detailed response:
- 17.1 Opening legal submissions.
- E. Referring to EMS Report 7 December, para 9.7.2, is it still the case that a cultural assessment is still not provided. Is this required by reference to the Regional Policy Statement?**
- 18 The EMS Report (in para 9.7.2) references the ARC's Section 149G Report commentary on the Auckland Regional Policy Statement. EMS's assessment is that the commentary points to the Project's general conformance with the regional policy framework, but goes on to state "*the absence of an updated cultural assessment is noted [by ARC] and requests the NZTA applicant to inform the Board on the current position at or prior to the hearing (page 32)*".

³ Section 117(1) of the RMA, as amended by the Resource Management (Simplifying and Streamlining) Amendment Act 2009.

⁴ Policy 29(3) of the 2010 NZCPS.

⁵ Section 117(1) of the RMA. Where a proposal of national significance relates partly to the CMA, any references within Part 6AA must be read as reference to both the Minister for the Environment and the Minister of Conservation (section 148(2) of the RMA).

19 The ARC Report had stated:

... NZTA is continuing to consult with iwi regarding the Waterview Connection project, having commissioned a cultural assessment by Te Kawerau-a-Maki Trust. A formal response was received from Ngati Whatua o Orakei and comment was made on the issues raised. As the cultural assessment has not been completed for the SH16 component and given that there will be landscaping and enhancement programmes for both the SH20 (Oakley Creek) and SH16 (CMA) parts of the Waterview Connection project which iwi may wish to be consulted on, the applicant should update the Board about the outcome of consultation with iwi.

- 20 Two cultural assessments from Ngati Whatua (dated July and December 2009) were submitted with the AEE. Further consultation occurred with Ngati Whatua, the outcome being as stated in the letter from Mr Ngarimu Blair to the EPA dated 20 December 2010 that Ngati Whatua no longer wished to be heard. Mr Blair advised that *"it is considered these opportunities for involvement in the detailed design and implementation aspects of the project sit outside the [NOR] and resource consents process and do not require further specific conditions to be imposed"*. It is considered that this process effectively responds to the outstanding issues of their earlier cultural reports.
- 21 With respect to the Te Kawerau a Maki Tribal Authority, the NZTA commissioned a cultural assessment which it initially understood was to be presented prior to lodgement and then in the submission of the Authority. Subsequently, it was agreed with the Authority that its concerns would instead be set out in the evidence of their expert (Mr Pita Turei, Submitter No. 241). Further consultation has been undertaken on the matters identified in this evidence.
- 22 Consultation with Te Kawerau a Maki (which in general supports the Project as a whole) is continuing and is focussed on the preparation of formal mechanisms for their input into the detailed design and construction phases of the Project. The scope of those mechanisms is particularly in respect of their input into archaeological, landscaping, lighting and stormwater matters. Currently, the NZTA is awaiting detail on the scope of works being sought to confirm the Authority's future involvement in the detailed design process. It is considered that this process will effectively respond to the issues raised in the submission and evidence presented on behalf of Te Kawerau a Maki.
- 23 Further, it is important to recognise that none of the relevant district or regional planning instruments requires that such a cultural assessment be undertaken. The Methods of the Auckland Regional Policy Statement (3.4.8) state that *"The ARC and TAs will, where Tangata Whenua are affected, encourage applicants to consult the*

appropriate Tangata Whenua groups prior to submitting their applications for resource consents” (Method 11).

- 24 More detailed response:
- 24.1 Appendix E.6 of the AEE (*Draft Ngāti Whātua o Ōrākei Heritage Assessment for the Widening of the Nor-Western Motorway between Waterview and Westgate*, December 2009 and the *State Highway 20 – Waterview Connection Ngāti Whātua o Orakei Cultural Heritage Report*, July 2009);
- 24.2 Owen Burn rebuttal evidence (paras 39-43);
- 24.3 Amelia Linzey rebuttal evidence (Planning) (paras 93-98); and
- 24.4 Ngarimu Blair letter to the EPA (dated 20 December 2010).⁶
- F. Advice is needed as to the timing of securing of NZHPT consents to modify archaeological sites (refer EMS Report 7 December, para 10.4.9)**
- 25 The NZTA currently proposes to lodge applications for any approvals required under the Historic Places Act once the Board has issued its decision. That will allow the opportunity for any additional matters that may emerge during the BOI hearing process to be included in the relevant HPT applications.
- 26 More detailed response:
- 26.1 Amelia Linzey EIC (planning analysis) (para 28.4);
- 26.2 Rod Clough rebuttal evidence (paras 39-40);
- 26.3 Conditions PI.5 (establishing the Community Liaison Groups), SO.6 (establishing a Working Liaison Group), OS.2 (regarding consultation on Open Space Restoration Plans), ARCH.1 (archaeological monitoring of sites), STW.20; and
- 26.4 Opening legal submissions.
- G. The Board awaits details of the foreshadowed partnership agreement with Auckland City over replacement reserves and open space restoration (refer for instance EMS Report 7 December, para 10.6.6).**
- 27 There has been ongoing consultation and discussions on this issue between Auckland Council and the NZTA. To date, there is no confirmed position on this matter.

⁶ A copy is provided in Amelia Linzey rebuttal evidence (Planning), Annexure F.

- 28 The NZTA has made an offer to Auckland Council to provide financial payment to the Council (in lieu of its currently proposed sportsfields at Waterview Reserve and temporary fields at Alan Wood Reserve). This approach would ensure that the provision of such facilities was maintained by the Project, but provide for Council's aspiration that the Phyllis Street Reserve be developed as a 'hub' for these facilities. The NZTA is currently awaiting comment from Auckland Council on this proposal, but amendment has been made to the NZTA's proposed Conditions to reflect this approach (see proposed Open Space condition OS.4).
- 29 More detailed response:
- 29.1 Tommy Parker rebuttal evidence (paras 65 and 66);
- 29.2 Amelia Linzey rebuttal evidence (para 43); and
- 29.3 Opening legal submissions.
- H. Are all necessary road stopping procedures concluded? (See for instance EMS Report 7 December, para 10.6.7). However, is there a legal issue of such land presently being road, and remaining as road, and may therefore a stopping not [be] required?**
- 30 Road stopping associated with the Project will be required at Cowley Street (which Auckland Council has indicated it expects to be stopped permanently).
- 31 Road stopping procedures are not concluded as they will not be programmed to occur until needed. This could be up to 4 years into the construction programme (when works commence at the Great North Road Interchange). Road stopping would not proceed until all properties are acquired by the NZTA (as properties would no longer require road access).
- 32 The EMS Report (at para 10.6.7) sought confirmation that the section of Valonia Street connecting to Richardson Road is not to be stopped. That is correct. While Valonia Street will be realigned, the affected area of the street is currently proposed to be used as carparking and the function of Valonia Street will remain (though this is subject to the Open Space Restoration Plan), albeit on a modified alignment.
- 33 Should the development of the Open Space Restoration Plan with Auckland Council result in a different configuration for facilities on the reserve on Valonia, this section of Valonia Street may need to be legally stopped. This could be done at the time of the reserve development (with the Open Space Restoration Plan proposed to be completed at least three months prior to practicable completion of the Project construction works, as set out in proposed Open Space conditions OS.1 and OS.2).

34 More detailed response:

34.1 Opening legal submissions.

I. Answers required on the 9 matters in the Schedule in the EMS December 20 report, para 3.2, re project definition, especially the four matters remaining blank.

35 The [12] matters contained in the EMS schedule are addressed below.

S42A Report Paragraph Reference	Topic for further consideration (Paraphrased)	Applicant's Evidence in Chief Reference (EIC): (No./paragraph)
1.7.2	Confirm the changes to the design of the Project, performance outcomes, the associated environmental effects and mitigation measures now the emergency exhaust is no longer part of the Project.	

36 The NZTA withdrew the NOR for the emergency exhaust at Cradock Street on 15 November 2010. There is no alteration to performance outcomes associated with this change, as the existing ventilation system proposed for the tunnels will be used in the event of an emergency. All performance standards for the proposed ventilation system will still be complied with.

37 More detailed response:

37.1 Andre Walter rebuttal evidence (paras 103-111).

3.2.1	Confirm all works are correctly and legally authorised.	
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38 The NZTA refers the Board to the 149G Reports from the Councils where no additional designation or resource consent requirements were identified (with the exception of the confirmation of the legal status of the consents for works on reclaimed land).

39 The initial issue raised in the 7 December EMS Report (para 3.2.1) referred to "submissions" that had sought outcomes requiring works beyond the designation footprint or beyond the NZTA's statutory powers. It also referred to "some of the relief sought in submissions, if accepted, would require additional resource consents" (para 3.2.4). With respect to the latter, the NZTA has lodged a resource consent (December 2010) in order to be able to "rotate" the Construction Yard 1 in response to the Te Atatu Pony Club submission.

40 Section 3.3.2 of the Section 42A Report also states that "*the alterations to existing designations are for a designation titled 'State Highway 16 (SH16)'. We are aware that there are a few examples of*

where works within the altered designation will not at any time have the status of being part of the 'State Highway'. ... In the event that the designation alterations are approved, then it could be argued that this work is not within the scope of the designation ...". The NZTA acknowledges that the purpose of the existing designation at SH16 is titled 'State Highway 16 (SH16)'. However, additional detail is provided in the description of works proposed by the alterations to designations, which includes "ancillary safety and operational services" and it is considered that the realignment of accessways to properties adjoining the State Highway are an example of these works.

