

EPA 10/2.001 – (WCC.NOR-2010-1034)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type:	Designation
Description:	Alteration to designation NZTA1, SH16, between Whau River and Henderson Creek, to including widening of the SH16 carriageway, modifications to the exiting Te Atatu interchange, ancillary safety and operational services, temporary works, a cycleway and pedestrian path and ancillary works and services – NOR1.
Lapse Period:	10 years

DC =	General Designation Conditions	OS =	Open Space Conditions
CEMP =	Construction Environmental Management Plan Conditions	SO =	Social Conditions
PI =	Public Information Conditions	V =	Vegetation Conditions
TT =	Temporary Traffic Conditions	A =	Avian Conditions
OT =	Operational Traffic Conditions	H =	Herpetofauna Conditions
CNV =	Noise and Vibration Conditions – Construction	L =	Lighting Conditions
ON =	Noise Conditions – Operation	ARCH =	Archaeology Conditions
OV =	Vibration Conditions – Operation	CL =	Contaminated Land and Contaminated Discharge Conditions
AQ =	Air Quality Conditions – Construction	F =	Freshwater Conditions
LV =	Landscape and Visual Conditions		

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
 - (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated

(c) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part G: Technical Reports:

- (i) Technical Report G.1 Assessment of Air Quality Effects
- (ii) Technical Report G.2 Assessment of Archaeological Effects
- (iii) Technical Report G.3 Assessment of Avian Ecological Effects
- (iv) Technical Report G.4 Assessment of Coastal Processes
- (v) Technical Report G.5 Assessment of Construction Noise Effects
- (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
- (vii) Technical Report G.7 Assessment of Groundwater Effects
- (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
- (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
- (x) Technical Report G.10 Assessment of Lighting Effects
- (xi) Technical Report G.11 Assessment of Marine Ecological Effects
- (xii) Technical Report G.12 Assessment of Operational Noise Effects
- (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
- (xiv) Technical Report G.14 Assessment of Social Effects
- (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
- (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
- (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
- (xviii) Technical Report G.18 Assessment of Transport Effects
- (xix) Technical Report G.19 Assessment of Vibration Effects
- (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
- (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
- (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
- (xxiii) Technical Report G.23 Coastal Works
- (xxiv) Technical Report G.24 Geotechnical Interpretive Report
- (xxv) Technical Report G.25 Traffic Modelling Report
- (xxvi) Technical Report G.26 Operational Model Validation Report
- (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement
- (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series
- (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
- (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
- (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)

(d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).

(e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:

- (i) Evidence in Chief (Numbers 1-37)
- (ii) Rebuttal Evidence (Numbers 1-33)
- (iii) Supplementary Information (Numbers 1-8)

- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.
- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.
- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.
- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.
- If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.
- The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.
- Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.*
- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.
- Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and southern ventilation buildings and stacks where further details are required.*
- 7) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.
- 8) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 9) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions, whichever is

the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and ~~39~~);
- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8); and
- (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.

Post-Construction / Operations

- 10) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
 - (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway
Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.
 - (b) The designation to be altered to remove those conditions no longer required for long term operation and maintenance of the Project.

Monitoring

- 11) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 12) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.
- Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.*
- Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.*
- 13) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.
- 14) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
 - (e) Environmental complaints management (including the procedures required under Condition PI.4);
 - (f) Compliance monitoring;

- (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
 - (h) Environmental auditing; and
 - (i) Corrective action.
- 15) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:
- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
 - (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
 - (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).
- 16) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:
- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
 - (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
 - (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloo);
 - (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

- (h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007);
- 17) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from residential dwellings, taking into account site and public safety and environmental constraints, in the locations shown on Waterview Connection Project Construction Yards Drawings (Refer Schedule A, Row 7);
 - (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 18) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 19) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.
- 20) CEMP.14 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). The EISDCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council, and include:
- (a) Methods and measures:
 - (i) 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.
 - (ii) 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
 - (iii) 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.
 - (iv) 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.

- (b) 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.
- (c) 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:
 - (i) Clause 2.2 with respect to excavations near overhead support structures;
 - (ii) Clause 2.4 with respect to buildings near overhead support structures;
 - (iii) Section 3 with respect to minimum separation between buildings and conductors;
 - (iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
 - (v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.
- (d) Confirmation that Transpower has been provided a copy of the EISCDMP for their review at least 20 working days prior to construction.

Advice 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).

- 21) CEMP.15 The NZTA will be responsible for all service relocations required for construction of the Project. The NZTA shall liaise with the providers of infrastructure service networks (including, but not limited to water, gas, stormwater, wastewater, power and telecommunications), and private property owners with on-site services to develop methodologies and timing for necessary services relocation required for the Project, with the objective of minimising disruption to the operation of these service networks and on-site services.

Advice note:

- (a) *It is noted that if separate consents are required for relocations for any services of network utility operators or landowners, such consents will be obtained before construction commences in the relevant area, and any effects of those relocations would be considered at that time. The same applies to any alteration of consents if required.*
- (b) *Network infrastructure owned and operated by Watercare Services is located within the designations. An operating agreement will be developed by the NZTA and Watercare Services which will include appropriate notification and access protocols where works are to be undertaken by either network operator on or adjacent to Watercare Services infrastructure within the designations.*

Construction

- 22) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 23) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 24) CEMP.8 All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
- 25) 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.

- 26) CEMP.12 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:
- (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.

A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.

- 27) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'

Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 28) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.
- 29) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

30) PI.5

The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:

- (a) Te Atatu (including the SH16 Causeway)
- (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
- (c) Owairaka

and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.

The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:

- (a) Auckland Council and Auckland Transport;
- (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
- (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
- (d) Department of Conservation;
- (e) Local Boards;
- (f) Iwi groups with Mana Whenua;
- (g) Public transport providers; and
- (h) Housing New Zealand Corporation.

Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 31) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 32) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located at each site specific work activity;
 - (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
 - (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
 - (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
 - (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
 - (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.
- 33) PI.6 The Community Liaison Group(s) shall be provided opportunities to review and comment on the following (amongst other things):
- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k);
 - (b) The Open Space Restoration Plans (as required by Condition OS.3);
 - (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as

- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

TEMPORARY TRAFFIC CONDITIONS

Pre-Construction

- 34) TT.1 The NZTA shall update and finalise the Construction Traffic Management Plan (CTMP) submitted with this application, in accordance with these conditions, and implement it through the CEMP.
- In finalising the CTMP, the NZTA shall:
- (a) Provide simulation modelling demonstrations to better understand the effects of construction of the Project on the affected road network;
 - (b) Include measures to avoid road closures and restrictions of vehicle, bus, cycle and pedestrian movements;
 - (c) Where road closures or restrictions cannot reasonably be avoided the particular vulnerabilities and sensitivities of pedestrian diversions and restricted conditions shall be taken into account in the planning of any closures or restrictions.
- 35) TT.2 The CTMP shall require the development of Site Specific Traffic Management Plans (SSTMPs) and their approval by the Traffic Management Project Governance Group (as defined by the CTMP), for each construction activity that may affect traffic or transportation infrastructure and services. The SSTMPs shall be provided to the Traffic Management Coordinator(s) for the relevant Road Controlling Authority at least 10 working days prior to each construction activity.
- 36) TT.3 Each SSTMP shall describe the measures that will be undertaken to avoid, remedy or mitigate the local and network wide effects of construction of the Project. In particular, the SSTMP shall include the following matters:
- (a) Traffic management measures to address and maintain, traffic capacity, including bus services, at peak traffic periods during weekdays (6:00 to 9:00 and 16:00 to 19:00) and peak traffic periods at weekends (including Te Atatu Road, Great North Road and Richardson Road);
 - (b) Methods to manage the effects of traffic during construction including the requirement to detour or divert traffic. These methods shall seek to avoid, remedy or mitigate effects on access to and from businesses and other organisations in the area;
 - (c) Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and buses;
 - (d) Methods to avoid, remedy or mitigate the local and network wide effects of the

- (e) Methods to manage the effects of the delivery of construction material, plant and machinery (including cranes and oversized trucks) during construction;
 - (f) Any routes where construction traffic movements will be restricted (either for particular times for construction periods);
 - (g) Measures to maintain existing vehicle access, as far as practicable, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with the Auckland Council and the affected landowner; and
 - (h) Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, where practicable (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours. (This Condition does not act as a qualification to the commitment to maintain access to open space and education facilities, as required in Condition OS.13).
- 37) TT.4 The SSTMPs shall include traffic management measures developed in consultation with the Auckland Transport, Bus and Coach Association and the Auckland Council, to address and maintain, where practicable, existing levels of service for buses particularly at peak periods (6:00 to 9:00 and 16:00 to 19:00) on weekdays.
- 38) TT.5 The NZTA shall consult with the Traffic Operations Manager, Auckland Transport with regard to the most appropriate means for providing access on Council roads within and adjacent to the designation. The NZTA shall also coordinate and consult directly with the proponents of any major construction or major traffic generating event occurring concurrently with, and in the vicinity of the Project.
- 39) TT.6 The SSTMPs shall include measures developed in consultation with Auckland Transport to, as far as practicable, enable continued public walking and cycling passage along the existing Northwestern Cycleway (between Te Atatu Interchange and St Lukes Interchange) and along Great North Road and the public walkway along Oakley Creek, with any interruptions being as short as feasible.

Construction

- 40) TT.7 The NZTA shall undertake construction works so as to avoid significant long duration impacts or the full closure of Te Atatu Road for all road users heading to or from the Te Atatu Peninsula and to ensure that access for emergency service vehicles is maintained.
- 41) TT.8 The NZTA shall restrict construction truck movements during peak hours (6:00 to 9:00 and 16:00 to 19:00) on weekdays and during the peak periods at the weekends to avoid the following:
- (a) Te Atatu Road Interchange, during both morning and afternoon peak hours
 - (b) Great North Road Interchange, city bound during the morning peak hours
 - (c) Great North Road Interchange, west bound onto SH16 and southbound onto Great North road during the afternoon peak.
- Construction truck movements during these hours shall only be allowed under exceptional circumstances agreed in advance with the Traffic Management Project Governance Group.
- 42) TT.9 The NZTA shall maintain at least the existing active traffic lane configuration capacity on

SH16, at the Te Atatu Interchange area, Te Atatu Road, Richardson Road and on Great North Road during peak periods being 6:00 to 9:00 and 16:00 to 19:00 on weekdays and during the peak periods on weekends, for the duration of the temporary construction programme.

- 43) TT.10 The NZTA shall monitor the impact of construction traffic in terms of traffic speeds and volumes on SH16, Great North Road, Te Atatu Road and Richardson Road throughout the construction period to confirm the expected traffic effects as set out in the Temporary Traffic Assessment (Technical Report G.16) submitted with this application.
- (a) This monitoring will be undertaken on a daily, weekly and monthly basis; and
 - (b) Monitoring results will be made available to the Traffic Operations Manager, Auckland Transport on request.
- 44) TT.11 If monitoring undertaken pursuant to Condition TT.10 indicates that traffic volumes or traffic conditions are significantly different from those expected, the SSTMPs will be reviewed and as appropriate amended to the satisfaction of the Traffic Management Project Governance Group.

OPERATIONAL TRAFFIC CONDITIONS

Construction

- 45) OT.1 The NZTA shall prepare in collaboration with Auckland Transport a Network Integration Plan (NIP) for the Project, or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements (identified in the Western Ring Route (Northwest) Network Plan) planned by the Auckland Council. The NIP shall include details of proposed physical works at the interface between the State highway and the local road network, and shall address such matters as pedestrian/ cycle ways, lane configuration, traffic signal co-ordination, signage and provision for buses
- In addition, the NIP will address:
- (a) The commitment of the NZTA to progress bus priority measures northbound on Great North Road as part of the reinstatement of Great North Road, as proposed by Auckland Transport and indicated on the Plans *Great North Road Option 1 Proposed Road Marking* (Schedule A, Row 33), subject to the agreement with Auckland Transport;
 - (b) How the works committed to by the NZTA for pedestrian and cycle ways, as detailed in the PT and Active Mode Transport Routes Plan Set (Condition DC.1(d) (refer Schedule A, Row 22)), integrate with pedestrian and cycle ways on the wider transport network;
 - (c) The Richardson Road Bridge, which shall be designed in general accordance with the structural plans (Schedule A, Row 9) and the commitment of the NZTA to provide a 2m footpath on Richardson Road Bridge, subject to confirming appropriate bus stop locations with Auckland Transport;
 - (d) Integration of the works proposed on Te Atatu Road to appropriately transition between the Waterview Connection Project and any projects being progressed by Auckland Transport;
 - (e) Opportunities to review traffic signal timings at the Te Atatu Interchange with a view to minimising delays to all users, including cyclists on the SH16 cycle way; and
 - (f) The commitment of the NZTA to provide for cycle “aspects” (cycle signal lights) at the Great North Road Interchange.
 - (g) As part of detailed design at the Te Atatu Interchange, the installation of underpasses and/or overbridges, provided however that should same not prove feasible in civil or

Works identified in the NIP which are the responsibility of the NZTA, will be undertaken as at the time of construction works for the Project.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

46) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration inducing construction activities would occur;
- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and after completion of construction works;
- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise mitigation, including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the construction site night works, as defined on the maps (refer Schedule A, Row 35) are notified of such works (i.e. any works during the hours of

- The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

- 47) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 "Acoustics - Construction Noise" and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75
	2000-0630	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

- 48) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration			PPV at horizontal plane of highest floor (mm/s)	Long-term vibration
	PPV at the foundation at a frequency of				
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)	PPV at horizontal plane of highest floor (mm/s)	
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 49) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
- (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 50) CNV.7 Where practicable, permanent (traffic) noise barriers, required in any Sector as Detailed Mitigation Options for operational noise following completion of the Project (in accordance with Conditions ON.3 to ON.5) shall be erected prior to noise generating construction works commencing. Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP, prior to noise generating construction works commencing.
- 51) CNV.8 Pile driving or pile removal shall not be undertaken at night (i.e. during the hours of 20:00 – 06:30).
- 52) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.
- Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for

SSNMPs to be submitted to the Council where an SSNMP is required.

If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.

Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).

NOISE CONDITIONS

General

53) ON.1 For the purposes of Conditions ON.2-ON.14 the following terms will have the following meanings:

- Appendix E – means Appendix E to the Technical Report G.12 ‘Assessment of Operational Noise Effects’ submitted with this application.
- BPO – means Best Practicable Option.
- Building Modification Mitigation – has the same meaning as in NZS 6806:2010.
- Design Year – means a point in time that is 10 years after the opening of the Project to the public
- Emergency Mechanical Services – means mechanical services used for emergency situations only.
- Habitable room – has the same meaning as in NZS 6806:2010.
- Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS 6806:2010 when determining the BPO mitigation option; i.e. Category A - primary noise criterion, Category B - secondary noise criterion and Category C - internal noise criterion.
- NZS 6806:2010 – means NZS 6806:2010 Acoustics – Road-Traffic Noise – New and Altered Roads.
- PPFs – means only the premises and facilities identified in green, yellow or red in Appendix E.
- Structural mitigation – has the same meaning as in NZS 6806:2010.

Pre-Construction

54) ON.2 The NZTA shall implement the traffic noise mitigation measures identified as the “Preferred Mitigation Options” in Appendix E as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix E (“Identified Categories”), where practicable and subject to Conditions ON.3-ON.11 below.

55) ON.3 The detailed design of the structural mitigation measures of the “Preferred Mitigation Options” (the Detailed Mitigation Options) shall be undertaken by a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council prior to construction of the Project, and, subject to Condition ON.4, shall include, as a minimum, the following:

- (a) Noise barriers with the location, length and height in general accordance with Appendix E and designed in accordance with the ULDF (Section B) (refer Schedule A, Row 38); and
- (b) A requirement that Open Graded Porous Asphalt ("OGPA") or equivalent low-noise generating road surface be used on all surface roads throughout the Project, except at

- (c) For the Great North Road Interchange, a requirement that Twin Layer Open Graded Porous Asphalt (“Twin Layer OGPA”) or equivalent low-noise generating road surface be used as shown in Appendix E.
- 56) ON.4 Where the design of the Detailed Mitigation Options identifies that it is not practicable to implement a particular structural mitigation measure in the location or of the length or height included in the “Preferred Mitigation Options”, either:
- (a) If the design of the structural mitigation measures could be changed and would still achieve the same Identified Category at all relevant PPFs, and a suitably qualified expert approved by the Major Infrastructure Team Manager, Auckland Council, certifies to the Auckland Council that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed mitigation measures; or
- (b) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any relevant PPF from Category A or B to Category C but Major Infrastructure Team Manager, Auckland Council confirms that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed structural mitigation measures.
- 57) ON.6 (a) **Sectors 1 to 8** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options:
- i. A noise level increase of 3 decibels or more will occur due to road-traffic noise from the Project; and
- ii. Habitable spaces are likely to receive in excess of 45 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year.
- For those PPFs, following the process set out in Conditions ON.7 to ON.11, it shall be determined which Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces.
- (b) **Sector 9** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options, habitable spaces are likely to receive in excess of 40 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year. For those PPFs, following the process set out in ON.7 and ON.8, it shall be determined if Building Modification Mitigation may be required to achieve 40 dB LAeq inside habitable spaces. For those PPFs where Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces, this shall be implemented following the process set out in ON.9 to ON.11.
- 58) ON.7 (a) Prior to commencement of construction of any sector of the Project in the vicinity of a PPF identified under Condition ON.6, the NZTA shall write to the owner of each-such building seeking access for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.
- (b) If the owner(s) of the building approve the NZTA's access to the property within 12 months of the date of the NZTA's letter (sent pursuant to Condition ON.7(a)), then no more than six months prior to commencement of construction in any sector of the

Construction

- 59) ON.5 The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project.
- 60) ON.8 Where a PPF identified under Condition ON.6 is identified, the NZTA shall be deemed to have complied with Condition ON.7 above where:
- (a) The NZTA (through its acoustics specialist) has visited the building; or
 - (b) The owner(s) of the building approved the NZTA's access, but the NZTA could not gain entry for some reason after repeated attempts; or
 - (c) The owner(s) of the building did not approve the NZTA's access to the property within the time period set out in Condition ON.7(b) (including where the owner(s) did not respond to the NZTA's letter (sent pursuant to Condition ON.7(a) within that period); or
 - (d) The owner(s) of the building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
- If any of (b) to (d) above apply to a particular Building, the NZTA shall not be required to implement any Building Modification Mitigation at that Building
- 61) ON.9 Subject to Condition ON.8, within 6 months of the assessment required under Condition ON.7(b), the NZTA shall give written notice to the owner of each PPF identified under Condition ON.6):
- (a) Advising of the options available for Building Modification Mitigation to the building; and
 - (b) Advising that the owner has three months within which to decide whether to accept Building Modification Mitigation for the building, and if the NZTA has advised the owner that more than one options for building modification mitigation is available, to advise which of those options the owner prefers.
- 62) ON.10 Once an agreement on Building Modification Mitigation is reached between the NZTA and the owner of an affected building, the mitigation shall be implemented (including the NZTA undertaking any required third party authorisation) in a reasonable and practical timeframe agreed between the NZTA and the owner. Building Modification Mitigation shall be to the standard specified in section 8.3.2 of NZS 6806:2010.
- Advice Note: The NZTA will be responsible for obtaining any necessary building consents or other approvals to undertake the above Building Modification Mitigation.*
- 63) ON.11 Subject to Condition ON.8, where Building Modification Mitigation is required, the NZTA shall be deemed to have complied with Condition ON.10 above where:
- (a) The NZTA has completed Building Modification Mitigation to the Building; or
 - (b) The owner(s) of the Building did not accept the NZTA's offer to implement Building Modification Mitigation prior to the expiry of the timeframe stated in Condition ON.9(b) above (including where the owner(s) did not respond to the Requiring Authority within that period); or
 - (c) The owner of the Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

Post-Construction / Operations

- 64) ON.12 The NZTA shall manage and maintain the Detailed Mitigation Options to ensure that, those mitigation works are maintained to retain their noise attenuation performance indefinitely.

Monitoring

- 65) ON.14
- (a) Prior to construction, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake a minimum of 8 (eight) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (b) Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake traffic noise monitoring at the same sites surveyed in Condition ON.14 (a) above, within 2 to 3 years following completion of construction of the Project. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (c) The results of the noise level monitoring in accordance with ON.14(b) above shall be used to verify the computer noise model of the Detailed Mitigation Option. A report describing the findings of the verification shall be provided to the Major Infrastructure Team Manager, Auckland Council within one month of it being completed.

VIBRATION CONDITIONS

Pre-Construction

- 66) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish pre-Project vibration levels for comparison with future vibration levels.

AIR QUALITY CONDITIONS

Pre-Construction

- 67) AQ.1 The NZTA shall finalise and implement, through the CEMP, the Construction Air Quality Management Plan (CAQMP) and Concrete Batching and Crushing Management Plan (CBCMP) submitted with the application.

The CAQMP and CBCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CAQMP and CBCMP includes the following details:

- (a) Daily visual monitoring of dust emissions;
- (b) Procedures for responding to process malfunctions and accidental dust discharges;
- (c) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site;
- (d) Continuous monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;
- (e) Monitoring of the times of detectable odour emissions from the ground;
- (f) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
- (g) Monitoring of construction vehicle maintenance;

- (h) Process equipment inspection, maintenance, monitoring and recording, including baghouses, pressure relief valves and high level alarms;
- (i) Complaints investigation, monitoring and reporting; and
- (j) The identification of staff and contractors' responsibilities.

Construction

- 68) AQ.2 The NZTA shall review the CAQMP and CBCMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition CEMP.13.
- 69) AQ.3 All construction activities shall be operated, maintained, supervised, monitored and controlled at all times so that all emissions authorised by this consent are maintained at the minimum practicable level.
- 70) AQ.4 The NZTA shall undertake construction activities in accordance with the CEMP, CAQMP and CBCMP, such that:
- (a) Hard surfaced areas of the construction yards and active construction areas are vacuum swept or scraped down at least twice each week and additionally as reasonably required;
 - (b) All unsealed areas of the site used for vehicle movement are maintained visibly damp by the use of water sprays or a water cart during weather conditions where the potential for dust emissions exist;
 - (c) Wheel wash systems are installed at all truck exits from unpaved areas of the site onto public roads are used for all trucks that depart from the site;
 - (d) All stockpiles are constructed and positioned to minimise the potential for dust emissions. The surfaces of all stockpiles are maintained adequately damp at all times to minimise the release of particulate matter;
 - (e) Belt conveyors for moving dry materials are fitted with water sprays or enclosed to minimise wind entrainment of dust. Where installed, water suppression is used whenever the conveyors are used for moving dry materials.
- 71) AQ.5 Unless expressly provided for by conditions of this consent, there shall be no odour, dust or fumes beyond the site boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.
- 72) AQ.6 All offensive or objectionable dust beyond the boundary of the site caused as a result of processes on the site shall be mitigated forthwith in accordance with the requirements of the Construction Air Quality Management Plan.
- 73) AQ.7 Beyond the site boundary there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.
- 74) AQ.8 No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.

Monitoring - Construction

- 75) AQ.14 The NZTA shall undertake visual inspections of dust emissions as follows:
- (a) Visual inspections of all active construction areas at least three times daily during October to April inclusive, whenever there are construction activities. The results of visual monitoring shall be logged.
 - (b) Visual inspections of dust emissions from the concrete batching plants and rock

- 76) AQ.15 The operation of water sprays shall be checked at least once each day.
- 77) AQ.16 Continuous monitoring of TSP concentrations shall be undertaken in at least one location in Sector 1, in at least two locations in Sectors 5 and/or 7, and in at least two locations in Sector 9 while construction activities are being undertaken in those Sectors. The locations of continuous TSP monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1:2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment.
- 78) AQ.17 Continuous monitoring of wind speed and direction shall be undertaken in at least one location in each of Sector 1, Sectors 5 or 7 and Sector 9 while construction activities are being undertaken in those Sectors. The locations of wind speed and direction monitors shall, as far as practicable, comply with the requirements of AS 2923:1987 Ambient Air – Guide for the Measurement of Horizontal Wind for Air Quality Applications and be at the same locations as the TSP monitors required by Condition AQ.16.
- 79) AQ.18 The locations and types of continuous TSP and meteorological monitoring sites required by Conditions AQ.16 and AQ.17 shall be selected by the NZTA in consultation with the Auckland Council.
- In the event of a failure of the monitoring equipment, this shall be repaired or replaced within 2 working days.

Reporting - Construction

- 80) AQ.19 All records, logs, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an Auckland Council enforcement officer and shall be kept for the duration of the consent.
- 81) AQ.20 If the monitoring required by Condition AQ.16 shows that concentrations of TSP in ambient air at or beyond the boundary of the site exceeds 80 micrograms/m³ as a 24-hour average, the NZTA shall undertake an investigation into the cause of the exceedance in accordance with the CAQMP.
- 82) AQ.21 A report into the outcome of any investigation required by Condition AQ.20 shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 10 working days of the exceedance. If the cause of the exceedance is identified as being an activity undertaken on the site, the report shall also identify additional measures to be taken to reduce discharges of particulate matter into air from that activity.
- 83) AQ.22 Log books shall be maintained that record all relevant information that is required to demonstrate compliance with the conditions of this consent. This information shall include, but is not limited to:
- (a) Visual assessments of any dust emissions from the site and the source;
 - (b) Any dust control equipment malfunction and any remedial action taken;
 - (c) When a water cart was used and, if so, the frequency of use and the volume of water used (including identification of location);
 - (d) All relevant details of the TSP and meteorological monitoring required by Conditions AQ.16 and AQ.17;
 - (e) Any additional dust control measures undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.
- 84) AQ.23 The NZTA shall maintain a log of any complaints received relating to air quality. Details of each complaint received shall be forwarded to the Major Infrastructure Team Manager,

Auckland Council within 24 hours of receipt of the complaint. The log shall include any complaints lodged with the Auckland Council where the Council has informed the NZTA of the complaint. The log shall include, but not be limited to the following:

- (a) The date, time, location and nature of the complaint;
- (b) Weather conditions at the time of the complaint (including approximate wind speed, wind direction, cloud cover);
- (c) Any possible other contributing factors (such as a fire, smoky vehicle, a local chimney emission, etc.);
- (d) The name, phone number and address of the complainant (unless the complainant elects not to supply these details);
- (e) Any remedial actions undertaken; and
- (f) The date and time of the entry and the signature of the person entering the information.

LANDSCAPE AND VISUAL CONDITIONS

Pre-Construction

- 85) LV.1 The Urban Design and Landscape Plans (UDL Plans) (Plan Set F.16, refer Schedule A, Row 17) shall be reviewed and revised in accordance with the conditions and submitted to the Major Infrastructure Team Manager, Auckland Council for certification that they comply with the conditions of the consents/ designation prior to construction of the relevant Project stage, at least 20 working days prior to the commencement of construction.

The UDL Plans shall be updated to:

- (a) Reflect relevant details from the PT and Active Mode Transport Routes Plan Set (Schedule A, Row 23);
- (b) Remove the playing field at Waterview Reserve;
- (c) Confirm the reconfigured bund design at Alwyn Avenue (Schedule A, Row 42);
- (d) Reflect landscaping required in relation to the northern vent stack in Waterview Glades pursuant to Conditions DC.8.

- 86) LV.2 In certifying the UDL Plans, prepared in accordance with Condition LV.1, the Major Infrastructure Team Manager, Auckland Council shall be satisfied the UDL plans includes:

- (a) The visual mitigation of infrastructure as detailed in Section B of the UDLF (refer Schedule A, Row 38).
- (b) Incorporation of art or art through design of structures, particularly as it relates to noise barriers and the Great North Road Interchange piers and ramps (Refer to clauses (g) and (i) below).
- (c) Planting to screen houses and noise walls (including cross section details);
- (d) Planting along the corridor on Traherne Island, in accordance with these conditions and the Ecological Management Plan;
- (e) Specimen planting on the Great North Road Interchange and the Te Atatu Road Interchange;
- (f) Specimen planting at the tunnel portals (except where this is within the OPW area);
- (g) Finalisation of the noise barriers (as required by Condition ON.3(a)) in accordance with the design principles for noise walls (refer Schedule A, Row 32);
- (h) Delineation of the final areas of the Open Space Restoration Plans in accordance with the Open Space Restoration Plans (Schedule A, Row 30), and reference that all works

- (i) Oakley Inlet Heritage Plan, prepared in accordance with Conditions OS.5, and in particular, consideration shall be given to the design treatment of the Great North Road Interchange piers and ramps to take into consideration the impact of the structures on the visual quality of the open space beneath;
- (j) Ecological Management Plan, prepared in accordance with Conditions V.1, A.1, H.1, F.1 and M.1;
- (k) Western Ring Route: Maioro Street Interchange and Waterview Connection - Oakley Creek Rehabilitation and Restoration Guidelines (Boffa Miskell, 2010); and
- (l) Details of artworks or art through design of structures within the Project (e.g. design detailing of median barriers, bridge railings, safety barriers, piers, retaining walls and tunnel portals), in accordance with Section B of the Urban Landscape and Design Framework (UDLF June 2010) (refer Schedule A, Row 38) and F.8:Plans of Structures and Architectural Features, but excluding the north and south ventilation buildings, plans sections and elevations.

87) LV.8 The NZTA shall ensure that any areas within the designation affected by construction activities have sub-soil rehabilitated and top-soil replaced so that the hydrological response including the volume of stormwater runoff generated is as close as practicable to the predevelopment situation. The methodologies to achieve this shall be documented and provided to the Major Infrastructure Team Manager, Auckland Council with the revised ULD Plans submitted pursuant to Condition LV.1.

88) LV.10 The UDL Plans shall identify all Amenity Trees required to be removed over the construction of the Project (in accordance with Condition CEMP.6(o) and (p)). Replacement trees shall be sized at 160Lt and will either draw from the Coastal Forest or Basalt Rock Forest ecotypes listed in the Landscape Planting Schedules (provided in F.16, refer Schedule A, 17) or an agreed alternative species (confirmed by Major Infrastructure Team Manager, Auckland Council), except in the case of those trees subject to Condition ARCH.9.

Advice note: This does not necessary apply to any replacement planting in the Open Space Restoration Plan areas, which will be confirmed in approval from Auckland Council and will be in accordance with relevant Auckland Council Park guidelines (see Condition OS.4).

Post-Construction / Operations

89) LV.3 The NZTA shall have implemented the UDL Plans within 6 months of practical completion of construction of the Project.

90) LV.4 The landscaping shall be implemented in accordance with the UDL Plans within the first planting season following the completion of the construction works, provided that climatic conditions are suitable, otherwise at the first practicable opportunity thereafter, and shall be maintained for a period of 10 years thereafter. Should the landscaping be implemented in stages (depending on construction phases), landscaping shall be implemented in accordance with this Condition for each stage unless subsequent construction staging requires use of the proposed landscaping area.

Advice note: On-going control and management of the landscaping within the designation is the responsibility of the NZTA.

91) LV.5 The NZTA shall implement the UDL Plans taking into account the pest plant management guidelines detailed in the Ecological Management Plan (as required by Condition CEMP.3).

92) LV.6 The UDL Plans shall make provision for close planting of fast growing native shrubs or small trees (Griselina, Karo, Tarata or similar) along the security boundary of Construction

Yard 1 facing Te Atatu Road. This planting shall be implemented prior to operational use of the yard and maintained in a healthy state for the duration of the works programme. Such planting shall occur at no greater than 1.0m centres and shall comprise plants that are Pb28 or larger at the time of planting.

- 93) LV.11 The UDL Plans shall make provision for the rehabilitation of McCormick Green at the completion of the SH16 construction works and removal of the construction stormwater pond. Works will be in general accordance with the UDL Plans 202 and 203, (Refer Schedule A, Row 17), providing for replacement Amenity Tree planting in accordance with Condition LV.10 above.

OPEN SPACE CONDITIONS

General

- 94) OS.1 For the purposes of Conditions OS.2 – OS.15 the following terms will have the following meanings:

- Full size – means a football (soccer) field with the dimensions 100m x 60m.
- Half size – means a football (soccer) field with the dimensions less than 100m x 60m but no smaller than 50m x 30m.
- Toddler – means a playground specifically designed for children between the ages of 1 and 3
- Junior – means a playground specifically designed for children between the ages of 4 and 8
- Youth – means a playground specifically designed for children between the ages of 9 – 14 years
- Open Space Restoration Plans – means those plans listed in Schedule A, row 30.
- Open for Play - means the sports field has a level surface and a dense weed-free sward of mature grass, goal posts and lighting if indicated in the Open Space Restoration Plans approved by the Auckland Council.
- Sand - carpeted - means the field has been levelled and irrigated, and conventional sub-soil drains, slit drains and a 50mm deep sand carpet have been installed. The field has been stolonised with a warm season grass such as kikuyu or couch.
- Auckland Council Park Guidelines – means the document by Auckland City Council titled “Furnishing our parks: design guidelines for park furniture”, dated September 2009
- Park furniture – means those items described in the Auckland Council Park Guidelines
- AS2560 – means the Australia New Zealand Standard for lighting of sports fields.
- AS4282 – means the Australia New Zealand Standard for the control of the obtrusive effects of outdoor lighting.
- Way finding exercise – means a process for determining the number, size, location and content of signage to provide clear direction for all park users.
- Skate-park for the purpose of conditions os.5(b)(iii) means a skate park with a size of approximately 1,400 sq. m. (generally 25 wide x 55m long), incorporating a range of design variations. Suitable for beginners (providing training facilities to develop their skills) but primarily catering for intermediate to advanced level skaters.
- BMX bike track for the purpose of condition OS.5(b)(iii) means a low maintenance, non-competition BMX bike track, incorporating a range of design variations.

Construction

- 95) OS.2 The NZTA shall prepare Open Space Restoration Plans to outline how the open space replacement land, as defined in the Open Space Restoration Plan Areas (Schedule A, Row 30) (including land occupied during construction) will be reinstated or replaced on completion of construction, for handover to Auckland Council and those areas identified in Condition DC.1A(f) and RC.3(f).
- Following the consultation detailed in Condition OS.3 below, the Open Space Restoration Plans listed in Condition OS.3(a) to (f) shall be submitted within 12 months of construction commencing in the specific areas affecting the reserves or within 12 months of occupation of open space, whichever is the sooner, to the Major Infrastructure Team Manager, Auckland Council.
- Advice note: Conditions OS.9 and OS.10 require certain works to be provided prior to occupation of Construction Yards 6 and 7 (Waterview Reserve) and Construction Yards 9-12 (Alan Wood Reserve) and this may impact on the timing of Open Space Restoration Plans for these areas.*
- 96) OS.3 The Open Space Restoration Plans shall be prepared in consultation with the Auckland Council, Iwi, the Community Liaison Groups (Condition PI.5), NZHPT, and other recreation users and other user representatives identified by Auckland Council. The Open Space Restoration Plans shall comprise the following specific plans:
- (a) Waterview Reserve Restoration Plan;
 - (b) Alan Wood Restoration Plan (including Hendon Park and 25 Valonia Street);
 - (c) Oakley Creek Esplanade (Waterview Glades) Restoration Plan;
 - (d) Jack Colvin Park Restoration Plan;
 - (e) Rosebank Domain Restoration Plan;
 - (f) Harbourview-Orangihina Reserve Restoration Plan.
 - (g) The areas of the Open Space Restoration Plans are shown in the Open Space Restoration Plan Areas (Refer Schedule A, Row 30).
- 97) OS.4 All Open Space Restoration Plans shall be prepared in general accordance with the UDL Plans (Schedule A, Row 30), and shall include, but not be limited to, the following:
- (a) Details of, including the location, of any artworks and educational signage, and directional signage. In the case of Alan Wood Reserve, Waterview Reserve and Oakley Creek Esplanade (Waterview Glade) this shall include a “way-finding exercise” in accordance with Auckland Council practice, to determine all signage to be provided; and
 - (b) Evidence of integration with the Oakley Creek restoration works required under Conditions STW.5, STW.20, V.16 and LV.2(i); and a summary of the consultation undertaken (as required by Condition OS.3) and the response received; and
 - (c) Details of any vehicle access through the reserves and parking areas; and
 - (d) Park furniture (including quantity and quality) to be provided in accordance with relevant Auckland Council Park guidelines, except for:
 - (i) The riparian area within Alan Wood Reserve where the only furniture required is a maximum of 10 seats; and
 - (ii) Oakley Creek Esplanade (Waterview Glades) where the only furniture required is replacement of 3 existing seats; and
 - (e) The inclusion and integration of the design for all pedestrian and cycleway linkages

- (f) Implementation programme, including sequencing of works and completion dates. This shall include works that could be implemented prior to practical completion of construction works or are outside the Project area (e.g. upgrading of the Waterview Esplanade Reserve set out in Condition OS.5(b)(vii);
- (g) Implementation programmes for planting and field reinstatement. This shall include:
 - (i) A 12 month maintenance period for built structures and soft landscaping; and
 - (ii) For any landscaping accessible to horses an assessment to demonstrate that the planting schedule is not toxic to horses and that consultation on this has been undertaken with the Te Atatu Pony Club;
- (h) The specific requirements for each Restoration Plan area as set out in Conditions OS.5 – OS.8;
- (i) Documentation of consultation undertaken required by Condition OS.3 and the views and concerns expressed by this consultation and the written approval of the Manager Community and Cultural Policy.

Advice note: For the avoidance of doubt provision of (a) to (h) above will require elevations, cross sections, engineering drawings and written documentation to supplement the UDL Plans. It is also noted that the UDL Plans identify landscaping, planting and other works beyond the Open Space Restoration Plans (refer Conditions LV.1 – LV.6, LV.9 and LV.10). Educational signs and artworks are particularly encouraged.

98) OS.8 In preparing the Jack Colvin Park Open Space Restoration Plan, equivalent reinstatement of the benched seating area will be offered to Auckland Council.

99) OS.13 During construction, the NZTA shall maintain pedestrian accessways to all open space available for public use during construction and education facilities where access is affected by the works, including any public access that crosses private land. Such access shall be safe, clearly identifiable, provide appropriate surfacing and seek to minimise significant detours. The access shall be of a same or similar standard as that disrupted and will be provided and maintained by the NZTA.

Advice note: This specifically includes the existing pedestrian access that provides a connection to the crossing over Oakley Creek between 1510 Great North Road and Unitec Mt Albert Campus.