41 More detailed response:

41.1 Amelia Linzey rebuttal evidence (Planning) (paras 70-76).

7.2.25	Provision of an economic assessment of Project's costs and benefits over time.	3/152-157; 160-162 34/40-48
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42 Project economic assessments have been undertaken which take into account traditional road user benefits, externalities, and potentially broader productivity and potentially broader economic growth associated with the Project. The most recent economic assessment commissioned by the NZTA is included in the rebuttal evidence of Mr Tommy Parker.

43 More detailed response:

43.1 Tommy Parker rebuttal evidence (paras 35-43 and 87-89 and Annexures A and D);

43.2 Michael Copeland rebuttal evidence (paras 30-32, 36-38);

43.3 Amelia Linzey EIC 37 (paras 47-48);

43.4 Amelia Linzey rebuttal evidence (Social) (paras 111-115⁷);

43.5 Andrew Murray EIC (paras 152-157); and

43.6 Andrew Murray rebuttal evidence (paras 91 – 98, para 108-109).

⁷ This is particularly in respect of wider regional economic benefits referred to in the social impact assessment.

10.1.4	The assessment of the general percentage of the various NOR sections that are already designated for these Project related works.	2/14 2/199-211
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44 The general percentage of various NOR sections that are already designated (both designations for SH16 and for existing rail designation/Special Purpose 3 (Transport Zone)) is detailed in:

44.1 Amelia Linzey rebuttal evidence (Planning) (paras 105-106).

10.2.32	Property purchase request (Submitter 12)	1/124-129
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45 The NZTA has discussed, confirmed and commenced the purchase process with this submitter.

46 More detailed response:

46.1 Amelia Linzey rebuttal evidence (Social) (para 116).

10.4.7	Confirm any feedback from Te Kawerau Iwi Tribal Authority.	
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47 This has been addressed in response to Issue E above.

48 In addition, NZTA's witnesses have responded further to various issues contained within the evidence of Pita Turei (submitter 241-1), as follows:

48.1 Geoff Waller rebuttal evidence (paras 17-22);

48.2 Rod Clough rebuttal evidence (paras 29-33); and

48.3 Relevant Conditions within Amelia Linzey rebuttal evidence (Planning) (see Annexure A, proposed Conditions SO.6, STW.20, PI.5, OS.2 and ARCH1).

10.6.7	Confirm locations where road stopping procedures under the Local Government Act will apply	
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49 This has been addressed in response to Issue H above.

10.8.9 10.8.26	Confirm where any potential return of land for residential activities in this Sector might occur.	37/53 28/200-202
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50 The NZTA estimates that approximately 7 to 12 properties in Sectors 5 and 7, and 11 to 13 properties in Sector 9 can be returned to residential use following construction.

51 The final figure will depend on the final open space mitigation which is agreed during the hearing (between the NZTA and Council) or which results from the Board's decision.

52 More detailed response:

52.1 Amelia Linzey rebuttal evidence (Social) (paras 122–126).

13.2.3 13.2.4	Confirm the approach and timing for other authorisations and approvals required, and how the Board should consider these matters.	5/13 5/48-50 6/38-40 37/82-90
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53 The NZTA currently proposes to lodge applications for any approvals required under the Historic Places Act 1993, Reserves Act 1977 and Wildlife Act 1953 once the Board has issued its decision. That will allow the opportunity for any additional matters that may emerge during the BOI hearing process to be included in the relevant applications.

54 As to the Marine Reserves Act 1971, an application under section 4(3) of that Act for a work in a marine reserve is intended to be filed within the next month. The Ministers' decisions on that application are not anticipated prior to this Board's decision.

55 Various processes under the Public Works Act 1981 have already been ongoing for some time and will continue up to and through construction, as required.

56 Additional response to that identified in the s42A Addendum Report (3rd column):

56.1 Opening legal submissions.

9.7.2	Absence of an updated Cultural Impact Assessment Report.	
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57 This has been addressed in response to Issue E above.

10.10.19 10.10.85 10.10.86	Consider the merits of adopting the permitted baseline assessment for that part of the Project route within the Special Purpose 3 Zone in this Sector if at grade, in comparison to the tunnel extension option.	
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58 The NZTA has not relied on any detailed permitted baseline argument in its application for designation as the purpose of the designation is to transcend over existing land use zoning and it is important to consider the effects of the whole Project. The NZTA has taken a conservative approach.

59 However, the NZTA agrees that it is important to acknowledge the underlying zoning and the extent to which this zoning provides some information on what may occur in the environment 'as of right' under the existing District Plan provisions. This is particularly relevant in relation to Sector 9 and the Board's consideration of effects in that Sector, where many in the community are assessing the Project against the current use of land in this area, rather than its intended long term use (reflected by zoning, designation and landownership) as a transport corridor for the Southdown Rail. A significant proportion of the works in this Sector (around 30%) fall within the Special Purpose 3 (Transport Corridor) zone.

60 More detailed response:

60.1 Mike Foster rebuttal evidence (para 75);

60.2 Amelia Linzey rebuttal evidence (Planning) (paras 100-104);

60.3 Owen Burn rebuttal evidence (35-38); and

60.4 Opening legal submissions.

11.2.5	Confirm the extent of the energy savings that might accrue to the Project and the level of reduction in carbon emissions.	6/51
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61 There are vehicle operating savings projected with the Project, which can be used to assess the reduction in carbon emission reductions. From the traffic model these are estimated to be 250,000 tonnes saved in 2016 and 1,000,000 tonnes saved in 2026 (these are annual values).⁸

62 However, the AEE also identifies that the Project (with its ongoing energy requirements for operation of the tunnel ventilation system) is not the most energy efficient option.

63 These two factors are acknowledged and inform the planning assessment of the AEE (page 23.48, in the assessment of the objectives of Part 12 of the Auckland District Plan: Isthmus Section).

64 Overall assessment of the Project against the objectives of Part 12 of the Auckland District Plan: Isthmus Section:

64.1 AEE Report, Chapter 23, page 23.48.

⁸ This calculation is based on the traffic modelling assessment of \$231 million NPV (net present value) of vehicle operating cost benefits. Those benefits include tyres, oil, brakes etc, but 50% is fuel/oil. Carbon dioxide emissions reductions are estimated as 4% of Vehicle Operating Costs (VOC), giving \$9million NPV, which is valued at approximately \$40/tonne (giving the figures above).

J. Ditto the 18 matters in the EMS 20 December report, para 3.3 on transportation improvements, especially the five blank matters.

65 The [17] matters contained in the EMS schedule are addressed below.

S42A Report Paragraph Reference	Topic for further consideration (Paraphrased)	Applicant's Evidence in Chief Reference (EIC): (No./paragraph)
7.2.14	Address the network capacity allocation and efficiency on the transport network	1/45-80 3/152-157

66 The Project provides congestion benefits to the network by providing extra capacity and by taking traffic off the local roads. The expected performance of parts of the network could reduce over time due to increases in traffic flows (compared to opening date), but when compared to a 'without project' scenario, the benefits of the Project will increase over time.

67 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

67.1 Andrew Murray EIC (paras 163-167).

7.2.19	The scope for the detailed design to provide for dedicated bus lanes as part of the Te Atatu Interchange.	2/16-22 3/119-121, 3/178-182
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68 The Project includes priority bus lane provision⁹ at the Te Atatu Interchange to allow buses to enter and exit the motorway. Although buses will experience some delay using the shoulder lanes when merging with general traffic at off ramps, the proposed extension of the shoulder bus lanes will improve the speed and reliability to buses.

69 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

69.1 Andrew Murray EIC (paras 163-167).

7.2.20	Provision of at grade cycleway connection on Sector 8.	3/112-124, 37/51-52
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70 The NZTA considers that while the provision of such a facility would be desirable as part of progressing development of the regional cycle network, it is not necessary for the NZTA to provide this either in terms of mitigation or in terms of meeting the Project objectives.

⁹ Shared bus and high occupancy vehicle priority lane.

71 The NZTA has offered to work collaboratively with Auckland Transport /Auckland Council to investigate opportunities for funding and implementing this cycleway connection.

72 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

72.1 Tommy Parker EIC (paras 156-161);

72.2 Tommy Parker rebuttal evidence (paras 44-47);

72.3 Andrew Murray rebuttal evidence (paras 30-57); and

72.4 Amelia Linzey rebuttal evidence (Planning) (paras 66-69).

7.2.21 7.2.22	Confirm the scope of approach, responsibilities and partnership arrangements associated with the Network Integration Plan to demonstrate how the Project's "wider benefits" are to be realised.	1/86-105 1/170-173, 3/68-71
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73 Proposed Operational Traffic condition OT.1 requires a Network Integration Plan (*NIP*) to be developed collaboratively with Auckland Transport. This condition clarifies the scope of approach and partnership agreement with Auckland Transport.