SOCIAL CONDITIONS

Pre-Construction

- 100) SO.1 In addition to the Community Liaison Groups established pursuant to Condition PI.5, the NZTA shall establish an Education Liaison Group (including representatives from local schools, kindergartens, childcare facilities, Unitec Institute of Technology, the Ministry of Education and Housing New Zealand Corporation), to provide a forum through which:
- (a) Relevant monitoring data can be provided (e.g. air quality monitoring);
 - (b) Notice can be provided of when particularly noisy activities will occur in close proximity to schools and education facilities, to enable the opportunity to identify any potential conflict with particular sensitive periods, and the requirement for specific mitigation strategies (e.g. rescheduling of construction activities where practicable);
 - (c) Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed;
 - (d) Notice can be provided of potential construction impacts on school transport routes

- (e) Learning and teaching opportunities for educational facilities to participate in Project works (e.g. planting or artworks).

The Education Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period. The Education Liaison Group shall continue to meet for at least 12 months following the completion of the Project (or less if the members of the Education Liaison Group agree), so that ongoing monitoring information can continue to be disseminated.

- 101) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:

- (a) Auckland Council;
- (b) Housing New Zealand Corporation;
- (c) Te Kawerau Iwi Tribal Authority;
- (d) Ngati Whatua o Orakei;
- (e) KiwiRail;
- (f) Department of Conservation;
- (g) Ministry of Education; and
- (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to the Auckland Council);
- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

- 102) SO.7 A schedule of trees that require removal for construction of the Project will be identified and reported to the Community Liaison Group for their consideration of potential provision of timber for heritage projects (including in particular the provision of *Robinia* wood for heritage boat building). If the demand for this timber is identified to the Construction Team, appropriate measures for felling and removal from the site will be confirmed.

- 103) SO.8 The NZTA will provide financial support to Te Atatu Pony Club over the period of

occupation of Construction Yard 1 for additional feed supplement required as a consequence of the area of lost grazing. Support will be paid on receipt of proof of purchase up to a maximum of \$12,000/yr and excluding any existing feed purchase that is required by the club (e.g. the amount of additional feed purchased in the 2010 and 2011 years, when the club had full use of the proposed construction yard 1).

Except this condition will be amended if additional grazing land becomes available or is provided by the Auckland Council (Areas A and B identified in the Henderson Massey Local Board Minutes, dated 7 April 2011). In this instance, providing the forage on that pasture is suitable for food for horses, the amount payable would be pro-rated based on the shortfall in area from the 'pre-construction' lease area only.

- 104) SO.10 Subject to any necessary consent and landowner approvals, the NZTA will construct a raceway on the alignment shown on the Plan 'Te Atatu Interchange': Construction Yard 1, including annotations (see Schedule A, Row 34). The raceway shall be not less than five metres wide and enclosed on both sides by timber rail fencing.
- 105) SO.11 The NZTA shall form a level, grassed area having approximate dimensions of 90 metres by 170 metres suitable for the exercise of horses, within the general location shown on the Drawing 'Te Atatu Interchange': Construction Yard 1 (see Schedule A, Row 34). Except this condition will cease to have effect if other adjacent land becomes available or is provided by the Auckland Council to the Te Atatu Pony Club for the duration of the NZTA's occupation of the land for Construction Yard 1 (for example, if the Areas A and B identified in the Henderson Massey Local Board Minutes, dated 7 April 2011 are made available).
- 106) SO.12 The NZTA shall comply with the obligations offered by the NZTA in its letter to the Te Atatu Pony Club, 21 March 2011, including the following:
- (a) Development of a Construction Yard Plan in consultation with the Te Atatu Pony Club and the Auckland Council to minimise the impacts on ponies and horses which will address:
- (i) The location, timing and monitoring of construction yard activities which could affect ponies and horses; and
 - (ii) Confirm the programme of key events in the Te Atatu Pony Club calendar so that, any construction yard activities with the potential to cause disruption can be rescheduled; and
 - (iii) Confirm communication protocols between the NZTA and its contractors and the TAPC;
- Advice notes:
- The attention of NZTA and the club is drawn to the PI suite of conditions concerning communication, consultation, and liaison.*
- (b) Subject to any necessary consent and landowner approvals, undertake the following works (where relevant, these works are to be in accordance with the details identified on the plan Te Atatu Interchange: Construction Yard 1 (see Schedule A, Row 34)):
- (i) Relocate existing water troughs (and their supply lines), trees (in accordance with Condition CEMP.6(n) and CEMP.6(o)) and horse jumps located within the construction yard to elsewhere in the remaining area leased by the Te Atatu Pony Club;
 - (ii) Provide surface water drainage for the south western paddock adjacent to the Motorway (SH16).

Construction

- 107) SO.2 In addition to Condition SO.1(b) above, where noisy construction activities (that are projected to exceed the Noise Criteria in the CNVMP) are proposed in close proximity or adjacent to schools/ childcare centres, the NZTA shall, when preparing their SSNMP (in accordance with Condition CNV.1) give specific consideration to options to carry out these works outside school hours or during school holidays as a mitigation option.
- 108) SO.9 The NZTA will provide annual financial support to Te Atatu Pony Club for monies lost from the 'One Day Events' held on the Harbourview - Orangihina Park, calculated on the basis of average annual funds derived from such events over the Feb 2008 to Feb 2011 years (up to a limit of \$8,000). This payment will be over the period from the contractor's occupation of Construction Yard 1 to the confirmation of the Open Space Restoration Plan (required by Condition OS.2 –OS.4). If the Open Space Restoration Plan for Harbourview - Orangihina Park confirms that the Pony Club will be reinstated on the site, then payment will continue up until restoration is completed to the satisfaction of Auckland Council.

VEGETATION CONDITIONS

General

- 109) V.10 Any planting utilising native plants shall use plants genetically sourced from the Tamaki Ecological District where possible or otherwise shall use plants that have been genetically sourced from within the Auckland Ecological Region.

Pre-Construction

- 110) V.1 The NZTA shall finalise the ECOMP submitted with this application, prior to works commencing on site. The ECOMP shall be implemented through the CEMP. The ECOMP shall clearly identify the location and identity of:
- (a) All Significant Vegetation within the designation that is to be fully protected or relocated; and
 - (b) All Valued Vegetation within the designation that is affected by the works (protected or removed).
- Note: Significant and Valued Vegetation shall be as defined in the ECOMP.
- 111) V.2 The NZTA shall employ a suitably experienced botanist ('nominated botanist') for the duration of the works to monitor, supervise and direct all works affecting or otherwise in close proximity to the Significant Vegetation and Valued Vegetation identified in the ECOMP.
- 112) V.3 Prior to any site works commencing, a pre-commencement site meeting shall be held so that the conditions that pertain to the Significant Vegetation and Valued Vegetation and all vegetation in general (both native and exotic) are explained by the nominated botanist to all contractors or sub-contractors who will be working on site within the close vicinity of that vegetation.

Construction

- 113) V.4 The NZTA shall minimise the amount of vegetation (both native and exotic) which is to be cleared, with the exception of weeds (both woody and otherwise, unless agreed with the Major Infrastructure Team Manager, Auckland Council and the Community Liaison Group that the retention of these 'weeds' has other environmental or ecological benefits that warrant their retention). All vegetation clearance shall be undertaken in accordance with the measures set out in the ECOMP.

- 114) V.5 The NZTA shall install protective fencing around, or otherwise clearly demarcate, all of the Significant Vegetation identified in the ECOMP as requiring full protection, under the supervision of the nominated botanist.
- 115) V.6 The NZTA shall replace any terrestrial Valued Vegetation that is required to be removed as a result of construction activities, in accordance with the ECOMP and the Urban Design and Landscape Plans.
- 116) V.7 The nominated botanist shall supervise all trimming, pruning and relocation work associated with the Significant Vegetation and Valued Vegetation required as part of the works.

Monitoring

- 117) V.8 Immediately prior to planting, and for a period of 2 years following completion of construction, the NZTA shall undertake weed control and management of all invasive plant pests within the vegetated areas of the surface designation for the Project. Following this 2 year period, on-going control and management of all invasive plant pests within these areas will be the responsibility of the NZTA.
- 118) V.9 The nominated botanist shall undertake a monitoring programme throughout the construction period, including monitoring of:
- (a) The condition, repair and location of the temporary protective fencing or other forms of demarcation used to identify the Significant Vegetation;
 - (b) Any works within the vicinity of the Significant Vegetation and Valued Vegetation;
 - (c) The general health of the Significant Vegetation and Valued Vegetation (including any Significant or Valued Vegetation that has been relocated away from the works area); and
 - (d) Compliance with the vegetation conditions of designation by way of fortnightly inspections during the construction period.

AVIAN CONDITIONS

Pre-Construction

- 119) A.1 The NZTA shall finalise, and implement through the CEMP, ECOMP submitted with this application to include the matters set out in Conditions A.2 to A.6.

Monitoring

- 120) A.3 The NZTA shall employ a suitably qualified ecologist to undertake monitoring of the roosting areas located at:
- (a) The existing high tide roost in Harbourview-Orangihina Park; and
 - (b) The temporary construction roosting structure(s) pursuant to Condition A.2.
- Monitoring shall be undertaken on a monthly basis, with a monitoring report prepared on a quarterly basis. The monitoring report shall be made available to the Major Infrastructure Team Manager, Auckland Council and Department of Conservation upon request.
- 121) A.4 Should the monitoring results indicate that the roosting sites have been abandoned, consultation shall be undertaken with the Department of Conservation and the Major Infrastructure Team Manager, Auckland Council to determine the need for and type of further management strategies (if any) required.

HERPETOFAUNA CONDITIONS

Pre-Construction

- 122) H.1 The NZTA shall finalise and implement through the CEMP, the ECOMP submitted with this application to include details of lizard management to be undertaken, including the following:
- (a) Lizard capture methodology, including timing;
 - (b) Lizard release locations(s);
 - (c) Lizard habitat enhancement at population release sites, including a detailed pest control programme for a minimum of one month prior to release and for a minimum of three consecutive years' duration after release;
 - (d) Location(s), monitoring and maintenance of lizard protective fencing;
 - (e) Post-release monitoring methodology; and
 - (f) Lizard captive management methodology.

LIGHTING CONDITIONS

Pre-Construction

- 123) L.2 A Temporary Construction Lighting Management Plan shall be prepared for all construction zones and construction yards prior to commencement of any night time works within the construction zones and construction yards. The Temporary Construction Lighting Management Plan shall be independently verified by a lighting specialist and provided to the Major Infrastructure Team Manager, Auckland Council for certification of compliance 10 working days prior to any night time work commencing.

The certification process shall ensure that the Plan includes (but is not be limited to):

- a) The layout and arrangement of all temporary lighting required for night time works, and shall show how this avoids the "Light Spill Restriction Zone" identified on the Construction Yard Plans (Refer Schedule A, Row 7) submitted with the application, and that the temporary lighting complies with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - b) Provision for a 10m buffer between the night time work and any residential boundary at all times to minimise potential for light spill; and
 - c) General operating procedures outlined in the CEMP.
- 124) L.3 Asymmetrical floodlights with horizontal glass visors that are not raised more than 3 degrees above the horizontal plane shall be used for any temporary construction night time lighting requirements. Alternative temporary lighting arrangements may be used, subject to the prior approval of the Major Infrastructure Team Manager, Auckland Council, where it can be demonstrated that the proposed lighting is similar or better to asymmetrical floodlights with glass visors. Glare shall be kept below the recommendation given in AS 4282 – 1997 "Control of the Obtrusive Effects of Outdoor Lighting" Tables 2.1 and 2.2.

Post-Construction / Operations

- 125) L.1 Lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas, in general accordance with the Waterview Connection Lighting Plan (Drawing Set F.11 (Refer Schedule A, Row 12):
- a) All motorway lighting shall be designed in accordance with "Roadlighting Standard AS/NZS1158";
 - b) All other lighting shall be designed in accordance with relevant rules provided in Rule

- c) Fully cut off luminaries shall be used on SH20 from the Southern Tunnel Portal to the Maoro Street Interchange to minimised lighting overspill, as shown on Drawing Set F.11(Refer Schedule A, Row 12).

ARCHAEOLOGY CONDITIONS

Pre-Construction

- 126) ARCH.1 The NZTA shall complete, and implement through the CEMP, the Archaeological Site Management Plan (ASMP) submitted with the notice of requirement, to include, but not be limited to:
- a) Identification of the Project archaeologist, their role and responsibility on the Project;
 - b) Who reports to the Project archaeologist;
 - c) Specific sites requiring supervision, and measures to be undertaken to protect and manage these sites;
 - d) Whether NZHPT and/or Auckland Council heritage and/or iwi supervision is required for the specific site (the latter to be determined through consultation with the relevant iwi groups); and
 - e) Accidental discovery protocols in the event that unknown archaeological sites are uncovered.
- 127) ARCH.2 The NZTA shall employ at its expense a qualified archaeologist (the Project archaeologist) who shall be on site to monitor all initial earthworks, including surface stripping of the site, for all specific areas identified in the ASMP to establish whether any sub-surface archaeological features are present. This includes, but is not limited to, the following areas:
- (a) All unmodified areas in the vicinity of Rosebank Road;
 - (b) All works in the vicinity of the “Oakley Inlet Heritage Area”, located adjacent to the Great North Road Interchange;
 - (c) Works in the vicinity of two midden sites (recorded R11/2214 and R11/2215) within Great North Road Interchange, and all previously unmodified areas near the banks of the Oakley Inlet;
 - (d) Any ground disturbance works in Construction Yard 7 within Oakley Creek Reserve.
- 128) ARCH.8 All contractors and subcontractors working on the Project shall be trained on the archaeological requirements set out in the ASMP.
- 129) ARCH. *Any archaeological sites within the area affected by the Project shall not be modified or disturbed in any way unless written authorisation has been obtained from the NZ Historic Places Trust.*
Advice
Note

Construction

- 130) ARCH.3 If any archaeological sites, including human remains are exposed during site works, then the following procedures shall apply:
- (a) Immediately it becomes apparent that a possible archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease;
 - (b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are untouched and notify the Project archaeologist;
 - (c) The Project archaeologist shall inspect the site to assess the relevance of the find, and

- (d) If the site is confirmed to be an archaeological site by the Project archaeologist, the site supervisor shall then notify tangata whenua, the New Zealand Historic Places Trust, and the Auckland Council that an archaeological site has been exposed so that appropriate action can be taken;
- (e) In the case of human remains, the NZ Police shall be notified.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 131) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.

Construction

- 132) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 133) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5 working days of identification of any contamination at the site which was not identified in the reports submitted in support of this application, including contaminated soil, surface water or groundwater.
- 134) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 135) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.
- 136) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Post-Construction / Operation

- 137) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;

- (b) Volumes of soil removed from site;
- (c) Copies of the waste disposal receipts; and
- (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works.

FRESHWATER CONDITIONS

Pre-Construction

- 138) F.1 The NZTA shall finalise, and implement through the CEMP, the ECOMP submitted with this application. The ECOMP shall be updated to ensure compliance with the conditions of this consent and include changes to the details of construction processes prior to construction commencing. The ECOMP shall include, but not be limited to details of:
- (a) Monitoring of freshwater ecology;
 - (b) Monitoring of freshwater and stream sediment quality;
 - (c) Trigger event criteria for undertaking additional monitoring;
 - (d) Procedures for responding to accidental discharges of contaminants to the freshwater environment; and
 - (e) Contingency plans and/or remedial measures in the event monitoring results identify adverse effects.

Monitoring

- 139) F.2 The NZTA shall engage a suitably qualified ecologist and water quality scientist to undertake freshwater monitoring programme prior to, during and following construction to monitor the effect of the Project on the freshwater ecology. The freshwater monitoring shall be undertaken in Oakley Creek, Pixie Stream and Meola Creek. The freshwater monitoring programme shall be undertaken in accordance with the details set out in the ECOMP and include:
- (a) Cross sectional profiles;
 - (b) Macro invertebrate sampling; and
 - (c) Freshwater fish monitoring.
- 140) F.3 The freshwater monitoring programme shall, as a minimum, be undertaken in accordance with the following frequency:
- (a) Prior to construction – two baseline ecological surveys.
 - (b) During construction – twice per year for fish and macro invertebrates and cross sectional profiles, within one month prior to the beginning of the earthworks season and within one month either side of the end of the earthworks season.
 - (c) Post construction – on an annual basis for a maximum period of three years, or less if the Major Infrastructure Team Manager, Auckland Council is satisfied that no adverse effects have occurred or are likely to occur from the Project.
 - (d) Monthly water quality samples at the five existing Oakley Creek sample locations to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb) and nutrients.
 - (e) Four “event based” samples per annum from each of the current two Oakley Creek sites. The samples are to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb), hydrocarbons (TPH) and nutrients.
 - (f) Two sediment quality samples per annum (January and July) at the five existing water quality Oakley Creek sites (if there is sufficient sediment to sample). The samples are to be analysed for metals (Zn, Cu and Pb), polycyclic aromatic hydrocarbons (PAH),

Advice note: The sample collection and analysis required under sub-clauses (d) to (f) shall be undertaken following an IANZ accredited methodology by a suitably accredited laboratory (International Accreditation New Zealand).

141) F.4 The NZTA shall undertake additional freshwater monitoring in the event of a 'trigger event' for freshwater habitats. For the purposes of this consent, a 'trigger event' for freshwater habitats is defined in the ECOMP.

142) F.5 The NZTAs ecologist/hydrologist (required by condition F.2) shall review, every six months, the freshwater monitoring results, provided from Conditions F.2 to F.4, and results in monitoring detailed in earthworks Conditions E.9 and E.19 and Groundwater Condition G.10. In the event that potential adverse effects are identified, including through review of the Condition G.10 monitoring results by the hydrologist and freshwater ecologist required by Condition G.12, the NZTA shall develop and submit for the approval of the Major Infrastructure Team Manager, Auckland Council appropriate contingency plans and/or remedial measures in accordance with the measures set out in the ECOMP.

Reporting

143) F.6 Freshwater monitoring reports shall be compiled from the monitoring undertaken pursuant to Conditions F.2 to F.4 and the review of Condition F.5, and a report provided to the Major Infrastructure Team Manager, Auckland Council every 6 months.

EPA 10/2.003 – (ACC: Plan Modification 202)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type: Designation

Description: To alter designation A07-01, SH16, causeway and Rosebank Peninsula – NOR2. Alteration to existing designation at Rosebank Interchange and Patiki bridges, including part of Rosebank Park Domain; modifications to land on existing causeway, ancillary safety and operational services, and maintenance, relocation of services, pedestrian and cycleway, landscaping and planting etc.

Lapse Period: 10 years

Code:

DC =	General Designation Conditions	LV =	Landscape and Visual Conditions
CEMP =	Construction Environmental Management Plan Conditions	OS =	Open Space Conditions
PI =	Public Information Conditions	SO =	Social Conditions
TT =	Temporary Traffic Conditions	V =	Vegetation Conditions
OT =	Operational Traffic Conditions	A =	Avian Conditions
CNV =	Noise and Vibration Conditions – Construction	H =	Herpetofauna Conditions
ON =	Noise Conditions – Operation	L =	Lighting Conditions
OV =	Vibration Conditions – Operation	ARCH =	Archaeology Conditions
AQ =	Air Quality Conditions – Construction	CL =	Contaminated Land and Contaminated Discharge Conditions

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
 - (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part F: Plans and Drawings, except as updated through the hearing (Refer Schedule A for current plan and drawing references); and
 - (c) Waterview Connection Project. Assessment of Environmental Effects Report (dated

- (i) Technical Report G.1 Assessment of Air Quality Effects
 - (ii) Technical Report G.2 Assessment of Archaeological Effects
 - (iii) Technical Report G.3 Assessment of Avian Ecological Effects
 - (iv) Technical Report G.4 Assessment of Coastal Processes
 - (v) Technical Report G.5 Assessment of Construction Noise Effects
 - (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
 - (vii) Technical Report G.7 Assessment of Groundwater Effects
 - (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
 - (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
 - (x) Technical Report G.10 Assessment of Lighting Effects
 - (xi) Technical Report G.11 Assessment of Marine Ecological Effects
 - (xii) Technical Report G.12 Assessment of Operational Noise Effects
 - (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
 - (xiv) Technical Report G.14 Assessment of Social Effects
 - (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
 - (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
 - (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
 - (xviii) Technical Report G.18 Assessment of Transport Effects
 - (xix) Technical Report G.19 Assessment of Vibration Effects
 - (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
 - (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
 - (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
 - (xxiii) Technical Report G.23 Coastal Works
 - (xxiv) Technical Report G.24 Geotechnical Interpretive Report
 - (xxv) Technical Report G.25 Traffic Modelling Report
 - (xxvi) Technical Report G.26 Operational Model Validation Report
 - (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement
 - (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series
 - (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
 - (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
 - (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)
- (d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).
- (e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:
- (i) Evidence in Chief (Numbers 1-37)
 - (ii) Rebuttal Evidence (Numbers 1-33)
 - (iii) Supplementary Information (Numbers 1-8)

- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.

- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.
- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.
- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.
- If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.
- The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.
- Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.*
- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.
- Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and southern ventilation buildings and stacks where further details are required.*
- 7) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.
- 8) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 9) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions, whichever is the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major

Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and 3938);
- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8)); and
- (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.

Post-Construction / Operations

- 10) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
 - (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway
Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.
 - (b) The designation to be altered to remove those conditions no longer required for long term operation and maintenance of the Project.

Monitoring

- 11) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 12) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.
- Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.*
- Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.*
- 13) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.
- 14) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
 - (e) Environmental complaints management (including the procedures required under Condition PI.4);
 - (f) Compliance monitoring;

- (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
 - (h) Environmental auditing; and
 - (i) Corrective action.
- 15) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:
- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
 - (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
 - (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).
- 16) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:
- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
 - (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
 - (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloos);
 - (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

- (h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007);
- 17) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from residential dwellings, taking into account site and public safety and environmental constraints, in the locations shown on Waterview Connection Project Construction Yards Drawings (Refer Schedule A, Row 7);
 - (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 18) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 19) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.
- 20) CEMP.14 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). The EISDCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council, and include:
- (a) Methods and measures:
 - (i) 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.
 - (ii) 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
 - (iii) 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.
 - (iv) 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.

- (b) 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.
- (c) 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:
 - (i) Clause 2.2 with respect to excavations near overhead support structures;
 - (ii) Clause 2.4 with respect to buildings near overhead support structures;
 - (iii) Section 3 with respect to minimum separation between buildings and conductors;
 - (iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
 - (v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.
- (d) Confirmation that Transpower has been provided a copy of the EISCDMP for their review at least 20 working days prior to construction.

Advice 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).

- 21) CEMP.15 The NZTA will be responsible for all service relocations required for construction of the Project. The NZTA shall liaise with the providers of infrastructure service networks (including, but not limited to water, gas, stormwater, wastewater, power and telecommunications), and private property owners with on-site services to develop methodologies and timing for necessary services relocation required for the Project, with the objective of minimising disruption to the operation of these service networks and on-site services.

Advice note:

- (a) *It is noted that if separate consents are required for relocations for any services of network utility operators or landowners, such consents will be obtained before construction commences in the relevant area, and any effects of those relocations would be considered at that time. The same applies to any alteration of consents if required.*
- (b) *Network infrastructure owned and operated by Watercare Services is located within the designations. An operating agreement will be developed by the NZTA and Watercare Services which will include appropriate notification and access protocols where works are to be undertaken by either network operator on or adjacent to Watercare Services infrastructure within the designations.*

Construction

- 22) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 23) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 24) CEMP.8 All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
- 25) 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.

- 26) CEMP.12 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:
- (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.

A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.

- 27) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'

Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 28) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.
- 29) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

30) PI.5

The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:

- (a) Te Atatu (including the SH16 Causeway)
- (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
- (c) Owairaka

and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.

The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:

- (a) Auckland Council and Auckland Transport;
- (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
- (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
- (d) Department of Conservation;
- (e) Local Boards;
- (f) Iwi groups with Mana Whenua;
- (g) Public transport providers; and
- (h) Housing New Zealand Corporation.

Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 31) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 32) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located at each site specific work activity;
 - (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
 - (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
 - (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
 - (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
 - (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.
- 33) PI.6 The Community Liaison Group(s) shall be provided opportunities to review and comment on the following (amongst other things):
- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k);
 - (b) The Open Space Restoration Plans (as required by Condition OS.3);
 - (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as

- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

TEMPORARY TRAFFIC CONDITIONS

Pre-Construction

- 34) TT.1 The NZTA shall update and finalise the Construction Traffic Management Plan (CTMP) submitted with this application, in accordance with these conditions, and implement it through the CEMP.
- In finalising the CTMP, the NZTA shall:
- (a) Provide simulation modelling demonstrations to better understand the effects of construction of the Project on the affected road network;
 - (b) Include measures to avoid road closures and restrictions of vehicle, bus, cycle and pedestrian movements;
 - (c) Where road closures or restrictions cannot reasonably be avoided the particular vulnerabilities and sensitivities of pedestrian diversions and restricted conditions shall be taken into account in the planning of any closures or restrictions.
- 35) TT.2 The CTMP shall require the development of Site Specific Traffic Management Plans (SSTMPs) and their approval by the Traffic Management Project Governance Group (as defined by the CTMP), for each construction activity that may affect traffic or transportation infrastructure and services. The SSTMPs shall be provided to the Traffic Management Coordinator(s) for the relevant Road Controlling Authority at least 10 working days prior to each construction activity.
- 36) TT.3 Each SSTMP shall describe the measures that will be undertaken to avoid, remedy or mitigate the local and network wide effects of construction of the Project. In particular, the SSTMP shall include the following matters:
- (a) Traffic management measures to address and maintain, traffic capacity, including bus services, at peak traffic periods during weekdays (6:00 to 9:00 and 16:00 to 19:00) and peak traffic periods at weekends (including Te Atatu Road, Great North Road and Richardson Road);
 - (b) Methods to manage the effects of traffic during construction including the requirement to detour or divert traffic. These methods shall seek to avoid, remedy or mitigate effects on access to and from businesses and other organisations in the area;
 - (c) Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and buses;
 - (d) Methods to avoid, remedy or mitigate the local and network wide effects of the

- (e) Methods to manage the effects of the delivery of construction material, plant and machinery (including cranes and oversized trucks) during construction;
 - (f) Any routes where construction traffic movements will be restricted (either for particular times for construction periods);
 - (g) Measures to maintain existing vehicle access, as far as practicable, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with the Auckland Council and the affected landowner; and
 - (h) Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, where practicable (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours. (This Condition does not act as a qualification to the commitment to maintain access to open space and education facilities, as required in Condition OS.13).
- 37) TT.4 The SSTMPs shall include traffic management measures developed in consultation with the Auckland Transport, Bus and Coach Association and the Auckland Council, to address and maintain, where practicable, existing levels of service for buses particularly at peak periods (6:00 to 9:00 and 16:00 to 19:00) on weekdays.
- 38) TT.5 The NZTA shall consult with the Traffic Operations Manager, Auckland Transport with regard to the most appropriate means for providing access on Council roads within and adjacent to the designation. The NZTA shall also coordinate and consult directly with the proponents of any major construction or major traffic generating event occurring concurrently with, and in the vicinity of the Project.
- 39) TT.6 The SSTMPs shall include measures developed in consultation with Auckland Transport to, as far as practicable, enable continued public walking and cycling passage along the existing Northwestern Cycleway (between Te Atatu Interchange and St Lukes Interchange) and along Great North Road and the public walkway along Oakley Creek, with any interruptions being as short as feasible.

Construction

- 40) TT.7 The NZTA shall undertake construction works so as to avoid significant long duration impacts or the full closure of Te Atatu Road for all road users heading to or from the Te Atatu Peninsula and to ensure that access for emergency service vehicles is maintained.
- 41) TT.8 The NZTA shall restrict construction truck movements during peak hours (6:00 to 9:00 and 16:00 to 19:00) on weekdays and during the peak periods at the weekends to avoid the following:
- (a) Te Atatu Road Interchange, during both morning and afternoon peak hours
 - (b) Great North Road Interchange, city bound during the morning peak hours
 - (c) Great North Road Interchange, west bound onto SH16 and southbound onto Great North road during the afternoon peak.
- Construction truck movements during these hours shall only be allowed under exceptional circumstances agreed in advance with the Traffic Management Project Governance Group.
- 42) TT.9 The NZTA shall maintain at least the existing active traffic lane configuration capacity on SH16, at the Te Atatu Interchange area, Te Atatu Road, Richardson Road and on Great

North Road during peak periods being 6:00 to 9:00 and 16:00 to 19:00 on weekdays and during the peak periods on weekends, for the duration of the temporary construction programme.

- 43) TT.10 The NZTA shall monitor the impact of construction traffic in terms of traffic speeds and volumes on SH16, Great North Road, Te Atatu Road and Richardson Road throughout the construction period to confirm the expected traffic effects as set out in the *Temporary Traffic Assessment* (Technical Report G.16) submitted with this application.
- (a) This monitoring will be undertaken on a daily, weekly and monthly basis; and
 - (b) Monitoring results will be made available to the Traffic Operations Manager, Auckland Transport on request.
- 44) TT.11 If monitoring undertaken pursuant to Condition TT.10 indicates that traffic volumes or traffic conditions are significantly different from those expected, the SSTMPs will be reviewed and as appropriate amended to the satisfaction of the Traffic Management Project Governance Group.

OPERATIONAL TRAFFIC CONDITIONS

Construction

- 45) OT.1 The NZTA shall prepare in collaboration with Auckland Transport a Network Integration Plan (NIP) for the Project, or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements (identified in the Western Ring Route (Northwest) Network Plan) planned by the Auckland Council. The NIP shall include details of proposed physical works at the interface between the State highway and the local road network, and shall address such matters as pedestrian/ cycle ways, lane configuration, traffic signal co-ordination, signage and provision for buses
- In addition, the NIP will address:
- (a) The commitment of the NZTA to progress bus priority measures northbound on Great North Road as part of the reinstatement of Great North Road, as proposed by Auckland Transport and indicated on the Plans *Great North Road Option 1 Proposed Road Marking* (Schedule A, Row 33), subject to the agreement with Auckland Transport;
 - (b) How the works committed to by the NZTA for pedestrian and cycle ways, as detailed in the PT and Active Mode Transport Routes Plan Set (Condition DC.1(d) (refer Schedule A, Row 22)), integrate with pedestrian and cycle ways on the wider transport network;
 - (c) The Richardson Road Bridge, which shall be designed in general accordance with the structural plans (Schedule A, Row 9) and the commitment of the NZTA to provide a 2m footpath on Richardson Road Bridge, subject to confirming appropriate bus stop locations with Auckland Transport;
 - (d) Integration of the works proposed on Te Atatu Road to appropriately transition between the Waterview Connection Project and any projects being progressed by Auckland Transport;
 - (e) Opportunities to review traffic signal timings at the Te Atatu Interchange with a view to minimising delays to all users, including cyclists on the SH16 cycle way; and
 - (f) The commitment of the NZTA to provide for cycle “aspects” (cycle signal lights) at the Great North Road Interchange.
 - (g) As part of detailed design at the Te Atatu Interchange, the installation of underpasses and/or overbridges, provided however that should same not prove feasible in civil or traffic engineering design terms, the installation of coordinated traffic signal operation

Works identified in the NIP which are the responsibility of the NZTA, will be undertaken as at the time of construction works for the Project.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

46) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration inducing construction activities would occur;
- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and after completion of construction works;
- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise mitigation, including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the construction site night works, as defined on the maps (refer Schedule A, Row 35) are notified of such works (i.e. any works during the hours of 20:00 to 06:30) at least 5 days prior to the commencement of any such

- The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

- 47) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 “Acoustics - Construction Noise” and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75
	2000-0630	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

- 48) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration			PPV at horizontal plane of highest floor (mm/s)	Long-term vibration
	PPV at the foundation at a frequency of				
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)	PPV at horizontal plane of highest floor (mm/s)	
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 49) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
- (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 50) CNV.7 Where practicable, permanent (traffic) noise barriers, required in any Sector as Detailed Mitigation Options for operational noise following completion of the Project (in accordance with Conditions ON.3 to ON.5) shall be erected prior to noise generating construction works commencing. Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP, prior to noise generating construction works commencing.
- 51) CNV.8 Pile driving or pile removal shall not be undertaken at night (i.e. during the hours of 20:00 – 06:30).
- 52) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.
- Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for

SSNMPs to be submitted to the Council where an SSNMP is required.

If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.

Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).

NOISE CONDITIONS

General

53) ON.1 For the purposes of Conditions ON.2-ON.14 the following terms will have the following meanings:

- Appendix E – means Appendix E to the Technical Report G.12 ‘Assessment of Operational Noise Effects’ submitted with this application.
- BPO – means Best Practicable Option.
- Building Modification Mitigation – has the same meaning as in NZS 6806:2010.
- Design Year – means a point in time that is 10 years after the opening of the Project to the public
- Emergency Mechanical Services – means mechanical services used for emergency situations only.
- Habitable room – has the same meaning as in NZS 6806:2010.
- Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS 6806:2010 when determining the BPO mitigation option; i.e. Category A - primary noise criterion, Category B - secondary noise criterion and Category C - internal noise criterion.
- NZS 6806:2010 – means NZS 6806:2010 Acoustics – Road-Traffic Noise – New and Altered Roads.
- PPFs – means only the premises and facilities identified in green, yellow or red in Appendix E.
- Structural mitigation – has the same meaning as in NZS 6806:2010.

Pre-Construction

54) ON.2 The NZTA shall implement the traffic noise mitigation measures identified as the “Preferred Mitigation Options” in Appendix E as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix E (“Identified Categories”), where practicable and subject to Conditions ON.3-ON.11 below.

55) ON.3 The detailed design of the structural mitigation measures of the “Preferred Mitigation Options” (the Detailed Mitigation Options) shall be undertaken by a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council prior to construction of the Project, and, subject to Condition ON.4, shall include, as a minimum, the following:

- (a) Noise barriers with the location, length and height in general accordance with Appendix E and designed in accordance with the ULDF (Section B) (refer Schedule A, Row 38); and
- (b) A requirement that Open Graded Porous Asphalt ("OGPA") or equivalent low-noise generating road surface be used on all surface roads throughout the Project, except at

- (c) For the Great North Road Interchange, a requirement that Twin Layer Open Graded Porous Asphalt (“Twin Layer OGPA”) or equivalent low-noise generating road surface be used as shown in Appendix E.
- 56) ON.4 Where the design of the Detailed Mitigation Options identifies that it is not practicable to implement a particular structural mitigation measure in the location or of the length or height included in the “Preferred Mitigation Options”, either:
- (a) If the design of the structural mitigation measures could be changed and would still achieve the same Identified Category at all relevant PPFs, and a suitably qualified expert approved by the Major Infrastructure Team Manager, Auckland Council, certifies to the Auckland Council that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed mitigation measures; or
- (b) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any relevant PPF from Category A or B to Category C but Major Infrastructure Team Manager, Auckland Council confirms that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed structural mitigation measures.
- 57) ON.6 (a) **Sectors 1 to 8** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options:
- i. A noise level increase of 3 decibels or more will occur due to road-traffic noise from the Project; and
- ii. Habitable spaces are likely to receive in excess of 45 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year.
- For those PPFs, following the process set out in Conditions ON.7 to ON.11, it shall be determined which Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces.
- (b) **Sector 9** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options, habitable spaces are likely to receive in excess of 40 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year. For those PPFs, following the process set out in ON.7 and ON.8, it shall be determined if Building Modification Mitigation may be required to achieve 40 dB LAeq inside habitable spaces. For those PPFs where Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces, this shall be implemented following the process set out in ON.9 to ON.11.
- 58) ON.7 (a) Prior to commencement of construction of any sector of the Project in the vicinity of a PPF identified under Condition ON.6, the NZTA shall write to the owner of each-such building seeking access for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.
- (b) If the owner(s) of the building approve the NZTA's access to the property within 12 months of the date of the NZTA's letter (sent pursuant to Condition ON.7(a)), then no more than six months prior to commencement of construction in any sector of the

Construction

- 59) ON.5 The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project.
- 60) ON.8 Where a PPF identified under Condition ON.6 is identified, the NZTA shall be deemed to have complied with Condition ON.7 above where:
- (a) The NZTA (through its acoustics specialist) has visited the building; or
 - (b) The owner(s) of the building approved the NZTA's access, but the NZTA could not gain entry for some reason after repeated attempts; or
 - (c) The owner(s) of the building did not approve the NZTA's access to the property within the time period set out in Condition ON.7(b) (including where the owner(s) did not respond to the NZTA's letter (sent pursuant to Condition ON.7(a) within that period); or
 - (d) The owner(s) of the building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
- If any of (b) to (d) above apply to a particular Building, the NZTA shall not be required to implement any Building Modification Mitigation at that Building
- 61) ON.9 Subject to Condition ON.8, within 6 months of the assessment required under Condition ON.7(b), the NZTA shall give written notice to the owner of each PPF identified under Condition ON.6):
- (a) Advising of the options available for Building Modification Mitigation to the building; and
 - (b) Advising that the owner has three months within which to decide whether to accept Building Modification Mitigation for the building, and if the NZTA has advised the owner that more than one options for building modification mitigation is available, to advise which of those options the owner prefers.
- 62) ON.10 Once an agreement on Building Modification Mitigation is reached between the NZTA and the owner of an affected building, the mitigation shall be implemented (including the NZTA undertaking any required third party authorisation) in a reasonable and practical timeframe agreed between the NZTA and the owner. Building Modification Mitigation shall be to the standard specified in section 8.3.2 of NZS 6806:2010.
- Advice Note: The NZTA will be responsible for obtaining any necessary building consents or other approvals to undertake the above Building Modification Mitigation.*
- 63) ON.11 Subject to Condition ON.8, where Building Modification Mitigation is required, the NZTA shall be deemed to have complied with Condition ON.10 above where:
- (a) The NZTA has completed Building Modification Mitigation to the Building; or
 - (b) The owner(s) of the Building did not accept the NZTA's offer to implement Building Modification Mitigation prior to the expiry of the timeframe stated in Condition ON.9(b) above (including where the owner(s) did not respond to the Requiring Authority within that period); or
 - (c) The owner of the Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

Post-Construction / Operations

- 64) ON.12 The NZTA shall manage and maintain the Detailed Mitigation Options to ensure that, those mitigation works are maintained to retain their noise attenuation performance indefinitely.

Monitoring

- 65) ON.14
- (a) Prior to construction, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake a minimum of 8 (eight) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (b) Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake traffic noise monitoring at the same sites surveyed in Condition ON.14 (a) above, within 2 to 3 years following completion of construction of the Project. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (c) The results of the noise level monitoring in accordance with ON.14(b) above shall be used to verify the computer noise model of the Detailed Mitigation Option. A report describing the findings of the verification shall be provided to the Major Infrastructure Team Manager, Auckland Council within one month of it being completed.

VIBRATION CONDITIONS

Pre-Construction

- 66) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish pre-Project vibration levels for comparison with future vibration levels.

AIR QUALITY CONDITIONS

Pre-Construction

- 67) AQ.1 The NZTA shall finalise and implement, through the CEMP, the Construction Air Quality Management Plan (CAQMP) and Concrete Batching and Crushing Management Plan (CBCMP) submitted with the application.

The CAQMP and CBCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CAQMP and CBCMP includes the following details:

- (a) Daily visual monitoring of dust emissions;
- (b) Procedures for responding to process malfunctions and accidental dust discharges;
- (c) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site;
- (d) Continuous monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;
- (e) Monitoring of the times of detectable odour emissions from the ground;
- (f) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
- (g) Monitoring of construction vehicle maintenance;

- (h) Process equipment inspection, maintenance, monitoring and recording, including baghouses, pressure relief valves and high level alarms;
- (i) Complaints investigation, monitoring and reporting; and
- (j) The identification of staff and contractors' responsibilities.

Construction

- 68) AQ.2 The NZTA shall review the CAQMP and CBCMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition CEMP.13.
- 69) AQ.3 All construction activities shall be operated, maintained, supervised, monitored and controlled at all times so that all emissions authorised by this consent are maintained at the minimum practicable level.
- 70) AQ.4 The NZTA shall undertake construction activities in accordance with the CEMP, CAQMP and CBCMP, such that:
- (a) Hard surfaced areas of the construction yards and active construction areas are vacuum swept or scraped down at least twice each week and additionally as reasonably required;
 - (b) All unsealed areas of the site used for vehicle movement are maintained visibly damp by the use of water sprays or a water cart during weather conditions where the potential for dust emissions exist;
 - (c) Wheel wash systems are installed at all truck exits from unpaved areas of the site onto public roads are used for all trucks that depart from the site;
 - (d) All stockpiles are constructed and positioned to minimise the potential for dust emissions. The surfaces of all stockpiles are maintained adequately damp at all times to minimise the release of particulate matter;
 - (e) Belt conveyors for moving dry materials are fitted with water sprays or enclosed to minimise wind entrainment of dust. Where installed, water suppression is used whenever the conveyors are used for moving dry materials.
- 71) AQ.5 Unless expressly provided for by conditions of this consent, there shall be no odour, dust or fumes beyond the site boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.
- 72) AQ.6 All offensive or objectionable dust beyond the boundary of the site caused as a result of processes on the site shall be mitigated forthwith in accordance with the requirements of the Construction Air Quality Management Plan.
- 73) AQ.7 Beyond the site boundary there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.
- 74) AQ.8 No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.

Monitoring - Construction

- 75) AQ.14 The NZTA shall undertake visual inspections of dust emissions as follows:
- (a) Visual inspections of all active construction areas at least three times daily during October to April inclusive, whenever there are construction activities. The results of visual monitoring shall be logged.
 - (b) Visual inspections of dust emissions from the concrete batching plants and rock

- 76) AQ.15 The operation of water sprays shall be checked at least once each day.

Reporting - Construction

- 77) AQ.19 All records, logs, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an Auckland Council enforcement officer and shall be kept for the duration of the consent.
- 78) AQ.22 Log books shall be maintained that record all relevant information that is required to demonstrate compliance with the conditions of this consent. This information shall include, but is not limited to:
- (a) Visual assessments of any dust emissions from the site and the source;
 - (b) Any dust control equipment malfunction and any remedial action taken;
 - (c) When a water cart was used and, if so, the frequency of use and the volume of water used (including identification of location);
 - (d) All relevant details of the TSP and meteorological monitoring required by Conditions AQ.16 and AQ.17;
 - (e) Any additional dust control measures undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.
- 79) AQ.23 The NZTA shall maintain a log of any complaints received relating to air quality. Details of each complaint received shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 24 hours of receipt of the complaint. The log shall include any complaints lodged with the Auckland Council where the Council has informed the NZTA of the complaint. The log shall include, but not be limited to the following:
- (a) The date, time, location and nature of the complaint;
 - (b) Weather conditions at the time of the complaint (including approximate wind speed, wind direction, cloud cover);
 - (c) Any possible other contributing factors (such as a fire, smoky vehicle, a local chimney emission, etc.);
 - (d) The name, phone number and address of the complainant (unless the complainant elects not to supply these details);
 - (e) Any remedial actions undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.

LANDSCAPE AND VISUAL CONDITIONS

Pre-Construction

- 80) LV.1 The Urban Design and Landscape Plans (UDL Plans) (Plan Set F.16, refer Schedule A, Row 17) shall be reviewed and revised in accordance with the conditions and submitted to the Major Infrastructure Team Manager, Auckland Council for certification that they comply with the conditions of the consents/ designation prior to construction of the relevant Project stage, at least 20 working days prior to the commencement of construction.
- The UDL Plans shall be updated to:
- (a) Reflect relevant details from the PT and Active Mode Transport Routes Plan Set (Schedule A, Row 23);

- (b) Remove the playing field at Waterview Reserve;
 - (c) Confirm the reconfigured bund design at Alwyn Avenue (Schedule A, Row 42);
 - (d) Reflect landscaping required in relation to the northern vent stack in Waterview Glades pursuant to Conditions DC.8.
- 81) LV.2 In certifying the UDL Plans, prepared in accordance with Condition LV.1, the Major Infrastructure Team Manager, Auckland Council shall be satisfied the UDL plans includes:
- (a) The visual mitigation of infrastructure as detailed in Section B of the UDLF (refer Schedule A, Row 38).
 - (b) Incorporation of art or art through design of structures, particularly as it relates to noise barriers and the Great North Road Interchange piers and ramps (Refer to clauses (g) and (i) below).
 - (c) Planting to screen houses and noise walls (including cross section details);
 - (d) Planting along the corridor on Traherne Island, in accordance with these conditions and the Ecological Management Plan;
 - (e) Specimen planting on the Great North Road Interchange and the Te Atatu Road Interchange;
 - (f) Specimen planting at the tunnel portals (except where this is within the OPW area);
 - (g) Finalisation of the noise barriers (as required by Condition ON.3(a)) in accordance with the design principles for noise walls (refer Schedule A, Row 32);
 - (h) Delineation of the final areas of the Open Space Restoration Plans in accordance with the Open Space Restoration Plans (Schedule A, Row 30), and reference that all works within the Open Space Restoration Plan Areas are subject to Conditions OS.1 to OS.8;
 - (i) Oakley Inlet Heritage Plan, prepared in accordance with Conditions OS.5, and in particular, consideration shall be given to the design treatment of the Great North Road Interchange piers and ramps to take into consideration the impact of the structures on the visual quality of the open space beneath;
 - (j) Ecological Management Plan, prepared in accordance with Conditions V.1, A.1, H.1, F.1 and M.1;
 - (k) Western Ring Route: Maioro Street Interchange and Waterview Connection - Oakley Creek Rehabilitation and Restoration Guidelines (Boffa Miskell, 2010); and
 - (l) Details of artworks or art through design of structures within the Project (e.g. design detailing of median barriers, bridge railings, safety barriers, piers, retaining walls and tunnel portals), in accordance with Section B of the Urban Landscape and Design Framework (UDLF June 2010) (refer Schedule A, Row 38) and F.8:Plans of Structures and Architectural Features, but excluding the north and south ventilation buildings, plans sections and elevations.
- 82) LV.8 The NZTA shall ensure that any areas within the designation affected by construction activities have sub-soil rehabilitated and top-soil replaced so that the hydrological response including the volume of stormwater runoff generated is as close as practicable to the predevelopment situation. The methodologies to achieve this shall be documented and provided to the Major Infrastructure Team Manager, Auckland Council with the revised UDL Plans submitted pursuant to Condition LV.1.
- 83) LV.10 The UDL Plans shall identify all Amenity Trees required to be removed over the construction of the Project (in accordance with Condition CEMP.6(o) and (p)). Replacement trees shall be sized at 160Lt and will either draw from the Coastal Forest or Basalt Rock Forest ecotypes listed in the Landscape Planting Schedules (provided in F.16, refer Schedule A, 17) or an agreed alternative species (confirmed by Major Infrastructure

Team Manager, Auckland Council), except in the case of those trees subject to Condition ARCH.9.

Advice note: This does not necessary apply to any replacement planting in the Open Space Restoration Plan areas, which will be confirmed in approval from Auckland Council and will be in accordance with relevant Auckland Council Park guidelines (see Condition OS.4).

Construction

- 84) LV.7 The NZTA shall ensure that the Temporary Embankments constructed for the Causeway are located on the seaward side of SH16 between the motorway end of Rosebank Road and the bridge over the Waterview Inlet.

Post-Construction / Operations

- 85) LV.3 The NZTA shall have implemented the UDL Plans within 6 months of practical completion of construction of the Project.

- 86) LV.4 The landscaping shall be implemented in accordance with the UDL Plans within the first planting season following the completion of the construction works, provided that climatic conditions are suitable, otherwise at the first practicable opportunity thereafter, and shall be maintained for a period of 10 years thereafter. Should the landscaping be implemented in stages (depending on construction phases), landscaping shall be implemented in accordance with this Condition for each stage unless subsequent construction staging requires use of the proposed landscaping area.

Advice note: On-going control and management of the landscaping within the designation is the responsibility of the NZTA.

- 87) LV.5 The NZTA shall implement the UDL Plans taking into account the pest plant management guidelines detailed in the Ecological Management Plan (as required by Condition CEMP.3).

- 88) LV.9 The UDL Plans shall make provision for the rehabilitation of Construction Yard 2 at the completion of SH16 construction works through the close planting of native coastal species within that part of the yard area seaward of the proposed stormwater filter strip. All planting shall be consistent with the native coastal planting referenced in the ECOMP and Condition V.10.

OPEN SPACE CONDITIONS

General

- 89) OS.1 For the purposes of Conditions OS.2 – OS.15 the following terms will have the following meanings:

- Full size – means a football (soccer) field with the dimensions 100m x 60m.
- Half size – means a football (soccer) field with the dimensions less than 100m x 60m but no smaller than 50m x 30m.
- Toddler – means a playground specifically designed for children between the ages of 1 and 3
- Junior – means a playground specifically designed for children between the ages of 4 and 8
- Youth – means a playground specifically designed for children between the ages of 9 – 14 years
- Open Space Restoration Plans – means those plans listed in Schedule A, row 30.
- Open for Play - means the sports field has a level surface and a dense weed-free sward of mature grass, goal posts and lighting if indicated in the Open Space

- Sand - carpeted - means the field has been levelled and irrigated, and conventional sub-soil drains, slit drains and a 50mm deep sand carpet have been installed. The field has been stolonised with a warm season grass such as kikuyu or couch.
- Auckland Council Park Guidelines – means the document by Auckland City Council titled “Furnishing our parks: design guidelines for park furniture”, dated September 2009
- Park furniture – means those items described in the Auckland Council Park Guidelines
- AS2560 – means the Australia New Zealand Standard for lighting of sports fields.
- AS4282 – means the Australia New Zealand Standard for the control of the obtrusive effects of outdoor lighting.
- Way finding exercise – means a process for determining the number, size, location and content of signage to provide clear direction for all park users.
- Skate-park for the purpose of conditions OS.5(b)(iii) means a skate park with a size of approximately 1,400 sq. m. (generally 25 wide x 55m long), incorporating a range of design variations. Suitable for beginners (providing training facilities to develop their skills) but primarily catering for intermediate to advanced level skaters.
- BMX bike track for the purpose of condition OS.5(b)(iii) means a low maintenance, non-competition BMX bike track, incorporating a range of design variations. Primarily catering for beginner and intermediate riders.

Construction

- 90) OS.2 The NZTA shall prepare Open Space Restoration Plans to outline how the open space replacement land, as defined in the Open Space Restoration Plan Areas (Schedule A, Row 30) (including land occupied during construction) will be reinstated or replaced on completion of construction, for handover to Auckland Council and those areas identified in Condition DC.1A(f) and RC.3(f).

Following the consultation detailed in Condition OS.3 below, the Open Space Restoration Plans listed in Condition OS.3(a) to (f) shall be submitted within 12 months of construction commencing in the specific areas affecting the reserves or within 12 months of occupation of open space, whichever is the sooner, to the Major Infrastructure Team Manager, Auckland Council.

Advice note: Conditions OS.9 and OS.10 require certain works to be provided prior to occupation of Construction Yards 6 and 7 (Waterview Reserve) and Construction Yards 9-12 (Alan Wood Reserve) and this may impact on the timing of Open Space Restoration Plans for these areas.

- 91) OS.3 The Open Space Restoration Plans shall be prepared in consultation with the Auckland Council, Iwi, the Community Liaison Groups (Condition PI.5), NZHPT, and other recreation users and other user representatives identified by Auckland Council. The Open Space Restoration Plans shall comprise the following specific plans:

- (a) Waterview Reserve Restoration Plan;
- (b) Alan Wood Restoration Plan (including Hendon Park and 25 Valonia Street);
- (c) Oakley Creek Esplanade (Waterview Glades) Restoration Plan;
- (d) Jack Colvin Park Restoration Plan;
- (e) Rosebank Domain Restoration Plan;
- (f) Harbourview-Orangihina Reserve Restoration Plan.

(g) The areas of the Open Space Restoration Plans are shown in the Open Space Restoration Plan Areas (Refer Schedule A, Row 30).

92) OS.4

All Open Space Restoration Plans shall be prepared in general accordance with the UDL Plans (Schedule A, Row 30), and shall include, but not be limited to, the following:

- (a) Details of, including the location, of any artworks and educational signage, and directional signage. In the case of Alan Wood Reserve, Waterview Reserve and Oakley Creek Esplanade (Waterview Glade) this shall include a “way-finding exercise” in accordance with Auckland Council practice, to determine all signage to be provided; and
- (b) Evidence of integration with the Oakley Creek restoration works required under Conditions STW.5, STW.20, V.16 and LV.2(i); and a summary of the consultation undertaken (as required by Condition OS.3) and the response received; and
- (c) Details of any vehicle access through the reserves and parking areas; and
- (d) Park furniture (including quantity and quality) to be provided in accordance with relevant Auckland Council Park guidelines, except for:
 - (i) The riparian area within Alan Wood Reserve where the only furniture required is a maximum of 10 seats; and
 - (ii) Oakley Creek Esplanade (Waterview Glades) where the only furniture required is replacement of 3 existing seats; and
- (e) The inclusion and integration of the design for all pedestrian and cycleway linkages and facilities detailed on the PT and Active Mode Transport Routes (Schedule A, Row 22). The design integration shall be in accordance with CPTED principles;
- (f) Implementation programme, including sequencing of works and completion dates. This shall include works that could be implemented prior to practical completion of construction works or are outside the Project area (e.g. upgrading of the Waterview Esplanade Reserve set out in Condition OS.5(b)(vii));
- (g) Implementation programmes for planting and field reinstatement. This shall include:
 - (i) A 12 month maintenance period for built structures and soft landscaping; and
 - (ii) For any landscaping accessible to horses an assessment to demonstrate that the planting schedule is not toxic to horses and that consultation on this has been undertaken with the Te Atatu Pony Club;
- (h) The specific requirements for each Restoration Plan area as set out in Conditions OS.5 – OS.8;
- (i) Documentation of consultation undertaken required by Condition OS.3 and the views and concerns expressed by this consultation and the written approval of the Manager Community and Cultural Policy.

Advice note: For the avoidance of doubt provision of (a) to (h) above will require elevations, cross sections, engineering drawings and written documentation to supplement the UDL Plans. It is also noted that the UDL Plans identify landscaping, planting and other works beyond the Open Space Restoration Plans (refer Conditions LV.1 – LV.6, LV.9 and LV.10). Educational signs and artworks are particularly encouraged.

93) OS.13

During construction, the NZTA shall maintain pedestrian accessways to all open space available for public use during construction and education facilities where access is affected by the works, including any public access that crosses private land. Such access shall be safe, clearly identifiable, provide appropriate surfacing and seek to minimise significant detours. The access shall be of a same or similar standard as that disrupted and will be provided and maintained by the NZTA.

Advice note: This specifically includes the existing pedestrian access that provides a connection to the crossing over Oakley Creek between 1510 Great North Road and Unitec Mt Albert Campus.

SOCIAL CONDITIONS

Pre-Construction

- 94) SO.1 In addition to the Community Liaison Groups established pursuant to Condition PI.5, the NZTA shall establish an Education Liaison Group (including representatives from local schools, kindergartens, childcare facilities, Unitec Institute of Technology, the Ministry of Education and Housing New Zealand Corporation), to provide a forum through which:
- (a) Relevant monitoring data can be provided (e.g. air quality monitoring);
 - (b) Notice can be provided of when particularly noisy activities will occur in close proximity to schools and education facilities, to enable the opportunity to identify any potential conflict with particular sensitive periods, and the requirement for specific mitigation strategies (e.g. rescheduling of construction activities where practicable);
 - (c) Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed;
 - (d) Notice can be provided of potential construction impacts on school transport routes (including pedestrian/cycle access) to enable the opportunity to identify specific mitigation preferences of the education facilities (e.g. any detour routes) and to enable these facilities to appropriately inform students and/or parents; and
 - (e) Learning and teaching opportunities for educational facilities to participate in Project works (e.g. planting or artworks).

The Education Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period. The Education Liaison Group shall continue to meet for at least 12 months following the completion of the Project (or less if the members of the Education Liaison Group agree), so that ongoing monitoring information can continue to be disseminated.

- 95) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:
- (a) Auckland Council;
 - (b) Housing New Zealand Corporation;
 - (c) Te Kawerau Iwi Tribal Authority;
 - (d) Ngati Whatua o Orakei;
 - (e) KiwiRail;
 - (f) Department of Conservation;
 - (g) Ministry of Education; and
 - (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to

- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

- 96) SO.7 A schedule of trees that require removal for construction of the Project will be identified and reported to the Community Liaison Group for their consideration of potential provision of timber for heritage projects (including in particular the provision of *Robinia* wood for heritage boat building). If the demand for this timber is identified to the Construction Team, appropriate measures for felling and removal from the site will be confirmed.

Construction

- 97) SO.2 In addition to Condition SO.1(b) above, where noisy construction activities (that are projected to exceed the Noise Criteria in the CNVMP) are proposed in close proximity or adjacent to schools/ childcare centres, the NZTA shall, when preparing their SSNMP (in accordance with Condition CNV.1) give specific consideration to options to carry out these works outside school hours or during school holidays as a mitigation option.

VEGETATION CONDITIONS

General

- 98) V.10 Any planting utilising native plants shall use plants genetically sourced from the Tamaki Ecological District where possible or otherwise shall use plants that have been genetically sourced from within the Auckland Ecological Region.
- 99) V.18 The NZTA shall implement the approved Traherne Island Weed and Pest Management Plan. Every 5 years, a suitably qualified and experienced ecologist engaged by NZTA shall review the plan in consultation with the Department of Conservation. The plan shall then be submitted to the Auckland Council for approval.

Pre-Construction

- 100) V.1 The NZTA shall finalise the ECOMP submitted with this application, prior to works commencing on site. The ECOMP shall be implemented through the CEMP. The ECOMP shall clearly identify the location and identity of:
- (a) All Significant Vegetation within the designation that is to be fully protected or relocated; and
 - (b) All Valued Vegetation within the designation that is affected by the works (protected or removed).
- Note: Significant and Valued Vegetation shall be as defined in the ECOMP.
- 101) V.2 The NZTA shall employ a suitably experienced botanist ('nominated botanist') for the duration of the works to monitor, supervise and direct all works affecting or otherwise in

close proximity to the Significant Vegetation and Valued Vegetation identified in the ECOMP.

- 102) V.3 Prior to any site works commencing, a pre-commencement site meeting shall be held so that the conditions that pertain to the Significant Vegetation and Valued Vegetation and all vegetation in general (both native and exotic) are explained by the nominated botanist to all contractors or sub-contractors who will be working on site within the close vicinity of that vegetation.

Construction

- 103) V.4 The NZTA shall minimise the amount of vegetation (both native and exotic) which is to be cleared, with the exception of weeds (both woody and otherwise, unless agreed with the Major Infrastructure Team Manager, Auckland Council and the Community Liaison Group that the retention of these 'weeds' has other environmental or ecological benefits that warrant their retention). All vegetation clearance shall be undertaken in accordance with the measures set out in the ECOMP.
- 104) V.5 The NZTA shall install protective fencing around, or otherwise clearly demarcate, all of the Significant Vegetation identified in the ECOMP as requiring full protection, under the supervision of the nominated botanist.
- 105) V.6 The NZTA shall replace any terrestrial Valued Vegetation that is required to be removed as a result of construction activities, in accordance with the ECOMP and the Urban Design and Landscape Plans.
- 106) V.7 The nominated botanist shall supervise all trimming, pruning and relocation work associated with the Significant Vegetation and Valued Vegetation required as part of the works.
- 107) V.11 Prior to commencement of works adjacent to Traherne Island, the NZTA shall employ a suitably qualified and experienced plant translocation expert to uplift and protect all areas of *Mimulus repens* on Traherne Island that will be affected by the work. The *Mimulus repens* shall be relocated to suitable and safe habitat away from the works area, or otherwise held and protected for the duration of the works in the vicinity of their original location and be replanted back at that location (or in close proximity to it) upon completion of the works. The location of the recipient sites will be determined in consultation with the Department of Conservation and in general accordance with the Traherne Island Natural Heritage Restoration Plan (2009 – 2014). Trials shall be undertaken to identify appropriate recipient sites, with these trial sites being monitored for a period of no less than 5 years, or until their failure. Where possible, recipient sites shall be located in currently weed-free areas. Where recipient sites may potentially be affected by weeds, they shall be subject to an on-going weed management plan. Should translocation attempts fail at all trial sites then the NZTA, in consultation with DOC, shall determine an alternative appropriate form of mitigation.
- 108) V.17 Prior to commencement of works adjacent to or on Traherne Island, the NZTA shall employ a suitably qualified and experienced ecologist for the preparation of a Traherne Island Weed and Pest Management Plan. The Plan shall be prepared in consultation with the Department of Conservation and be submitted to the Auckland Council for approval at least 20 working days prior to construction commencing.

Post-Construction / Operations

- 109) V.15 Planting along and within the rock revetment of the widened SH16 causeway shall be undertaken by the NZTA at locations in general accordance with the Urban Design and Landscape Plans and planting schedules (Refer Schedule A, Row 17), as identified in

those plans under the label "*Rock Armour with Saltwater Revetment Planting*". The planting treatments will be in accordance with the concepts of the ECOMP, Appendix I '*Conceptual Rock Revetment Planting Designs*'.

Monitoring

- 110) V.8 Immediately prior to planting, and for a period of 2 years following completion of construction, the NZTA shall undertake weed control and management of all invasive plant pests within the vegetated areas of the surface designation for the Project. Following this 2 year period, on-going control and management of all invasive plant pests within these areas will be the responsibility of the NZTA.
- 111) V.9 The nominated botanist shall undertake a monitoring programme throughout the construction period, including monitoring of:
- (a) The condition, repair and location of the temporary protective fencing or other forms of demarcation used to identify the Significant Vegetation;
 - (b) Any works within the vicinity of the Significant Vegetation and Valued Vegetation;
 - (c) The general health of the Significant Vegetation and Valued Vegetation (including any Significant or Valued Vegetation that has been relocated away from the works area); and
 - (d) Compliance with the vegetation conditions of designation by way of fortnightly inspections during the construction period.

AVIAN CONDITIONS

General

- 112) A.6 Animal pest control shall be undertaken by the NZTA on Traherne Island (northern and southern sides) and on the Coastal Marine Area (CMA) frontage of SH16 from Traherne Island North to Whau Creek, and on the southern side of SH16 from Traherne Island South to Whau River (in accordance with Condition V.17).

Pre-Construction

- 113) A.1 The NZTA shall finalise, and implement through the CEMP, ECOMP submitted with this application to include the matters set out in Conditions A.2 to A.6.

Construction / Operation

- 114) A.2 The NZTA shall provide temporary high tide roosting structure(s) adjacent to the Causeway during construction, in accordance with the ECOMP, to the satisfaction of the Major Infrastructure Team Manager, Auckland Council. The temporary bird roosts shall be sized in accordance with the ECOMP, and located within the Waterview Estuary adjacent to the southern side of the causeway and in the vicinity of the existing Causeway bridge.
- 115) A.5 Vegetation clearance at Traherne Island shall occur outside the bird breeding season of September to December. Elsewhere, vegetation clearance shall occur outside the bird breeding season of September to December where practicable.

Monitoring

- 116) A.3 The NZTA shall employ a suitably qualified ecologist to undertake monitoring of the roosting areas located at:
- (a) The existing high tide roost in Harbourview-Orangihina Park; and
 - (b) The temporary construction roosting structure(s) pursuant to Condition A.2.
- Monitoring shall be undertaken on a monthly basis, with a monitoring report prepared on a quarterly basis. The monitoring report shall be made available to the Major Infrastructure Team Manager, Auckland Council and Department of Conservation upon request.
- 117) A.4 Should the monitoring results indicate that the roosting sites have been abandoned, consultation shall be undertaken with the Department of Conservation and the Major Infrastructure Team Manager, Auckland Council to determine the need for and type of further management strategies (if any) required.

HERPETOFAUNA CONDITIONS

Pre-Construction

- 118) H.1 The NZTA shall finalise and implement through the CEMP, the ECOMP submitted with this application to include details of lizard management to be undertaken, including the following:
- (a) Lizard capture methodology, including timing;
 - (b) Lizard release locations(s);
 - (c) Lizard habitat enhancement at population release sites, including a detailed pest control programme for a minimum of one month prior to release and for a minimum of three consecutive years' duration after release;
 - (d) Location(s), monitoring and maintenance of lizard protective fencing;
 - (e) Post-release monitoring methodology; and
 - (f) Lizard captive management methodology.

LIGHTING CONDITIONS

Pre-Construction

- 119) L.2 A Temporary Construction Lighting Management Plan shall be prepared for all construction zones and construction yards prior to commencement of any night time works within the construction zones and construction yards. The Temporary Construction Lighting Management Plan shall be independently verified by a lighting specialist and provided to the Major Infrastructure Team Manager, Auckland Council for certification of compliance 10 working days prior to any night time work commencing.
- The certification process shall ensure that the Plan includes (but is not be limited to):
- a) The layout and arrangement of all temporary lighting required for night time works, and shall show how this avoids the "Light Spill Restriction Zone" identified on the Construction Yard Plans (Refer Schedule A, Row 7) submitted with the application, and that the temporary lighting complies with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - b) Provision for a 10m buffer between the night time work and any residential boundary at all times to minimise potential for light spill; and
 - c) General operating procedures outlined in the CEMP.

- 120) L.3 Asymmetrical floodlights with horizontal glass visors that are not raised more than 3 degrees above the horizontal plane shall be used for any temporary construction night time lighting requirements. Alternative temporary lighting arrangements may be used, subject to the prior approval of the Major Infrastructure Team Manager, Auckland Council, where it can be demonstrated that the proposed lighting is similar or better to asymmetrical floodlights with glass visors. Glare shall be kept below the recommendation given in AS 4282 – 1997 “Control of the Obtrusive Effects of Outdoor Lighting” Tables 2.1 and 2.2.

Post-Construction / Operations

- 121) L.1 Lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas, in general accordance with the Waterview Connection Lighting Plan (Drawing Set F.11 (Refer Schedule A, Row 12):
- a) All motorway lighting shall be designed in accordance with "Roadlighting Standard AS/NZS1158";
 - b) All other lighting shall be designed in accordance with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - c) Fully cut off luminaires shall be used on SH20 from the Southern Tunnel Portal to the Maoro Street Interchange to minimised lighting overspill, as shown on Drawing Set F.11(Refer Schedule A, Row 12).

ARCHAEOLOGY CONDITIONS

Pre-Construction

- 122) ARCH.1 The NZTA shall complete, and implement through the CEMP, the Archaeological Site Management Plan (ASMP) submitted with the notice of requirement, to include, but not be limited to:
- a) Identification of the Project archaeologist, their role and responsibility on the Project;
 - b) Who reports to the Project archaeologist;
 - c) Specific sites requiring supervision, and measures to be undertaken to protect and manage these sites;
 - d) Whether NZHPT and/or Auckland Council heritage and/or iwi supervision is required for the specific site (the latter to be determined through consultation with the relevant iwi groups); and
 - e) Accidental discovery protocols in the event that unknown archaeological sites are uncovered.
- 123) ARCH.2 The NZTA shall employ at its expense a qualified archaeologist (the Project archaeologist) who shall be on site to monitor all initial earthworks, including surface stripping of the site, for all specific areas identified in the ASMP to establish whether any sub-surface archaeological features are present. This includes, but is not limited to, the following areas:
- (a) All unmodified areas in the vicinity of Rosebank Road;
 - (b) All works in the vicinity of the “Oakley Inlet Heritage Area”, located adjacent to the Great North Road Interchange;
 - (c) Works in the vicinity of two midden sites (recorded R11/2214 and R11/2215) within Great North Road Interchange, and all previously unmodified areas near the banks of the Oakley Inlet;
 - (d) Any ground disturbance works in Construction Yard 7 within Oakley Creek Reserve.

- 124) ARCH.4 In accordance with the ASMP, the following archaeological sites shall be fenced off and protected to the satisfaction of the Project archaeologist, prior to construction activities being undertaken:
- (a) Recorded sites R11/2504, R11/2505, R11/2506 and R11/2507, located on the northern boundary of the designation adjacent to the Rosebank Road peninsula.
 - (b) Recorded site R11/2383 in the Oakley Creek Esplanade Reserve construction yard.
- 125) ARCH.8 All contractors and subcontractors working on the Project shall be trained on the archaeological requirements set out in the ASMP.
- 126) ARCH. Advice Note *Any archaeological sites within the area affected by the Project shall not be modified or disturbed in any way unless written authorisation has been obtained from the NZ Historic Places Trust.*

Construction

- 127) ARCH.3 If any archaeological sites, including human remains are exposed during site works, then the following procedures shall apply:
- (a) Immediately it becomes apparent that a possible archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease;
 - (b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are untouched and notify the Project archaeologist;
 - (c) The Project archaeologist shall inspect the site to assess the relevance of the find, and then the Auckland Council shall be advised of the significance;
 - (d) If the site is confirmed to be an archaeological site by the Project archaeologist, the site supervisor shall then notify tangata whenua, the New Zealand Historic Places Trust, and the Auckland Council that an archaeological site has been exposed so that appropriate action can be taken;
 - (e) In the case of human remains, the NZ Police shall be notified.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 128) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.

Construction

- 129) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 130) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5

working days of identification of any contamination at the site which was not identified in the reports submitted in support of this application, including contaminated soil, surface water or groundwater.

- 131) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 132) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.
- 133) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Post-Construction / Operation

- 134) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;
 - (b) Volumes of soil removed from site;
 - (c) Copies of the waste disposal receipts; and
 - (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works.

EPA 10/2.004 – (ACC: Plan Modification 202)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type: Designation

Description: To alter designation A07-01, SH16, between Great North Road and St Lukes Interchange – NOR3. Addition of properties to existing designation, and construction of two new lanes, stormwater treatment, wetland pond, ancillary works and services, vegetation removal and restoration works, relocation of services, works on existing cycleway, landscaping and planting.

Lapse Period: 10 years

Code:

DC =	General Designation Conditions	OS =	Open Space Conditions
CEMP =	Construction Environmental Management Plan Conditions	SO =	Social Conditions
PI =	Public Information Conditions	V =	Vegetation Conditions
TT =	Temporary Traffic Conditions	A =	Avian Conditions
OT =	Operational Traffic Conditions	H =	Herpetofauna Conditions
CNV =	Noise and Vibration Conditions – Construction	L =	Lighting Conditions
ON =	Noise Conditions – Operation	ARCH =	Archaeology Conditions
OV =	Vibration Conditions – Operation	CL =	Contaminated Land and Contaminated Discharge Conditions
AQ =	Air Quality Conditions – Construction	F =	Freshwater Conditions
LV =	Landscape and Visual Conditions		

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
 - (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated

- (c) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part G: Technical Reports:
- (i) Technical Report G.1 Assessment of Air Quality Effects
 - (ii) Technical Report G.2 Assessment of Archaeological Effects
 - (iii) Technical Report G.3 Assessment of Avian Ecological Effects
 - (iv) Technical Report G.4 Assessment of Coastal Processes
 - (v) Technical Report G.5 Assessment of Construction Noise Effects
 - (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
 - (vii) Technical Report G.7 Assessment of Groundwater Effects
 - (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
 - (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
 - (x) Technical Report G.10 Assessment of Lighting Effects
 - (xi) Technical Report G.11 Assessment of Marine Ecological Effects
 - (xii) Technical Report G.12 Assessment of Operational Noise Effects
 - (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
 - (xiv) Technical Report G.14 Assessment of Social Effects
 - (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
 - (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
 - (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
 - (xviii) Technical Report G.18 Assessment of Transport Effects
 - (xix) Technical Report G.19 Assessment of Vibration Effects
 - (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
 - (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
 - (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
 - (xxiii) Technical Report G.23 Coastal Works
 - (xxiv) Technical Report G.24 Geotechnical Interpretive Report
 - (xxv) Technical Report G.25 Traffic Modelling Report
 - (xxvi) Technical Report G.26 Operational Model Validation Report
 - (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement
 - (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series
 - (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
 - (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
 - (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)
- (d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).
- (e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:
- (i) Evidence in Chief (Numbers 1-37)
 - (ii) Rebuttal Evidence (Numbers 1-33)
 - (iii) Supplementary Information (Numbers 1-8)

- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.
- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.
- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.
- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.
- If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.
- The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.
- Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.*
- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.
- Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and southern ventilation buildings and stacks where further details are required.*
- 7) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.
- 8) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 9) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions,

whichever is the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and 39~~38~~);
- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8); and
- (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.

Post-Construction

- 10) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
 - (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway

Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.
 - (b) The designation to be altered to remove those conditions no longer required for long term operation and maintenance of the Project.

Monitoring

- 11) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 12) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.
- Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.*
- Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.*
- 13) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.
- 14) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
 - (e) Environmental complaints management (including the procedures required under Condition PI.4);
 - (f) Compliance monitoring;

- (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
 - (h) Environmental auditing; and
 - (i) Corrective action.
- 15) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:
- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
 - (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
 - (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).
- 16) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:
- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
 - (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
 - (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloos);
 - (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

- (h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007);
- 17) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from residential dwellings, taking into account site and public safety and environmental constraints, in the locations shown on Waterview Connection Project Construction Yards Drawings (Refer Schedule A, Row 7);
 - (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 18) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 19) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.
- 20) CEMP.14 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). The EISDCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council, and include:
- (a) Methods and measures:
 - (i) 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.
 - (ii) 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
 - (iii) 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.
 - (iv) 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.

- (b) 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.
- (c) 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:
 - (i) Clause 2.2 with respect to excavations near overhead support structures;
 - (ii) Clause 2.4 with respect to buildings near overhead support structures;
 - (iii) Section 3 with respect to minimum separation between buildings and conductors;
 - (iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
 - (v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.
- (d) Confirmation that Transpower has been provided a copy of the EISCDMP for their review at least 20 working days prior to construction.

Advice 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).

- 21) CEMP.15 The NZTA will be responsible for all service relocations required for construction of the Project. The NZTA shall liaise with the providers of infrastructure service networks (including, but not limited to water, gas, stormwater, wastewater, power and telecommunications), and private property owners with on-site services to develop methodologies and timing for necessary services relocation required for the Project, with the objective of minimising disruption to the operation of these service networks and on-site services.

Advice note:

- (a) *It is noted that if separate consents are required for relocations for any services of network utility operators or landowners, such consents will be obtained before construction commences in the relevant area, and any effects of those relocations would be considered at that time. The same applies to any alteration of consents if required.*
- (b) *Network infrastructure owned and operated by Watercare Services is located within the designations. An operating agreement will be developed by the NZTA and Watercare Services which will include appropriate notification and access protocols where works are to be undertaken by either network operator on or adjacent to Watercare Services infrastructure within the designations.*

Construction

- 22) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 23) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 24) CEMP.8 All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
- 25) 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.

- 26) CEMP.12 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:
- (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.

A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.

- 27) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'

Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 28) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.
- 29) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

30) PI.5

The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:

- (a) Te Atatu (including the SH16 Causeway)
- (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
- (c) Owairaka

and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.

The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:

- (a) Auckland Council and Auckland Transport;
- (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
- (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
- (d) Department of Conservation;
- (e) Local Boards;
- (f) Iwi groups with Mana Whenua;
- (g) Public transport providers; and
- (h) Housing New Zealand Corporation.

Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 31) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 32) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located at each site specific work activity;
 - (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
 - (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
 - (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
 - (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
 - (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.
- 33) PI.6 The Community Liaison Group(s) shall be provided opportunities to review and comment on the following (amongst other things):
- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k);
 - (b) The Open Space Restoration Plans (as required by Condition OS.3);
 - (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as

- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

TEMPORARY TRAFFIC CONDITIONS

Pre-Construction

- 34) TT.1 The NZTA shall update and finalise the Construction Traffic Management Plan (CTMP) submitted with this application, in accordance with these conditions, and implement it through the CEMP.
- In finalising the CTMP, the NZTA shall:
- (a) Provide simulation modelling demonstrations to better understand the effects of construction of the Project on the affected road network;
 - (b) Include measures to avoid road closures and restrictions of vehicle, bus, cycle and pedestrian movements;
 - (c) Where road closures or restrictions cannot reasonably be avoided the particular vulnerabilities and sensitivities of pedestrian diversions and restricted conditions shall be taken into account in the planning of any closures or restrictions.
- 35) TT.2 The CTMP shall require the development of Site Specific Traffic Management Plans (SSTMPs) and their approval by the Traffic Management Project Governance Group (as defined by the CTMP), for each construction activity that may affect traffic or transportation infrastructure and services. The SSTMPs shall be provided to the Traffic Management Coordinator(s) for the relevant Road Controlling Authority at least 10 working days prior to each construction activity.
- 36) TT.3 Each SSTMP shall describe the measures that will be undertaken to avoid, remedy or mitigate the local and network wide effects of construction of the Project. In particular, the SSTMP shall include the following matters:
- (a) Traffic management measures to address and maintain, traffic capacity, including bus services, at peak traffic periods during weekdays (6:00 to 9:00 and 16:00 to 19:00) and peak traffic periods at weekends (including Te Atatu Road, Great North Road and Richardson Road);
 - (b) Methods to manage the effects of traffic during construction including the requirement to detour or divert traffic. These methods shall seek to avoid, remedy or mitigate effects on access to and from businesses and other organisations in the area;
 - (c) Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and buses;

- (d) Methods to avoid, remedy or mitigate the local and network wide effects of the construction of individual elements of the project (e.g. intersections/ overbridges) and the use of staging to allow sections of the Project to be opened to the traffic while other sections are still under construction;
- (e) Methods to manage the effects of the delivery of construction material, plant and machinery (including cranes and oversized trucks) during construction;
- (f) Any routes where construction traffic movements will be restricted (either for particular times for construction periods);
- (g) Measures to maintain existing vehicle access, as far as practicable, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with the Auckland Council and the affected landowner; and
- (h) Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, where practicable (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours. (This Condition does not act as a qualification to the commitment to maintain access to open space and education facilities, as required in Condition OS.13).

- 37) TT.4 The SSTMPs shall include traffic management measures developed in consultation with the Auckland Transport, Bus and Coach Association and the Auckland Council, to address and maintain, where practicable, existing levels of service for buses particularly at peak periods (6:00 to 9:00 and 16:00 to 19:00) on weekdays.
- 38) TT.5 The NZTA shall consult with the Traffic Operations Manager, Auckland Transport with regard to the most appropriate means for providing access on Council roads within and adjacent to the designation. The NZTA shall also coordinate and consult directly with the proponents of any major construction or major traffic generating event occurring concurrently with, and in the vicinity of the Project.
- 39) TT.6 The SSTMPs shall include measures developed in consultation with Auckland Transport to, as far as practicable, enable continued public walking and cycling passage along the existing Northwestern Cycleway (between Te Atatu Interchange and St Lukes Interchange) and along Great North Road and the public walkway along Oakley Creek, with any interruptions being as short as feasible.

Construction

- 40) TT.7 The NZTA shall undertake construction works so as to avoid significant long duration impacts or the full closure of Te Atatu Road for all road users heading to or from the Te Atatu Peninsula and to ensure that access for emergency service vehicles is maintained.
- 41) TT.8 The NZTA shall restrict construction truck movements during peak hours (6:00 to 9:00 and 16:00 to 19:00) on weekdays and during the peak periods at the weekends to avoid the following:
- (a) Te Atatu Road Interchange, during both morning and afternoon peak hours
 - (b) Great North Road Interchange, city bound during the morning peak hours
 - (c) Great North Road Interchange, west bound onto SH16 and southbound onto Great North road during the afternoon peak.

Construction truck movements during these hours shall only be allowed under exceptional circumstances agreed in advance with the Traffic Management Project Governance Group.

- 42) TT.9 The NZTA shall maintain at least the existing active traffic lane configuration capacity on SH16, at the Te Atatu Interchange area, Te Atatu Road, Richardson Road and on Great North Road during peak periods being 6:00 to 9:00 and 16:00 to 19:00 on weekdays and during the peak periods on weekends, for the duration of the temporary construction programme.
- 43) TT.10 The NZTA shall monitor the impact of construction traffic in terms of traffic speeds and volumes on SH16, Great North Road, Te Atatu Road and Richardson Road throughout the construction period to confirm the expected traffic effects as set out in the *Temporary Traffic Assessment* (Technical Report G.16) submitted with this application.
- (a) This monitoring will be undertaken on a daily, weekly and monthly basis; and
- (b) Monitoring results will be made available to the Traffic Operations Manager, Auckland Transport on request.
- 44) TT.11 If monitoring undertaken pursuant to Condition TT.10 indicates that traffic volumes or traffic conditions are significantly different from those expected, the SSTMPs will be reviewed and as appropriate amended to the satisfaction of the Traffic Management Project Governance Group.

OPERATIONAL TRAFFIC CONDITIONS

Construction

- 45) OT.1 The NZTA shall prepare in collaboration with Auckland Transport a Network Integration Plan (NIP) for the Project, or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements (identified in the Western Ring Route (Northwest) Network Plan) planned by the Auckland Council. The NIP shall include details of proposed physical works at the interface between the State highway and the local road network, and shall address such matters as pedestrian/ cycle ways, lane configuration, traffic signal co-ordination, signage and provision for buses
- In addition, the NIP will address:
- (a) The commitment of the NZTA to progress bus priority measures northbound on Great North Road as part of the reinstatement of Great North Road, as proposed by Auckland Transport and indicated on the Plans *Great North Road Option 1 Proposed Road Marking* (Schedule A, Row 33), subject to the agreement with Auckland Transport;
- (b) How the works committed to by the NZTA for pedestrian and cycle ways, as detailed in the PT and Active Mode Transport Routes Plan Set (Condition DC.1(d) (refer Schedule A, Row 22)), integrate with pedestrian and cycle ways on the wider transport network;
- (c) The Richardson Road Bridge, which shall be designed in general accordance with the structural plans (Schedule A, Row 9) and the commitment of the NZTA to provide a 2m footpath on Richardson Road Bridge, subject to confirming appropriate bus stop locations with Auckland Transport;
- (d) Integration of the works proposed on Te Atatu Road to appropriately transition between the Waterview Connection Project and any projects being progressed by Auckland Transport;
- (e) Opportunities to review traffic signal timings at the Te Atatu Interchange with a view to minimising delays to all users, including cyclists on the SH16 cycle way; and
- (f) The commitment of the NZTA to provide for cycle “aspects” (cycle signal lights) at the Great North Road Interchange.
- (g) As part of detailed design at the Te Atatu Interchange, the installation of underpasses

Works identified in the NIP which are the responsibility of the NZTA, will be undertaken as at the time of construction works for the Project.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

46) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration inducing construction activities would occur;
- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and after completion of construction works;
- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise mitigation, including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the

- The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

47) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 “Acoustics - Construction Noise” and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

48) CNV.3 Project Construction Noise Criteria: Airblast (excluding Sundays)

Category	Type of Blasting Operations	Peak Sound Pressure Level (LZpeak dB)
Human Comfort Limits		
Sensitive Site	Operations lasting longer than 12 months or more than 20 Blasts	115 dB for 95% blasts per year. 120 dB maximum unless agreement is reached with occupier that a higher limit may apply
Sensitive Site	Operations lasting less than 12 months or less than 20 Blasts	120 dB for 95% blasts per year. 125 dB maximum unless agreement is reached with occupier that a higher limit may apply
Occupied non-sensitive sites such as factories and commercial premises	All blasting	125 dB maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications of levels that can be shown to adversely affect the equipment operation
Damage Control Limits		
Structures that include masonry, plaster and plasterboard in their construction and also unoccupied structures of reinforced concrete or steel construction	All Blasting	133 dB unless agreement is reached with owner that a higher limit may apply.
Service structures such as pipelines, powerlines and cables located above ground	All Blasting	Limit to be determined by structural design methodology

- 49) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration				Long-term vibration
	PPV at the foundation at a frequency of			PPV at horizontal plane of highest floor (mm/s)	PPV at horizontal plane of highest floor (mm/s)
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)		
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 50) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
 - (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 51) CNV.6 Blasting shall be undertaken between 09:00h and 17:00h, Monday to Saturday, except that blasting may be undertaken between 09:00h and 17:00h on Sundays where:
- (a) The blasting is at least 50m inside the Sector 8 tunnel;
 - (b) The blasting produces peak particle velocities at any residential building not exceeding 0.5mm/s; and
 - (c) The Project construction noise criteria set out in Condition CNV.2 for Sundays are complied with.

- 52) CNV.7 Where practicable, permanent (traffic) noise barriers, required in any Sector as Detailed Mitigation Options for operational noise following completion of the Project (in accordance with Conditions ON.3 to ON.5) shall be erected prior to noise generating construction works commencing. Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP, prior to noise generating construction works commencing.
- 53) CNV.8 Pile driving or pile removal shall not be undertaken at night (i.e. during the hours of 20:00 – 06:30).
- 54) CNV.9 The concrete batch plants, rock crushing plants and the loading bays and conveyors for such plants shall be fully enclosed.
- 55) CNV.11 For all other properties, if noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2 or CNV.4 will potentially be exceeded, then the process set out in the CNVMP will be undertaken including Site Specific Noise Management Plans. Where relocation for residents is proposed, notification of such relocation with residents and property owners will be undertaken in accordance with the processes contained in the CNVMP.
- 56) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.
- Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for SSNMPs to be submitted to the Council where an SSNMP is required.
- If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.
- Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).*

NOISE CONDITIONS

General

- 57) ON.1 For the purposes of Conditions ON.2-ON.14 the following terms will have the following meanings:
- Appendix E – means Appendix E to the Technical Report G.12 ‘Assessment of Operational Noise Effects’ submitted with this application.
 - BPO – means Best Practicable Option.
 - Building Modification Mitigation – has the same meaning as in NZS 6806:2010.
 - Design Year – means a point in time that is 10 years after the opening of the Project to the public
 - Emergency Mechanical Services – means mechanical services used for emergency situations only.
 - Habitable room – has the same meaning as in NZS 6806:2010.
 - Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS 6806:2010 when determining the

- NZS 6806:2010 – means NZS 6806:2010 Acoustics – Road-Traffic Noise – New and Altered Roads.
- PPFs – means only the premises and facilities identified in green, yellow or red in Appendix E.
- Structural mitigation – has the same meaning as in NZS 6806:2010.

Pre-Construction

- 58) ON.2 The NZTA shall implement the traffic noise mitigation measures identified as the “Preferred Mitigation Options” in Appendix E as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix E (“Identified Categories”), where practicable and subject to Conditions ON.3-ON.11 below.
- 59) ON.3 The detailed design of the structural mitigation measures of the “Preferred Mitigation Options” (the Detailed Mitigation Options) shall be undertaken by a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council prior to construction of the Project, and, subject to Condition ON.4, shall include, as a minimum, the following:
- (a) Noise barriers with the location, length and height in general accordance with Appendix E and designed in accordance with the ULDF (Section B) (refer Schedule A, Row 38); and
 - (b) A requirement that Open Graded Porous Asphalt (“OGPA”) or equivalent low-noise generating road surface be used on all surface roads throughout the Project, except at the Great North Road Interchange; and
 - (c) For the Great North Road Interchange, a requirement that Twin Layer Open Graded Porous Asphalt (“Twin Layer OGPA”) or equivalent low-noise generating road surface be used as shown in Appendix E.
- 60) ON.4 Where the design of the Detailed Mitigation Options identifies that it is not practicable to implement a particular structural mitigation measure in the location or of the length or height included in the “Preferred Mitigation Options”, either:
- (a) If the design of the structural mitigation measures could be changed and would still achieve the same Identified Category at all relevant PPFs, and a suitably qualified expert approved by the Major Infrastructure Team Manager, Auckland Council, certifies to the Auckland Council that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed mitigation measures; or
 - (b) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any relevant PPF from Category A or B to Category C but Major Infrastructure Team Manager, Auckland Council confirms that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed structural mitigation measures.
- 61) ON.6 (a) **Sectors 1 to 8** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options:
- i. A noise level increase of 3 decibels or more will occur due to road-traffic

- ii. Habitable spaces are likely to receive in excess of 45 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year.

For those PPFs, following the process set out in Conditions ON.7 to ON.11, it shall be determined which Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces.

- (b) **Sector 9** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options, habitable spaces are likely to receive in excess of 40 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year. For those PPFs, following the process set out in ON.7 and ON.8, it shall be determined if Building Modification Mitigation may be required to achieve 40 dB LAeq inside habitable spaces. For those PPFs where Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces, this shall be implemented following the process set out in ON.9 to ON.11.

- 62) ON.7
- (a) Prior to commencement of construction of any sector of the Project in the vicinity of a PPF identified under Condition ON.6, the NZTA shall write to the owner of each-such building seeking access for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.
 - (b) If the owner(s) of the building approve the NZTA's access to the property within 12 months of the date of the NZTA's letter (sent pursuant to Condition ON.7(a)), then no more than six months prior to commencement of construction in any sector of the Project, the NZTA shall instruct a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council, to visit the building to measure internal noise levels and assess the existing building envelope in relation to noise reduction performance.

Construction

- 63) ON.5 The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project.

- 64) ON.8 Where a PPF identified under Condition ON.6 is identified, the NZTA shall be deemed to have complied with Condition ON.7 above where:

- (a) The NZTA (through its acoustics specialist) has visited the building; or
- (b) The owner(s) of the building approved the NZTA's access, but the NZTA could not gain entry for some reason after repeated attempts; or
- (c) The owner(s) of the building did not approve the NZTA's access to the property within the time period set out in Condition ON.7(b) (including where the owner(s) did not respond to the NZTA's letter (sent pursuant to Condition ON.7(a) within that period); or
- (d) The owner(s) of the building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

If any of (b) to (d) above apply to a particular Building, the NZTA shall not be required to implement any Building Modification Mitigation at that Building

- 65) ON.9 Subject to Condition ON.8, within 6 months of the assessment required under Condition ON.7(b), the NZTA shall give written notice to the owner of each PPF identified under Condition ON.6):

- (a) Advising of the options available for Building Modification Mitigation to the building;

- (b) Advising that the owner has three months within which to decide whether to accept Building Modification Mitigation for the building, and if the NZTA has advised the owner that more than one options for building modification mitigation is available, to advise which of those options the owner prefers.
- 66) ON.10 Once an agreement on Building Modification Mitigation is reached between the NZTA and the owner of an affected building, the mitigation shall be implemented (including the NZTA undertaking any required third party authorisation) in a reasonable and practical timeframe agreed between the NZTA and the owner. Building Modification Mitigation shall be to the standard specified in section 8.3.2 of NZS 6806:2010.
- Advice Note: The NZTA will be responsible for obtaining any necessary building consents or other approvals to undertake the above Building Modification Mitigation.*
- 67) ON.11 Subject to Condition ON.8, where Building Modification Mitigation is required, the NZTA shall be deemed to have complied with Condition ON.10 above where:
- (a) The NZTA has completed Building Modification Mitigation to the Building; or
 - (b) The owner(s) of the Building did not accept the NZTA's offer to implement Building Modification Mitigation prior to the expiry of the timeframe stated in Condition ON.9(b) above (including where the owner(s) did not respond to the Requiring Authority within that period); or
 - (c) The owner of the Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

Post-Construction/Operation

- 68) ON.12 The NZTA shall manage and maintain the Detailed Mitigation Options to ensure that, those mitigation works are maintained to retain their noise attenuation performance indefinitely.

Monitoring

- 69) ON.14
- (a) Prior to construction, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake a minimum of 8 (eight) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (b) Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake traffic noise monitoring at the same sites surveyed in Condition ON.14 (a) above, within 2 to 3 years following completion of construction of the Project. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (c) The results of the noise level monitoring in accordance with ON.14(b) above shall be used to verify the computer noise model of the Detailed Mitigation Option. A report describing the findings of the verification shall be provided to the Major Infrastructure Team Manager, Auckland Council within one month of it being completed.

VIBRATION CONDITIONS

Pre-Construction

- 70) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish

pre-Project vibration levels for comparison with future vibration levels.

AIR QUALITY CONDITIONS

Pre-Construction

- 71) AQ.1 The NZTA shall finalise and implement, through the CEMP, the Construction Air Quality Management Plan (CAQMP) and Concrete Batching and Crushing Management Plan (CBCMP) submitted with the application.
- The CAQMP and CBCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CAQMP and CBCMP includes the following details:
- (a) Daily visual monitoring of dust emissions;
 - (b) Procedures for responding to process malfunctions and accidental dust discharges;
 - (c) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site;
 - (d) Continuous monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;
 - (e) Monitoring of the times of detectable odour emissions from the ground;
 - (f) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
 - (g) Monitoring of construction vehicle maintenance;
 - (h) Process equipment inspection, maintenance, monitoring and recording, including baghouses, pressure relief valves and high level alarms;
 - (i) Complaints investigation, monitoring and reporting; and
 - (j) The identification of staff and contractors' responsibilities.

Construction

- 72) AQ.2 The NZTA shall review the CAQMP and CBCMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition CEMP.13.
- 73) AQ.3 All construction activities shall be operated, maintained, supervised, monitored and controlled at all times so that all emissions authorised by this consent are maintained at the minimum practicable level.
- 74) AQ.4 The NZTA shall undertake construction activities in accordance with the CEMP, CAQMP and CBCMP, such that:
- (a) Hard surfaced areas of the construction yards and active construction areas are vacuum swept or scraped down at least twice each week and additionally as reasonably required;
 - (b) All unsealed areas of the site used for vehicle movement are maintained visibly damp by the use of water sprays or a water cart during weather conditions where the potential for dust emissions exist;
 - (c) Wheel wash systems are installed at all truck exits from unpaved areas of the site onto public roads are used for all trucks that depart from the site;
 - (d) All stockpiles are constructed and positioned to minimise the potential for dust emissions. The surfaces of all stockpiles are maintained adequately damp at all times to minimise the release of particulate matter;
 - (e) Belt conveyors for moving dry materials are fitted with water sprays or enclosed to

- 75) AQ.5 Unless expressly provided for by conditions of this consent, there shall be no odour, dust or fumes beyond the site boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.
- 76) AQ.6 All offensive or objectionable dust beyond the boundary of the site caused as a result of processes on the site shall be mitigated forthwith in accordance with the requirements of the Construction Air Quality Management Plan.
- 77) AQ.7 Beyond the site boundary there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.
- 78) AQ.8 No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.

Monitoring - Construction

- 79) AQ.14 The NZTA shall undertake visual inspections of dust emissions as follows:
- (a) Visual inspections of all active construction areas at least three times daily during October to April inclusive, whenever there are construction activities. The results of visual monitoring shall be logged.
 - (b) Visual inspections of dust emissions from the concrete batching plants and rock crushing plant shall be undertaken daily while the plant is operating.
- 80) AQ.15 The operation of water sprays shall be checked at least once each day.

Reporting - Construction

- 81) AQ.19 All records, logs, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an Auckland Council enforcement officer and shall be kept for the duration of the consent.
- 82) AQ.22 Log books shall be maintained that record all relevant information that is required to demonstrate compliance with the conditions of this consent. This information shall include, but is not limited to:
- (a) Visual assessments of any dust emissions from the site and the source;
 - (b) Any dust control equipment malfunction and any remedial action taken;
 - (c) When a water cart was used and, if so, the frequency of use and the volume of water used (including identification of location);
 - (d) All relevant details of the TSP and meteorological monitoring required by Conditions AQ.16 and AQ.17;
 - (e) Any additional dust control measures undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.
- 83) AQ.23 The NZTA shall maintain a log of any complaints received relating to air quality. Details of each complaint received shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 24 hours of receipt of the complaint. The log shall include any complaints lodged with the Auckland Council where the Council has informed the NZTA of the complaint. The log shall include, but not be limited to the following:

- (a) The date, time, location and nature of the complaint;
- (b) Weather conditions at the time of the complaint (including approximate wind speed, wind direction, cloud cover);
- (c) Any possible other contributing factors (such as a fire, smoky vehicle, a local chimney emission, etc.);
- (d) The name, phone number and address of the complainant (unless the complainant elects not to supply these details);
- (e) Any remedial actions undertaken; and
- (f) The date and time of the entry and the signature of the person entering the information.

LANDSCAPE AND VISUAL CONDITIONS

Pre-Construction

- 84) LV.1 The Urban Design and Landscape Plans (UDL Plans) (Plan Set F.16, refer Schedule A, Row 17) shall be reviewed and revised in accordance with the conditions and submitted to the Major Infrastructure Team Manager, Auckland Council for certification that they comply with the conditions of the consents/ designation prior to construction of the relevant Project stage, at least 20 working days prior to the commencement of construction.
- The UDL Plans shall be updated to:
- a) Reflect relevant details from the PT and Active Mode Transport Routes Plan Set (Schedule A, Row 23);
 - b) Remove the playing field at Waterview Reserve;
 - c) Confirm the reconfigured bund design at Alwyn Avenue (Schedule A, Row 42);
 - d) Reflect landscaping required in relation to the northern vent stack in Waterview Glades pursuant to Conditions DC.8.
- 85) LV.2 In certifying the UDL Plans, prepared in accordance with Condition LV.1, the Major Infrastructure Team Manager, Auckland Council shall be satisfied the UDL plans includes:
- (a) The visual mitigation of infrastructure as detailed in Section B of the UDLF (refer Schedule A, Row 38).
 - (b) Incorporation of art or art through design of structures, particularly as it relates to noise barriers and the Great North Road Interchange piers and ramps (Refer to clauses (g) and (i) below).
 - (c) Planting to screen houses and noise walls (including cross section details);
 - (d) Planting along the corridor on Traherne Island, in accordance with these conditions and the Ecological Management Plan;
 - (e) Specimen planting on the Great North Road Interchange and the Te Atatu Road Interchange;
 - (f) Specimen planting at the tunnel portals (except where this is within the OPW area);
 - (g) Finalisation of the noise barriers (as required by Condition ON.3(a)) in accordance with the design principles for noise walls (refer Schedule A, Row 32);
 - (h) Delineation of the final areas of the Open Space Restoration Plans in accordance with the Open Space Restoration Plans (Schedule A, Row 30), and reference that all works within the Open Space Restoration Plan Areas are subject to Conditions OS.1 to OS.8;
 - (i) Oakley Inlet Heritage Plan, prepared in accordance with Conditions OS.5, and in particular, consideration shall be given to the design treatment of the Great North

- (j) Ecological Management Plan, prepared in accordance with Conditions V.1, A.1, H.1, F.1 and M.1;
 - (k) Western Ring Route: Maioro Street Interchange and Waterview Connection - Oakley Creek Rehabilitation and Restoration Guidelines (Boffa Miskell, 2010); and
 - (l) Details of artworks or art through design of structures within the Project (e.g. design detailing of median barriers, bridge railings, safety barriers, piers, retaining walls and tunnel portals), in accordance with Section B of the Urban Landscape and Design Framework (UDLF June 2010) (refer Schedule A, Row 38) and F.8:Plans of Structures and Architectural Features, but excluding the north and south ventilation buildings, plans sections and elevations.
- 86) LV.8 The NZTA shall ensure that any areas within the designation affected by construction activities have sub-soil rehabilitated and top-soil replaced so that the hydrological response including the volume of stormwater runoff generated is as close as practicable to the predevelopment situation. The methodologies to achieve this shall be documented and provided to the Major Infrastructure Team Manager, Auckland Council with the revised ULD Plans submitted pursuant to Condition LV.1.
- 87) LV.10 The UDL Plans shall identify all Amenity Trees required to be removed over the construction of the Project (in accordance with Condition CEMP.6(o) and (p)). Replacement trees shall be sized at 160Lt and will either draw from the Coastal Forest or Basalt Rock Forest ecotypes listed in the Landscape Planting Schedules (provided in F.16, refer Schedule A, 17) or an agreed alternative species (confirmed by Major Infrastructure Team Manager, Auckland Council), except in the case of those trees subject to Condition ARCH.9.
- Advice note: This does not necessary apply to any replacement planting in the Open Space Restoration Plan areas, which will be confirmed in approval from Auckland Council and will be in accordance with relevant Auckland Council Park guidelines (see Condition OS.4).*

Post-Construction/Operation

- 88) LV.3 The NZTA shall have implemented the UDL Plans within 6 months of practical completion of construction of the Project.
- 89) LV.4 The landscaping shall be implemented in accordance with the UDL Plans within the first planting season following the completion of the construction works, provided that climatic conditions are suitable, otherwise at the first practicable opportunity thereafter, and shall be maintained for a period of 10 years thereafter. Should the landscaping be implemented in stages (depending on construction phases), landscaping shall be implemented in accordance with this Condition for each stage unless subsequent construction staging requires use of the proposed landscaping area.
- Advice note: On-going control and management of the landscaping within the designation is the responsibility of the NZTA.*
- 90) LV.5 The NZTA shall implement the UDL Plans taking into account the pest plant management guidelines detailed in the Ecological Management Plan (as required by Condition CEMP.3).

OPEN SPACE CONDITIONS

Construction

- 91) OS.13 During construction, the NZTA shall maintain pedestrian accessways to all open space

available for public use during construction and education facilities where access is affected by the works, including any public access that crosses private land. Such access shall be safe, clearly identifiable, provide appropriate surfacing and seek to minimise significant detours. The access shall be of a same or similar standard as that disrupted and will be provided and maintained by the NZTA.

Advice note: This specifically includes the existing pedestrian access that provides a connection to the crossing over Oakley Creek between 1510 Great North Road and Unitec Mt Albert Campus.

Post-Construction/Operation

- 92) OS.15 The works shall not result in any permanent loss of carparking from Western Springs Garden carpark.

SOCIAL CONDITIONS

Pre-Construction

- 93) SO.1 In addition to the Community Liaison Groups established pursuant to Condition PI.5, the NZTA shall establish an Education Liaison Group (including representatives from local schools, kindergartens, childcare facilities, Unitec Institute of Technology, the Ministry of Education and Housing New Zealand Corporation), to provide a forum through which:

- (a) Relevant monitoring data can be provided (e.g. air quality monitoring);
- (b) Notice can be provided of when particularly noisy activities will occur in close proximity to schools and education facilities, to enable the opportunity to identify any potential conflict with particular sensitive periods, and the requirement for specific mitigation strategies (e.g. rescheduling of construction activities where practicable);
- (c) Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed;
- (d) Notice can be provided of potential construction impacts on school transport routes (including pedestrian/cycle access) to enable the opportunity to identify specific mitigation preferences of the education facilities (e.g. any detour routes) and to enable these facilities to appropriately inform students and/or parents; and
- (e) Learning and teaching opportunities for educational facilities to participate in Project works (e.g. planting or artworks).

The Education Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period. The Education Liaison Group shall continue to meet for at least 12 months following the completion of the Project (or less if the members of the Education Liaison Group agree), so that ongoing monitoring information can continue to be disseminated.

- 94) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:

- (a) Auckland Council;
- (b) Housing New Zealand Corporation;
- (c) Te Kawerau Iwi Tribal Authority;
- (d) Ngati Whatua o Orakei;
- (e) KiwiRail;

- (f) Department of Conservation;
- (g) Ministry of Education; and
- (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to the Auckland Council);
- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

- 95) SO.7 A schedule of trees that require removal for construction of the Project will be identified and reported to the Community Liaison Group for their consideration of potential provision of timber for heritage projects (including in particular the provision of *Robinia* wood for heritage boat building). If the demand for this timber is identified to the Construction Team, appropriate measures for felling and removal from the site will be confirmed.

Construction

- 96) SO.2 In addition to Condition SO.1(b) above, where noisy construction activities (that are projected to exceed the Noise Criteria in the CNVMP) are proposed in close proximity or adjacent to schools/ childcare centres, the NZTA shall, when preparing their SSNMP (in accordance with Condition CNV.1) give specific consideration to options to carry out these works outside school hours or during school holidays as a mitigation option.

VEGETATION CONDITIONS

General

- 97) V.10 Any planting utilising native plants shall use plants genetically sourced from the Tamaki Ecological District where possible or otherwise shall use plants that have been genetically sourced from within the Auckland Ecological Region.

Pre-Construction

- 98) V.1 The NZTA shall finalise the ECOMP submitted with this application, prior to works commencing on site. The ECOMP shall be implemented through the CEMP. The ECOMP shall clearly identify the location and identity of:
- (a) All Significant Vegetation within the designation that is to be fully protected or relocated; and

- (b) All Valued Vegetation within the designation that is affected by the works (protected or removed).

Note: Significant and Valued Vegetation shall be as defined in the ECOMP.

- 99) V.2 The NZTA shall employ a suitably experienced botanist ('nominated botanist') for the duration of the works to monitor, supervise and direct all works affecting or otherwise in close proximity to the Significant Vegetation and Valued Vegetation identified in the ECOMP.
- 100) V.3 Prior to any site works commencing, a pre-commencement site meeting shall be held so that the conditions that pertain to the Significant Vegetation and Valued Vegetation and all vegetation in general (both native and exotic) are explained by the nominated botanist to all contractors or sub-contractors who will be working on site within the close vicinity of that vegetation.

Construction

- 101) V.4 The NZTA shall minimise the amount of vegetation (both native and exotic) which is to be cleared, with the exception of weeds (both woody and otherwise, unless agreed with the Major Infrastructure Team Manager, Auckland Council and the Community Liaison Group that the retention of these 'weeds' has other environmental or ecological benefits that warrant their retention). All vegetation clearance shall be undertaken in accordance with the measures set out in the ECOMP.
- 102) V.5 The NZTA shall install protective fencing around, or otherwise clearly demarcate, all of the Significant Vegetation identified in the ECOMP as requiring full protection, under the supervision of the nominated botanist.
- 103) V.6 The NZTA shall replace any terrestrial Valued Vegetation that is required to be removed as a result of construction activities, in accordance with the ECOMP and the Urban Design and Landscape Plans.
- 104) V.7 The nominated botanist shall supervise all trimming, pruning and relocation work associated with the Significant Vegetation and Valued Vegetation required as part of the works.

Monitoring

- 105) V.8 Immediately prior to planting, and for a period of 2 years following completion of construction, the NZTA shall undertake weed control and management of all invasive plant pests within the vegetated areas of the surface designation for the Project. Following this 2 year period, on-going control and management of all invasive plant pests within these areas will be the responsibility of the NZTA.
- 106) V.9 The nominated botanist shall undertake a monitoring programme throughout the construction period, including monitoring of:
- (a) The condition, repair and location of the temporary protective fencing or other forms of demarcation used to identify the Significant Vegetation;
 - (b) Any works within the vicinity of the Significant Vegetation and Valued Vegetation;
 - (c) The general health of the Significant Vegetation and Valued Vegetation (including any Significant or Valued Vegetation that has been relocated away from the works area); and
 - (d) Compliance with the vegetation conditions of designation by way of fortnightly inspections during the construction period.

AVIAN CONDITIONS

Pre-Construction

- 107) A.1 The NZTA shall finalise, and implement through the CEMP, ECOMP submitted with this application to include the matters set out in Conditions A.2 to A.6.

HERPETOFAUNA CONDITIONS

Pre-Construction

- 108) H.1 The NZTA shall finalise and implement through the CEMP, the ECOMP submitted with this application to include details of lizard management to be undertaken, including the following:
- (a) Lizard capture methodology, including timing;
 - (b) Lizard release locations(s);
 - (c) Lizard habitat enhancement at population release sites, including a detailed pest control programme for a minimum of one month prior to release and for a minimum of three consecutive years' duration after release;
 - (d) Location(s), monitoring and maintenance of lizard protective fencing;
 - (e) Post-release monitoring methodology; and
 - (f) Lizard captive management methodology.

LIGHTING CONDITIONS

Pre-Construction

- 109) L.2 A Temporary Construction Lighting Management Plan shall be prepared for all construction zones and construction yards prior to commencement of any night time works within the construction zones and construction yards. The Temporary Construction Lighting Management Plan shall be independently verified by a lighting specialist and provided to the Major Infrastructure Team Manager, Auckland Council for certification of compliance 10 working days prior to any night time work commencing.

The certification process shall ensure that the Plan includes (but is not be limited to):

- a) The layout and arrangement of all temporary lighting required for night time works, and shall show how this avoids the "Light Spill Restriction Zone" identified on the Construction Yard Plans (Refer Schedule A, Row 7) submitted with the application, and that the temporary lighting complies with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - b) Provision for a 10m buffer between the night time work and any residential boundary at all times to minimise potential for light spill; and
 - c) General operating procedures outlined in the CEMP.
- 110) L.3 Asymmetrical floodlights with horizontal glass visors that are not raised more than 3 degrees above the horizontal plane shall be used for any temporary construction night time lighting requirements. Alternative temporary lighting arrangements may be used, subject to the prior approval of the Major Infrastructure Team Manager, Auckland Council, where it can be demonstrated that the proposed lighting is similar or better to asymmetrical

floodlights with glass visors. Glare shall be kept below the recommendation given in AS 4282 – 1997 “Control of the Obtrusive Effects of Outdoor Lighting” Tables 2.1 and 2.2.

Post-Construction/Operation

- 111) L.1 Lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas, in general accordance with the Waterview Connection Lighting Plan (Drawing Set F.11 (Refer Schedule A, Row 12):
- a) All motorway lighting shall be designed in accordance with "Roadlighting Standard AS/NZS1158";
 - b) All other lighting shall be designed in accordance with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - c) Fully cut off luminaries shall be used on SH20 from the Southern Tunnel Portal to the Maoro Street Interchange to minimised lighting overspill, as shown on Drawing Set F.11 (Refer Schedule A, Row 12).

ARCHAEOLOGY CONDITIONS

Pre-Construction

- 112) ARCH.1 The NZTA shall complete, and implement through the CEMP, the Archaeological Site Management Plan (ASMP) submitted with the notice of requirement, to include, but not be limited to:
- a) Identification of the Project archaeologist, their role and responsibility on the Project;
 - b) Who reports to the Project archaeologist;
 - c) Specific sites requiring supervision, and measures to be undertaken to protect and manage these sites;
 - d) Whether NZHPT and/or Auckland Council heritage and/or iwi supervision is required for the specific site (the latter to be determined through consultation with the relevant iwi groups); and
 - e) Accidental discovery protocols in the event that unknown archaeological sites are uncovered.
- 113) ARCH.2 The NZTA shall employ at its expense a qualified archaeologist (the Project archaeologist) who shall be on site to monitor all initial earthworks, including surface stripping of the site, for all specific areas identified in the ASMP to establish whether any sub-surface archaeological features are present. This includes, but is not limited to, the following areas:
- (a) All unmodified areas in the vicinity of Rosebank Road;
 - (b) All works in the vicinity of the “Oakley Inlet Heritage Area”, located adjacent to the Great North Road Interchange;
 - (c) Works in the vicinity of two midden sites (recorded R11/2214 and R11/2215) within Great North Road Interchange, and all previously unmodified areas near the banks of the Oakley Inlet;
 - (d) Any ground disturbance works in Construction Yard 7 within Oakley Creek Reserve.
- 114) ARCH.8 All contractors and subcontractors working on the Project shall be trained on the archaeological requirements set out in the ASMP.
- 115) ARCH. Advice Note *Any archaeological sites within the area affected by the Project shall not be modified or disturbed in any way unless written authorisation has been obtained from the NZ Historic Places Trust.*

Construction

- 116) ARCH.3 If any archaeological sites, including human remains are exposed during site works, then the following procedures shall apply:
- (a) Immediately it becomes apparent that a possible archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease;
 - (b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are untouched and notify the Project archaeologist;
 - (c) The Project archaeologist shall inspect the site to assess the relevance of the find, and then the Auckland Council shall be advised of the significance;
 - (d) If the site is confirmed to be an archaeological site by the Project archaeologist, the site supervisor shall then notify tangata whenua, the New Zealand Historic Places Trust, and the Auckland Council that an archaeological site has been exposed so that appropriate action can be taken;
 - (e) In the case of human remains, the NZ Police shall be notified.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 117) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.
- 118) CL.2 Prior to the main construction works commencing, the baseline quality of soils and groundwater within Sector 5 (the southern bank of Oakley Creek coincident with the location of the former tannery) and Sector 7 (particularly in relation to works in the vicinity of Great North Road) shall be investigated and established. The investigations shall be carried out in accordance with appropriate Ministry for the Environment and Auckland Council guidelines. The findings of the soil and groundwater investigations shall be used to determine the specific constructions methods during work in this area to manage any likely environmental effects in relation to the Project.
- 119) CL.3 Prior to the main construction works commencing, soils and fill materials within Alan Wood Reserve (Sector 9) shall be further classified so as to determine the distribution and extent of cleanfill, managed fill and contaminated/hazardous fill materials.

Construction

- 120) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 121) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5 working days of identification of any contamination at the site which was not identified in

the reports submitted in support of this application, including contaminated soil, surface water or groundwater.

- 122) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 123) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.
- 124) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Monitoring

- 125) CL.9 During and following the tunnel construction works beneath Sector 8, groundwater quality monitoring shall be carried out at locations within and down hydraulic gradient of Phyllis Street Landfill. Monitoring shall be undertaken on at least a monthly basis, and for a period up to 12 months following completion of the tunnel construction works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.
- 126) CL.10 Prior to, during and following tunnel construction works beneath Phyllis Street Landfill, monitoring for landfill gas shall be carried out from existing monitoring boreholes within the landfill. Monitoring shall be undertaken on at least a monthly basis, for a period of no less than 6 months prior to, and up to 12 months following completion of the tunnelling works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.

Post-Construction/Operation

- 127) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;
 - (b) Volumes of soil removed from site;
 - (c) Copies of the waste disposal receipts; and
 - (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works.

FRESHWATER CONDITIONS

Pre-Construction

- 128) F.1 The NZTA shall finalise, and implement through the CEMP, the ECOMP submitted with this application. The ECOMP shall be updated to ensure compliance with the conditions of this consent and include changes to the details of construction processes prior to construction commencing. The ECOMP shall include, but not be limited to details of:
- (a) Monitoring of freshwater ecology;
 - (b) Monitoring of freshwater and stream sediment quality;
 - (c) Trigger event criteria for undertaking additional monitoring;

- (d) Procedures for responding to accidental discharges of contaminants to the freshwater environment; and
- (e) Contingency plans and/or remedial measures in the event monitoring results identify adverse effects.

Monitoring

129) F.2 The NZTA shall engage a suitably qualified ecologist and water quality scientist to undertake freshwater monitoring programme prior to, during and following construction to monitor the effect of the Project on the freshwater ecology. The freshwater monitoring shall be undertaken in Oakley Creek, Pixie Stream and Meola Creek. The freshwater monitoring programme shall be undertaken in accordance with the details set out in the ECOMP and include:

- (a) Cross sectional profiles;
- (b) Macro invertebrate sampling; and
- (c) Freshwater fish monitoring.