74 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

74.1 Tommy Parker rebuttal evidence (paras 55-56);

74.2 Andrew Murray EIC (para 231); and

74.3 Andrew Murray rebuttal evidence (para 59-60).

7.2.23	Provision of an integrated set of drawings showing pedestrian pathways, cycleways, bus lanes and bus ways for the Project and detailing for each interchange	2/16-22 3/61-64 3/163-171, 29/101-113 29/153-157
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75 This has been addressed in response to Issue B above.

7.2.24	Provision of current and possible future bus service provision on the local road network in relation to SH20 corridor	1/176-183 2/53-59
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76 Technical Report G.18 (Transport Assessment) shows up to 59 current services for the 2-hour peaks and 339 buses per weekday currently on Great North Road. While future bus services are yet to be confirmed (being part of the Quality Transit Network (*QTN*)), the aspirations for this route include 10 minute frequencies during

peaks, 20 minute frequencies interpeak and 60 minute frequencies during evenings and weekends.

77 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

77.1 Andrew Murray rebuttal evidence (Annexure H); and

77.2 Expert Caucusing Joint Report to the Board of Inquiry – Transport, pages 4 and 5.

10.2.12	Provision of safe, direct pedestrian and cycle movements through the Te Atatu Interchange.	2/25-31 3/119-121, 3/178-182
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78 The Project incorporates improvements to pedestrian and cycle access through the Te Atatu Interchange.¹⁰ The NZTA considers that these measures will provide for more direct and safer pedestrian and cycle crossing facilities through the interchange.

79 Further, the Network Integration Plan to be prepared pursuant to proposed condition OT.1, is required to consider and identify opportunities to review traffic signal timings at the Interchange with a view to minimising delays to all users, including cyclists.

80 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

80.1 Expert Caucusing Joint Report to the Board of Inquiry – Transport, pages 8 and 9; and

80.2 Proposed Operational Traffic condition OT.1(d).

10.5.7	How do site specific traffic management plans reconcile with the timetable presented in G.21 Construction Environmental Management Plan.	
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81 The nature of the construction activities will vary across the Project and change over the construction period, with different temporary traffic management requirements.

82 As a consequence, there will be many Site Specific Traffic Management Plans (SSTMPs) implemented during construction. SSTMPs will generally be no longer than six to twelve months to comply with the Project's Construction Traffic Management Plan, NZ Code of Practice for Temporary Traffic Management and best practice.

¹⁰ Including new pedestrian / cycleway bridge on the eastern side of the interchange, an improved pedestrian subway on the western side, and a series of at-grade pedestrian crossings through the interchange.

83 More detailed response:

83.1 John Gottler rebuttal evidence (paras 74-77).

<p>10.6.35 10.6.39 10.6.40</p>	<p>Feasibility of enhancing north-south pedestrian/cycleway connectivity between Waterview-Pt. Chevalier.</p>	<p>1/142-150, 1/156-161, 2/60-65 3/115-118, 37/52</p>
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84 The NZTA Project does enhance north-south pedestrian / cycleway connectivity through at-grade improvements, particularly on Great North Road between Oakley Avenue and through the Great North Interchange. A new pedestrian / cycleway is also proposed to connect Waterview to Eric Armishaw Park (within the SH16 designation). Further bridged connections are not considered to mitigate any actual loss in connectivity associated with the Project.

85 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

85.1 Andrew Murray rebuttal evidence (paras 115-127);

85.2 Lynne Hancock rebuttal evidence (paras 27-30);

85.3 David Little rebuttal evidence (paras 28-30);

85.4 Amelia Linzey EIC (Planning) (para 52);

85.5 Amelia Linzey rebuttal evidence (Planning) (paras 21 and 69);

85.6 PT & Active Mode Transport Routes Existing and Proposed (Key Plan and Sheets 1-19);

85.7 Proposed Operational Traffic condition OT.1(e) (the Network Integration Plan will consider and identify provision of cycle "aspects" (cycle signal lights) at Great North Interchange); and

85.8 Expert Caucusing Joint Report to the Board of Inquiry – Topic Open Space (paras 30 – 32).

<p>10.7.17</p>	<p>Evaluate the opportunity to improve the cycleway network by upgrading the Carrington Road / Sutherland Road crossing and improvements to the St. Lukes Road interchange to enhance the safety of the (off-road) cycleway network.</p>	<p>2/53-65</p>
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86 The Project does not have an adverse effect on the cycleway at this location. To the contrary, a benefit is expected from the significantly reduced traffic flows. Nor is an upgrade of this existing crossing reasonably necessary to achieve the objectives of the

Project. While an upgrade of the crossing at Carrington / Sutherland Roads may be desirable, it is not included as part of this Project.

87 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

87.1 Andrew Murray rebuttal evidence (paras 9-20 (in relation to St Lukes Interchange generally) and Annexure H.2 specifically discussing the crossing improvements at Carrington / Sutherland Roads).

10.8.97	Assess the merits of a northbound bus lane between Oakley Avenue and Waterview Interchange as part of the reconstruction of the road above the cut and cover tunnel.	3/168-171
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88 While the provision of a bus lane would be desirable as part of progressing development of the QTN network, the NZTA does not consider that it is necessary to provide either in terms of mitigation or meeting its Project objectives.

89 This notwithstanding, the NZTA recognises that the proposed cut and cover works on Great North Road do present opportunities to provide such facilities. The NZTA is exploring opportunities for jointly providing this facility with the Auckland Council (in accordance with proposed Operational Traffic condition OT.1(a)).

90 Additional response to that identified in the s42A Addendum Report (above):

90.1 Tommy Parker rebuttal evidence (paras 48-50); and

90.2 Andrew Murray rebuttal evidence (paras 23-29).

10.8.98	Assess the merits of a Great North Road western shared pedestrian and cycle route consistent with the standard of other project shared paths on the western side of Great North Road from Oakley Avenue to Waterview interchange.	3/61-67, 3/112-114, 5/75-77, 37/51-52 3/117-118
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91 The NZTA recognises that the proposed works north of Oakley Avenue adjoining Great North Road provide an opportunity to improve shared pedestrian and cycle facilities on the western side of Great North Road and provide an opportunity to address safety/security concerns for pedestrians on this section of the road (with the sense of reduced passive surveillance as housing has been removed). The PT & Active Mode Transport Routes Existing and Proposed (Key Plan and Sheets 1-19) indicate this route.

92 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

92.1 Lynne Hancock rebuttal evidence (para 23 and 24, and Annexure B detailing revised Urban Design and Landscape Plans);

92.2 PT & Active Mode Transport Routes Existing and Proposed (Key Plan and Sheets 1-19); and

92.3 Expert Caucusing Joint Report to the Board of Inquiry – Topic Open Space (para 30).

10.9.30 10.9.31	Determine partnership opportunities for an at grade cycle-pedestrian network in Sector 8.	
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93 This has been addressed in the responses to Issue J above.

10.9.33	Determine whether wider public transport improvements over time can be achieved in part through the Project and with support from the various transport agencies.	1/176-183 3/114 3/158-159
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94 This will be considered together with Auckland Transport, as part of the Project Network Integration Plan (*NIP*) (proposed Condition OT.1).

95 Additional response to that identified in the s42A Addendum Report (above, 3rd column):

95.1 Andrew Murray EIC (para 231).

10.10.98	Confirm KiwiRail's views regarding the use of the designated rail corridor for amenity purposes.	5/68 30/94
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96 KiwiRail has indicated that it is generally receptive to this request, subject to confirming that responsibilities for maintenance would not lie with KiwiRail (e.g. will be the responsibility of the NZTA).

97 More detailed response:

97.1 Evidence of Pamela Butler (paras 4.6-4.7); and

97.2 Expert Caucusing Joint Report to the Board of Inquiry – Topic Open Space (paras 17–21).

10.10.106	Clarify that the Project does not compromise the prospect for a rail station precinct provided at Stoddard town centre Road shops.	
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98 The Project will not preclude the development of a rail station in the vicinity of the Stoddard town centre.

99 More detailed response:

99.1 Amelia Linzey rebuttal evidence (Planning) (para 117); and

99.2 Evidence of Pamela Butler on behalf of KiwiRail (para 4.8).

13.1.15	Confirm the Project's compatibility with a 10 year plan to implement the development of a rapid transit network and quality transit network under the Auckland Passenger Transport Network Plan 2006-2016.	1/85-105 3/163-167
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100 The Project does contribute to the enhancement of the QTN network.

101 More detailed response:

101.1 Andrew Murray rebuttal evidence (footnote 83 in Annexure H).

K. There would seem to be a need for adequate evaluative materials and drawings concerning local connections said not to be viable or at the Waterview Interchange (See for instance EMS Report 20 December, paras 3.3.2 and 3.3.5).

102 The NZTA has undertaken further work to evaluate the proposal to provide local access to SH20 at the Great North Road Interchange, but does not consider it to be viable for the following reasons:

102.1 Design requirements and existing constraints;

102.2 Only marginal improvement in accessibility to SH20 for the Waterview/Point Chevalier/Carrington community;¹¹

102.3 Reduced network efficiency/potential for increased congestion on other local roads;

102.4 The connection is not required to mitigate an adverse transport effect and

102.5 Cost implications.

¹¹ As a large proportion of local traffic would continue to use existing local connections.

- 103 Mr Rob Mason's rebuttal evidence contains plans that show Sir Harold Marshall's proposal for a local connection to SH20, in addition to concept designs prepared by the Project design team showing the implications of adding on and off ramps in the vicinity of the Great North Road Interchange.
- 104 More detailed response:
- 104.1 Tommy Parker rebuttal evidence (paras 53-54);
- 104.2 Rob Mason rebuttal evidence (paras 10 – 33 provide history of constraints assessment at Great North Road interchange, and paras 34-76 assessment of local access to SH20 at Great North Road Interchange);
- 104.3 Andrew Murray rebuttal evidence (paras 61 to 90);
- 104.4 Andre Walter rebuttal evidence (paras 67 to 77); and
- 104.5 Amelia Linzey rebuttal evidence (Planning) (paras 5–10 and Annexure B).
- L. The southern ventilation building is acknowledged in evidence to be better if largely underground. What is the NZTA attitude, and what are the technical and cost implications? (See for instance EMS Report 20 December, para 3.4.12). Also as to both ventilation buildings, refer EMS Report 20 December, paras 3.4.15 and 18.**
- 105 The NZTA evidence acknowledges that there would be various benefits if the southern ventilation building could be largely underground (benefits to open space, visual effects and CPTED concerns). However, there are also various implications and significant costs associated with undergrounding.
- 106 The NZTA's position is that undergrounding of the southern ventilation building is not warranted, for the following reasons:
- 106.1 Significant ramps would be required to provide access to a fully below ground building, with a number of additional design considerations and significant cost implications for this (as set out in Andre Walter's rebuttal evidence para 49);
- 106.2 Partial burial of ventilation buildings has also been considered in response to option development arising from the expert caucusing for landscape / visual and presented at the expert caucusing for open space. Andre Walter's rebuttal evidence (paras 52 and 53) provides a summary of the engineering, design and cost considerations for this option; and
- 106.3 Partial burial with the use of gantry crane buildings to access below ground ventilation fans has also been considered.

Again this option was developed from the expert caucusing for landscape / visual, as a concept to reduce the amount of road surfacing in the Alan Wood Reserve / open space areas. Andre Walter's rebuttal evidence paras 56 and 57 provides a summary of the engineering, design and cost considerations for this option.

- 106.4 While the latter of the two options above had not been through a complete multi-disciplinary option evaluation (given the late nature of its development), it is noted that both options have greater costs than the 'full burial' option (which has been evaluated by the team), with the 'trade-off' of built structure in the Alan Wood open space area. On this basis, the NZTA considers that the cost implications outweigh the potential 'partial' mitigation that these options may provide (given the mixed expert opinions from the landscape/visual and open space caucusing) and does not represent 'sustainable development'.
- 107 The technical and cost implications are set out in the rebuttal evidence of Mr Andre Walter (paras 38-61). Other witnesses for the NZTA have provided rebuttal evidence of the effects of undergrounding given the engineering requirements for this, concluding that there are a range of potential effects of the building being undergrounded.
- 108 More detailed responses:
- 108.1 Tommy Parker rebuttal evidence (paras 59-64);
- 108.2 Andre Walter rebuttal evidence (paras 38-61);
- 108.3 David Little rebuttal evidence (paras 108-112);
- 108.4 David Gibbs rebuttal evidence (paras 19-20);
- 108.5 Stephen Brown rebuttal evidence (paras 45-51);
- 108.6 Amelia Linzey rebuttal evidence (planning) Para 9.4;
- 108.7 Joint Expert Caucusing Report of Landscape and Visual Design Expert Witnesses, paras 3.1–3.9;
- 108.8 Joint Expert Caucusing Report for Open Space, paras 84–86); and
- 108.9 Opening legal submissions.

M. Is an additional resource consent needed for the trial embankment proposal? Refer EMS 20 December report, paras 3.5.5 and 3.5.6.

109 No additional resource consents are required for the trial embankment. Any works or activity associated with the trial embankment can be constructed within the suite of resource consents lodged with the NZTA's application(s).

110 More detailed response:

110.1 Owen Burn rebuttal evidence (para 61-62); and

110.2 Opening legal submissions.

N. What is the extent of agreement with Auckland City over open space and partnering (to the extent possibly not already covered in question G above). (See for instance EMS Report 20 December, paras 3.6.5 and 3.8).

111 Para 3.6.5 states:

We presume but cannot confirm that the Open Space strategy now accords with expectations and agreements made with the Auckland Council. At this stage the detailed staging/sequencing of temporary and or permanent relocation of recreational assets and facilities still remains unclear to us. We presume that this will not be clear until submitter evidence is exchanged.

112 The relevant aspect of the schedule in para 3.8 reads:

Confirm arrangements with Auckland Council for the provision of sports facilities that better meet the future demands of the community.

113 This has been addressed in response to Issue G above. In addition, the expert caucusing on open space has identified and made progress on detail for the Project's specific open space design requirements so as to better align with Council's operational and maintenance needs. The NZTA considers that these details can be further progressed at the detailed design stage, with the development of Open Space Restoration Plans and their approval by Auckland Council (refer proposed Open Space conditions OS.1 to OS.7).

114 More detailed response:

114.1 Expert Caucusing Joint Report to the Board of Inquiry – Topic Open Space (pars 49 – 63); and

114.2 Opening legal submissions.

0. Answers needed on the 8 blank items concerning specific and sector effects described in EMS Report 20 December, para 3.7.

115 The 8 blank items in the EMS table in para 3.7 are addressed below:

S42A Report Paragraph Reference	Topic for further consideration (Paraphrased)	Applicant's Evidence in Chief Reference (EIC): (No./paragraph)
10.2.15	Confirm there are no effects on the marae proposed for the Harbourview-Orangihina Park.	

116 The 'proposed marae' referred to in the s42A Report is an area of open space land zoned "Marae Special Area"¹² within the Harbourview-Orangihina Park (in that section of the Park where Construction Yard 1 is proposed to be located). A resource consent for a Comprehensive Development Plan is required prior to the establishment of any buildings or development within the Marae Special Area. To date, no application has been lodged to affect this zoning.

117 More detailed response:

117.1 Owen Burn rebuttal evidence (para 53-56).

10.4.5	Confirm whether permanent occupation of Rosebank Domain for the upgraded access and widened pedestrian/cycleway is consistent with the recreation reserve status of the land.	
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118 The function of this area of Rosebank Domain (an access road to the domain and pedestrian/cycleway) will remain the same. While the Project works will widen the land area of this function (by separating the access and pedestrian/cycleway facilities), there will be no further land use impacts on the recreational facility.

119 More detailed response:

119.1 Amelia Linzey rebuttal evidence (Planning) (para 92).

10.6.10	Surveys of the current tenants in Waterview that would be affected by the Project to determine relocation preferences and match those with rental supply. This information would assist assess the scale and significance of the social effects of relocation.	
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120 The Housing New Zealand Corporation has confirmed that resettlement of tenants is to be undertaken through its own internal

¹² Operative Waitakere District Plan – Planning Map D10 (See E.2 Planning Maps of the AEE).

processes (without further input from the NZTA). Therefore, the NZTA does not propose to adopt this suggestion.

121 More detailed response:

121.1 Amelia Linzey rebuttal evidence (Social) (paras 119-120).

10.8.101	Advise further on merits of relocation of kindergarten and school.	
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122 The NZTA has advised the Ministry of Education and Auckland Kindergarten Association that it is willing to relocate the Waterview Kindergarten on a permanent basis.

123 More detailed response:

123.1 Tommy Parker rebuttal evidence (paras 67-68);

123.2 Amelia Linzey rebuttal evidence (Social) (paras 33-35); and

123.3 Proposed Condition SO.2 (Amelia Linzey rebuttal evidence (planning) Annexure A).

10.9.16	Response to Ryder assessment for further mitigation by providing fish access above the Oakley Creek waterfall. This is a matter that could be discussed further with Friends of the Oakley Stream and the Council.	
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124 NZTA's freshwater expert Mr Eddie Sides does not consider that it is appropriate to install a fish passage, given that the objectives of the proposed mitigation are to make the Oakley Creek as natural as possible (whereas this proposal would alter the natural character of the stream, and potentially change the fish population that exist above the waterfall).

125 More detailed response:

125.1 Eddie Sides rebuttal evidence (para 24).

10.9.23	Confirm that there are no groundwater contamination issues associated with construction works in the vicinity of Phyllis Reserve and Harbutt Reserves (that were in part former landfills).	
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126 There are negligible groundwater contamination issues associated with tunnelling beneath the Phyllis and Harbutt Reserves, as discussed in Mr Terry Widdowson's rebuttal evidence and in detail in Section 14 of Technical Report G.9 lodged with the application.

127 More detailed response:

127.1 AEE Part G: Technical Report G.9: Assessment of Land and Groundwater Contamination, Section 14; and

127.2 Terry Widdowson rebuttal evidence (paras 11-12).

10.10.63	Confirm the actual design for the operation of the concrete batching plant through the Concrete Batching and Crushing Management Plan to minimise dust emissions.	
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128 The concrete batching plant required for the Project will be fully enclosed in order to allow for continuous operation 24 hours a day, 7 days a week. Full enclosure is now provided for by proposed Noise and Vibration condition CNV.9.