130) F.3 The freshwater monitoring programme shall, as a minimum, be undertaken in accordance with the following frequency:

- (a) Prior to construction – two baseline ecological surveys.
- (b) During construction – twice per year for fish and macro invertebrates and cross sectional profiles, within one month prior to the beginning of the earthworks season and within one month either side of the end of the earthworks season.
- (c) Post construction – on an annual basis for a maximum period of three years, or less if the Major Infrastructure Team Manager, Auckland Council is satisfied that no adverse effects have occurred or are likely to occur from the Project.
- (d) Monthly water quality samples at the five existing Oakley Creek sample locations to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb) and nutrients.
- (e) Four “event based” samples per annum from each of the current two Oakley Creek sites. The samples are to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb), hydrocarbons (TPH) and nutrients.
- (f) Two sediment quality samples per annum (January and July) at the five existing water quality Oakley Creek sites (if there is sufficient sediment to sample). The samples are to be analysed for metals (Zn, Cu and Pb), polycyclic aromatic hydrocarbons (PAH), hydrocarbons (TPH) and semi-volatile organic compounds.

Advice note: The sample collection and analysis required under sub-clauses (d) to (f) shall be undertaken following an IANZ accredited methodology by a suitably accredited laboratory (International Accreditation New Zealand).

131) F.4 The NZTA shall undertake additional freshwater monitoring in the event of a ‘trigger event’ for freshwater habitats. For the purposes of this consent, a ‘trigger event’ for freshwater habitats is defined in the ECOMP.

132) F.5 The NZTAs ecologist/hydrologist (required by condition F.2) shall review, every six months, the freshwater monitoring results, provided from Conditions F.2 to F.4, and results in monitoring detailed in earthworks Conditions E.9 and E.19 and Groundwater Condition G.10. In the event that potential adverse effects are identified, including through review of the Condition G.10 monitoring results by the hydrologist and freshwater ecologist required by Condition G.12, the NZTA shall develop and submit for the approval of the Major Infrastructure Team Manager, Auckland Council appropriate contingency plans and/or remedial measures in accordance with the measures set out in the ECOMP.

Reporting

- 133) F.6 Freshwater monitoring reports shall be compiled from the monitoring undertaken pursuant to Conditions F.2 to F.4 and the review of Condition F.5, and a report provided to the Major Infrastructure Team Manager, Auckland Council every 6 months.

EPA 10/2.005 – (ACC: Plan Modification 202)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type: Designation

Description: For a new designation, SH16, SH20 and Great North underpass – NOR4. A new surface designation for construction, operation and maintenance of new interchange and structures associated with tunnel operation, including ventilation building and stack, mitigation and local road access, taking in new pieces of land, and allowing for construction and operation of ramps, stormwater, wetland ponds, ancillary safety and operational services and maintenance, temporary works, vegetation removal and restoration, relocation of services, works on north-western cycleway, landscaping and planting, open space restoration of the Oakley Inlet heritage area.

Lapse Period: 10 years

Code:

DC =	General Designation Conditions	OS =	Open Space Conditions
CEMP =	Construction Environmental Management Plan Conditions	SO =	Social Conditions
PI =	Public Information Conditions	V =	Vegetation Conditions
TT =	Temporary Traffic Conditions	A =	Avian Conditions
OT =	Operational Traffic Conditions	H =	Herpetofauna Conditions
CNV =	Noise and Vibration Conditions – Construction	L =	Lighting Conditions
ON =	Noise Conditions – Operation	ARCH =	Archaeology Conditions
OV =	Vibration Conditions – Operation	S =	Ground Settlement Conditions
AQ =	Air Quality Conditions – Construction	CL =	Contaminated Land and Contaminated Discharge Conditions
OA =	Operational Air Quality Conditions	F =	Freshwater Conditions
LV =	Landscape and Visual Conditions		

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
- (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part F: Plans and Drawings, except as updated through the hearing (Refer Schedule A for current plan and drawing references); and
 - (c) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part G: Technical Reports:
 - (i) Technical Report G.1 Assessment of Air Quality Effects
 - (ii) Technical Report G.2 Assessment of Archaeological Effects
 - (iii) Technical Report G.3 Assessment of Avian Ecological Effects
 - (iv) Technical Report G.4 Assessment of Coastal Processes
 - (v) Technical Report G.5 Assessment of Construction Noise Effects
 - (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
 - (vii) Technical Report G.7 Assessment of Groundwater Effects
 - (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
 - (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
 - (x) Technical Report G.10 Assessment of Lighting Effects
 - (xi) Technical Report G.11 Assessment of Marine Ecological Effects
 - (xii) Technical Report G.12 Assessment of Operational Noise Effects
 - (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
 - (xiv) Technical Report G.14 Assessment of Social Effects
 - (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
 - (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
 - (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
 - (xviii) Technical Report G.18 Assessment of Transport Effects
 - (xix) Technical Report G.19 Assessment of Vibration Effects
 - (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
 - (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
 - (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
 - (xxiii) Technical Report G.23 Coastal Works
 - (xxiv) Technical Report G.24 Geotechnical Interpretive Report
 - (xxv) Technical Report G.25 Traffic Modelling Report
 - (xxvi) Technical Report G.26 Operational Model Validation Report
 - (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement
 - (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series

- (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
 - (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
 - (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)
- (d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).
- (e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:
- (i) Evidence in Chief (Numbers 1-37)
 - (ii) Rebuttal Evidence (Numbers 1-33)
 - (iii) Supplementary Information (Numbers 1-8)
- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.
- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.
- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.
- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.
- If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.
- The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.
- Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.*
- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.
- Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and southern ventilation buildings and stacks where further details are required.*

- 7) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.
- 8) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 9) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions, whichever is the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and ~~39~~38);
- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8); and
- (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.

- 10) DC.7 An Outline Plan of Works shall be prepared for the Northern and Southern Ventilation Buildings and Stacks (OPW1 and OPW2) (in the general location as shown in the Operational Scheme Plans F.2 (Schedule A, Row 3) as shown on Figures DC.A and DC.B) in accordance with Section 176A of the RMA and Conditions DC.8 and DC.9 below and submitted to the Major Infrastructure Team Manager, Auckland Council.

For the purposes of Conditions DC.8 and DC.9, the following definitions shall apply:

- (a) Control Building – A building or buildings associated with the staffed control of the tunnel operating systems (including CCTV systems or surveillance). This precludes the inclusion or attached of any equipment unrelated to the structure of operation of the control building.
- (b) Ventilation Building – A building or buildings associated with the operation and maintenance of the tunnels and associated ventilation system (including power and emergency water supply). This precludes the inclusion or attachment of any equipment unrelated to the structure or operation of the ventilation building.
- (c) Ventilation Stack (stack) - A structure which channels air emissions to a height in the atmosphere which is suitable to disperse the emissions and result in an acceptable ambient air quality. This precludes the inclusion or attachment of any equipment unrelated to the structure or operation of the ventilation stack.

- 11) DC.8 Outline Plan of Works for the Northern Ventilation Buildings and Stack (OPW1) (refer Figure DC.A)

OPW1 shall be prepared in accordance with Section 176A of the RMA.

The final form of the Northern Ventilation Buildings and Stack shall be in accordance with the design principles of Section B of the Urban Landscape and Design Framework (ULDF June 2010) (refer Schedule A, Row 38) and the following requirements:

- (a) Retention of the same building / structural components underground as per the revised Drawing Set F.8, specifically Drawing 9 'North Portal - Basement Floor Plan' and above ground, specifically Drawing 8 'North Portal Location Plan' (refer Schedule A, Row 9) (subject to the amendments to location required by subclause (c) below);
- (b) Creation of a fragmented form for the ventilation buildings, such that the above-ground building is broken down into small, discrete elements – broadly similar in scale to that of nearby residential and school buildings;
- (c) Location of the ventilation stack on the eastern side of Great North Road, within the OPW area identified on Plan DC.A. The precise location within the OPW area shall be a matter of consultation with the Community Liaison Group(s) as established by Condition PI.5;
- (d) Ensure that any required roof linkages do not dominate the form of the building nor make it register visually as a single entity;
- (e) Development of an architectural profile, detailing and material palette that references the local landscape/ geology/ coastline/ residential area in the design of the above-ground ventilation buildings and for the ventilation stack to avoid an industrial character;
- (f) Maximisation of areas of planted open space between buildings, structures and vehicle movement/ parking areas;
- (g) Maximisation of the quantum of limbed-up (to promote visibility and surveillance (in accordance with CPTED principles)), large scale, specimen tree planting between buildings, structures and vehicle movement / parking areas surrounding the ventilation buildings;
- (h) Treatment of the ventilation building and ventilation stack as objects of urban sculpture;

- (i) Maintain opportunities for residential development at 14445 and 1449 Great North Road at the end of the construction programme;
- (j) Provision of lighting integrated with the façade design to illuminate the ventilation building and shared pedestrian/ cycle path along Great North Road;
- (k) The opportunity to provide and maintain a shared pedestrian / cycle path along Great North Road between Oakley Avenue and Herdman Street at a width that does not compromise a planted berm that provides screening for the buildings and maintains a safe walking environment for children using this path and is in accordance with the Plans PT & Active Mode Transport Routes (Refer Schedule A, Row 22);
- (l) Consideration of the desirability of setting the ventilation stack back from the frontage of Great North Road to provide for screening of structures and for the safe operation of accessways / service lanes required for the ventilation stack and for Great North Road;
- (m) Providing for the retention of as much existing vegetation as possible surrounding the ventilation stack and for planting at the base of the ventilation stack in a manner that integrates with the Oakley Creek Esplanade (Waterview Glades) Restoration Plan (Conditions OS.3 and O.S.7);
- (n) The works needed for land stability for the stack (e.g. bunding, retaining walls, slope stability measures). Any retaining structures required shall be undertaken in a manner that integrates with the Oakley Creek Esplanade (Waterview Glades) Restoration Plan (OS.3 and OS.7);
- (o) Documentation of consultation undertaken with the Waterview (to St Lukes) Community Liaison Group (as established by Condition P1.5) and the Manager, Urban Design Auckland Council, the views and concerns expressed by this consultation, particularly as pertains to the final location and design of the ventilation stack;
- (p) Confirmation that the building height (maximum 6.5m) and above ground area is no greater than the Concept Plan drawings in the updated plan set F.8, specifically Drawing 11, North Portal Ground Floor Plan (refer Schedule A, Row 9);
- (q) The site configuration should maximise the use of building façades to achieve site security, minimising the necessity for additional fencing. All security fencing is to be set back from the street frontage, maximising transparency and should reflect the residential character of the area; and
- (r) The northern ventilation stack will be at a height of 15m. This height shall be calculated from the lowest existing ground level along the Great North Road boundary adjacent to the ventilation stack.

Post-Construction / Operations

- 12) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
- (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway
Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.
 - (b) The designation to be altered to remove those conditions no longer required for long term operation and maintenance of the Project.

Monitoring

- 13) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 14) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.
- Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.*
- Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.*
- 15) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.
- 16) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
 - (e) Environmental complaints management (including the procedures required under Condition PI.4);

- (f) Compliance monitoring;
- (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
- (h) Environmental auditing; and
- (i) Corrective action.

17) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:

- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
- (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
- (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).

18) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:

- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
- (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloos);

- (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);
- 19) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from residential dwellings, taking into account site and public safety and environmental constraints, in the locations shown on Waterview Connection Project Construction Yards Drawings (Refer Schedule A, Row 7);
 - (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 20) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 21) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.
- 22) CEMP.14 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). The EISDCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council, and include:
- (a) Methods and measures:
 - (i) 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.
 - (ii) 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
 - (iii) 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.

- (iv) 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.
- (b) 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.
- (c) 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:
 - (i) Clause 2.2 with respect to excavations near overhead support structures;
 - (ii) Clause 2.4 with respect to buildings near overhead support structures;
 - (iii) Section 3 with respect to minimum separation between buildings and conductors;
 - (iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
 - (v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.
- (d) Confirmation that Transpower has been provided a copy of the EISCDMP for their review at least 20 working days prior to construction.

Advice 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).

- 23) CEMP.15 The NZTA will be responsible for all service relocations required for construction of the Project. The NZTA shall liaise with the providers of infrastructure service networks (including, but not limited to water, gas, stormwater, wastewater, power and telecommunications), and private property owners with on-site services to develop methodologies and timing for necessary services relocation required for the Project, with the objective of minimising disruption to the operation of these service networks and on-site services.

Advice note:

- (a) *It is noted that if separate consents are required for relocations for any services of network utility operators or landowners, such consents will be obtained before construction commences in the relevant area, and any effects of those relocations would be considered at that time. The same applies to any alteration of consents if required.*
- (b) *Network infrastructure owned and operated by Watercare Services is located within the designations. An operating agreement will be developed by the NZTA and Watercare Services which will include appropriate notification and access protocols where works are to be undertaken by either network operator on or adjacent to Watercare Services infrastructure within the designations.*

Construction

- 24) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 25) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 26) CEMP.8 All storage of material and equipment associated with the construction works shall take

place within the boundaries of the designation.

- 27) 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.
- 28) CEMP.12 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:
- (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.
- A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.
- 29) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'
- Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.*

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 30) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.
- 31) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent

conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

32) PI.5

The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:

- (a) Te Atatu (including the SH16 Causeway)
- (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
- (c) Owairaka

and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.

The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:

- (a) Auckland Council and Auckland Transport;
- (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
- (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
- (d) Department of Conservation;
- (e) Local Boards;
- (f) Iwi groups with Mana Whenua;
- (g) Public transport providers; and
- (h) Housing New Zealand Corporation.

Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 33) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 34) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located at each site specific work activity;
 - (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
 - (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
 - (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
 - (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
 - (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.
- 35) PI.6 The Community Liaison Group(s) shall be provided opportunities to review and comment

on the following (amongst other things):

- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k);
- (b) The Open Space Restoration Plans (as required by Condition OS.3);
- (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as required by Condition LV.1);
- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

TEMPORARY TRAFFIC CONDITIONS

Pre-Construction

- 36) TT.1 The NZTA shall update and finalise the Construction Traffic Management Plan (CTMP) submitted with this application, in accordance with these conditions, and implement it through the CEMP.
In finalising the CTMP, the NZTA shall:
 - (a) Provide simulation modelling demonstrations to better understand the effects of construction of the Project on the affected road network;
 - (b) Include measures to avoid road closures and restrictions of vehicle, bus, cycle and pedestrian movements;
 - (c) Where road closures or restrictions cannot reasonably be avoided the particular vulnerabilities and sensitivities of pedestrian diversions and restricted conditions shall be taken into account in the planning of any closures or restrictions.
- 37) TT.2 The CTMP shall require the development of Site Specific Traffic Management Plans (SSTMPs) and their approval by the Traffic Management Project Governance Group (as defined by the CTMP), for each construction activity that may affect traffic or transportation infrastructure and services. The SSTMPs shall be provided to the Traffic Management Coordinator(s) for the relevant Road Controlling Authority at least 10 working days prior to each construction activity.
- 38) TT.3 Each SSTMP shall describe the measures that will be undertaken to avoid, remedy or mitigate the local and network wide effects of construction of the Project. In particular, the SSTMP shall include the following matters:
 - (a) Traffic management measures to address and maintain, traffic capacity, including bus services, at peak traffic periods during weekdays (6:00 to 9:00 and 16:00 to 19:00) and peak traffic periods at weekends (including Te Atatu Road, Great North Road and Richardson Road);
 - (b) Methods to manage the effects of traffic during construction including the requirement

- (c) Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and buses;
 - (d) Methods to avoid, remedy or mitigate the local and network wide effects of the construction of individual elements of the project (e.g. intersections/ overbridges) and the use of staging to allow sections of the Project to be opened to the traffic while other sections are still under construction;
 - (e) Methods to manage the effects of the delivery of construction material, plant and machinery (including cranes and oversized trucks) during construction;
 - (f) Any routes where construction traffic movements will be restricted (either for particular times for construction periods);
 - (g) Measures to maintain existing vehicle access, as far as practicable, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with the Auckland Council and the affected landowner; and
 - (h) Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, where practicable (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours. (This Condition does not act as a qualification to the commitment to maintain access to open space and education facilities, as required in Condition OS.13).
- 39) TT.4 The SSTMPs shall include traffic management measures developed in consultation with the Auckland Transport, Bus and Coach Association and the Auckland Council, to address and maintain, where practicable, existing levels of service for buses particularly at peak periods (6:00 to 9:00 and 16:00 to 19:00) on weekdays.
- 40) TT.5 The NZTA shall consult with the Traffic Operations Manager, Auckland Transport with regard to the most appropriate means for providing access on Council roads within and adjacent to the designation. The NZTA shall also coordinate and consult directly with the proponents of any major construction or major traffic generating event occurring concurrently with, and in the vicinity of the Project.
- 41) TT.6 The SSTMPs shall include measures developed in consultation with Auckland Transport to, as far as practicable, enable continued public walking and cycling passage along the existing Northwestern Cycleway (between Te Atatu Interchange and St Lukes Interchange) and along Great North Road and the public walkway along Oakley Creek, with any interruptions being as short as feasible.

Construction

- 42) TT.7 The NZTA shall undertake construction works so as to avoid significant long duration impacts or the full closure of Te Atatu Road for all road users heading to or from the Te Atatu Peninsula and to ensure that access for emergency service vehicles is maintained.
- 43) TT.8 The NZTA shall restrict construction truck movements during peak hours (6:00 to 9:00 and 16:00 to 19:00) on weekdays and during the peak periods at the weekends to avoid the following:
- (a) Te Atatu Road Interchange, during both morning and afternoon peak hours
 - (b) Great North Road Interchange, city bound during the morning peak hours

- (c) Great North Road Interchange, west bound onto SH16 and southbound onto Great North road during the afternoon peak.

Construction truck movements during these hours shall only be allowed under exceptional circumstances agreed in advance with the Traffic Management Project Governance Group.

- 44) TT.9 The NZTA shall maintain at least the existing active traffic lane configuration capacity on SH16, at the Te Atatu Interchange area, Te Atatu Road, Richardson Road and on Great North Road during peak periods being 6:00 to 9:00 and 16:00 to 19:00 on weekdays and during the peak periods on weekends, for the duration of the temporary construction programme.
- 45) TT.10 The NZTA shall monitor the impact of construction traffic in terms of traffic speeds and volumes on SH16, Great North Road, Te Atatu Road and Richardson Road throughout the construction period to confirm the expected traffic effects as set out in the *Temporary Traffic Assessment* (Technical Report G.16) submitted with this application.
 - (a) This monitoring will be undertaken on a daily, weekly and monthly basis; and
 - (b) Monitoring results will be made available to the Traffic Operations Manager, Auckland Transport on request.
- 46) TT.11 If monitoring undertaken pursuant to Condition TT.10 indicates that traffic volumes or traffic conditions are significantly different from those expected, the SSTMPs will be reviewed and as appropriate amended to the satisfaction of the Traffic Management Project Governance Group.

OPERATIONAL TRAFFIC CONDITIONS

Construction

- 47) OT.1 The NZTA shall prepare in collaboration with Auckland Transport a Network Integration Plan (NIP) for the Project, or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements (identified in the Western Ring Route (Northwest) Network Plan) planned by the Auckland Council. The NIP shall include details of proposed physical works at the interface between the State highway and the local road network, and shall address such matters as pedestrian/ cycle ways, lane configuration, traffic signal co-ordination, signage and provision for buses
In addition, the NIP will address:
 - (a) The commitment of the NZTA to progress bus priority measures northbound on Great North Road as part of the reinstatement of Great North Road, as proposed by Auckland Transport and indicated on the Plans *Great North Road Option 1 Proposed Road Marking* (Schedule A, Row 33), subject to the agreement with Auckland Transport;
 - (b) How the works committed to by the NZTA for pedestrian and cycle ways, as detailed in the PT and Active Mode Transport Routes Plan Set (Condition DC.1(d) (refer Schedule A, Row 22)), integrate with pedestrian and cycle ways on the wider transport network;
 - (c) The Richardson Road Bridge, which shall be designed in general accordance with the structural plans (Schedule A, Row 9) and the commitment of the NZTA to provide a 2m footpath on Richardson Road Bridge, subject to confirming appropriate bus stop locations with Auckland Transport;
 - (d) Integration of the works proposed on Te Atatu Road to appropriately transition between the Waterview Connection Project and any projects being progressed by Auckland Transport;
 - (e) Opportunities to review traffic signal timings at the Te Atatu Interchange with a view to

- (f) The commitment of the NZTA to provide for cycle “aspects” (cycle signal lights) at the Great North Road Interchange.
- (g) As part of detailed design at the Te Atatu Interchange, the installation of underpasses and/or overbridges, provided however that should same not prove feasible in civil or traffic engineering design terms, the installation of coordinated traffic signal operation for cyclists on the north-western cycleway by means of synchronised cycle lights which seek to reduce delays for cyclists.

Works identified in the NIP which are the responsibility of the NZTA, will be undertaken as at the time of construction works for the Project.

Post Construction / Operation

- 48) OT.2 The NZTA shall prepare a Tunnel Traffic Operation Plan in consultation with the Auckland Transport and Auckland Council. The Plan shall include, but not be limited to:
- (a) Procedures for tunnel operational safety, including fire-life safety;
 - (b) Procedures for maintenance requirements.
 - (c) Procedures for managing traffic to avoid or minimise potential congestion within the tunnel, particularly during peak periods.
 - (d) Procedures for the management of traffic during incidents.
 - (e) Procedures for the operation of tunnel fans and the management of portal emissions.
 - (f) Confirmation that all equipment has been tested and operates in accordance with requirements and specifications.

The Tunnel Traffic Operation Plan shall be completed and provided to Auckland Transport and to the Major Infrastructure Team Manager, Auckland Council (in respect of Condition OT.2(e)), prior to operational use of the tunnelled section of SH20.

Advice note: The operation and maintenance of the air quality monitoring equipment inside the tunnel shall follow manufacturer’s recommendations.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

- 49) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration

- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and after completion of construction works;
- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise mitigation, including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the construction site night works, as defined on the maps (refer Schedule A, Row 35) are notified of such works (i.e. any works during the hours of 20:00 to 06:30) at least 5 days prior to the commencement of any such work.
 - The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

- 50) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 "Acoustics - Construction Noise" and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75
	2000-0630	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

51) CNV.3

Project Construction Noise Criteria: Airblast (excluding Sundays)

Category	Type of Blasting Operations	Peak Sound Pressure Level (LZpeak dB)
Human Comfort Limits		
Sensitive Site	Operations lasting longer than 12 months or more than 20 Blasts	115 dB for 95% blasts per year. 120 dB maximum unless agreement is reached with occupier that a higher limit may apply
Sensitive Site	Operations lasting less than 12 months or less than 20 Blasts	120 dB for 95% blasts per year. 125 dB maximum unless agreement is reached with occupier that a higher limit may apply
Occupied non-sensitive sites such as factories and commercial premises	All blasting	125 dB maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications of levels that can be shown to adversely affect the equipment operation
Damage Control Limits		
Structures that include masonry, plaster and plasterboard in their construction and also unoccupied structures of reinforced concrete or steel construction	All Blasting	133 dB unless agreement is reached with owner that a higher limit may apply.

Service structures such as pipelines, powerlines and cables located above ground	All Blasting	Limit to be determined by structural design methodology
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- 52) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration				Long-term vibration
	PPV at the foundation at a frequency of			PPV at horizontal plane of highest floor (mm/s)	PPV at horizontal plane of highest floor (mm/s)
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)		
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 53) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
- (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 54) CNV.6 Blasting shall be undertaken between 09:00h and 17:00h, Monday to Saturday, except that blasting may be undertaken between 09:00h and 17:00h on Sundays where:
- (a) The blasting is at least 50m inside the Sector 8 tunnel;
- (b) The blasting produces peak particle velocities at any residential building not exceeding 0.5mm/s; and
- (c) The Project construction noise criteria set out in Condition CNV.2 for Sundays are complied with.
- 55) CNV.7 Where practicable, permanent (traffic) noise barriers, required in any Sector as Detailed Mitigation Options for operational noise following completion of the Project (in accordance

with Conditions ON.3 to ON.5) shall be erected prior to noise generating construction works commencing. Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP, prior to noise generating construction works commencing.

- 56) CNV.8 Pile driving or pile removal shall not be undertaken at night (i.e. during the hours of 20:00 – 06:30).
- 57) CNV.9 The concrete batch plants, rock crushing plants and the loading bays and conveyors for such plants shall be fully enclosed.
- 58) CNV.10 If noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2(c) or CNV.4 will potentially be exceeded and that temporary relocation will be offered for residents at 1510 Great North Road, then relocation (and temporary transportation) shall be arranged with the leaseholder at 1510 Great North Road for tenants (with at least 1 months' notice to the leaseholder prior to relocation). Any accepted offer of relocation is to be in place prior to tunnelling works within 50m of the building at 1510 Great North Road.
- 59) CNV.11 For all other properties, if noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2 or CNV.4 will potentially be exceeded, then the process set out in the CNVMP will be undertaken including Site Specific Noise Management Plans. Where relocation for residents is proposed, notification of such relocation with residents and property owners will be undertaken in accordance with the processes contained in the CNVMP.
- 60) CNV.12 Any relocation required by CNV.10 will not be undertaken in the period between 10 working days prior to any Unitec examinations and the completion of those examinations.
- 61) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.

Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for SSNMPs to be submitted to the Council where an SSNMP is required.

If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.

Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).

NOISE CONDITIONS

General

- 62) ON.1 For the purposes of Conditions ON.2-ON.14 the following terms will have the following meanings:
- Appendix E – means Appendix E to the Technical Report G.12 'Assessment of Operational Noise Effects' submitted with this application.
 - BPO – means Best Practicable Option.
 - Building Modification Mitigation – has the same meaning as in NZS 6806:2010.

- Design Year – means a point in time that is 10 years after the opening of the Project to the public
- Emergency Mechanical Services – means mechanical services used for emergency situations only.
- Habitable room – has the same meaning as in NZS 6806:2010.
- Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS 6806:2010 when determining the BPO mitigation option; i.e. Category A - primary noise criterion, Category B - secondary noise criterion and Category C - internal noise criterion.
- NZS 6806:2010 – means NZS 6806:2010 Acoustics – Road-Traffic Noise – New and Altered Roads.
- PPFs – means only the premises and facilities identified in green, yellow or red in Appendix E.
- Structural mitigation – has the same meaning as in NZS 6806:2010.

Pre-Construction

- 63) ON.2 The NZTA shall implement the traffic noise mitigation measures identified as the “Preferred Mitigation Options” in Appendix E as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix E (“Identified Categories”), where practicable and subject to Conditions ON.3-ON.11 below.
- 64) ON.3 The detailed design of the structural mitigation measures of the “Preferred Mitigation Options” (the Detailed Mitigation Options) shall be undertaken by a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council prior to construction of the Project, and, subject to Condition ON.4, shall include, as a minimum, the following:
- (a) Noise barriers with the location, length and height in general accordance with Appendix E and designed in accordance with the ULDF (Section B) (refer Schedule A, Row 38); and
 - (b) A requirement that Open Graded Porous Asphalt (“OGPA”) or equivalent low-noise generating road surface be used on all surface roads throughout the Project, except at the Great North Road Interchange; and
 - (c) For the Great North Road Interchange, a requirement that Twin Layer Open Graded Porous Asphalt (“Twin Layer OGPA”) or equivalent low-noise generating road surface be used as shown in Appendix E.
- 65) ON.4 Where the design of the Detailed Mitigation Options identifies that it is not practicable to implement a particular structural mitigation measure in the location or of the length or height included in the “Preferred Mitigation Options”, either:
- (a) If the design of the structural mitigation measures could be changed and would still achieve the same Identified Category at all relevant PPFs, and a suitably qualified expert approved by the Major Infrastructure Team Manager, Auckland Council, certifies to the Auckland Council that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed mitigation measures; or
 - (b) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any relevant PPF from Category A or B to Category C but Major Infrastructure Team Manager, Auckland Council confirms that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed structural

- 66) ON.6 (a) Sectors 1 to 8 - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options:
- i. A noise level increase of 3 decibels or more will occur due to road-traffic noise from the Project; and
 - ii. Habitable spaces are likely to receive in excess of 45 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year.

For those PPFs, following the process set out in Conditions ON.7 to ON.11, it shall be determined which Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces.

- (b) Sector 9 - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options, habitable spaces are likely to receive in excess of 40 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year. For those PPFs, following the process set out in ON.7 and ON.8, it shall be determined if Building Modification Mitigation may be required to achieve 40 dB LAeq inside habitable spaces. For those PPFs where Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces, this shall be implemented following the process set out in ON.9 to ON.11.

- 67) ON.7 (a) Prior to commencement of construction of any sector of the Project in the vicinity of a PPF identified under Condition ON.6, the NZTA shall write to the owner of each such building seeking access for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.
- (b) If the owner(s) of the building approve the NZTA's access to the property within 12 months of the date of the NZTA's letter (sent pursuant to Condition ON.7(a)), then no more than six months prior to commencement of construction in any sector of the Project, the NZTA shall instruct a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council, to visit the building to measure internal noise levels and assess the existing building envelope in relation to noise reduction performance.

Construction

- 68) ON.5 The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project.

- 69) ON.8 Where a PPF identified under Condition ON.6 is identified, the NZTA shall be deemed to have complied with Condition ON.7 above where:

- (a) The NZTA (through its acoustics specialist) has visited the building; or
- (b) The owner(s) of the building approved the NZTA's access, but the NZTA could not gain entry for some reason after repeated attempts; or
- (c) The owner(s) of the building did not approve the NZTA's access to the property within the time period set out in Condition ON.7(b) (including where the owner(s) did not respond to the NZTA's letter (sent pursuant to Condition ON.7(a) within that period); or
- (d) The owner(s) of the building cannot, after reasonable enquiry, be found prior to

If any of (b) to (d) above apply to a particular Building, the NZTA shall not be required to implement any Building Modification Mitigation at that Building

- 70) ON.9 Subject to Condition ON.8, within 6 months of the assessment required under Condition ON.7(b), the NZTA shall give written notice to the owner of each PPF identified under Condition ON.6):
- (a) Advising of the options available for Building Modification Mitigation to the building; and
 - (b) Advising that the owner has three months within which to decide whether to accept Building Modification Mitigation for the building, and if the NZTA has advised the owner that more than one options for building modification mitigation is available, to advise which of those options the owner prefers.
- 71) ON.10 Once an agreement on Building Modification Mitigation is reached between the NZTA and the owner of an affected building, the mitigation shall be implemented (including the NZTA undertaking any required third party authorisation) in a reasonable and practical timeframe agreed between the NZTA and the owner. Building Modification Mitigation shall be to the standard specified in section 8.3.2 of NZS 6806:2010.
- Advice Note: The NZTA will be responsible for obtaining any necessary building consents or other approvals to undertake the above Building Modification Mitigation.*
- 72) ON.11 Subject to Condition ON.8, where Building Modification Mitigation is required, the NZTA shall be deemed to have complied with Condition ON.10 above where:
- (a) The NZTA has completed Building Modification Mitigation to the Building; or
 - (b) The owner(s) of the Building did not accept the NZTA's offer to implement Building Modification Mitigation prior to the expiry of the timeframe stated in Condition ON.9(b) above (including where the owner(s) did not respond to the Requiring Authority within that period); or
 - (c) The owner of the Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

Post-Construction / Operations

- 73) ON.12 The NZTA shall manage and maintain the Detailed Mitigation Options to ensure that, those mitigation works are maintained to retain their noise attenuation performance indefinitely.
- 74) ON.13 All mechanical services associated with the general operation of the tunnels shall be designed such that noise emissions do not exceed the following noise limits, when measured at or within the boundary of any residential-zoned site:

Monday to Saturday	7 am to 10 pm	50 dB $L_{Aeq(15\ min)}$
Sunday & Public Holidays	9 am to 6 pm	50 dB $L_{Aeq(15\ min)}$
At all other times		40 dB $L_{Aeq(15\ min)}$
		75 dB L_{Amax}

Monitoring

- 75) ON.14
- (a) Prior to construction, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake a minimum of 8 (eight) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (b) Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager,

- (c) The results of the noise level monitoring in accordance with ON.14(b) above shall be used to verify the computer noise model of the Detailed Mitigation Option. A report describing the findings of the verification shall be provided to the Major Infrastructure Team Manager, Auckland Council within one month of it being completed.

VIBRATION CONDITIONS

Pre-Construction

- 76) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish pre-Project vibration levels for comparison with future vibration levels.

AIR QUALITY CONDITIONS

Pre-Construction

- 77) AQ.1 The NZTA shall finalise and implement, through the CEMP, the Construction Air Quality Management Plan (CAQMP) and Concrete Batching and Crushing Management Plan (CBCMP) submitted with the application.

The CAQMP and CBCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CAQMP and CBCMP includes the following details:

- (a) Daily visual monitoring of dust emissions;
- (b) Procedures for responding to process malfunctions and accidental dust discharges;
- (c) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site;
- (d) Continuous monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;
- (e) Monitoring of the times of detectable odour emissions from the ground;
- (f) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
- (g) Monitoring of construction vehicle maintenance;
- (h) Process equipment inspection, maintenance, monitoring and recording, including baghouses, pressure relief valves and high level alarms;
- (i) Complaints investigation, monitoring and reporting; and
- (j) The identification of staff and contractors' responsibilities.

Construction

- 78) AQ.2 The NZTA shall review the CAQMP and CBCMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition CEMP.13.

- 79) AQ.3 All construction activities shall be operated, maintained, supervised, monitored and controlled at all times so that all emissions authorised by this consent are maintained at the

minimum practicable level.

- 80) AQ.4 The NZTA shall undertake construction activities in accordance with the CEMP, CAQMP and CBCMP, such that:
- (a) Hard surfaced areas of the construction yards and active construction areas are vacuum swept or scraped down at least twice each week and additionally as reasonably required;
 - (b) All unsealed areas of the site used for vehicle movement are maintained visibly damp by the use of water sprays or a water cart during weather conditions where the potential for dust emissions exist;
 - (c) Wheel wash systems are installed at all truck exits from unpaved areas of the site onto public roads are used for all trucks that depart from the site;
 - (d) All stockpiles are constructed and positioned to minimise the potential for dust emissions. The surfaces of all stockpiles are maintained adequately damp at all times to minimise the release of particulate matter;
 - (e) Belt conveyors for moving dry materials are fitted with water sprays or enclosed to minimise wind entrainment of dust. Where installed, water suppression is used whenever the conveyors are used for moving dry materials.
- 81) AQ.5 Unless expressly provided for by conditions of this consent, there shall be no odour, dust or fumes beyond the site boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.
- 82) AQ.6 All offensive or objectionable dust beyond the boundary of the site caused as a result of processes on the site shall be mitigated forthwith in accordance with the requirements of the Construction Air Quality Management Plan.
- 83) AQ.7 Beyond the site boundary there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.
- 84) AQ.8 No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.
- 85) AQ.9 Air displaced from concrete batching plant during silo filling or concrete batching shall be vented to atmosphere via filter units as follows:
- (a) Cement silos – a pulse jet baghouse mounted on top of the silo designed to meet a particulate discharge concentration limit of 30 mg/m^3 , a collection efficiency of 99.9% and a maximum air to cloth ratio of $3.0 \text{ m}^3/\text{m}^2/\text{min}$.
 - (b) Cement weigh hopper - a static baghouse mounted on top of the weigh hopper designed to meet a particulate discharge concentration limit of 30 mg/m^3 , a collection efficiency of 90% and a maximum air to cloth ratio of $1.0 \text{ m}^3/\text{m}^2/\text{min}$.
 - (c) Mixer drum – either via the cement silo or via a separate baghouse designed to meet a particulate discharge concentration limit of 30 mg/m^3 , a collection efficiency of 99.9% and a maximum air to cloth ratio of $3.0 \text{ m}^3/\text{m}^2/\text{min}$. If a separate baghouse is used, the pressure drop across this baghouse shall be continuously monitored.
- 86) AQ.10 Each cement silo on site shall be fitted with a high fill alarm that shall be adequately maintained and be operating whenever bulk cement is being transferred into that silo. In the event of the alarm operating, filling into that silo shall cease immediately and shall not be resumed until the cause has been located and remedied.
- 87) AQ.11 No part of the concrete batching process shall be operated without the associated emission

control equipment being fully operational and functioning correctly.

Monitoring - Construction

- 88) AQ.14 The NZTA shall undertake visual inspections of dust emissions as follows:
- (a) Visual inspections of all active construction areas at least three times daily during October to April inclusive, whenever there are construction activities. The results of visual monitoring shall be logged.
 - (b) Visual inspections of dust emissions from the concrete batching plants and rock crushing plant shall be undertaken daily while the plant is operating.
- 89) AQ.15 The operation of water sprays shall be checked at least once each day.
- 90) AQ.16 Continuous monitoring of TSP concentrations shall be undertaken in at least one location in Sector 1, in at least two locations in Sectors 5 and/or 7, and in at least two locations in Sector 9 while construction activities are being undertaken in those Sectors. The locations of continuous TSP monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1:2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment.
- 91) AQ.17 Continuous monitoring of wind speed and direction shall be undertaken in at least one location in each of Sector 1, Sectors 5 or 7 and Sector 9 while construction activities are being undertaken in those Sectors. The locations of wind speed and direction monitors shall, as far as practicable, comply with the requirements of AS 2923:1987 Ambient Air – Guide for the Measurement of Horizontal Wind for Air Quality Applications and be at the same locations as the TSP monitors required by Condition AQ.16.
- 92) AQ.18 The locations and types of continuous TSP and meteorological monitoring sites required by Conditions AQ.16 and AQ.17 shall be selected by the NZTA in consultation with the Auckland Council.
- In the event of a failure of the monitoring equipment, this shall be repaired or replaced within 2 working days.