129 More detailed response:

129.1 Siiri Wilkening rebuttal evidence (Construction) (paras 91-96);

129.2 Gavin Fisher rebuttal evidence (paras 8-10); and

129.3 Andre Walter rebuttal evidence (paras 126-127).

10.10.103	Confirm that the combination of effects from tunnelling and flooding will not have adverse effects on residential areas served by septic tanks.	
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130 The s42A report notes in paragraph 10.10.103 a submitter concerned about effects of flooding on its septic tank (at 7 Bollard Avenue). During expert caucusing the septic tank at 7 Bollard Avenue, along with septic tanks in general, were discussed.

131 Tim Fisher's investigations conclude that changes in peak flows and water level from the Project at 7 Bollard Avenue are negligible. Therefore the effect of the Project on this property in terms of water levels, flows, erosion and the performance of the septic tanks will be no more than minor. Total ground settlement of 5-10mm is estimated at 7 Bollard Avenue. The settlement experts also agreed in caucusing that the potential ground settlement effects on the septic tank will be no more than minor.

132 In regards to general settlement effects, it was agreed that operational septic tanks should be assessed in areas where 50mm or more ground settlement is predicted. Proposed Ground Settlement condition S.7 has been amended to list operational septic tanks as 'at risk' buildings and structures to be reviewed (see S.7(l)).

133 More detailed response:

133.1 Dr Tim Fisher rebuttal evidence (para 67); and

133.2 Gavin Alexander rebuttal evidence (paras 69-71).

P. Query the missing reference materials concerning re-radiated noise and vibration, noted at EMS Report 20 December, para 3.7.15.

134 The EMS Report notes (para 3.7.15):

We could not find the referenced discussion of 'regenerated noise' in EIC 10. EIC 11 summarises the issue and then notes the term 'structure borne noise' is the term referred to. The matter remains to be clarified for the Board.

135 Ms Siiri Wilkening's EIC 10 (Construction Noise) discusses structure-borne noise (also known as re-radiated noise) in paragraphs 28, 60-62, 92, 122-123.

136 Structure-borne noise from tunnelling may arise for limited periods while the tunnelling occurs below dwellings. Due to uncertainty of the potential for and the levels of such noise occurring, a methodology of monitoring, notification and potential relocation is recommended as set out in Ms Wilkening's EIC (paragraphs 61 and 62).

137 Ms Wilkening considers that it is not appropriate to assess internal noise levels due to structure-borne noise based on the provisions of the Construction Noise Standard NZS6803. Instead, the more stringent internal noise criteria of the World Health Organisation (*WHO*) has been applied, which are 35 dB LAeq (16h) for living areas during daytime, and 30 dB LAeq(8h) for bedrooms at night-time. In Ms Wilkening's opinion, these levels are acceptable to avoid sleep disturbance.

138 Condition CNV.2 sets out internal noise criteria for structure-borne noise from tunnelling.

139 More detailed response:

139.1 Siiri Wilkening EIC (paras 28, 60-62); and

139.2 Siiri Wilkening rebuttal evidence (paras 20-25, 56-59, and 104-110).

Q. Ditto for construction yard 9, refer EMS report 20 December, para 3.7.16.

140 The EMS Report notes (para 3.7.16):

EIC 10 notes at paragraph 145 the 'potential upgrade to building envelopes' for dwellings in close proximity to the concrete batching plant. This needs clarification for the Board to appreciate the nature of the works envisaged and how consent conditions could be given effect to.

141 Ms Wilkening advises that the requirement for building envelope improvements will be determined following finalisation of the location of the batching plants. The improvements will be determined on a case-by-case basis, taking into account factors such as the existing building envelope materials, location of the dwelling and actual noise levels.

142 Technical Report G.5 provides an indicative area for at-risk dwellings which may require mechanical ventilation. However, affected dwellings and proposed mitigation measures will not be confirmed until the design, layout and location of the batching plant is finalised. As the potentially required improvements are dependent on the existing dwelling (e.g. wall and roof materials, glazing, joinery, insulation), the NZTA cannot provide specifics at this stage.

143 However, generally, the building elements which require upgrades in the first instance include joinery and glazing. Associated with the requirement to keep external doors and windows closed, alternative ventilation is often required to be installed as well.¹³

144 More detailed response:

144.1 Siiri Wilkening rebuttal evidence (paras 113-117).

R. Information required concerning the four blank items referred to in EMS Report 20 December, para 3.9 re condition-setting.

145 The 4 blank items in the EMS table in para 3.9 are addressed below:

S42A Report Paragraph Reference	Topic for further consideration (Paraphrased)	Applicant's Evidence in Chief Reference (EIC): (No./paragraph)
14.2.11 14.2.12	Confirm the standardisation of timeframes to working days.	

¹³ It is noted that such works do not generally require resource consents (with only one building at Unitec being a classified heritage building where such matters may raise further consenting implications).

146 The NZTA has adopted this approach in its full suite of revised conditions.

147 More detailed response:

147.1 Amelia Linzey rebuttal evidence (Planning) (para 132.7).

14.2.13	Clarify that all reporting obligations can be provided in monthly reporting to the Auckland Council.	
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148 Given the scale and complexity of this Project, and the scale of proposed monitoring with different frequency requirements, neither a monthly reporting obligation, nor a single monthly monitoring report (as also proposed by EMS) are considered workable, necessary or reasonable. Instead, it is proposed that the detail and frequency of reporting across the management plans be agreed between the NZTA and the Auckland Council as a component of the CEMP process.

149 More detailed response:

149.1 Hugh Leersnyder rebuttal evidence (para 43-43).

10.8.66	A Temporary Construction Lighting Plan for Construction Yards 6 and 7 is not listed on the table of management plans on Page 12.4 and a draft is not provided in report G.10.	
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150 It is proposed to append the Temporary Construction Lighting Plan(s) to the Construction Environmental Management Plan (proposed condition CEMP.4 has been amended to reflect this). A draft of the plan has not yet been developed as it is highly dependent on input from the contractor. However, proposed Lighting condition L.2 requires the preparation of this Plan and specifies the appropriate environmental performance standards.

151 More detailed response:

151.1 Geoff Waller rebuttal evidence (para 23); and

151.2 Hugh Leersnyder rebuttal evidence (paras 31 to 33).

10.9.35	Confirm there are appropriate conditions to address vibration, settlement or other construction issues associated with the operation of the Pak N' Save supermarket on New North Road.	
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152 The proposed conditions and management plans are considered to be appropriate to address potential construction issues associated with the Pak'nSave supermarket on New North Road.

153 The suite of Ground Settlement conditions (S.1 to S.15) and the Settlement Effects Management Plan require preconstruction, construction and post-construction building inspections and ground settlement monitoring. The Construction Noise and Vibration conditions (CNV.1) and the Construction Noise and Vibration Management Plan require vibration monitoring (prior to and during construction). Other potential construction issues are also considered to be adequately addressed through the other conditions and the implementation of the CEMP.

154 More detailed response:

154.1 Gavin Alexander EIC (para 86 and Annexure C); and

154.2 Peter Millar rebuttal evidence (para 39).

S. Emission Impossible, in their 14 January report, in section 4.11.1, agree with NZTA's witness Mr Gavin Fisher, that treatment of tunnel air is unlikely to be cost effective. We presently presume that this is a reference to paras 59 and 60 of his evidence (perhaps amongst others). We note his rough estimates in those paras of some extremely large capital and operational costs, but note from 59 that those may be regional, and from 60 unstated, but perhaps national. No analysis of cost appears to have been done regarding this project, which is what is before the Board of Inquiry. Mr Fisher and the Board's reporting experts would appear to need to consider this further, especially as the offsets being suggested by them both appear to involve the tackling of national or regional emission problems, on a national or regional basis, rather than being project specific mitigation. Alternatively there may be project-related aspects, perhaps on some sort of neighbourhood basis, where project-related offsets could be employed, but that is not immediately apparent to us.

The Board's current thinking is that a simple rough order breakdown of the costs, efficiency of the selected techniques and design life expectancy of the equipment, and additional environmental adverse effects which result (if any) from the containment by the treatment, would assist, along with any advice about potential cost savings, for instance can the shaft height be reduced if treatment is incorporated? There seems to be a lot of reliance on past tunnel construction where treatment of air quality in tunnels has more to do with tunnel users than the surrounding environment.

155 The NZTA does not propose to filter air emissions, as filtration of emissions from the tunnel stacks is not considered to be a viable air pollution control option. Expert caucusing reached agreement on this matter.