Reporting - Construction

- 93) AQ.19 All records, logs, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an Auckland Council enforcement officer and shall be kept for the duration of the consent.
- 94) AQ.20 If the monitoring required by Condition AQ.16 shows that concentrations of TSP in ambient air at or beyond the boundary of the site exceeds 80 micrograms/m³ as a 24-hour average, the NZTA shall undertake an investigation into the cause of the exceedance in accordance with the CAQMP.
- 95) AQ.21 A report into the outcome of any investigation required by Condition AQ.20 shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 10 working days of the exceedance. If the cause of the exceedance is identified as being an activity undertaken on the site, the report shall also identify additional measures to be taken to reduce discharges of particulate matter into air from that activity.
- 96) AQ.22 Log books shall be maintained that record all relevant information that is required to demonstrate compliance with the conditions of this consent. This information shall include, but is not limited to:
- (a) Visual assessments of any dust emissions from the site and the source;
 - (b) Any dust control equipment malfunction and any remedial action taken;
 - (c) When a water cart was used and, if so, the frequency of use and the volume of water

- (d) All relevant details of the TSP and meteorological monitoring required by Conditions AQ.16 and AQ.17;
 - (e) Any additional dust control measures undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.
- 97) AQ.23 The NZTA shall maintain a log of any complaints received relating to air quality. Details of each complaint received shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 24 hours of receipt of the complaint. The log shall include any complaints lodged with the Auckland Council where the Council has informed the NZTA of the complaint. The log shall include, but not be limited to the following:
- (a) The date, time, location and nature of the complaint;
 - (b) Weather conditions at the time of the complaint (including approximate wind speed, wind direction, cloud cover);
 - (c) Any possible other contributing factors (such as a fire, smoky vehicle, a local chimney emission, etc.);
 - (d) The name, phone number and address of the complainant (unless the complainant elects not to supply these details);
 - (e) Any remedial actions undertaken; and
 - (f) The date and time of the entry and the signature of the person entering the information.

OPERATIONAL AIR QUALITY CONDITIONS

Post Construction / Operations

- 98) OA.1 The vents used to discharge emissions in the tunnels shall discharge vertically into air at a height of 15m, as follows:
- (a) The northern ventilation stack will be at a height of 15m. This height shall be calculated from the lowest existing ground level along the Great North Road boundary, adjacent to the ventilation stack; and
 - (b) The southern ventilation stack will be at a height of 15m calculated from the post-construction ground level of the Alan Wood Reserve averaged at a distance of 10m from the exterior walls the ventilation stack location.
- and shall not be impeded by any obstruction that may in the opinion of the Peer Review Panel (Condition OA. 7) decrease the vertical efflux velocity (in other words, the average velocity of material emitted into the atmosphere).
- 99) OA.2 Prior to the tunnels becoming operational, the NZTA shall establish two ambient air quality monitoring stations and one portal air quality monitoring station. The location and types of these monitoring stations shall be selected by the NZTA in consultation with the Auckland Council and Peer Review Panel (Condition OA.7), providing that one ambient monitoring station will be located within the Waterview Primary School (subject to agreement by the School).
- Ambient air quality shall be monitored continuously in real time, to monitor potential effects associated with the operation of the ventilation system from the tunnels. Ambient monitoring shall include fine particulates (PM10 and PM2.5) and nitrogen dioxide. Portal monitoring shall include nitrogen dioxide. Results shall be compared with the relevant National Environmental Standards for air quality and Auckland Regional air quality targets

(as identified in Chapter 4 of the Auckland Regional Plan: Air, Land and Water, 2010). Monitoring shall be undertaken at each site until the Peer Review Panel recommends that monitoring is no longer necessary. The locations, operation and maintenance schedules of the continuous monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1: 2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment, and with methods specified in the National Environment Standards.

- 100) OA.3 Continuous monitoring of wind speed and direction shall be undertaken at each ambient air quality monitoring location as required by Condition OA.2. The locations of wind speed and direction monitors shall, as far as practicable, comply with the requirements of AS 2923:1987 Ambient Air – Guide for the Measurement of Horizontal Wind for Air Quality Applications.
- 101) OA.4 For the first 12 months of tunnel operation, the results of the ambient air quality monitoring shall be reported via validated reports and issued for information via the Project website (monthly). Following this period, and for a period of at least 12 months, reporting shall take place quarterly as follows: Quarter 1 (December to February) by 31 March, Quarter 2 (March to May) by 30 June, Quarter 3 (June to August) by 30 September and Quarter 4 (September to November) by 31 December.
- 102) OA.5 If the monitoring required by Condition OA.2 shows that concentrations of contaminants in ambient air at the monitoring locations exceeds the relevant National Environmental Standards for air quality, or Regional Air Quality Targets (as identified in Chapter 4 of the Auckland Regional Plan: Air, Land and Water), the NZTA shall undertake an investigation into the cause of the exceedance and report this to the Peer Review Panel (Condition OA.7) and the Major Infrastructure Team Manager, Auckland Council.
- 103) OA.6 The air quality monitoring shall be undertaken in general accordance with the Operational Air Quality Management Procedure (Appendix O of *Technical Report G.1 Assessment of Air Quality Effects*) submitted with this application.
- 104) OA.7 A Peer Review Panel shall be appointed by NZTA with the agreement of Major Infrastructure Team Manager, Auckland Council for the purpose of reviewing the ambient air quality monitoring programme and results. The Peer Review Panel shall consist of two independent experts in air quality with experience in ambient air quality monitoring and emissions from motor vehicles. The Peer Review Panel shall review all ambient monitoring, relevant traffic data and tunnel emissions and provide a summary report including any interpretation and recommendations to NZTA, Auckland Council and the Community Liaison Group(s) within 6 months of the tunnels becoming operational and annually thereafter.
- 105) OA.8 The tunnel ventilation system shall be designed and operated to ensure that any air emitted from the tunnel portals does not cause the concentration of nitrogen dioxide (NO₂) in ambient air to exceed 200 micrograms per cubic metre, expressed as a rolling 1 hour average, at any point beyond the designation boundary that borders an air pollution sensitive land use.

Advice Note: The above standard reflects the National Environmental Standard for Nitrogen Dioxide (NO₂) concentration in ambient air.

LANDSCAPE AND VISUAL CONDITIONS

Pre-Construction

- 106) LV.1 The Urban Design and Landscape Plans (UDL Plans) (Plan Set F.16, refer Schedule A, Row 17) shall be reviewed and revised in accordance with the conditions and submitted to the Major Infrastructure Team Manager, Auckland Council for certification that they comply with the conditions of the consents/ designation prior to construction of the relevant Project stage, at least 20 working days prior to the commencement of construction.
- The UDL Plans shall be updated to:
- (a) Reflect relevant details from the PT and Active Mode Transport Routes Plan Set (Schedule A, Row 23);
 - (b) Remove the playing field at Waterview Reserve;
 - (c) Confirm the reconfigured bund design at Alwyn Avenue (Schedule A, Row 42);
 - (d) Reflect landscaping required in relation to the northern vent stack in Waterview Glades pursuant to Conditions DC.8.
- 107) LV.2 In certifying the UDL Plans, prepared in accordance with Condition LV.1, the Major Infrastructure Team Manager, Auckland Council shall be satisfied the UDL plans includes:
- (a) The visual mitigation of infrastructure as detailed in Section B of the UDLF (refer Schedule A, Row 38).
 - (b) Incorporation of art or art through design of structures, particularly as it relates to noise barriers and the Great North Road Interchange piers and ramps (Refer to clauses (g) and (i) below).
 - (c) Planting to screen houses and noise walls (including cross section details);
 - (d) Planting along the corridor on Traherne Island, in accordance with these conditions and the Ecological Management Plan;
 - (e) Specimen planting on the Great North Road Interchange and the Te Atatu Road Interchange;
 - (f) Specimen planting at the tunnel portals (except where this is within the OPW area);
 - (g) Finalisation of the noise barriers (as required by Condition ON.3(a)) in accordance with the design principles for noise walls (refer Schedule A, Row 32);
 - (h) Delineation of the final areas of the Open Space Restoration Plans in accordance with the Open Space Restoration Plans (Schedule A, Row 30), and reference that all works within the Open Space Restoration Plan Areas are subject to Conditions OS.1 to OS.8;
 - (i) Oakley Inlet Heritage Plan, prepared in accordance with Conditions OS.5, and in particular, consideration shall be given to the design treatment of the Great North Road Interchange piers and ramps to take into consideration the impact of the structures on the visual quality of the open space beneath;
 - (j) Ecological Management Plan, prepared in accordance with Conditions V.1, A.1, H.1, F.1 and M.1;
 - (k) Western Ring Route: Maioro Street Interchange and Waterview Connection - Oakley Creek Rehabilitation and Restoration Guidelines (Boffa Miskell, 2010); and
 - (l) Details of artworks or art through design of structures within the Project (e.g. design detailing of median barriers, bridge railings, safety barriers, piers, retaining walls and tunnel portals), in accordance with Section B of the Urban Landscape and Design Framework (UDLF June 2010) (refer Schedule A, Row 38) and F.8:Plans of Structures and Architectural Features, but excluding the north and south ventilation buildings,

- 108) LV.8 The NZTA shall ensure that any areas within the designation affected by construction activities have sub-soil rehabilitated and top-soil replaced so that the hydrological response including the volume of stormwater runoff generated is as close as practicable to the predevelopment situation. The methodologies to achieve this shall be documented and provided to the Major Infrastructure Team Manager, Auckland Council with the revised ULD Plans submitted pursuant to Condition LV.1.
- 109) LV.10 The UDL Plans shall identify all Amenity Trees required to be removed over the construction of the Project (in accordance with Condition CEMP.6(o) and (p)). Replacement trees shall be sized at 160Lt and will either draw from the Coastal Forest or Basalt Rock Forest ecotypes listed in the Landscape Planting Schedules (provided in F.16, refer Schedule A, 17) or an agreed alternative species (confirmed by Major Infrastructure Team Manager, Auckland Council), except in the case of those trees subject to Condition ARCH.9.
- Advice note: This does not necessary apply to any replacement planting in the Open Space Restoration Plan areas, which will be confirmed in approval from Auckland Council and will be in accordance with relevant Auckland Council Park guidelines (see Condition OS.4).*

Post-Construction / Operations

- 110) LV.3 The NZTA shall have implemented the UDL Plans within 6 months of practical completion of construction of the Project.
- 111) LV.4 The landscaping shall be implemented in accordance with the UDL Plans within the first planting season following the completion of the construction works, provided that climatic conditions are suitable, otherwise at the first practicable opportunity thereafter, and shall be maintained for a period of 10 years thereafter. Should the landscaping be implemented in stages (depending on construction phases), landscaping shall be implemented in accordance with this Condition for each stage unless subsequent construction staging requires use of the proposed landscaping area.
- Advice note: On-going control and management of the landscaping within the designation is the responsibility of the NZTA.*
- 112) LV.5 The NZTA shall implement the UDL Plans taking into account the pest plant management guidelines detailed in the Ecological Management Plan (as required by Condition CEMP.3).

OPEN SPACE CONDITIONS

General

- 113) OS.1 For the purposes of Conditions OS.2 – OS.15 the following terms will have the following meanings:
- Full size – means a football (soccer) field with the dimensions 100m x 60m.
 - Half size – means a football (soccer) field with the dimensions less than 100m x 60m but no smaller than 50m x 30m.
 - Toddler – means a playground specifically designed for children between the ages of 1 and 3
 - Junior – means a playground specifically designed for children between the ages of 4 and 8
 - Youth – means a playground specifically designed for children between the ages of 9 – 14 years

- Open Space Restoration Plans – means those plans listed in Schedule A, row 30.
- Open for Play - means the sports field has a level surface and a dense weed-free sward of mature grass, goal posts and lighting if indicated in the Open Space Restoration Plans approved by the Auckland Council.
- Sand - carpeted - means the field has been levelled and irrigated, and conventional sub-soil drains, slit drains and a 50mm deep sand carpet have been installed. The field has been stolonised with a warm season grass such as kikuyu or couch.
- Auckland Council Park Guidelines – means the document by Auckland City Council titled “Furnishing our parks: design guidelines for park furniture”, dated September 2009
- Park furniture – means those items described in the Auckland Council Park Guidelines
- AS2560 – means the Australia New Zealand Standard for lighting of sports fields.
- AS4282 – means the Australia New Zealand Standard for the control of the obtrusive effects of outdoor lighting.
- Way finding exercise – means a process for determining the number, size, location and content of signage to provide clear direction for all park users.
- Skate-park for the purpose of conditions OS.5(b)(iii) means a skate park with a size of approximately 1,400 sq. m. (generally 25 wide x 55m long), incorporating a range of design variations. Suitable for beginners (providing training facilities to develop their skills) but primarily catering for intermediate to advanced level skaters.
- BMX bike track for the purpose of condition OS.5(b)(iii) means a low maintenance, non-competition BMX bike track, incorporating a range of design variations. Primarily catering for beginner and intermediate riders.

Pre-Construction

- 114) OS.5 The Waterview Reserve Open Space Restoration Plan shall be prepared in general accordance with the UDL Plans (Refer Schedule A, Row 17). The following shall be provided:
- (a) Equivalent reinstatement of the following recreational facilities:
 - (i) A children’s playground with the design and equipment targeted at “junior” and “youth” ages; and
 - (ii) One ablution block; and
 - (iii) One basketball court (28m by 15m); and
 - (iv) One volleyball court.
 - (b) Other restoration and enhancement:
 - (i) Measures to enhance the Oakley Inlet Heritage Area, including interpretative signage and pedestrian access;
 - (ii) Creation of esplanade reserve along Oakley Inlet;
 - (iii) Subject to obtaining necessary resource consents and Auckland Council landowner approval, provision of a skate-park, BMX bike track (non-motorised bikes);
 - (iv) Provision of pedestrian paths within the reserve area (as indicated on the UDL Plan 212);
 - (v) Eco-sourced and mass planting to screen the interchange ramps from Herdman

- (vi) A sloping and landscaped bund as indicated on the UDL Plan 212 (Refer Schedule A, Row 17) to screen the interchange ramps from the open space areas;
 - (vii) Subject to obtaining necessary resource consents and Auckland Council landowner approvals, upgrading of the Waterview Esplanade Reserve walkway and associated landscaping, identified on the UDL Plan 210 (Refer Schedule A, Row 17);
- (c) The works required in accordance with Condition OS.16(a) in respect of the all-weather cycle/pedestrian path into Eric Armishaw Park.
- (d) A financial payment shall be made to the Auckland Council (in lieu and as equivalent of a playing field at Waterview Reserve), in full at least 20 working days prior to occupation of Construction Yards 6 and 7, valued on the basis of provision of one "open for play" full size sand-carpeted football (soccer) field with a clear 10m space for spectators on all sides and associated changing facilities and parking requirements—as at Waterview Reserve or as proposed by UDL Plans (Schedule A, Row 17).

Advice note: the purpose of the financial payment in lieu is for the provision of a playing field at Phyllis Reserve, rather than its reinstatement at Waterview Reserve.

Advice note: The replacement land area for Open Space will provide approximately 2.35 – 2.4ha of new replacement open space land in general accordance with the Proposed Open Space Impacts and Replacement Plans (See Schedule A, Row 28), including 0.30ha of additional open space at Saxon Reserve if it is all able to be acquired and consented.

- 115) OS.7 The Oakley Creek Esplanade Reserve (Waterview Glades) Open Space Restoration Plan shall be prepared in general accordance with the UDL Plans (Refer Schedule A, Row 17), and shall include, but not be limited to, the following:
- (a) Creation of esplanade reserve at 36 Cradock Street;
 - (b) Riparian planting along Oakley Creek to a width of 15m and as identified on the notated UDL Plan 229 (Refer Schedule A, Row 17) as notation M1;
 - (c) Re-contouring of the reserve in a manner that is consistent with those shown on UDL Plan 229 (Refer Schedule A, Row 17) and as described in the annotation Plan Note 7 of that Plan; and
 - (d) Stability work required for the ventilation stack (refer Condition DC.8(n)), and the integration of any necessary structures within Oakley Creek Esplanade Reserve.
- 116) OS.10 At least 20 working days prior to the occupation of the construction areas within Waterview Reserve, the NZTA shall, in consultation and agreement with the Auckland Council, provide:
- (a) The financial payment in lieu of the playing field facilities at Waterview Reserve, as per Condition OS.5(c);
 - (b) A half basketball court and volleyball court within the relocated Waterview Reserve;
 - (c) Development of Saxon Reserve with an additional site area of 2,000m² and as a minimum, the expanded reserve shall include an upgraded children's playground (toddler, junior and youth), landscaping, pedestrian paths, park furniture and an ablution block; and
 - (d) Improvements to the existing pathway connections at Howlett Reserve, providing wider and safer access out to either Howlett Street or Oakley Avenue. In the event land purchase requirements deems this unable to be completed prior to occupation of the construction areas within Waterview Reserve, an equivalent financial payment in lieu of the land purchase and improvement works will be made. The financial payment will

- 117) OS.11 At least 20 working days prior to the occupation of the construction areas within Oakley Creek Esplanade Reserve (Waterview Glades), the NZTA shall, in consultation and subject to agreement with the Auckland Council, provide:
- (a) Formalisation of the existing informal pathway at the northern end of Oakley Creek Esplanade Reserve (Waterview Glades), to connect to the existing Oakley Creek walkway (as indicatively identified on the notated UDL Plan 229 (Refer Schedule A, Row 17), as Plan Note 3), as modified for the finalised location of the ventilation stack (DC.8), and in a way that maintains public health and safety throughout the construction period;
 - (b) Planting of the riparian margins of Oakley Creek.

Construction

- 118) OS.2 The NZTA shall prepare Open Space Restoration Plans to outline how the open space replacement land, as defined in the Open Space Restoration Plan Areas (Schedule A, Row 30) (including land occupied during construction) will be reinstated or replaced on completion of construction, for handover to Auckland Council and those areas identified in Condition DC.1A(f) and RC.3(f).

Following the consultation detailed in Condition OS.3 below, the Open Space Restoration Plans listed in Condition OS.3(a) to (f) shall be submitted within 12 months of construction commencing in the specific areas affecting the reserves or within 12 months of occupation of open space, whichever is the sooner, to the Major Infrastructure Team Manager, Auckland Council.

Advice note: Conditions OS.9 and OS.10 require certain works to be provided prior to occupation of Construction Yards 6 and 7 (Waterview Reserve) and Construction Yards 9-12 (Alan Wood Reserve) and this may impact on the timing of Open Space Restoration Plans for these areas.

- 119) OS.3 The Open Space Restoration Plans shall be prepared in consultation with the Auckland Council, Iwi, the Community Liaison Groups (Condition PI.5), NZHPT, and other recreation users and other user representatives identified by Auckland Council. The Open Space Restoration Plans shall comprise the following specific plans:
- (a) Waterview Reserve Restoration Plan;
 - (b) Alan Wood Restoration Plan (including Hendon Park and 25 Valonia Street);
 - (c) Oakley Creek Esplanade (Waterview Glades) Restoration Plan;
 - (d) Jack Colvin Park Restoration Plan;
 - (e) Rosebank Domain Restoration Plan;
 - (f) Harbourview-Orangihina Reserve Restoration Plan.
 - (g) The areas of the Open Space Restoration Plans are shown in the Open Space Restoration Plan Areas (Refer Schedule A, Row 30).
- 120) OS.4 All Open Space Restoration Plans shall be prepared in general accordance with the UDL Plans (Schedule A, Row 30), and shall include, but not be limited to, the following:
- (a) Details of, including the location, of any artworks and educational signage, and directional signage. In the case of Alan Wood Reserve, Waterview Reserve and

- (b) Evidence of integration with the Oakley Creek restoration works required under Conditions STW.5, STW.20, V.16 and LV.2(i); and a summary of the consultation undertaken (as required by Condition OS.3) and the response received; and
- (c) Details of any vehicle access through the reserves and parking areas; and
- (d) Park furniture (including quantity and quality) to be provided in accordance with relevant Auckland Council Park guidelines, except for:
 - (i) The riparian area within Alan Wood Reserve where the only furniture required is a maximum of 10 seats; and
 - (ii) Oakley Creek Esplanade (Waterview Glades) where the only furniture required is replacement of 3 existing seats; and
- (e) The inclusion and integration of the design for all pedestrian and cycleway linkages and facilities detailed on the PT and Active Mode Transport Routes (Schedule A, Row 22). The design integration shall be in accordance with CPTED principles;
- (f) Implementation programme, including sequencing of works and completion dates. This shall include works that could be implemented prior to practical completion of construction works or are outside the Project area (e.g. upgrading of the Waterview Esplanade Reserve set out in Condition OS.5(b)(vii);
- (g) Implementation programmes for planting and field reinstatement. This shall include:
 - (i) A 12 month maintenance period for built structures and soft landscaping; and
 - (ii) For any landscaping accessible to horses an assessment to demonstrate that the planting schedule is not toxic to horses and that consultation on this has been undertaken with the Te Atatu Pony Club;
- (h) The specific requirements for each Restoration Plan area as set out in Conditions OS.5 – OS.8;
- (i) Documentation of consultation undertaken required by Condition OS.3 and the views and concerns expressed by this consultation and the written approval of the Manager Community and Cultural Policy.

Advice note: For the avoidance of doubt provision of (a) to (h) above will require elevations, cross sections, engineering drawings and written documentation to supplement the UDL Plans. It is also noted that the UDL Plans identify landscaping, planting and other works beyond the Open Space Restoration Plans (refer Conditions LV.1 – LV.6, LV.9 and LV.10). Educational signs and artworks are particularly encouraged.

- 121) OS.13 During construction, the NZTA shall maintain pedestrian accessways to all open space available for public use during construction and education facilities where access is affected by the works, including any public access that crosses private land. Such access shall be safe, clearly identifiable, provide appropriate surfacing and seek to minimise significant detours. The access shall be of a same or similar standard as that disrupted and will be provided and maintained by the NZTA.

Advice note: This specifically includes the existing pedestrian access that provides a connection to the crossing over Oakley Creek between 1510 Great North Road and Unitec Mt Albert Campus.

- 122) OS.14 Where access to Oakley Creek will be disrupted for more than 3 consecutive days, or over a weekend, or there is no provision for a walkway detour, the Community Liaison Person shall notify the Friends of Oakley Creek at least 20 working days in advance of any planned

disruption (except where the disruption is of shorter duration, or an emergency situation).

Post Construction / Operations

- 123) OS.16 The NZTA shall provide:
- (a) Subject to obtaining necessary resource consents and Auckland Council landowner approval, a 3m all-weather shared cycle/pedestrian path with boardwalks as required, from the Great North Road Interchange through into Eric Armishaw Park. The works shall be sufficient to connect this path to the existing walkways and paths within that park (eg to the playground); and
 - (b) The pedestrian connections to Berridge Avenue, Alberta Street and Montrose Street as shown on the PT and Active Mode Transport Routes (Sheet 109) (Refer Schedule A, Row 22),
- once these areas are no longer required for construction.

SOCIAL CONDITIONS

General

- 124) SO.5A The NZTA shall comply with the obligations imposed on it by clauses 4 and 5 (dated April 2011) Project Agreement between it, the Ministry of Education and the Waterview Primary School Board of Trustees. The NZTA's obligations under this condition are subject to the Ministry and Board of Trustees providing such approvals, agreements or other input as specified in that Project Agreement.

Pre-Construction

- 125) SO.1 In addition to the Community Liaison Groups established pursuant to Condition PI.5, the NZTA shall establish an Education Liaison Group (including representatives from local schools, kindergartens, childcare facilities, Unitec Institute of Technology, the Ministry of Education and Housing New Zealand Corporation), to provide a forum through which:
- (a) Relevant monitoring data can be provided (e.g. air quality monitoring);
 - (b) Notice can be provided of when particularly noisy activities will occur in close proximity to schools and education facilities, to enable the opportunity to identify any potential conflict with particular sensitive periods, and the requirement for specific mitigation strategies (e.g. rescheduling of construction activities where practicable);
 - (c) Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed;
 - (d) Notice can be provided of potential construction impacts on school transport routes (including pedestrian/cycle access) to enable the opportunity to identify specific mitigation preferences of the education facilities (e.g. any detour routes) and to enable these facilities to appropriately inform students and/or parents; and
 - (e) Learning and teaching opportunities for educational facilities to participate in Project works (e.g. planting or artworks).

The Education Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period. The Education Liaison Group shall continue to meet for at least 12 months following the completion of the Project (or less if the members of the Education Liaison Group agree), so that ongoing monitoring information can continue to be disseminated.

- 126) SO.3 The NZTA shall comply with the obligations imposed on it by clauses 4 and 5 of the Project Agreement (dated May 2011 (yet to be signed)) between it, the Ministry of Education and

the Auckland Kindergarten Association, including in particular the requirement to relocate the Waterview Kindergarten to an alternative site prior to construction works commencing on sites adjoining the Kindergarten site. The NZTA's obligations under this condition are subject to the Ministry and the Auckland Kindergarten Association providing written approvals, agreements or other inputs as specified in that Project Agreement.

127) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:

- (a) Auckland Council;
- (b) Housing New Zealand Corporation;
- (c) Te Kawerau Iwi Tribal Authority;
- (d) Ngati Whatua o Orakei;
- (e) KiwiRail;
- (f) Department of Conservation;
- (g) Ministry of Education; and
- (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to the Auckland Council);
- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

128) SO.7 A schedule of trees that require removal for construction of the Project will be identified and reported to the Community Liaison Group for their consideration of potential provision of timber for heritage projects (including in particular the provision of *Robinia* wood for heritage boat building). If the demand for this timber is identified to the Construction Team, appropriate measures for felling and removal from the site will be confirmed.

Construction

129) SO.2 In addition to Condition SO.1(b) above, where noisy construction activities (that are projected to exceed the Noise Criteria in the CNVMP) are proposed in close proximity or adjacent to schools/ childcare centres, the NZTA shall, when preparing their SSNMP (in accordance with Condition CNV.1) give specific consideration to options to carry out these works outside school hours or during school holidays as a mitigation option.

Post Construction / Operations

- 130) SO.13 The NZTA shall appoint a medical specialist qualified and experienced in Environmental and Occupational Medicine for the duration of the operational air quality monitoring of the Project (as defined by Condition OA.4) to be a point of contact for persons concerned about the discharge from the ventilation stacks. This person must be reasonably available by appointment for advice on matters of concern for residents within the Waterview / Point Chevalier and Owairaka / New Windsor communities, and parents of pupils and prospective pupils at schools, kindergartens, playschools, and child care centres within those areas.
- 131) SO.14 For the purpose of mitigating significant adverse effects on passive open space and reserves in Sectors 5, 7 and 9, both during the construction years and longer term, particularly in the Waterview, Owairaka and New Windsor communities (other mitigation having been held by the Board of Inquiry not to be adequate) the following applies:
- (a) The NZTA shall, subject to conditions (b), (c) and (d) below, construct the following:
 - (i) A pedestrian and cycleway to AUSTROADS standards between Waterview and Owairaka/New Windsor (as generally indicated on drawing labelled as "Indicative SH20 Cycleway Route" (refer to Schedule A, Row 40)), subject to any modifications necessary to address design, property or engineering constraints.
 - (ii) The "Alford St Bridge".
 - (iii) The "Soljak PI Bridge".
 - (b) The NZTA's obligations under condition (a)(i) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals on a permanent basis in respect of the facilities described in condition (a)(i); and
 - (ii) acquired sufficient land to form a cycle and pedestrian way to AUSTROADS standards between Alan Wood Reserve and Unitec; and
 - (iii) obtained all necessary resource consents required for construction and operation of the facilities.
 - (c) The NZTA's obligations under condition (a)(ii) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals on a permanent basis for the Alford St Bridge; and
 - (ii) obtained all necessary resource consents required for construction and operation of the Alford St Bridge.
 - (d) The NZTA's obligations under conditions (a)(iii) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals for the Soljak PI Bridge either on a permanent basis or on the basis that the Soljak PI Bridge may be constructed and operated unless and until its continued existence and / or operation conflicts with or compromises future works pursuant to the designation for rail purposes;

and

- (ii) obtained all necessary resource consents required for construction and operation of the Soljak PI Bridge.
- (e) The certification from Auckland Council required under conditions (b), (c) and (d) above must be received by the NZTA within 8 years of the designations for the Project being confirmed.
- (f) Each of the facilities for which certification has been given must be constructed within 1 year of the opening of the motorway, or two years from when certification is given for the relevant facility, whichever is the earlier, subject however to some elements of the facilities towards the northern end needing to await the de-commissioning of Construction Yard 7.
- (g) The value of the construction works to be undertaken by the NZTA pursuant to condition (a) to (d) above shall not exceed a sum equal to \$8 million in June 2011 New Zealand dollars (with any construction costs above that figure being met by the Council.)”
- (h) The pedestrian and cycleway facilities described in condition (a)(i) above are in addition to the cycling and pedestrian facilities required by the other conditions.

Advice notes:

The intention of this condition is to construct a continuous pedestrian and cycleway with bridges at Soljak PI and Alford St. To achieve this, the Council and Auckland Transport will use their best endeavours to obtain the necessary consents and landowner approvals, for all three components of the network.

The approvals required for the Soljak PI Bridge reflect the designation for rail purposes of land under the bridge and the possibility that any bridge structure will be approved for a limited length of time only.

In the event that, despite their best endeavours, the Council and Auckland Transport cannot obtain all of the necessary landowner approvals, the condition allows each part of the network to be constructed in isolation from the others. That will provide some mitigation of the significant adverse effects on passive open space and reserves in Sectors 5, 7 and 9 that the condition is intended to address. It will also enable the Council and Auckland Transport to complete the network in the future at their expense when and if they are able to obtain the outstanding approvals.

Condition (f) above requires the earlier of the 2 named events to be the trigger for NZTA to undertake the works, in order that the required mitigation or at least some of it occur during the construction years. It also recognises that towards the northern end of the pedestrian and cycleway, some of the works may need to await the de-commissioning of Construction Yard 7.

Subject to landowner approvals, the Council and/or Auckland Transport will be the owner of the pedestrian and cycleway and the bridges described in (a) above and shall have full responsibility for the operation and maintenance of those facilities once they have been constructed by NZTA. Accordingly, NZTA will be under no further obligation in respect of any of the facilities once they have been constructed and, in particular, will have no obligation in terms of the removal, alteration or replacement of the Soljak PI Bridge in the event that it conflicts with or compromises proposed works pursuant to the designation for rail purposes.

Monitoring

- 132) SO.4 The NZTA shall, in agreement with the Ministry of Education, monitor the Waterview Primary School and the Waterview Kindergarten rolls:
- (a) At commencement of construction in the Waterview area (including demolition of houses within the confirmed designation footprint); and
 - (b) For a period up to 3 years after construction is completed in the Waterview area and confirmed the operational designation footprint in these areas, or until monitoring shows the roll has stabilised to the 2006 roll level (155 and 30 students respectively) over two consecutive years (whichever is shorter).
- 133) SO.5 Should monitoring as required by Condition SO.4 indicate that the rolls of Waterview Kindergarten and Waterview Primary School have dropped below 30 and 155 respectively (the 2006 roll levels), the NZTA shall in consultation with the Ministry of Education provide financial resources to ensure that resources are maintained to these 2006 roll levels during the required length of monitoring.

VEGETATION CONDITIONS

General

- 134) V.10 Any planting utilising native plants shall use plants genetically sourced from the Tamaki Ecological District where possible or otherwise shall use plants that have been genetically sourced from within the Auckland Ecological Region.
- 135) V.16 All realignments and riparian enhancements of Oakley Creek shall be carried out in accordance with the Oakley Creek Realignment and Rehabilitation Guidelines and in general accordance with the Urban Design and Landscape plans (Refer Schedule A, Row 17).

Pre-Construction

- 136) V.1 The NZTA shall finalise the ECOMP submitted with this application, prior to works commencing on site. The ECOMP shall be implemented through the CEMP. The ECOMP shall clearly identify the location and identity of:
- (a) All Significant Vegetation within the designation that is to be fully protected or relocated; and
 - (b) All Valued Vegetation within the designation that is affected by the works (protected or removed).
- Note: Significant and Valued Vegetation shall be as defined in the ECOMP.
- 137) V.2 The NZTA shall employ a suitably experienced botanist ('nominated botanist') for the duration of the works to monitor, supervise and direct all works affecting or otherwise in close proximity to the Significant Vegetation and Valued Vegetation identified in the ECOMP.
- 138) V.3 Prior to any site works commencing, a pre-commencement site meeting shall be held so that the conditions that pertain to the Significant Vegetation and Valued Vegetation and all vegetation in general (both native and exotic) are explained by the nominated botanist to all contractors or sub-contractors who will be working on site within the close vicinity of that vegetation.

Construction

- 139) V.4 The NZTA shall minimise the amount of vegetation (both native and exotic) which is to be cleared, with the exception of weeds (both woody and otherwise, unless agreed with the Major Infrastructure Team Manager, Auckland Council and the Community Liaison Group that the retention of these 'weeds' has other environmental or ecological benefits that warrant their retention). All vegetation clearance shall be undertaken in accordance with the measures set out in the ECOMP.
- 140) V.5 The NZTA shall install protective fencing around, or otherwise clearly demarcate, all of the Significant Vegetation identified in the ECOMP as requiring full protection, under the supervision of the nominated botanist.
- 141) V.6 The NZTA shall replace any terrestrial Valued Vegetation that is required to be removed as a result of construction activities, in accordance with the ECOMP and the Urban Design and Landscape Plans.
- 142) V.7 The nominated botanist shall supervise all trimming, pruning and relocation work associated with the Significant Vegetation and Valued Vegetation required as part of the works.

Post-Construction / Operations

- 143) V.14 A rock forest restoration programme shall be undertaken by the NZTA on the northern banks of the Oakley Creek Inlet in accordance with the concepts of the ECOMP, Appendix H '*Rock Forest Provisional Concept Plan*'. A detailed planting plan shall be submitted to Auckland Council for approval, prior to implementation of the planting, with the plan to include planting specifications and management techniques. The detailed planting plan shall be integrated with cultural heritage values including, but not limited to, those shown on the plan entitled '*Oakley Inlet Heritage Area*' (UDL Plan 224 refer Schedule A, Row 17).

Monitoring

- 144) V.8 Immediately prior to planting, and for a period of 2 years following completion of construction, the NZTA shall undertake weed control and management of all invasive plant pests within the vegetated areas of the surface designation for the Project. Following this 2 year period, on-going control and management of all invasive plant pests within these areas will be the responsibility of the NZTA.
- 145) V.9 The nominated botanist shall undertake a monitoring programme throughout the construction period, including monitoring of:
- (a) The condition, repair and location of the temporary protective fencing or other forms of demarcation used to identify the Significant Vegetation;
 - (b) Any works within the vicinity of the Significant Vegetation and Valued Vegetation;
 - (c) The general health of the Significant Vegetation and Valued Vegetation (including any Significant or Valued Vegetation that has been relocated away from the works area);
and
 - (d) Compliance with the vegetation conditions of designation by way of fortnightly inspections during the construction period.

AVIAN CONDITIONS

Pre-Construction

- 146) A.1 The NZTA shall finalise, and implement through the CEMP, ECOMP submitted with this application to include the matters set out in Conditions A.2 to A.6.

HERPETOFAUNA CONDITIONS

Pre-Construction

- 147) H.1 The NZTA shall finalise and implement through the CEMP, the ECOMP submitted with this application to include details of lizard management to be undertaken, including the following:
- (a) Lizard capture methodology, including timing;
 - (b) Lizard release locations(s);
 - (c) Lizard habitat enhancement at population release sites, including a detailed pest control programme for a minimum of one month prior to release and for a minimum of three consecutive years' duration after release;
 - (d) Location(s), monitoring and maintenance of lizard protective fencing;
 - (e) Post-release monitoring methodology; and
 - (f) Lizard captive management methodology.

LIGHTING CONDITIONS

Pre-Construction

- 148) L.2 A Temporary Construction Lighting Management Plan shall be prepared for all construction zones and construction yards prior to commencement of any night time works within the construction zones and construction yards. The Temporary Construction Lighting Management Plan shall be independently verified by a lighting specialist and provided to the Major Infrastructure Team Manager, Auckland Council for certification of compliance 10 working days prior to any night time work commencing.

The certification process shall ensure that the Plan includes (but is not be limited to):

- a) The layout and arrangement of all temporary lighting required for night time works, and shall show how this avoids the "Light Spill Restriction Zone" identified on the Construction Yard Plans (Refer Schedule A, Row 7) submitted with the application, and that the temporary lighting complies with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - b) Provision for a 10m buffer between the night time work and any residential boundary at all times to minimise potential for light spill; and
 - c) General operating procedures outlined in the CEMP.
- 149) L.3 Asymmetrical floodlights with horizontal glass visors that are not raised more than 3 degrees above the horizontal plane shall be used for any temporary construction night time lighting requirements. Alternative temporary lighting arrangements may be used, subject to the prior approval of the Major Infrastructure Team Manager, Auckland Council, where it can be demonstrated that the proposed lighting is similar or better to asymmetrical

floodlights with glass visors. Glare shall be kept below the recommendation given in AS 4282 – 1997 “Control of the Obtrusive Effects of Outdoor Lighting” Tables 2.1 and 2.2.

Post-Construction / Operations

- 150) L.1 Lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas, in general accordance with the Waterview Connection Lighting Plan (Drawing Set F.11 (Refer Schedule A, Row 12):
- a) All motorway lighting shall be designed in accordance with "Roadlighting Standard AS/NZS1158";
 - b) All other lighting shall be designed in accordance with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - c) Fully cut off luminaries shall be used on SH20 from the Southern Tunnel Portal to the Maoro Street Interchange to minimised lighting overspill, as shown on Drawing Set F.11(Refer Schedule A, Row 12).