- 156 NZTA's expert witness Mr Fisher has not "suggested" offsets. He states that he considers such mitigation is unwarranted due to the limited effect of the Project relative to other local air pollution sources, as well as concerns about effective implementation of any offset regime. Further discussion is given in his rebuttal evidence which considers the plausibility of offsets at the project scale.
- 157 Filtration of emissions from the tunnel stacks has never been considered to be viable air pollution control option. A specific system would need to be designed and costed to address the array vehicle exhaust emissions generated. Indicative benefit cost analysis suggests the cost of a very basic system would probably be 1000 times more than the public health benefits that might be derived. This finding is supported by the conclusion reached on this matter by the experts involved in the air quality caucusing.
- 158 The most cost-effective solution to address ambient air quality concerns associated with tunnels is to improve exhaust emission standards of the vehicles using the particular tunnel concerned. However, this is not a realistic option for this Project to implement. Alternative international best practice has been applied instead and tall vents are proposed to disperse and dilute emissions instead.
- 159 From an air pollution control point of view, the taller the vent the better. Whilst 25m vents at either end of the tunnel will provide a very effective solution, as shown in Mr Fisher's rebuttal evidence, the vents could be reduced to a height of 15m without filtration and still provide sufficient dispersion and dilution with only a marginal increase in ambient air quality effects predicted to be experienced at ground level.
- 160 More detailed response:
- 160.1 Gavin Fisher EIC (paras 56-70);
- 160.2 Gavin Fisher rebuttal evidence (paras 25-27, 55-62, and 69-77); and
- 160.3 Expert Caucusing Joint Report to the Board of Inquiry (Topic Air Quality), para 8.

T. Has NZTA applied for air discharge consents, and if not, on what basis has that approach been taken? If their response refers to Rule 4.5.3 of the District Plan concerning permitted activities, would it not be incorrect to rely on that, because that deals with mobile sources, and the stacks and portals are of course fixed, offering concentrated discharges of earlier mobile emissions?

- 161 The NZTA has applied for the following air discharge consents:
- 161.1 Discharge to air from crushing activities (EPA 10/2.023);

161.2 Discharge to air from concrete batching plant (EPA 10/2.024);
and

161.3 Discharge to air from road works (EPA 10/2.025).

162 The ARC's s149G report concludes that "*all resource consents in relation to the proposal to which the matter relates have been applied for*" and "*all resource consents under the administrative jurisdiction of the ARC in relation to the proposal are understood to have been included in the proposal*" (para 5.11).¹⁴

163 With respect to air discharges that relate to mobile sources such as motor vehicles, Rule 4.5.3 of the Auckland Regional Plan: Air, Land and Water(ARP:ALW) states that:

"The **discharge of contaminants into air created by motor vehicle**, aircraft, train, vessel and lawnmower engines including those located on industrial or trade premises is a permitted activity". (emphasis added)

164 The NZTA's position is that Rule 4.5.3 applies because the ventilation stacks are dispersing emissions created by motor vehicles. This is consistent with the air quality rules' focus on the "activity" causing the air discharge, not on the method of dispersal to the air.¹⁵

165 In respect of section 15(2A), the discharge from the ventilation stacks does not contravene a regional rule. to the contrary, it is a permitted activity.

166 Further, the NZTA's air quality expert's opinion is that exposure levels to vehicle-related contaminants from the Project will comply with the National Environmental Standards for Air Quality (AQNES),¹⁶ so s15(2) of the RMA is not triggered either.

¹⁴ We also note that paragraph 2.3.1 of EMS' s42A Report dated 7 December 2010 states:

The advice provided in each of the three s149G reports received by the Board of Inquiry affirms that, in their assessment, all resource consents required have been applied for. We are satisfied that the EPA and the Councils have been diligent in determining the resource consents required and the statutory approvals necessary within their respective boundaries in consultation with the NZTA project team.

¹⁵ For example, other activities addressed in the ARP:ALW include combustion activities (Rules 4.5.25 – 4.5.32) and dust generating activities (Rules 4.5.44 – 4.5.70).

¹⁶ See Gavin Fisher EIC at paragraph 32.

167 More detailed response:

167.1 AEE (Section 6.5.6.4 and 23.8.1.5)¹⁷ and Technical Report G.1 (Section 4.3 and 12.8).

U. Does NZTA propose that designations will specifically authorize all aspects of the project, and if not, what aspects does it propose be dealt with by way of subsequent outline plan?

168 The NZTA proposes that the majority of the Project falling within the designated footprint will be authorised by the various designations sought, if confirmed.

169 The NZTA anticipates that the following aspects of the Project will be dealt with by way of outline plan of works (OPW):

169.1 Northern ventilation building and stack; and

169.2 Southern ventilation building and stack (areas identified on revised Operational Scheme Plans, Andre Walter rebuttal evidence, Annexure A.

170 New proposed General Designation condition DC.6 requires an Outline Plan of Works for both of these aspects to be prepared and submitted to the Auckland Council.

171 More detailed response:

171.1 Amelia Linzey rebuttal evidence (Planning) (paras 48, 118-121 and 131 and Annexure A: Proposed Conditions, particularly DC.6 – DC.9 [and OS.1 – OS.7]); and

171.2 Opening legal submissions.

V. Does NZTA accept the revised designs for the portals and associated buildings, or are they still just options?

172 The revised design options for the northern and southern ventilation buildings and stacks, as attached to the architectural EIC of Mr David Gibbs (Construkt), remain as design options.

173 The NZTA proposes that these buildings are subject to further detailed design in compliance with specific design criteria set out in proposed Conditions DC.8 and DC.9.

174 An opportunity for further development of design features with the community is also provided for within the proposed condition for the Community Liaison Group (Condition PI.5). This has also been

¹⁷ Though in both cases it is noted that these sections should say “no rules requiring consent in the ARP: ALW ...”.

clearly provided for in the Outline Plan of Works Process provided in the Designation conditions (see proposed conditions DC.8(l) and DC.9(l)).

175 More detailed response:

175.1 Opening Legal Submissions; and

175.2 Amelia Linzey rebuttal evidence (Planning) (paras 118-121 and Annexure A: Proposed Conditions).

W. Why does the concrete batching plant have to work 24 hours a day? Could product be trucked in during the night, reducing noise emission from the plant?

176 There is a requirement for the concrete batching plant to operate 24 hours a day to provide for the safety of workers, maximum utilisation of resources, and to construct the driven tunnels within a reasonable timeframe. For example, the construction sequence requires that the primary support (comprising rockbolts and shotcrete) be installed no longer than 30 minutes after the excavation of a section of tunnel is completed. If this does not occur, there is risk of roof and tunnel deformation with resultant increases in settlement.

177 More detailed response:

177.1 Andre Walter rebuttal evidence (paras 112-127).

X. Will NZTA be accepting the proposed "rotation" of the Pony Club works?

178 On receipt of submissions, a number of meetings and ongoing discussions have been had between NZTA, representatives of the Te Atatu Pony Club and with the owner of this land (Auckland Council).

179 From these discussions, a resource consent has been lodged with the Auckland Council (on 24 December 2010) for a reconfigured Construction Yard 1, which would extend south along Te Atatu Road outside the current proposed designation (as shown in the rebuttal evidence of Mr Burn).

180 If the land area subject to the resource consent was included in the designation as a result of the Board's decision, the eastern extent of Construction Yard 1 could be reduced by an equivalent area. This would create the "rotated" configuration suggested by Council's Mr Beer.

181 More detailed response:

181.1 Owen Burn rebuttal evidence (paras 16-20 and 31-32); and

181.2 Amelia Linzey rebuttal evidence (Planning) (paras 90-91).

Y. Commencing at the start of the hearing, but then advancing on an iterative basis, NZTA should consider putting forward a schedule, that can be updated as and when required, of amendments it accepts to conditions that other parties and witnesses put forward from time to time. A second part of the Schedule could list those proposed amendments that are not accepted.

182 The NZTA proposes to have a “master set” of conditions which it will be regularly updating as the hearing progresses. That set will incorporate further changes suggested by other parties and agreed by the NZTA during the hearing. It is anticipated that a final set will be provided with the NZTA’s Reply at the conclusion of the hearing.

183 The NZTA will give further consideration to the feasibility of preparing separate schedules listing:

(a) Conditions put forward by other parties that are agreed; and

(b) Conditions put forward by other parties that are not agreed.

Z. G15 refers to G27 for design philosophy for civil stormwater and stream works. They refer to a design life of 100 years. There is an end of design life at 2110. Whilst designs generally based on the date of design submission, this design has yet to be completed, and the construction period is extensive, so at the time the project is operational, the design life could already been 1/10th through. Is the design for 100 years, or is it limited to year 2090?

184 The design life for the stormwater infrastructure is 100 years. This is put into practice by the selection of materials that have estimated durability of 100 years (e.g. concrete pipes). It is also put into practice by the design of stormwater systems e.g. size of pipe for the rainfall that can be expected in 100 years time based on the design criteria for that element of the stormwater system (e.g. 10 year Average Recurrence Interval (ARI), 100 year ARI, 2500 year ARI).

185 More detailed response:

185.1 Tim Fisher rebuttal evidence (para 70).

Z. Initial rainfall data is based on 100 ARI (modified for climate change). Are there any records indicating that 100 ARI has been exceeded to date in this area?

186 Tim Fisher’s review of catchment management reports and rainfall data shows that no events of this size have occurred in the recorded history of the catchment.

187 More detailed response:

187.1 Tim Fisher rebuttal evidence (para 76).

Z. The climate change scenario appears to be limited to 2090 (i.e. 90 years, not 100 years). The evidence notes climate predictions do not extend to the end of the design life — but perhaps some projection of the base data is required.