ARCHAEOLOGY CONDITIONS

Pre-Construction

- 151) ARCH.1 The NZTA shall complete, and implement through the CEMP, the Archaeological Site Management Plan (ASMP) submitted with the notice of requirement, to include, but not be limited to:
- a) Identification of the Project archaeologist, their role and responsibility on the Project;
 - b) Who reports to the Project archaeologist;
 - c) Specific sites requiring supervision, and measures to be undertaken to protect and manage these sites;
 - d) Whether NZHPT and/or Auckland Council heritage and/or iwi supervision is required for the specific site (the latter to be determined through consultation with the relevant iwi groups); and
 - e) Accidental discovery protocols in the event that unknown archaeological sites are uncovered.
- 152) ARCH.2 The NZTA shall employ at its expense a qualified archaeologist (the Project archaeologist) who shall be on site to monitor all initial earthworks, including surface stripping of the site, for all specific areas identified in the ASMP to establish whether any sub-surface archaeological features are present. This includes, but is not limited to, the following areas:
- (a) All unmodified areas in the vicinity of Rosebank Road;
 - (b) All works in the vicinity of the “Oakley Inlet Heritage Area”, located adjacent to the Great North Road Interchange;
 - (c) Works in the vicinity of two midden sites (recorded R11/2214 and R11/2215) within Great North Road Interchange, and all previously unmodified areas near the banks of the Oakley Inlet;
 - (d) Any ground disturbance works in Construction Yard 7 within Oakley Creek Reserve.
- 153) ARCH.4 In accordance with the ASMP, the following archaeological sites shall be fenced off and protected to the satisfaction of the Project archaeologist, prior to construction activities being undertaken:
- (a) Recorded sites R11/2504, R11/2505, R11/2506 and R11/2507, located on the northern boundary of the designation adjacent to the Rosebank Road peninsula.

- (b) Recorded site R11/2383 in the Oakley Creek Esplanade Reserve construction yard.
- 154) ARCH.5 In accordance with the ASMP, the following specific measures shall be implemented in the area identified as the "Oakley Inlet Heritage Area" (including recorded sites R11/2191, R11/2202, R11/2203 and R11/2459), located adjacent to the Great North Road Interchange:
- (a) In determining the details of construction methodology and site access, the NZTA shall ensure that there is no impact on sites R11/2202, R11/2203 and the main features of site R11/2191 (the basalt walls, boiler, building foundations and platforms). When the details have been determined, a plan will be prepared in consultation with the Project archaeologist that outlines the areas of archaeological value to be fenced off and protected from any adverse effects during the construction process. The Heritage Manager, Environmental Services, Auckland Council shall be consulted in the drafting of the plan and shall certify that the extent and method of fencing will protect the areas of archaeological value prior to commencement of construction works within the area. This plan will be added to the Archaeological Constraints layer in the GIS layers included as an Appendix of the ASMP in the CEMP.
 - (b) All works in the Oakley Inlet Heritage Area shall be monitored by the Project archaeologist;
 - (c) Machine access to construction works in this area shall be planned so as to minimise adverse effects on archaeological features;
 - (d) During and following removal of houses north of Cowley Street and west of Great North Road in the area where the mill workers' cottages and mill race were once located, investigations shall be undertaken to establish and record any archaeological remains that may have survived;
 - (e) Remedial or limited restoration works shall be carried out to the basalt walls, wheel pit, boiler and bridge abutment of the mill/tannery/ quarry site (R11/2191), to a specification prepared by a heritage professional, to ensure their long term preservation. The specification shall be prepared in consultation with the Heritage Manager, Environmental Services, Auckland Council;
 - (f) A vegetation management plan shall be prepared and implemented to remove vegetation that is damaging archaeological features in this area and to protect and enhance features with appropriate vegetation cover. This plan shall form part of the Waterview Reserve Restoration Plan (refer to Conditions ARCH.6 and OS.5) and shall be prepared in consultation with the Heritage Manager, Environmental Services, Auckland Council;
 - (g) The design and location of any walkways and paths and structures within the Oakley Inlet Heritage Area shall include consideration of historic paths and accessways accessways (excluding the piers associated with the SH16 Interchange).
- 155) ARCH.6 The Project archaeologist shall be made part of the Waterview Reserve Restoration Plan (refer Condition OS.3) development team to provide advice on long term management of the "Oakley Inlet Heritage Area". The Waterview Reserve Restoration Plan shall include provision for, as a minimum:
- (a) A pedestrian bridge linking the northern and southern banks of the Oakley inlet shall be provided in the original location of the historical bridge to restore the historical connection between the two parts of the Oakley Inlet Heritage Area and make both parts easily accessible. The bridge is to be of a design appropriate to the historic form of this bridge but at a height above water to accommodate the passage of kayaks at high tide;
 - (b) Interpretative signage of the Oakley Inlet Heritage Area for public information and

- (c) The management of planting to avoid encroachment of deep rooted trees on identified archaeological sites (including planting undertaken in accordance with Condition V.14).
- 156) ARCH.8 All contractors and subcontractors working on the Project shall be trained on the archaeological requirements set out in the ASMP.
- 157) ARCH.9 All Monterey Pines or oak trees (*Quercus* spp) over 10m in height within Sector 5 shall be identified and managed through the CEMP Amenity Tree process (Conditions CEMP.6(o) and (p)). Irrespective of their health (unless the Project Arborist and Auckland Council confirm that these trees pose an immediate hazard), these trees will be confirmed as Amenity Trees. These trees shall be retained where practicable. If removal of any of these trees is required for construction, they shall be replaced by trees of the same species (or as otherwise agreed through the Waterfront Reserve Restoration Plan) sized at 160Lt. The location of replacement specimens will be defined through planning of the Oakley Inlet Heritage Area (as part of the Waterview Reserve Restoration Plan, refer Condition OS.5), with the replanting of Monterey Pines to reflect their historic use as a boundary planting species. Two trees shall be provided for every oak tree (*Quercus* spp) removed.
- 158) ARCH. Advice Note *Any archaeological sites within the area affected by the Project shall not be modified or disturbed in any way unless written authorisation has been obtained from the NZ Historic Places Trust.*

Construction

- 159) ARCH.3 If any archaeological sites, including human remains are exposed during site works, then the following procedures shall apply:
- (a) Immediately it becomes apparent that a possible archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease;
 - (b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are untouched and notify the Project archaeologist;
 - (c) The Project archaeologist shall inspect the site to assess the relevance of the find, and then the Auckland Council shall be advised of the significance;
 - (d) If the site is confirmed to be an archaeological site by the Project archaeologist, the site supervisor shall then notify tangata whenua, the New Zealand Historic Places Trust, and the Auckland Council that an archaeological site has been exposed so that appropriate action can be taken;
 - (e) In the case of human remains, the NZ Police shall be notified.
- 160) ARCH.7 In accordance with the ASMP, any works to the dry stone wall (recorded site R11/2213) located on the north western boundary of the Great North Road Interchange, shall be minimised and managed in accordance with the following:
- (a) If it is necessary to demolish part of the wall, the stone shall be used to repair the remainder of the wall. Appropriate reuse of any surplus stone will be determined following consultation with the NZHPT and Auckland Council.
 - (b) The remainder of the stone wall shall be protected from construction machinery by the use of waratahs and an adequate buffer area prior to earthworks commencing.
 - (c) The remainder of the stone wall shall be carefully cleared of vegetation growth and repaired where necessary to a specification prepared by a heritage professional employed at the expense of the NZTA.

GROUND SETTLEMENT CONDITIONS

Pre-Construction

161) S.1 The NZTA shall finalise, and implement through the CEMP, the Settlement Effects Management Plan (SEMP) lodged with the application prior to construction activities being undertaken. Prior to construction (following detailed investigation and design), the total estimated settlements and building damage categories shall be confirmed using the methodology in Technical Report G.13 *Assessment of Ground Settlement Effects* and the SEMF shall be updated accordingly.

In the event that settlement predictions are greater (than those allowed for in Figure E.14 (refer Schedule A, Row 26)) or building damage categories increase in ranking or buildings affected from those identified in Figures G1-G4 (refer Schedule A, Row 27), mitigation measures shall be introduced as part of the detailed design and construction process to avoid any adverse effects greater than predicted by the application lodged in August 2010.

162) S.2 The NZTA shall establish a series of ground settlement monitoring markers to monitor potential settlement in relation to the construction of the tunnels. The survey markers will be located generally as follows:

- (a) Along the tunnel alignment and extending out to a maximum of 400m either side of the tunnels to correlate with cross sections that have been used for the settlement estimates and to infill between them.
- (b) To cover the more extensive eastern zone area of settlement at Chainage 3400 (Figure E.14 refer Schedule A, Row 26).
- (c) On or around buildings or features considered to be particularly sensitive as defined in the SEMF (including those buildings identified in Condition S.7) and as may be updated to reflect detailed analysis and interpretation of monitoring results as the Project proceeds.

Two types of markers shall be established: Framework Markers which shall form the main basis of monitoring, and Intermediate Markers which shall provide additional monitoring information for interpretation of Alerts and Alarms. The locations of each type of settlement monitoring marker shall be confirmed in the SEMF. Each Framework Marker shall have an alert and alarm level set in relation to Figure E.14, where alert = 75% of the theoretical value and alarm = 100% of the theoretical value with due consideration of the seasonal range of ground movement identified by pre-construction monitoring.

163) S.7 The NZTA shall review and update the schedule of buildings and structures considered to be at risk in accordance with the criteria of the SEMF and maintain this for review by the Auckland Council. This shall include, but not be limited to, the following properties identified in the Technical Report G.13 *Assessment of Ground Settlement Effects* provided in support of this application:

- (a) Buildings on properties within the substrata designation;
- (b) Buildings where total estimated settlement is greater than 50mm (defined in Figure E.14 – Refer Schedule A, Row 26);
- (c) Buildings in areas estimated to have a risk of damage more than negligible (defined in Figures G1-G4 as categories 1-5 (Refer Schedule A, Row 27));
- (d) Unitec Buildings 76, and 310-313 (as per Unitec Site Plan in Schedule A, Row 31);
- (e) 1510 Great North Road, Unitec Residential Flats (two buildings);
- (f) Pak'n Save Supermarket;
- (g) Metro Football Clubhouse, Phyllis Street;

- (h) Building at 1550 Great North Road;
 - (i) BP Service station at 1380 Great North Road;
 - (j) Modern Chairs Building (Richardson Road);
 - (k) Waterview Primary School;
 - (l) Operational septic tanks where total estimated settlement is greater than 50mm; and
 - (m) Buildings on the western side of the alignment between Chainage 3000 and 3400 where total estimated settlement is greater than 20mm.
- 164) S.8 The NZTA shall consult with owners of buildings and structures identified in Condition S.7 and, subject to the owner's approval of terms acceptable to the NZTA, shall undertake a pre-construction condition assessment of these structures in accordance with the SEMP.
- 165) S.9 The NZTA shall employ a suitably qualified person (e.g. a Chartered Professional Engineer) to undertake the building assessments required pursuant to Conditions S.8 and S.12 and identify this person in the SEMP.

Construction

- 166) S.10 The NZTA shall undertake monthly visual inspections of the following buildings during the "active construction" phase of the Project as defined in Condition S.3:
- (a) All Type 1 Dwellings within a zone where "more than negligible" effects have been predicted;
 - (b) All Type 2 Dwellings within a zone where "slight" effects or greater have been predicted
 - (c) Unitec Building 76;
 - (d) 1510 Great North Road, Unitec Residential Flats (two buildings);
 - (e) Pak'n Save supermarket; and
 - (f) Waterview Primary School (pool and hall).
- Note: Type 1 and 2 Dwellings are those as defined in Technical Report G.13 *Assessment of Ground Settlement Effects*.
- 167) S.11 The NZTA shall undertake level and/or wall inclination surveys on a monthly basis during the "active construction" phase of the Project on the following buildings:
- (a) All Type 1 Dwellings within a zone where "slight" effects or greater have been predicted;
 - (b) Unitec Building 76;
 - (c) 1510 Great North Road, Unitec Residential Flats (two buildings);
 - (d) Waterview Primary School (pool); and
 - (e) Pak 'n' Save Supermarket

Post Construction / Operations

- 168) S.12 The NZTA shall, subject to the owner(s) approval, ensure that within 6 months of completion of construction activities, a post-construction condition assessment covering the matters identified in the SEMP is undertaken and shall be provided to the owner(s). The assessment report shall include a determination of the cause of damage identified (if any) since the pre-construction condition assessments. The NZTA shall agree with the owner(s) appropriate remedial works (if any) in conjunction with arrangements for implementation and/or compensation. The requirements of this condition need not be fulfilled for any particular building with the written approval of the current owner of a building or where the NZTA can provide reasonable evidence to the Auckland Council that the current owner of

that building has agreed they do not require such a survey.

Monitoring

- 169) S.3 The NZTA shall survey the settlement monitoring markers at the following frequency:
- (a) Pre-construction
 - i) All Framework Markers – Vertical and selected horizontal at 3 monthly intervals, starting at least 12 months prior to construction commencing; and
 - ii) All Intermediate Markers - Vertical and selected horizontal once.
 - (b) During Construction
 - i) All Framework Markers - Vertical on a monthly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.
 - (c) During Active Construction
 - i) All Framework and Intermediate Markers – Vertical on a weekly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.
- “Active construction” shall be defined as:
- (a) Starting when the advancing tunnel face comes within 150m and ending when the final tunnel lining has been installed 150m beyond the section; and
 - (b) When excavation in front of a retaining wall comes within 100m of a section and ending when the permanent wall supports are in place beyond a distance of 100m.
- 170) S.4 Within three days of each monitoring round, the NZTA shall use the settlement monitoring results (together with the results of groundwater monitoring where they may provide an earlier indication of future settlements) to reassess the ground settlements and building damage categories and compare them to those estimated in Figures E.14 and G1-G4 (refer Schedule A, Row 26 and 27).
- If alert and alarm levels are exceeded, the trigger marker shall be resurveyed within 24 hours.
- If the reassessment indicates that a building has increased its damage category from that in Figures G1 – G4 (refer Schedule A, Row 27) then this shall be considered to be an Alert Level and additional specific assessment of the building shall be carried out by the NZTA to confirm this reassessment within 72 hours.
- If the additional assessment confirms the increase in damage category, this shall be considered to be an Alarm Level and the property owner and occupier will be notified within 48 hours. Following consultation with the property owner and occupier(s); subsequent actions may include increased frequency and/or extent of monitoring, modification to the construction approach or mitigation works to the affected building.
- 171) S.5 Settlement monitoring shall be undertaken for a period of 2 years following completion of the tunnels. The NZTA may reduce the frequency of settlement monitoring, required by Condition S.3, to 6-monthly:
- (a) Once the active construction stage has passed; and
 - (b) Monthly monitoring has been undertaken for a minimum of 6 months; and
 - (c) The monitoring indicates that any potential settlement effects are within a satisfactory range as specified in the SEMP; and
 - (d) The criteria in (a) to (c) above has been certified by the Auckland Council.
- 172) S.14 The NZTA shall establish inclinometer and surface monitoring of the retaining walls for the tunnel portals and cut and cover tunnel to determine any potential effect from the tunnels. The nature and timing of the monitoring shall be determined during detailed design of the

retaining walls and specified in the SEMP.

- 173) S.16 Prior to construction commencing, the NZTA shall undertake geotechnical investigations of slopes or sites that have been identified as potentially being susceptible to movement. This shall include, but not be limited to:
- (a) 14H and 14J Cradock Street
 - (b) 34 Cradock Street
 - (c) 40 Cradock Street
 - (d) 56 Powell Street;
 - (e) 1590A Great North Road; and
 - (f) Other sites on the western slopes of Oakley Creek identified under Condition S.7(b) and S.7(m) which are assessed in the course of a pre-construction condition assessment undertaken in accordance with Condition S.8 as potentially being susceptible to slope movement.

The NZTA shall undertake monitoring throughout the active construction period in accordance with Condition S.10 above and shall assess and agree remedial action as required, in consultation with the owner, in accordance with Condition S.12 above.

- 174) S.17 Pairs of settlement markers shall be established on each side of the cross sections identified on Figure E.14 to monitor differential movements. The markers in each pair shall be no more than 20m apart, and each pair shall be within 100m of the centreline of the closest tunnel. Monitoring installed in accordance with Condition S.11 can be utilised for this purpose. Each pair of markers shall have Alert and Alarm values set based on the calculated differential settlements at that location and consistent with the relevant calculated Building Damage Category (Figures G1-G4, (Refer Schedule A Row 27)), Alert and Alarm levels shall be as defined in Condition S.2. Monitoring frequency shall be as defined for Framework Markers in Condition S.3.

Monitoring - Pre-Construction

- 175) S.15 Prior to construction commencing, the NZTA shall undertake CCTV surveys of services identified in the SEMP as being susceptible to damage or particularly critical. This shall include, but not be limited to:
- (a) Waterview Orakei No. 9 trunk sewer.

The NZTA shall monitor these services by undertaking additional CCTV surveys throughout the construction period. If any damage is determined in relation to the Project, the NZTA shall undertake any remedial action as required in consultation with the service provider.

Reporting

- 176) S.6 The NZTA shall collate the results of the settlement monitoring (undertaken pursuant to Conditions S.2 – S.5) and prepare a report that shall be made available to the Auckland Council]. A settlement monitoring report shall be prepared prior to the commencement of construction, and then at monthly intervals throughout the construction period. Following the completion of construction, a settlement monitoring report shall be prepared following each round of settlement monitoring undertaken (i.e. monthly and then 6-monthly when monitoring is reduced pursuant to Condition S.5).

The settlement reports shall highlight any alert or alarm level exceedances and provide a full interpretation and/or explanation as to why these levels are exceeded, the likely effects and detail any remedial or mitigation measures initiated as a result of these trigger exceedances.

- 177) S.13 The NZTA shall ensure that a copy of the pre, post-construction and any additional building

condition assessment reports for each building be forwarded to the respective property owner(s) within 15 working days of completing the reports. The NZTA shall notify the Auckland Council that the assessments have been completed. The community liaison person appointed pursuant to Condition PI.1 shall be the contact person for owner(s) subject to assessment and reporting under Conditions S.1 to S.11 and S.16 and remedial works or compensation payments under Condition S.12 and S.16.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 178) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.
- 179) CL.2 Prior to the main construction works commencing, the baseline quality of soils and groundwater within Sector 5 (the southern bank of Oakley Creek coincident with the location of the former tannery) and Sector 7 (particularly in relation to works in the vicinity of Great North Road) shall be investigated and established. The investigations shall be carried out in accordance with appropriate Ministry for the Environment and Auckland Council guidelines. The findings of the soil and groundwater investigations shall be used to determine the specific constructions methods during work in this area to manage any likely environmental effects in relation to the Project.
- 180) CL.3 Prior to the main construction works commencing, soils and fill materials within Alan Wood Reserve (Sector 9) shall be further classified so as to determine the distribution and extent of cleanfill, managed fill and contaminated/hazardous fill materials.

Construction

- 181) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 182) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5 working days of identification of any contamination at the site which was not identified in the reports submitted in support of this application, including contaminated soil, surface water or groundwater.
- 183) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 184) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.

- 185) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Post-Construction / Operation

- 186) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;
 - (b) Volumes of soil removed from site;
 - (c) Copies of the waste disposal receipts; and
 - (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works.

Monitoring

- 187) CL.9 During and following the tunnel construction works beneath Sector 8, groundwater quality monitoring shall be carried out at locations within and down hydraulic gradient of Phyllis Street Landfill. Monitoring shall be undertaken on at least a monthly basis, and for a period up to 12 months following completion of the tunnel construction works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.
- 188) CL.10 Prior to, during and following tunnel construction works beneath Phyllis Street Landfill, monitoring for landfill gas shall be carried out from existing monitoring boreholes within the landfill. Monitoring shall be undertaken on at least a monthly basis, for a period of no less than 6 months prior to, and up to 12 months following completion of the tunnelling works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.

FRESHWATER CONDITIONS

Pre-Construction

- 189) F.1 The NZTA shall finalise, and implement through the CEMP, the ECOMP submitted with this application. The ECOMP shall be updated to ensure compliance with the conditions of this consent and include changes to the details of construction processes prior to construction commencing. The ECOMP shall include, but not be limited to details of:
- (a) Monitoring of freshwater ecology;
 - (b) Monitoring of freshwater and stream sediment quality;
 - (c) Trigger event criteria for undertaking additional monitoring;
 - (d) Procedures for responding to accidental discharges of contaminants to the freshwater environment; and
 - (e) Contingency plans and/or remedial measures in the event monitoring results identify adverse effects.

Monitoring

- 190) F.2 The NZTA shall engage a suitably qualified ecologist and water quality scientist to undertake freshwater monitoring programme prior to, during and following construction to monitor the effect of the Project on the freshwater ecology. The freshwater monitoring shall be undertaken in Oakley Creek, Pixie Stream and Meola Creek. The freshwater monitoring programme shall be undertaken in accordance with the details set out in the ECOMP and include:
- (a) Cross sectional profiles;
 - (b) Macro invertebrate sampling; and
 - (c) Freshwater fish monitoring.
- 191) F.3 The freshwater monitoring programme shall, as a minimum, be undertaken in accordance with the following frequency:
- (a) Prior to construction – two baseline ecological surveys.
 - (b) During construction – twice per year for fish and macro invertebrates and cross sectional profiles, within one month prior to the beginning of the earthworks season and within one month either side of the end of the earthworks season.
 - (c) Post construction – on an annual basis for a maximum period of three years, or less if the Major Infrastructure Team Manager, Auckland Council is satisfied that no adverse effects have occurred or are likely to occur from the Project.
 - (d) Monthly water quality samples at the five existing Oakley Creek sample locations to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb) and nutrients.
 - (e) Four “event based” samples per annum from each of the current two Oakley Creek sites. The samples are to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb), hydrocarbons (TPH) and nutrients.
 - (f) Two sediment quality samples per annum (January and July) at the five existing water quality Oakley Creek sites (if there is sufficient sediment to sample). The samples are to be analysed for metals (Zn, Cu and Pb), polycyclic aromatic hydrocarbons (PAH), hydrocarbons (TPH) and semi-volatile organic compounds.
- Advice note: The sample collection and analysis required under sub-clauses (d) to (f) shall be undertaken following an IANZ accredited methodology by a suitably accredited laboratory (International Accreditation New Zealand).
- 192) F.4 The NZTA shall undertake additional freshwater monitoring in the event of a ‘trigger event’ for freshwater habitats. For the purposes of this consent, a ‘trigger event’ for freshwater habitats is defined in the ECOMP.
- 193) F.5 The NZTAs ecologist/hydrologist (required by condition F.2) shall review, every six months, the freshwater monitoring results, provided from Conditions F.2 to F.4, and results in monitoring detailed in earthworks Conditions E.9 and E.19 and Groundwater Condition G.10. In the event that potential adverse effects are identified, including through review of the Condition G.10 monitoring results by the hydrologist and freshwater ecologist required by Condition G.12, the NZTA shall develop and submit for the approval of the Major Infrastructure Team Manager, Auckland Council appropriate contingency plans and/or remedial measures in accordance with the measures set out in the ECOMP.

Reporting

- 194) F.6 Freshwater monitoring reports shall be compiled from the monitoring undertaken pursuant to Conditions F.2 to F.4 and the review of Condition F.5, and a report provided to the Major Infrastructure Team Manager, Auckland Council every 6 months.

EPA 10/2.006 – (ACC: Plan Modification 202)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type: Designation

Description: For a new designation, SH20 tunnels, Great North Road underpass to Alan Wood Reserve – NOR5. New strata (subsoil) designation for construction, operation and maintenance of cut and cover and deep excavation tunnels, restricting subsurface activities beneath certain properties, through proposed Sectors 7 and 8; construction, operation and maintenance and protection of SH20 subsurface works (tunnels).

Lapse Period: 10 years

DC =	General Designation Conditions	OA =	Operational Air Quality Conditions
CEMP =	Construction Environmental Management Plan Conditions	SO =	Social Conditions
PI =	Public Information Conditions	S =	Ground Settlement Conditions
TT =	Temporary Traffic Conditions	CL =	Contaminated Land and Contaminated Discharge Conditions
CNV =	Noise and Vibration Conditions – Construction	STW =	Streamworks Conditions
OV =	Vibration Conditions – Operation		

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
 - (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part F: Plans and Drawings, except as updated through the hearing (Refer Schedule A for current plan and drawing references); and
 - (c) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part G: Technical Reports:
 - (i) Technical Report G.1 Assessment of Air Quality Effects

- (ii) Technical Report G.2 Assessment of Archaeological Effects
 - (iii) Technical Report G.3 Assessment of Avian Ecological Effects
 - (iv) Technical Report G.4 Assessment of Coastal Processes
 - (v) Technical Report G.5 Assessment of Construction Noise Effects
 - (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
 - (vii) Technical Report G.7 Assessment of Groundwater Effects
 - (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
 - (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
 - (x) Technical Report G.10 Assessment of Lighting Effects
 - (xi) Technical Report G.11 Assessment of Marine Ecological Effects
 - (xii) Technical Report G.12 Assessment of Operational Noise Effects
 - (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
 - (xiv) Technical Report G.14 Assessment of Social Effects
 - (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
 - (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
 - (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
 - (xviii) Technical Report G.18 Assessment of Transport Effects
 - (xix) Technical Report G.19 Assessment of Vibration Effects
 - (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
 - (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
 - (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
 - (xxiii) Technical Report G.23 Coastal Works
 - (xxiv) Technical Report G.24 Geotechnical Interpretive Report
 - (xxv) Technical Report G.25 Traffic Modelling Report
 - (xxvi) Technical Report G.26 Operational Model Validation Report
 - (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement
 - (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series
 - (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
 - (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
 - (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)
- (d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).
- (e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:
- (i) Evidence in Chief (Numbers 1-37)
 - (ii) Rebuttal Evidence (Numbers 1-33)
 - (iii) Supplementary Information (Numbers 1-8)
- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.
- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions

imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.

- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.

- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.

If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.

The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.

Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.

- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.

Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and southern ventilation buildings and stacks where further details are required.

- 7) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.

- 8) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 9) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions, whichever is the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in

text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and 39~~38~~);
- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8); and
- (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.

10) DC.7

An Outline Plan of Works shall be prepared for the Northern and Southern Ventilation Buildings and Stacks (OPW1 and OPW2) (in the general location as shown in the Operational Scheme Plans F.2 (Schedule A, Row 3) as shown on Figures DC.A and DC.B) in accordance with Section 176A of the RMA and Conditions DC.8 and DC.9 below and submitted to the Major Infrastructure Team Manager, Auckland Council.

For the purposes of Conditions DC.8 and DC.9, the following definitions shall apply:

- (a) Control Building – A building or buildings associated with the staffed control of the tunnel operating systems (including CCTV systems or surveillance). This precludes the inclusion or attached of any equipment unrelated to the structure of operation of the control building.
- (b) Ventilation Building – A building or buildings associated with the operation and maintenance of the tunnels and associated ventilation system (including power and emergency water supply). This precludes the inclusion or attachment of any equipment unrelated to the structure or operation of the ventilation building.
- (c) Ventilation Stack (stack) - A structure which channels air emissions to a height in the atmosphere which is suitable to disperse the emissions and result in an acceptable ambient air quality. This precludes the inclusion or attachment of any equipment

- 11) DC.8 Outline Plan of Works for the Northern Ventilation Buildings and Stack (OPW1) (refer Figure DC.A)

OPW1 shall be prepared in accordance with Section 176A of the RMA.

The final form of the Northern Ventilation Buildings and Stack shall be in accordance with the design principles of Section B of the Urban Landscape and Design Framework (ULDF June 2010) (refer Schedule A, Row 38) and the following requirements:

- (a) Retention of the same building / structural components underground as per the revised Drawing Set F.8, specifically Drawing 9 'North Portal - Basement Floor Plan' and above ground, specifically Drawing 8 'North Portal Location Plan' (refer Schedule A, Row 9) (subject to the amendments to location required by subclause (c) below);
- (b) Creation of a fragmented form for the ventilation buildings, such that the above-ground building is broken down into small, discrete elements – broadly similar in scale to that of nearby residential and school buildings;
- (c) Location of the ventilation stack on the eastern side of Great North Road, within the OPW area identified on Plan DC.A. The precise location within the OPW area shall be a matter of consultation with the Community Liaison Group(s) as established by Condition PI.5;
- (d) Ensure that any required roof linkages do not dominate the form of the building nor make it register visually as a single entity;
- (e) Development of an architectural profile, detailing and material palette that references the local landscape/ geology/ coastline/ residential area in the design of the above-ground ventilation buildings and for the ventilation stack to avoid an industrial character;
- (f) Maximisation of areas of planted open space between buildings, structures and vehicle movement/ parking areas;
- (g) Maximisation of the quantum of limbed-up (to promote visibility and surveillance (in accordance with CPTED principles)), large scale, specimen tree planting between buildings, structures and vehicle movement / parking areas surrounding the ventilation buildings;
- (h) Treatment of the ventilation building and ventilation stack as objects of urban sculpture;
- (i) Maintain opportunities for residential development at 14445 and 1449 Great North Road at the end of the construction programme;
- (j) Provision of lighting integrated with the façade design to illuminate the ventilation building and shared pedestrian/ cycle path along Great North Road;
- (k) The opportunity to provide and maintain a shared pedestrian / cycle path along Great North Road between Oakley Avenue and Herdman Street at a width that does not compromise a planted berm that provides screening for the buildings and maintains a safe walking environment for children using this path and is in accordance with the Plans PT & Active Mode Transport Routes (Refer Schedule A, Row 22);
- (l) Consideration of the desirability of setting the ventilation stack back from the frontage of Great North Road to provide for screening of structures and for the safe operation of accessways / service lanes required for the ventilation stack and for Great North Road;
- (m) Providing for the retention of as much existing vegetation as possible surrounding the ventilation stack and for planting at the base of the ventilation stack in a manner that integrates with the Oakley Creek Esplanade (Waterview Glades) Restoration Plan (Conditions OS.3 and O.S.7);
- (n) The works needed for land stability for the stack (e.g. bunding, retaining walls, slope

- (o) Documentation of consultation undertaken with the Waterview (to St Lukes) Community Liaison Group (as established by Condition P1.5) and the Manager, Urban Design Auckland Council, the views and concerns expressed by this consultation, particularly as pertains to the final location and design of the ventilation stack;
- (p) Confirmation that the building height (maximum 6.5m) and above ground area is no greater than the Concept Plan drawings in the updated plan set F.8, specifically Drawing 11, North Portal Ground Floor Plan (refer Schedule A, Row 9);
- (q) The site configuration should maximise the use of building façades to achieve site security, minimising the necessity for additional fencing. All security fencing is to be set back from the street frontage, maximising transparency and should reflect the residential character of the area; and
- (r) The northern ventilation stack will be at a height of 15m. This height shall be calculated from the lowest existing ground level along the Great North Road boundary adjacent to the ventilation stack.

Post-Construction / Operations

- 12) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
- (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway
- Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.*
- (b) The designation to be altered to remove those conditions no longer required for long term operation and maintenance of the Project.

Monitoring

- 13) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 14) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.

Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.

Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.

- 15) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.

- 16) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
- (e) Environmental complaints management (including the procedures required under Condition PI.4);
- (f) Compliance monitoring;
- (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
- (h) Environmental auditing; and
- (i) Corrective action.

- 17) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:

- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
 - (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
 - (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).
- 18) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:
- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
 - (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
 - (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloos);
 - (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);
- 19) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from

- (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 20) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 21) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.

Construction

- 22) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 23) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 24) CEMP.8 All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.
- 25) 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.
- 26) CEMP.12 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:
- (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.
- A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.

- 27) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'

Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 28) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.

- 29) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

- 30) PI.5 The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:
- (a) Te Atatu (including the SH16 Causeway)
 - (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
 - (c) Owairaka
- and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.
- The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:
- (a) Auckland Council and Auckland Transport;
 - (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
 - (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
 - (d) Department of Conservation;
 - (e) Local Boards;
 - (f) Iwi groups with Mana Whenua;
 - (g) Public transport providers; and
 - (h) Housing New Zealand Corporation.
- Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 31) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 32) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located

- (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
- (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
- (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
- (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
- (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.

33) PI.6

The Community Liaison Group(s) shall be provided opportunities to review and comment on the following (amongst other things):

- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k));
- (b) The Open Space Restoration Plans (as required by Condition OS.3);
- (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as required by Condition LV.1);
- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

OPERATIONAL TRAFFIC CONDITIONS

Post Construction / Operation

- 34) OT.2 The NZTA shall prepare a Tunnel Traffic Operation Plan in consultation with the Auckland Transport and Auckland Council. The Plan shall include, but not be limited to:
- (a) Procedures for tunnel operational safety, including fire-life safety;
 - (b) Procedures for maintenance requirements.
 - (c) Procedures for managing traffic to avoid or minimise potential congestion within the tunnel, particularly during peak periods.
 - (d) Procedures for the management of traffic during incidents.
 - (e) Procedures for the operation of tunnel fans and the management of portal emissions.
 - (f) Confirmation that all equipment has been tested and operates in accordance with requirements and specifications.

The Tunnel Traffic Operation Plan shall be completed and provided to Auckland Transport and to the Major Infrastructure Team Manager, Auckland Council (in respect of Condition OT.2(e)), prior to operational use of the tunnelled section of SH20.

Advice note: The operation and maintenance of the air quality monitoring equipment inside the tunnel shall follow manufacturer's recommendations.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

- 35) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration inducing construction activities would occur;
- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and after completion of construction works;
- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise

- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the construction site night works, as defined on the maps (refer Schedule A, Row 35) are notified of such works (i.e. any works during the hours of 20:00 to 06:30) at least 5 days prior to the commencement of any such work.
 - The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

36) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 “Acoustics - Construction Noise” and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75
	2000-0630	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

37) CNV.3 Project Construction Noise Criteria: Airblast (excluding Sundays)

Category	Type of Blasting Operations	Peak Sound Pressure Level (LZpeak dB)
Human Comfort Limits		
Sensitive Site	Operations lasting longer than 12 months or more than 20 Blasts	115 dB for 95% blasts per year. 120 dB maximum unless agreement is reached with occupier that a higher limit may apply
Sensitive Site	Operations lasting less than 12 months or less than 20 Blasts	120 dB for 95% blasts per year. 125 dB maximum unless agreement is reached with occupier that a higher limit may apply
Occupied non-sensitive sites such as factories and commercial premises	All blasting	125 dB maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications of levels that can be shown to adversely affect the equipment operation
Damage Control Limits		
Structures that include masonry, plaster and plasterboard in their construction and also unoccupied structures of reinforced concrete or steel construction	All Blasting	133 dB unless agreement is reached with owner that a higher limit may apply.

Service structures such as pipelines, powerlines and cables located above ground	All Blasting	Limit to be determined by structural design methodology
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- 38) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration			PPV at horizontal plane of highest floor (mm/s)	Long-term vibration
	PPV at the foundation at a frequency of				
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)	PPV at horizontal plane of highest floor (mm/s)	
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 39) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
 - (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 40) CNV.6 Blasting shall be undertaken between 09:00h and 17:00h, Monday to Saturday, except that blasting may be undertaken between 09:00h and 17:00h on Sundays where:
- (a) The blasting is at least 50m inside the Sector 8 tunnel;
 - (b) The blasting produces peak particle velocities at any residential building not exceeding 0.5mm/s; and
 - (c) The Project construction noise criteria set out in Condition CNV.2 for Sundays are complied with.

- 41) CNV.10 If noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2(c) or CNV.4 will potentially be exceeded and that temporary relocation will be offered for residents at 1510 Great North Road, then relocation (and temporary transportation) shall be arranged with the leaseholder at 1510 Great North Road for tenants (with at least 1 months' notice to the leaseholder prior to relocation). Any accepted offer of relocation is to be in place prior to tunnelling works within 50m of the building at 1510 Great North Road.
- 42) CNV.11 For all other properties, if noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2 or CNV.4 will potentially be exceeded, then the process set out in the CNVMP will be undertaken including Site Specific Noise Management Plans. Where relocation for residents is proposed, notification of such relocation with residents and property owners will be undertaken in accordance with the processes contained in the CNVMP.
- 43) CNV.12 Any relocation required by CNV.10 will not be undertaken in the period between 10 working days prior to any Unitec examinations and the completion of those examinations.
- 44) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.
- Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for SSNMPs to be submitted to the Council where an SSNMP is required.
- If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.
- Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).*

VIBRATION CONDITIONS

Pre-Construction

- 45) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish pre-Project vibration levels for comparison with future vibration levels.

OPERATIONAL AIR QUALITY CONDITIONS

Post Construction / Operations

- 46) OA.2 Prior to the tunnels becoming operational, the NZTA shall establish two ambient air quality monitoring stations and one portal air quality monitoring station. The location and types of these monitoring stations shall be selected by the NZTA in consultation with the Auckland Council and Peer Review Panel (Condition OA.7), providing that one ambient monitoring station will be located within the Waterview Primary School (subject to agreement by the School).
- Ambient air quality shall be monitored continuously in real time, to monitor potential effects

associated with the operation of the ventilation system from the tunnels. Ambient monitoring shall include fine particulates (PM10 and PM2.5) and nitrogen dioxide. Portal monitoring shall include nitrogen dioxide. Results shall be compared with the relevant National Environmental Standards for air quality and Auckland Regional air quality targets (as identified in Chapter 4 of the Auckland Regional Plan: Air, Land and Water, 2010). Monitoring shall be undertaken at each site until the Peer Review Panel recommends that monitoring is no longer necessary. The locations, operation and maintenance schedules of the continuous monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1: 2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment, and with methods specified in the National Environment Standards.

SOCIAL CONDITIONS

Pre-Construction

47) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:

- (a) Auckland Council;
- (b) Housing New Zealand Corporation;
- (c) Te Kawerau Iwi Tribal Authority;
- (d) Ngati Whatua o Orakei;
- (e) KiwiRail;
- (f) Department of Conservation;
- (g) Ministry of Education; and
- (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to the Auckland Council);
- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

GROUND SETTLEMENT CONDITIONS

Pre-Construction

- 48) S.1 The NZTA shall finalise, and implement through the CEMP, the Settlement Effects Management Plan (SEMP) lodged with the application prior to construction activities being undertaken. Prior to construction (following detailed investigation and design), the total estimated settlements and building damage categories shall be confirmed using the methodology in Technical Report G.13 *Assessment of Ground Settlement Effects* and the SEMP shall be updated accordingly.

In the event that settlement predictions are greater (than those allowed for in Figure E.14 (refer Schedule A, Row 26)) or building damage categories increase in ranking or buildings affected from those identified in Figures G1-G4 (refer Schedule A, Row 27), mitigation measures shall be introduced as part of the detailed design and construction process to avoid any adverse effects greater than predicted by the application lodged in August 2010.