188 The climate change predictions for 2090 have been used based on MfE (2008) Guidelines.¹⁸ The MfE Guidelines do not provide guidance on extrapolating rainfall beyond 2090 for a 100 year design life that might end in 2116 (motorway completion plus 100 years), unlike sea level rise where a number of mm/year is often used to extrapolate climate change predictions.

189 However, as a precautionary approach Mr Fisher recommends that at the detailed design stage the climate change predictions are extrapolated to estimate the rainfall in 2116 for the design events (10 year ARI, 100 year ARI and 2500 year ARI). These rainfall estimates should be used for design or for the planning of adaptive approaches, whichever is more appropriate to the stormwater element being considered for design.

190 More detailed response:

190.1 Tim Fisher rebuttal evidence (para 71).

Z. The increase in rainfall has been based on mean predicted temperature increase (which is the average of the average over the year at 2.1°C). What effect does taking the average of the maximum estimate make (i.e. 4.2°C compared with 2.1°C increase)?

191 The MfE Guidelines infer that annual mean temperatures are to be used, with screening calculations for low and high temperature change scenarios.¹⁹ For the 100 year ARI rainfall, the Guidelines recommend a factor for percentage adjustments of 8 that is multiplied by the projected climate temperature change to calculate the percentage change in rainfall. Mr Fisher used the mid-range estimate of the annual temperature change at 2090 which was 2.1°C to get a percentage change in rainfall due to climate change of 16.8% at 2090.

192 It is acknowledged that there is a lot of uncertainty with this estimate approach because the scientific communities' predictions for climate change and its effect on rainfall are still developing. Given these uncertainties, consideration should be given to testing

¹⁸ MfE (2008) Preparing for Climate Change – A Guide for Local Government in New Zealand (MfE (2008) Guidelines).

¹⁹ MfE (2008) Guidelines, page 34, paragraphs 1 and 2.

the design for the upper estimates of the percentage change in rainfall during detailed design. Tim Fisher recommends that sensitivity testing of flood levels be undertaken at the detailed design stage to ensure that the hydrological uncertainties (with other provisions for freeboard) are appropriately accounted for in the freeboard allowances.

193 More detailed response:

193.1 Tim Fisher rebuttal evidence (paras 72-75).

Z. G27.5.3 concerning the Oakley Inlet suggests a combination of extreme sea levels with flood events — has the stormwater model been run for the 100 year ART rainfall event plus 20 year ARI sea level (including climate change), and similarly for the 20 ARI rainfall event plus 100 year ARI sea level (including climate change). G15 seems to indicate modified rainfall only.

194 The information in Technical Report G.27 to the AEE is correct. The determination of flood levels will be for the combination of Oakley Creek flow and sea levels, with both to include climate change effects. Mr Fisher states that it is appropriate that the proposal for flood levels is to be based on the higher of the 100 year ARI rainfall event plus the 20 year ARI sea level, and the 20 year ARI rainfall event plus the 100 year ARI sea level, is appropriate.

195 More detailed response:

195.1 Tim Fisher rebuttal evidence (para 77).

Z. Whilst a minimum crest level for rock protection of 3m RL has been adopted, ponds situated in or close to the CMA shall have minimum crest elevation of 3.25m RL. So the pond embankment could be higher than the rock revetment?

196 It is presumed that this question relates to the Jack Colvin wetland as this is the only wetland on the coastal edge.

197 The crest of the wetland is at 3.6m RL, which is determined by the stormwater treatment and storage requirements of the wetland. The revetment height on the seaward side of the embankment is based on the protection requirements for the coastal hazard at this location and will be at a lower level. In this case the upper slope of the seaward side of the pond embankment, above the rock revetment, will be stabilised with vegetation.

198 The minimum crest level for the actual causeway revetment is to be confirmed, as discussed by NZTA expert Dr Rob Bell in rebuttal evidence.

199 More detailed response:

199.1 Rob Bell rebuttal evidence (para 61); and

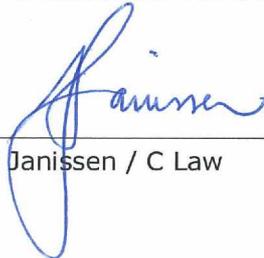
199.2 Tim Fisher rebuttal evidence (para 78).

AA. Will a revised set of drawings be provided at the time rebuttal evidence is filed, or at the very least will there be a schedule of all plans concerning the Proposal, including as to revisions, with notes about where the latter are to be found?

200 The NZTA attaches as **Annexure B** an updated Schedule of all plans concerning the Project, including references to where revisions can be found.

Dated: 6 February 2011

Counsel for the
NZ TRANSPORT AGENCY



S M Janissen / C Law

ANNEXURE A – LETTER FROM WATERCARE SERVICES

30 July 2010

NZ Transport Agency
Level 11, HSBC House
1 Queen Street
Private Bag 106602
Auckland 1143

Attention: Kevin Stevens

Dear Sir

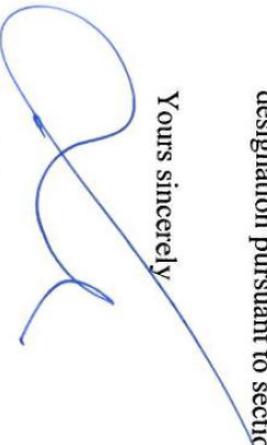
**Operative Waitakere City District Plan:
Designation WSL9, Flanshaw Road, Te Atatu (Pt Allot 8A Parish of Waipareira)**

This is to advise that Watercare Services Limited (“WSL”) is the requiring authority responsible for the above designation.

WSL is aware that the New Zealand Transport Agency (“NZTA”) intends to give notice to Waitakere City Council of its requirement to alter the designation for State Highway 16 (described in the Operative Waitakere City District Plan as NZTA 1) between the Te Atatu Interchange and Henderson Creek. WSL is aware that the alteration proposed by NZTA will extend over the existing WSL designation referred to above and has been supplied with plans (copies attached) of the proposed alteration.

WSL advises that it grants its consent to NZTA to undertake work only within the 51m² area indicated on the attached plan and that is the subject of the alteration to the State Highway 16 designation pursuant to section 177 of the Resource Management Act 1991.

Yours sincerely

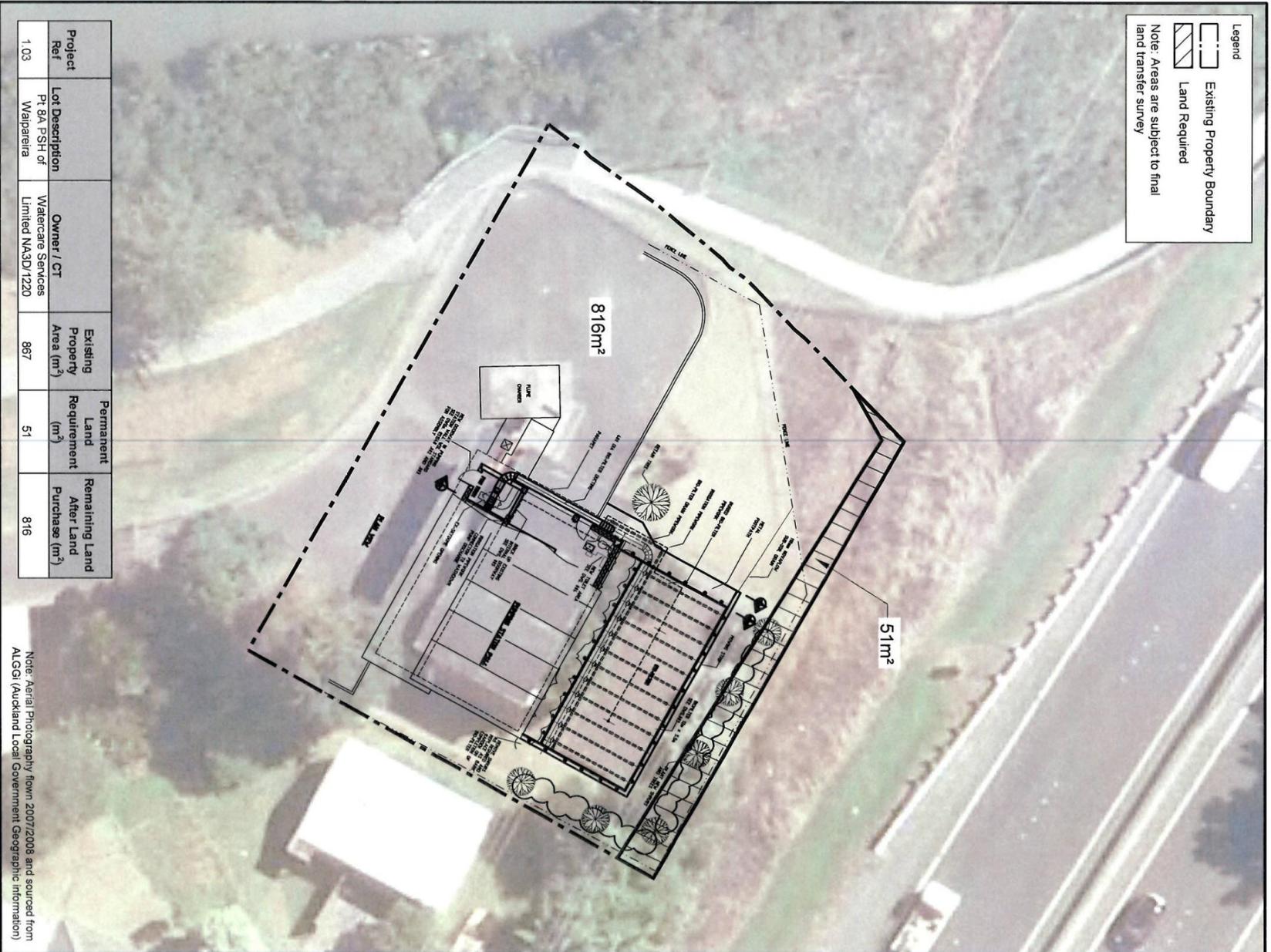


Mark Bourne
Operations Manager Wastewater

Legend

-  Existing Property Boundary
-  Land Required

Note: Areas are subject to final land transfer survey



Project Ref	Lot Description	Owner / CT	Existing Property Area (m ²)	Permanent Land Requirement (m ²)	Remaining Land After Land Purchase (m ²)
1.03	Pt 8A PSH of Waipareira	Watercare Services Limited NA3D/1220	867	51	816

Note: Aerial Photography from 2007/2008 and sourced from ALGGI (Auckland Local Government Geographic Information)

 NZ TRANSPORT AGENCY WAKA KOTAHU		Land Requirement Plan Ref 1.03		Approved for Issue JH Date: 18.05.10	Project No: B289-000-SK-068		
Client:		Consultant:  aurecon		Project: Waterview Connection Project SH16 / SH20			Drawing No: PRELIMINARY NOT FOR CONSTRUCTION
No	Revision	By	CHK	Appd	Date		
01	Initial Issue	RT	AG	JH	18.05.10		

ANNEXURE B – SCHEDULE OF PLANS

This is a schedule of all plans concerning the Proposal, including as to revisions, with notes about where the latter are to be found. This schedule is based upon *Part F - Plans and Drawings* of the application documentation and any plan or drawing that is referred to in the proposed conditions as **at 4 February 2011** (Annexure A of Rebuttal Evidence – 33 Amelia Linzey (Planning)).

Where a cell in the 'Location' column is blank this indicates that the drawing remains unchanged since lodgement (e.g. the same as that found in *Part F – Plans and Drawings* in the application documentation (lodged 20 August 2010)).

Plan Title	Plan Number	Rev	Location (if different from Part F – Plans and Drawings in the application documentation)
F.0 - Notice of Requirements Plans	20.1.11-3-D-G-900-100 to119	Rev B	
F.1 - Designation Plans	20.1.11-3-D-G-901-100 to119	Rev B	
F.2 - Operation Scheme Plans	20.1.11-3-D-N-910-101-108	Rev D	
	20.1.11-3-D-N-910-100, 109-112, 114, 116, 118, 119	Rev F	
	20.1.11-3-D-N-910-113, 115, 117	Rev G ²⁰	Annexure A and F, Rebuttal Evidence 2 – Andre Walter
F.3 - Long Sections	20.1.11-3-D-C-102-131-134, 411 - 413	Rev B	
	20.1.11-3-D-C-102-301-304, 401-403,411-413	Rev C	
F.4 - Cross Sections	20.1.11-3-D-C-101-201-205	Rev B	
	20.1.11-3-D-C-301-305	Rev C	
F.5 - Construction Scheme Plans	20.1.11-3-D-C-912-100	Rev A	
	20.1.11-3-D-C-912-101to119	Rev D	
F.6 - Construction Yard Plans	20.1.11-3-D-C-913-100	Rev A	
	20.1.11-3-D-C-913-101to112	Rev B	
F.7 - Rail Alignment	20.1.11-3-D-C-170-117to119	Rev B	
F.8 - Plans of Structures and Architectural Features	20.1.11-D-N-919-471, 480, 800;	Rev A	
	20.1.11-D-N-917-910	Rev A	
	20.1.11-D-N-919-410 to 411	Rev A	These plans all relate to the northern and southern ventilation building and are superseded by Drawings 1-15 (Rev A) , Annexure A, Evidence In Chief 27 – David Gibbs
	20.1.11-D-N-919-420, 421, 422	Rev B	
	20.1.11-D-S-917-410, 420		
20.1.11-D-S-917-400, 430, 431, 460, 480	Rev B		

²⁰ Revision F is located in Part F – Plans and Drawings.

Plan Title	Plan Number	Rev	Location (if different from Part F – Plans and Drawings in the application documentation)
	20.1.11-D-N-919-210, 220, 230, 600, 700, 430,431	Rev B	
	20.1.11-D-N-917-470	Rev B	Withdrawn
	20.1.11-D-N-917-210, 220, 221, 230, 231, 250, 251,	Rev C	
F.9 - Oakley Inlet Heritage Plan	20.1.11-3-D-C-914-109 20.1.11-3-D-4-810-224	Rev B	
F.10 - Geological Profile	20.1.11-3-D-J-200-326 to 337	Rev B	
F.11 - Lighting Plans	20.1.11-3-D-C-161-100 20.1.11-3-D-E-161-101 to 108 20.1.11-3-D-C-161-109 to 119	Rev B	
F.12 - CMA Permanent Occupation Plans	20.1.11-3-D-N-941-100 to 109	Rev B	
F.13 - CMA Temporary Occupation	20.1.11-3-D-N-942-100 to 109	Rev B	
F.14 - Streamworks and Stormwater (SW) Discharges	20.1.11-3-D-N-931-100, 101, 111, 117-119, 301	Rev B	
F.15 - Coastal Discharges	20.1.11-3-D-N-943-100, 101, 103 to 106, 109	Rev A	
	20.1.11-3-D-N-943-301	Rev B	
F.16 - Urban Design & Landscape Plans	20.1.11-3-D-L-810-201-209	Rev C	
	20.1.11-3-D-L-810-200, 214-216, 226-228	Rev B	
	20.1.11-3-D-L-810-210-213, 217-224, 229	Rev C ²¹	Annexure A and B of Rebuttal Evidence 26 - Lynne Hancock
	20.1.11-3-D-L-810-210	Rev B	Withdrawn - related to NOR6
F.17 - Noise Walls / Mitigation	20.1.11-3-D-N-918-100 to 103, 108-111, 113, 117-119	Rev B	
F.18 - Reclamation Extent	20.1.11-3-D-C-520-100, 101, 103 to 108	Rev B	
F.19 - Lane Marking & Sign Location	20.1.11-3-D-C-915-100	Rev A	
	20.1.11-3-D-C-915-101-119	Rev B	
F.20 - Cycleway Overview	20.1.11-3-D-N-916-140 to 144	Rev B	
PT & Active Mode Transport Routes Existing & Proposed	20.1.11-3-D-N-903-100 to 119	Rev C	Provided to the EPA on 28 January 2011
Operational Stormwater and Streamworks concept design drawings	20.1.11-3-D-D-300-000to119	Rev B	Appendix A of Technical Report G.15 <i>Assessment of Stormwater and Streamworks Effects</i>
	20.1.11-3-D-D-310-211to214	Rev B	
	20.1.11-3-D-D-317-201-202	Rev B	
	20.1.11-3-D-D-330-201to202	Rev B	
	20.1.11-3-D-D-330-211-219	Rev A	

²¹ Revision B is located in Part F – Plans and Drawings.

Plan Title	Plan Number	Rev	Location (if different from Part F – Plans and Drawings in the application documentation)
	20.1.11-3-D-D-340-201, 304-306	Rev B	
	20.1.11-3-D-D-341- 201to202	Rev B	
	20.1.11-3-D-D-345-221, 231	Rev B	
	20.1.11-3-D-D-346-210, 203, 204	Rev B	
	20.1.11-3-D-D-349- 201,203, 204, 211,213,214	Rev B	
	20.1.11-3-D-D-349- 215to216	Rev A	
	20.1.11-3-D-S-635-200	Rev B	
Construction Stormwater and Streamworks concept design drawings	20.1.11-3-D-D-350- 100to119	Rev B	
	20.1.11-3-D-D-350- 220to201	Rev A	
	20.1.11-3-D-D-360-201,301	Rev B	
	20.1.11-3-D-D-365-211,212	Rev B	
	20.1.11-3-D-D-150- 301to303	Rev A	
Significant and Valued Vegetation	Figures 3A to 3E	-	Pages 9-13 of Technical Report G.17 <i>Assessment of Terrestrial Vegetation Effects</i>
Total Estimated Settlement – Tunnels and Approaches	Figure E14	Rev 4 ²²	Annexure A of Rebuttal Evidence 13- Gavin Alexander
Proposed Open Space Impacts and Replacement	GIS-3814238-23	Rev 2 ²³	Annexure C of Rebuttal Evidence 33 – Amelia Linzey

²² Revision 3 is located in Appendix E of Technical Report G.13: Ground Settlement Effects.

²³ Revision 1 is located in Appendix E.4 (Open Space Restoration Options), Part E Appendices of the application documents.