- 49) S.2 The NZTA shall establish a series of ground settlement monitoring markers to monitor potential settlement in relation to the construction of the tunnels. The survey markers will be located generally as follows:

- (a) Along the tunnel alignment and extending out to a maximum of 400m either side of the tunnels to correlate with cross sections that have been used for the settlement estimates and to infill between them.
- (b) To cover the more extensive eastern zone area of settlement at Chainage 3400 (Figure E.14 refer Schedule A, Row 26).
- (c) On or around buildings or features considered to be particularly sensitive as defined in the SEMP (including those buildings identified in Condition S.7) and as may be updated to reflect detailed analysis and interpretation of monitoring results as the Project proceeds.

Two types of markers shall be established: Framework Markers which shall form the main basis of monitoring, and Intermediate Markers which shall provide additional monitoring information for interpretation of Alerts and Alarms. The locations of each type of settlement monitoring marker shall be confirmed in the SEMP. Each Framework Marker shall have an alert and alarm level set in relation to Figure E.14, where alert = 75% of the theoretical value and alarm = 100% of the theoretical value with due consideration of the seasonal range of ground movement identified by pre-construction monitoring.

- 50) S.7 The NZTA shall review and update the schedule of buildings and structures considered to be at risk in accordance with the criteria of the SEMP and maintain this for review by the Auckland Council. This shall include, but not be limited to, the following properties identified in the Technical Report G.13 *Assessment of Ground Settlement Effects* provided in support of this application:

- (a) Buildings on properties within the substrata designation;
- (b) Buildings where total estimated settlement is greater than 50mm (defined in Figure E.14 – Refer Schedule A, Row 26);
- (c) Buildings in areas estimated to have a risk of damage more than negligible (defined in Figures G1-G4 as categories 1-5 (Refer Schedule A, Row 27));
- (d) Unitec Buildings 76, and 310-313 (as per Unitec Site Plan in Schedule A, Row 31);
- (e) 1510 Great North Road, Unitec Residential Flats (two buildings);
- (f) Pak'n Save Supermarket;
- (g) Metro Football Clubhouse, Phyllis Street;

- (h) Building at 1550 Great North Road;
- (i) BP Service station at 1380 Great North Road;
- (j) Modern Chairs Building (Richardson Road);
- (k) Waterview Primary School;
- (l) Operational septic tanks where total estimated settlement is greater than 50mm; and
- (m) Buildings on the western side of the alignment between Chainage 3000 and 3400 where total estimated settlement is greater than 20mm.

51) S.8 The NZTA shall consult with owners of buildings and structures identified in Condition S.7 and, subject to the owner's approval of terms acceptable to the NZTA, shall undertake a pre-construction condition assessment of these structures in accordance with the SEMP.

52) S.9 The NZTA shall employ a suitably qualified person (e.g. a Chartered Professional Engineer) to undertake the building assessments required pursuant to Conditions S.8 and S.12 and identify this person in the SEMP.

Construction

53) S.10 The NZTA shall undertake monthly visual inspections of the following buildings during the "active construction" phase of the Project as defined in Condition S.3:

- (a) All Type 1 Dwellings within a zone where "more than negligible" effects have been predicted;
- (b) All Type 2 Dwellings within a zone where "slight" effects or greater have been predicted
- (c) Unitec Building 76;
- (d) 1510 Great North Road, Unitec Residential Flats (two buildings);
- (e) Pak'n Save supermarket; and
- (f) Waterview Primary School (pool and hall).

Note: Type 1 and 2 Dwellings are those as defined in Technical Report G.13 *Assessment of Ground Settlement Effects*.

54) S.11 The NZTA shall undertake level and/or wall inclination surveys on a monthly basis during the "active construction" phase of the Project on the following buildings:

- (a) All Type 1 Dwellings within a zone where "slight" effects or greater have been predicted;
- (b) Unitec Building 76;
- (c) 1510 Great North Road, Unitec Residential Flats (two buildings);
- (d) Waterview Primary School (pool); and
- (e) Pak 'n' Save Supermarket

Post Construction / Operations

55) S.12 The NZTA shall, subject to the owner(s) approval, ensure that within 6 months of completion of construction activities, a post-construction condition assessment covering the matters identified in the SEMP is undertaken and shall be provided to the owner(s). The assessment report shall include a determination of the cause of damage identified (if any) since the pre-construction condition assessments. The NZTA shall agree with the owner(s) appropriate remedial works (if any) in conjunction with arrangements for implementation and/or compensation. The requirements of this condition need not be fulfilled for any particular building with the written approval of the current owner of a building or where the NZTA can provide reasonable evidence to the Auckland Council that the current owner of that building has agreed they do not require such a survey.

Monitoring

- 56) S.3 The NZTA shall survey the settlement monitoring markers at the following frequency:
- (a) Pre-construction
 - i) All Framework Markers – Vertical and selected horizontal at 3 monthly intervals, starting at least 12 months prior to construction commencing; and
 - ii) All Intermediate Markers - Vertical and selected horizontal once.
 - (b) During Construction
 - i) All Framework Markers - Vertical on a monthly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.
 - (c) During Active Construction
 - i) All Framework and Intermediate Markers – Vertical on a weekly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.
- “Active construction” shall be defined as:
- (a) Starting when the advancing tunnel face comes within 150m and ending when the final tunnel lining has been installed 150m beyond the section; and
 - (b) When excavation in front of a retaining wall comes within 100m of a section and ending when the permanent wall supports are in place beyond a distance of 100m.
- 57) S.4 Within three days of each monitoring round, the NZTA shall use the settlement monitoring results (together with the results of groundwater monitoring where they may provide an earlier indication of future settlements) to reassess the ground settlements and building damage categories and compare them to those estimated in Figures E.14 and G1-G4 (refer Schedule A, Row 26 and 27).
- If alert and alarm levels are exceeded, the trigger marker shall be resurveyed within 24 hours.
- If the reassessment indicates that a building has increased its damage category from that in Figures G1 – G4 (refer Schedule A, Row 27) then this shall be considered to be an Alert Level and additional specific assessment of the building shall be carried out by the NZTA to confirm this reassessment within 72 hours.
- If the additional assessment confirms the increase in damage category, this shall be considered to be an Alarm Level and the property owner and occupier will be notified within 48 hours. Following consultation with the property owner and occupier(s); subsequent actions may include increased frequency and/or extent of monitoring, modification to the construction approach or mitigation works to the affected building.
- 58) S.5 Settlement monitoring shall be undertaken for a period of 2 years following completion of the tunnels. The NZTA may reduce the frequency of settlement monitoring, required by Condition S.3, to 6-monthly:
- (a) Once the active construction stage has passed; and
 - (b) Monthly monitoring has been undertaken for a minimum of 6 months; and
 - (c) The monitoring indicates that any potential settlement effects are within a satisfactory range as specified in the SEMP; and
 - (d) The criteria in (a) to (c) above has been certified by the Auckland Council.
- 59) S.14 The NZTA shall establish inclinometer and surface monitoring of the retaining walls for the tunnel portals and cut and cover tunnel to determine any potential effect from the tunnels. The nature and timing of the monitoring shall be determined during detailed design of the retaining walls and specified in the SEMP.

- 60) S.16 Prior to construction commencing, the NZTA shall undertake geotechnical investigations of slopes or sites that have been identified as potentially being susceptible to movement. This shall include, but not be limited to:
- (a) 14H and 14J Cradock Street
 - (b) 34 Cradock Street
 - (c) 40 Cradock Street
 - (d) 56 Powell Street;
 - (e) 1590A Great North Road; and
 - (f) Other sites on the western slopes of Oakley Creek identified under Condition S.7(b) and S.7(m) which are assessed in the course of a pre-construction condition assessment undertaken in accordance with Condition S.8 as potentially being susceptible to slope movement.

The NZTA shall undertake monitoring throughout the active construction period in accordance with Condition S.10 above and shall assess and agree remedial action as required, in consultation with the owner, in accordance with Condition S.12 above.

- 61) S.17 Pairs of settlement markers shall be established on each side of the cross sections identified on Figure E.14 to monitor differential movements. The markers in each pair shall be no more than 20m apart, and each pair shall be within 100m of the centreline of the closest tunnel. Monitoring installed in accordance with Condition S.11 can be utilised for this purpose. Each pair of markers shall have Alert and Alarm values set based on the calculated differential settlements at that location and consistent with the relevant calculated Building Damage Category (Figures G1-G4, (Refer Schedule A Row 27)), Alert and Alarm levels shall be as defined in Condition S.2. Monitoring frequency shall be as defined for Framework Markers in Condition S.3.

Monitoring - Pre-Construction

- 62) S.15 Prior to construction commencing, the NZTA shall undertake CCTV surveys of services identified in the SEMP as being susceptible to damage or particularly critical. This shall include, but not be limited to:

- (a) Waterview Orakei No. 9 trunk sewer.

The NZTA shall monitor these services by undertaking additional CCTV surveys throughout the construction period. If any damage is determined in relation to the Project, the NZTA shall undertake any remedial action as required in consultation with the service provider.

Reporting

- 63) S.6 The NZTA shall collate the results of the settlement monitoring (undertaken pursuant to Conditions S.2 – S.5) and prepare a report that shall be made available to the Auckland Council]. A settlement monitoring report shall be prepared prior to the commencement of construction, and then at monthly intervals throughout the construction period. Following the completion of construction, a settlement monitoring report shall be prepared following each round of settlement monitoring undertaken (i.e. monthly and then 6-monthly when monitoring is reduced pursuant to Condition S.5).

The settlement reports shall highlight any alert or alarm level exceedances and provide a full interpretation and/or explanation as to why these levels are exceeded, the likely effects and detail any remedial or mitigation measures initiated as a result of these trigger exceedances.

- 64) S.13 The NZTA shall ensure that a copy of the pre, post-construction and any additional building condition assessment reports for each building be forwarded to the respective property

owner(s) within 15 working days of completing the reports. The NZTA shall notify the Auckland Council that the assessments have been completed. The community liaison person appointed pursuant to Condition PI.1 shall be the contact person for owner(s) subject to assessment and reporting under Conditions S.1 to S.11 and S.16 and remedial works or compensation payments under Condition S.12 and S.16.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 65) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.
- 66) CL.2 Prior to the main construction works commencing, the baseline quality of soils and groundwater within Sector 5 (the southern bank of Oakley Creek coincident with the location of the former tannery) and Sector 7 (particularly in relation to works in the vicinity of Great North Road) shall be investigated and established. The investigations shall be carried out in accordance with appropriate Ministry for the Environment and Auckland Council guidelines. The findings of the soil and groundwater investigations shall be used to determine the specific constructions methods during work in this area to manage any likely environmental effects in relation to the Project.
- 67) CL.3 Prior to the main construction works commencing, soils and fill materials within Alan Wood Reserve (Sector 9) shall be further classified so as to determine the distribution and extent of cleanfill, managed fill and contaminated/hazardous fill materials.

Construction

- 68) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 69) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5 working days of identification of any contamination at the site which was not identified in the reports submitted in support of this application, including contaminated soil, surface water or groundwater.
- 70) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 71) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.
- 72) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the

Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Post-Construction / Operations

- 73) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;
 - (b) Volumes of soil removed from site;
 - (c) Copies of the waste disposal receipts; and
 - (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works

Monitoring

- 74) CL.9 During and following the tunnel construction works beneath Sector 8, groundwater quality monitoring shall be carried out at locations within and down hydraulic gradient of Phyllis Street Landfill. Monitoring shall be undertaken on at least a monthly basis, and for a period up to 12 months following completion of the tunnel construction works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.
- 75) CL.10 Prior to, during and following tunnel construction works beneath Phyllis Street Landfill, monitoring for landfill gas shall be carried out from existing monitoring boreholes within the landfill. Monitoring shall be undertaken on at least a monthly basis, for a period of no less than 6 months prior to, and up to 12 months following completion of the tunnelling works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.

STREAMWORKS CONDITIONS

Construction

- 76) STW.1 The streamworks and associated works (such as stormwater outfalls) shall be undertaken in accordance with the plans and information contained within Technical Report G.15 *Assessment of Stormwater and Streamworks Effects* and Technical Report G.22 *Erosion and Sediment Control Plan*, submitted with this application. The design of streamworks and associated works shall follow the approach expressed in the Oakley Creek Re-alignment and Rehabilitation Guidelines, appended to *Technical Report G.6 Assessment of Freshwater Ecological Effects*.

EPA 10/2.008 – (ACC: Plan Modification 202)

This document has been prepared in compliance with conditions of the “*Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal, Volume 2, Conditions of Consent*”. Schedule B of Volume 2 identifies the Conditions relevant to this Consent by the code and number as referenced throughout this document. In the event of dispute, Schedule B of Volume 2 shall take precedence over this Consent.

Type: Designation

Description: For new designation, SH20, southern tunnel portal to Maioro Street interchange – NOR7. New surface designation for construction, operation and maintenance of the SH20 surface component from Maioro Street Interchange to the proposed tunnels; includes land for structures associated with tunnel operation and works for mitigation and local road access and ramps; land taken from reserves and from land owned by the Crown for rail and residential purposes, generally in Sector 9.

Works for construction, operation and maintenance of SH20 described above and including stormwater treatment, wetland ponds, ancillary safety and operational services, ventilation building and stack, temporary works, vegetation removal and restoration works, cycleway extension, landscaping and planning, installation and maintenance of grout curtain for groundwater management.

Lapse Period: 10 years

Code:

DC =	General Designation Conditions	OS =	Open Space Conditions
CEMP =	Construction Environmental Management Plan Conditions	SO =	Social Conditions
PI =	Public Information Conditions	V =	Vegetation Conditions
TT =	Temporary Traffic Conditions	A =	Avian Conditions
OT =	Operational Traffic Conditions	H =	Herpetofauna Conditions
CNV =	Noise and Vibration Conditions – Construction	L =	Lighting Conditions
ON =	Noise Conditions – Operation	ARCH =	Archaeology Conditions
OV =	Vibration Conditions – Operation	S =	Ground Settlement Conditions
AQ =	Air Quality Conditions – Construction	STW =	Streamworks Conditions
OA =	Operational Air Quality Conditions	CL =	Contaminated Land and Contaminated Discharge Conditions
LV =	Landscape and Visual Conditions	F =	Freshwater Conditions

GENERAL DESIGNATION CONDITIONS

General

- 1) DC.1 Except as modified by the conditions below, the works shall be undertaken in general accordance with the information provided by the New Zealand Transport Agency (NZTA being the Requiring Authority), the Notice(s) of Requirement and the supporting documents, and supplementary information provided in evidence. This information is summarised as follows:
 - (a) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Parts A-E;
 - (b) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part F: Plans and Drawings, except as updated through the hearing (Refer Schedule A for current plan and drawing references); and
 - (c) Waterview Connection Project. Assessment of Environmental Effects Report (dated August 2010). Part G: Technical Reports:
 - (i) Technical Report G.1 Assessment of Air Quality Effects
 - (ii) Technical Report G.2 Assessment of Archaeological Effects
 - (iii) Technical Report G.3 Assessment of Avian Ecological Effects
 - (iv) Technical Report G.4 Assessment of Coastal Processes
 - (v) Technical Report G.5 Assessment of Construction Noise Effects
 - (vi) Technical Report G.6 Assessment of Freshwater Ecological Effects
 - (vii) Technical Report G.7 Assessment of Groundwater Effects
 - (viii) Technical Report G.8 Assessment of Herpetofauna Ecological Effects
 - (ix) Technical Report G.9 Assessment of Land and Groundwater Contamination
 - (x) Technical Report G.10 Assessment of Lighting Effects
 - (xi) Technical Report G.11 Assessment of Marine Ecological Effects
 - (xii) Technical Report G.12 Assessment of Operational Noise Effects
 - (xiii) Technical Report G.13 Assessment of Ground Settlement Effects
 - (xiv) Technical Report G.14 Assessment of Social Effects
 - (xv) Technical Report G.15 Assessment of Stormwater and Streamworks Effects
 - (xvi) Technical Report G.16 Assessment of Temporary Traffic Effects
 - (xvii) Technical Report G.17 Assessment of Terrestrial Vegetation Effects
 - (xviii) Technical Report G.18 Assessment of Transport Effects
 - (xix) Technical Report G.19 Assessment of Vibration Effects
 - (xx) Technical Report G.20 Assessment of Visual and Landscape Effects
 - (xxi) Technical Report G.21 Construction Environmental Management Plan (CEMP)
 - (xxii) Technical Report G.22 Erosion and Sediment Control Plan (ESCP)
 - (xxiii) Technical Report G.23 Coastal Works
 - (xxiv) Technical Report G.24 Geotechnical Interpretive Report
 - (xxv) Technical Report G.25 Traffic Modelling Report
 - (xxvi) Technical Report G.26 Operational Model Validation Report
 - (xxvii) Technical Report G.27 Stormwater Design Philosophy Statement

- (xxviii) Technical Report G.28 Geotechnical Factual Report – 500 Series
 - (xxix) Technical Report G.29 Geotechnical Factual Report – 700 Series
 - (xxx) Technical Report G.30 Assessment of Associated Sediment and Contaminant Loads
 - (xxxi) Technical Report G.31: Technical Addendum Report (September 2010)
- (d) PT & Active Mode Transport Routes Existing and Proposed (Refer Schedule A, Row 22).
- (e) Waterview Connection Project, Evidence and Supplementary Information provided to the Board of Inquiry:
- (i) Evidence in Chief (Numbers 1-37)
 - (ii) Rebuttal Evidence (Numbers 1-33)
 - (iii) Supplementary Information (Numbers 1-8)
- 2) DC.2 The period within which this designation shall lapse if not given effect to shall be 10 years from the date on which it is confirmed in accordance with Section 184(1) of the Resource Management Act 1991.
- 3) DC.3 The NZTA shall update and finalise the relevant Construction and Operational Management Plans required under these conditions to ensure compliance with the designation conditions imposed by the Board of Inquiry. The relevant Management Plans shall be submitted to the Major Infrastructure Team Manager, Auckland Council within the timeframes specified in the following conditions. No works shall be undertaken until the relevant management plans have been finalised and certified or approved in accordance with the relevant conditions.
- 4) DC.4 Any Management Plans submitted to the Major Infrastructure Team Manager, Auckland Council for approval or certification may be submitted in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.
- 5) DC.5 In the event of any dispute, disagreement or inaction arising as to any Auckland Council Manager certification/ approvals required by the designation conditions, or as to the implementation of or monitoring required by the conditions, matters shall be referred in the first instance to the NZTA Regional State Highway Manager and to the Resource Consents Manager, Auckland Council to determine a process of resolution.
- If a resolution cannot be agreed, then the matter may be referred to an independent appropriately qualified expert, agreeable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.
- The independent appropriately qualified expert shall be appointed within 10 working days of the NZTA or Auckland Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue his or her decision on the matter. In making the decision, the expert shall be entitled to seek further information and hear from the parties as he or she sees fit.
- Advice note: The dispute resolution process provided for in this condition does not prejudice any party's right to take enforcement action in relation to the implementation of the designation conditions. However, the dispute resolution process will be applied before any formal enforcement action is taken by the Council, except in urgent situations.*
- 6) DC.6 Except for Conditions DC.7, DC.8 and DC.9, the NZTA shall be exempt from providing an Outline Plan of Works for the Project, as provided for in Section 176A (2)(a) and (b) of the RMA.
- Advice note: The Construction and Operational Management Plans, together with the provision of detailed drawings required by Condition DC.1(b) are considered sufficient detail in all aspects of the Project, with the exception of proposed works for the northern and*

southern ventilation buildings and stacks where further details are required.

- 7) DC.11 A number of conditions of the designation require works on land that is to be acquired by the NZTA to provide land for a rail corridor to replace existing rail land required for the Project ("replacement rail land"). Any conditions applying to the replacement rail land must be met by the NZTA up until (and if) construction of rail commences on that land. Once construction of rail commences on the replacement rail land, under a new or altered rail designation imposed through a publicly notified process, any conditions relating to the replacement rail land shall cease to have effect.

Advice note: The expectation is that the planning process authorising the construction of such rail will have imposed appropriate conditions to apply in respect of the rail corridor and any mitigation and interface with the Waterview Project,

- 8) DC.13 Pursuant to Section 36(1)(d) of the RMA, the requiring authority is required to pay to Auckland Council any administrative charge for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of designation conditions.
- 9) DC.14 The servants of agents of Auckland Council shall be permitted to have access to relevant parts of the Project at all reasonable times for the purpose of carrying out inspections, investigations, tests, measurements and/or to take samples.

Pre-Construction

- 10) DC.1A Within 3 months of the designations being confirmed for the Project (or at least 1 month prior to any Auckland Council approvals or certifications required by these Conditions, whichever is the earlier), the NZTA shall update and finalise to the satisfaction of the Major Infrastructure Team Manager, Auckland Council all drawings and Plans cited in Schedule A, and provide a full set of the information and documentation referred to in Condition DC.1 to the Major Infrastructure Team Manager Auckland Council. At the same time the NZTA shall prepare to the satisfaction of the Major Infrastructure Team Leader, Auckland Council, a document for each designation which sets out the designation and have attached to it in text format a comprehensive set of the conditions imposed by the Board of Inquiry in its Final Decision as summarised in Schedule B, inclusive of any standard conditions and advice notes.

In particular (but not limited to), the following Plans will need to be amended in light of these Final Conditions:

- (a) F.2 Operational Scheme Plans (refer Schedule A, Row 3) require amendment detailing the amended location of the ventilation stacks and southern ventilation buildings;
- (b) F.5 Construction Scheme Plans (refer Schedule A, Row 4) require amendment to detail changes to the construction footprint for the amended location of the ventilation stacks and southern ventilation buildings and reconfiguration of Construction Yard 1);
- (c) F.6 Construction Yard Plans 101 and 107 (refer Schedule A, Row 7), detailing amendments to the Construction Yard 1 in light of the reconfiguration of this Yard and for Construction Yard 7 in light of the relocation of the northern ventilation stack (refer Schedule A, Row 34);
- (d) F.8 Plans of Structures and Architectural Features (refer Schedule A, Row 9), detailing the amended location of the northern ventilation stack and the design and location of the southern ventilation building and stack;
- (e) The CNVMP (including flow diagram and the supplementary evidence produced by Ms Wilkening) (refer Schedule A, Rows 36, 37 and 39~~38~~);

- (f) The areas of the Open Space Restoration Plans (Schedule A, Row 30) to:
 - (i) Extend these areas in geographic extent to provide for the works identified in the Management Plan notations identified in the OS Conditions (in particular OS.5 and OS.6) (e.g. these areas will (as relevant) include Eric Armishaw Park, Howlett Reserve and Waterview Esplanade Reserve); and
 - (ii) Exclude the operational area of designation required for the northern ventilation stack (as identified through the OPW process (refer Condition DC.8); and
 - (e) Schedule A, Row 28 the Plan detailing proposed open space impacts and replacements needs to be updated to recolour the two land parcels on Hendon Avenue (which are excluded from the replacement calculations) to 'brown' to confirm they are part of the operational impact and will not be returned as open space.
- 11) DC.7 An Outline Plan of Works shall be prepared for the Northern and Southern Ventilation Buildings and Stacks (OPW1 and OPW2) (in the general location as shown in the Operational Scheme Plans F.2 (Schedule A, Row 3) as shown on Figures DC.A and DC.B) in accordance with Section 176A of the RMA and Conditions DC.8 and DC.9 below and submitted to the Major Infrastructure Team Manager, Auckland Council.
- For the purposes of Conditions DC.8 and DC.9, the following definitions shall apply:
- (a) Control Building – A building or buildings associated with the staffed control of the tunnel operating systems (including CCTV systems or surveillance). This precludes the inclusion or attached of any equipment unrelated to the structure of operation of the control building.
 - (b) Ventilation Building – A building or buildings associated with the operation and maintenance of the tunnels and associated ventilation system (including power and emergency water supply). This precludes the inclusion or attachment of any equipment unrelated to the structure or operation of the ventilation building.
 - (c) Ventilation Stack (stack) - A structure which channels air emissions to a height in the atmosphere which is suitable to disperse the emissions and result in an acceptable ambient air quality. This precludes the inclusion or attachment of any equipment unrelated to the structure or operation of the ventilation stack.
- 12) DC.9 Outline Plan of Works for the Southern Ventilation Building, Control Building and Stack (OPW2) (Refer Figure DC.B).
- OPW2 shall be prepared in accordance with Section 176A of the RMA.
- The final form of the Southern Ventilation Building, Control Building and Ventilation Stack shall be in accordance with the design principles of Section B of the Urban Landscape and Design Framework (ULDF June 2010) (refer Schedule A, Row 38) and the following requirements:
- (a) Retention of the same building / structural components underground as per the revised Drawing Set F.8, specifically Drawings of Vent South Option 003 / 003A (refer Schedule A, Row 9);
 - (b) Creation of an above ground building –arrangement that maximises the separation of the buildings from the houses on Hendon Avenue to the east and the pedestrian / cycle way to the west;
 - (c) The location of facilities, accessways, parking and manoeuvring areas to be in general accordance with the revised Plans of Drawing Set F.8, specifically Drawings of Vent South Option 003 / 003A (refer Schedule A, Row 9), providing for a shift of between 70 – 80m to the south east from the position shown in the application documents, the final decision within that 10m range to be taken by the NZTA, to the approval of Major Infrastructure Team Manager, Auckland Council, after consultation with the Community

- (d) Minimisation of the height of the ventilation building, control building and ventilation stack to limit their visual intrusion/ incursion relative to neighbouring residential properties – other than to enhance the visual aesthetic and cohesion of these key elements;
- (e) Development of an architectural profile, detailing and material palette that is sufficiently varied to avoid the building and vent imparting a monolithic character;
- (f) Employment of an architectural profile, detailing and material palette that references the local landscape/ geology/ tectonic character of the locality, and which is visually/ aesthetically 'grounded' in the remaining open space of Alan Wood Reserve and avoids an industrial character;
- (g) Treatment of the ventilation buildings and ventilation stack as objects of urban sculpture that are integrated with one another;
- (h) Use of the building materials on the ventilation buildings and stack which are sufficiently robust, varied/ modulated, and treated that they remain adverse to graffiti and vandalism;
- (i) Maximisation of the quantum of limbed-up large scale specimen trees (to promote visibility and surveillance (in accordance with CPTED principles)) in the vicinity of the ventilation buildings, related structures and vehicle movement/ parking areas, so as to reduce the apparent scale of the buildings when viewed from residential properties near Hendon Avenue and Methuen Road;
- (j) Documentation of consultation with the Owairaka Community Liaison Group (as established by Condition PI.5) and the Manager, Urban Design Auckland Council and the views and concerns expressed by this consultation;
- (k) Confirmation that the building height (maximum of 7.5m) and above ground area is no greater than the Concept Plan drawings in the updated plan set F.8, specifically Drawings of Vent South Option 003 / 003A (refer Schedule A, Row 9);
- (l) The site configuration should maximise the use of CPTED principles for territorial reinforcements to achieve site security, minimising the necessity for additional fencing;
- (m) If parking areas are secured, they should where possible directly abut the buildings. Any fencing should be kept to a minimum;
- (n) Provision of lighting integrated with the façade design to illuminate the ventilation building, and as appropriate any shared pedestrian / cycle path within Alan Wood Reserve; and
- (o) The ventilation stack will be at a height of 15m calculated from the post-construction ground level of the Alan Wood Reserve averaged at a distance of 10m from the exterior walls the ventilation stack location.

Post-Construction / Operations

- 13) DC.10 The NZTA shall give notice to the Manager Regional and Local Planning, Auckland Council in accordance with Section 182 and 181 respectively of the RMA for:
- (a) Within six months of the State highway opening (being operational), removal of those parts of the designation that are not required for the long term operation, maintenance and mitigation of effects of the State highway
Note: this condition is specific to land no longer required for construction purposes once the Project is completed and includes the land of 6 Barrymore Road, refer Condition OS.17.
 - (b) The designation to be altered to remove those conditions no longer required for long

Monitoring

- 14) DC.12 Unless otherwise provided for by Condition RC.2, if any monitoring required to be undertaken by any party by the designation conditions indicates non-compliance with any designation condition, the NZTA must provide written notice to the Major Infrastructure Team Manager Auckland Council as soon as it becomes aware of same, stating the following:
- (a) A description of the non-compliance; and
 - (b) The measures NZTA proposes for addressing the non-compliance, including any additional mitigation measures.
- Subject to the Council's approval, the NZTA must implement the additional mitigation measures to address the non-compliance.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITIONS

Pre-Construction

- 15) CEMP.1 Except where provided for in Condition CEMP.1A below, the NZTA shall update and finalise the draft Construction Environmental Management Plan (CEMP) including all the Management Plans which form part of the CEMP and are included as appendices, 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 Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to the commencement of works to certify compliance and consistency with the conditions. Construction shall not commence until certification is obtained.
- Advice note: For clarity the CEMP will be updated and finalised in accordance with the conditions. Any amendments will be limited to reflecting the requirements of the conditions, specifying personnel, and completing the Environmental Risk Register.*
- Advice Note: Particular care must be taken with development and operation of Construction Yard 7. When the CEMP is being updated and finalised, consideration must be given to the contents of the draft SSCEMP prepared for Construction Yard 7 (Row 41, Schedule A) recognising changes required by inclusion of the ventilation stack in this yard.*
- 16) CEMP.1B For the purposes of staging works, as some works may commence well in advance of others, the NZTA may provide staged or site specific CEMPs for those works to the Major Infrastructure Team Manager, Auckland Council. The NZTA shall consult with the Team Manager about the need and timing for any other site-specific or staged CEMPs and shall provide any required site-specific or staged CEMPs to the Major Infrastructure Team Manager, Auckland Council for review at least 20 working days prior to commencement of such the specific stage (including enabling) or site works.
- 17) CEMP.2 The certification process of the CEMP (and its appendices) shall confirm that the CEMP gives effect to the relevant conditions, as well as those matters in CEMP.6, and that it includes 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 (in accordance with the Communication Plan required under Condition PI.2);
 - (e) Environmental complaints management (including the procedures required under

- (f) Compliance monitoring;
 - (g) Reporting (including detail on the frequency of reporting to the Auckland Council);
 - (h) Environmental auditing; and
 - (i) Corrective action.
- 18) CEMP.3 The management of key environmental effects associated with the construction phase of the Project is detailed within environmental management plans that are included in the CEMP as appendices. This suite of management plans as shown on Figure CEMP.A comprises:
- (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) Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP) (to be prepared in accordance with Condition CEMP.15);
 - (n) Waste Management Plan (to be prepared in accordance with Condition CEMP.10) ;
and
 - (o) Temporary Construction Lighting Management Plan (to be prepared in accordance with Condition L.2).
- 19) CEMP.6 The finalised CEMP shall include specific details on demolition, construction and management of all works associated with the Project. The certification process of the CEMP shall confirm that the CEMP includes details of the following:
- (a) details of the site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
 - (b) The location of large notice boards that clearly identify the NZTA and the Project name, together with the name, telephone, email address and address for service of the site or Project manager and the community liaison person;
 - (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 night, on Sundays 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 worker's offices and conveniences (e.g. portaloos);
 - (g) Procedures of controlling sediment run-off, dust and the removal of soil, debris and

- (h) Methods to stabilise ingress and egress points to construction sites, to the standard required by ARC Technical Publication 90 (Nov 2007);
- 20) CEMP.7 The layout of the 12 Construction Yards, including associated buildings, fencing and site access shall be developed in accordance with Waterview Connection Project Construction Yards Plans (Refer Schedule A, Row 7). The layout drawings shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the occupation of the yard, for review and certification that the final layout of the construction yards is in accordance with the conditions. The layout drawings shall incorporate the following:
- (a) The main access to the construction yards to be located as far as practicable from residential dwellings, taking into account site and public safety and environmental constraints, in the locations shown on Waterview Connection Project Construction Yards Drawings (Refer Schedule A, Row 7);
 - (b) Noisy construction activities to be located as far as practicable, and preferably no less than 100m, from residential dwellings; Construction of temporary boundary/ security fences to be undertaken in a manner which minimises impacts on existing trees;
 - (c) Temporary acoustic fences and visual barriers;
 - (d) Temporary buildings greater than 8 metres in height to be located in a position which minimises visual impact on adjacent residential dwellings; and
 - (e) Location of workers' and Project vehicle parking.
- 21) CEMP.10 The NZTA shall finalise and implement the Hazardous Substances Management Plan (HSMP), through the CEMP (as per Condition CEMP.1), submitted with this application, prior to works commencing on site. The certification process of the CEMP shall confirm that the HSMP clearly identifies the requirements for proper storage, handling, transport and disposal of hazardous substances during the construction phase of the Project and confirm that there shall be no storage of explosives on the Project site.
- 22) CEMP.11 The NZTA shall develop and implement a Waste Management Plan in accordance with the waste management principles, controls and methods set out in the CEMP. The Plan shall be provided to the Major Infrastructure Team Manager, Auckland Council and be implemented throughout the entire construction period.
- 23) CEMP.14 The CEMP shall include, as an appendix, an Electrical Infrastructure Site Development and Construction Management Plan (EISDCMP). The EISDCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council, and include:
- (a) Methods and measures:
 - (i) 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.
 - (ii) 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
 - (iii) 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.
 - (iv) To ensure that changes to the drainage patterns and runoff characteristics do not

- (b) 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.
- (c) 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:
 - (i) Clause 2.2 with respect to excavations near overhead support structures;
 - (ii) Clause 2.4 with respect to buildings near overhead support structures;
 - (iii) Section 3 with respect to minimum separation between buildings and conductors;
 - (iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and,
 - (v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors.
- (d) Confirmation that Transpower has been provided a copy of the EISCDMP for their review at least 20 working days prior to construction.

Advice 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).

- 24) CEMP.15 The NZTA will be responsible for all service relocations required for construction of the Project. The NZTA shall liaise with the providers of infrastructure service networks (including, but not limited to water, gas, stormwater, wastewater, power and telecommunications), and private property owners with on-site services to develop methodologies and timing for necessary services relocation required for the Project, with the objective of minimising disruption to the operation of these service networks and on-site services.

Advice note:

- (a) *It is noted that if separate consents are required for relocations for any services of network utility operators or landowners, such consents will be obtained before construction commences in the relevant area, and any effects of those relocations would be considered at that time. The same applies to any alteration of consents if required.*
- (b) *Network infrastructure owned and operated by Watercare Services is located within the designations. An operating agreement will be developed by the NZTA and Watercare Services which will include appropriate notification and access protocols where works are to be undertaken by either network operator on or adjacent to Watercare Services infrastructure within the designations.*

Construction

- 25) CEMP.4 The CEMP shall be implemented and maintained throughout the entire construction period.
- 26) CEMP.5 A copy of the CEMP shall be held on each construction site at all times and be available for inspection on request by the Auckland Council.
- 27) CEMP.8 All storage of material and equipment associated with the construction works shall take place within the boundaries of the designation.

- 28) 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.
- 29) CEMP.12 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:
- (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.
- A summary of the review process undertaken shall be kept by the NZTA, provided annually to the Major Infrastructure Team Manager, Auckland Council and made available (with any related data) to the Auckland Council upon request.
- 30) CEMP.13 Following the review process (as described in Condition CEMP.12), the CEMP may require updating. Any material change proposed to the CEMP (including appended Management Plans) shall be submitted for approval to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the proposed changes taking effect.'
- Advice Note: Material change will include amendment to any base information informing the CEMP or any process, procedure or method of the CEMP (such as the environmental constraints map, compliance monitoring process, complaints procedure or mitigation / remedial methods identified) which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.*

PUBLIC INFORMATION CONDITIONS

Pre-Construction

- 31) PI.1 A community liaison person shall be appointed by the NZTA for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the Project. The liaison person's name and contact details shall be made available in the CEMP and on site signage by the NZTA. This person must be reasonably available for on-going consultation on all matters of concern to affected parties arising from the Project.
- 32) PI.2 The NZTA shall prepare and implement a Communications Plan that sets out procedures detailing how the public, Ministry of Social Development, Housing New Zealand Corporation and other organisations representing the particular demographic characteristics of the community (including but not limited to Primary Health Organisations, general practitioners, youth, education organisations, aged care groups and groups representing ethnic and migrant communities) will be communicated with throughout the construction and monitoring periods (as prescribed in the designation and consent conditions).

In preparing the Communications Plan, the NZTA will liaise with Auckland Council to access its community liaison databases. The Communications Plan will include details of:

- (a) The site or Project manager and the community liaison person, including their contact details (phone, facsimile, postal address, email address);
- (b) In accordance with these Conditions, the database of the key construction activities and monitoring requirements that are the subject of the Communications Plan;
- (c) The database of stakeholders and residents who will be communicated with;
- (d) Communication methods, an assessment of how these methods reach the different audience/stakeholder groups (including those methods set out in Condition CEMP.6), and detail on when each of these methods will be used (e.g. regular communication or event specific methods);
- (e) The appointed specialist in Environmental and Occupational Medicine, including contact details (as per Condition SO.13);
- (f) Any stakeholder specific communication plans required; and
- (g) Monitoring and review procedures for the Communications Plan.

The Communications Plan shall be written in accordance with the external communication procedures set out in the CEMP and provided at least 20 working days prior to construction commencing, to the Major Infrastructure Team Manager, Auckland Council, Working Liaison Group and the Community Liaison Group(s) established by Condition PI.5. The structure of the communication groups set out in these conditions is attached as Figure PI.A.

33) PI.5

The NZTA shall establish Community Liaison Group(s) at least two months prior to construction commencing in each of the following key construction areas:

- (a) Te Atatu (including the SH16 Causeway)
- (b) Waterview (including works to St Lukes on SH16 and on the Waterview Estuary and Causeway Bridges)
- (c) Owairaka

and hold regular meetings (at least three monthly) throughout the construction period and up to 24 months following construction completion relevant to these areas (or less if the members of the Group agree), so that on-going monitoring information can continue to be disseminated.

The Community Liaison Group(s) shall be open to all interested parties within the Project area including, but not limited to the following groups:

- (a) Auckland Council and Auckland Transport;
- (b) Educational facilities within the Project area (including schools, kindergartens, childcare facilities and Unitec Institute of Technology);
- (c) Relevant community/ environmental groups (including but not limited to Friends of Oakley Creek, Star Mills Preservation Group, Cycle Action Auckland and representatives from those organisations identified in the Communications Plan (as required by Condition PI.2) and local residents;
- (d) Department of Conservation;
- (e) Local Boards;
- (f) Iwi groups with Mana Whenua;
- (g) Public transport providers; and
- (h) Housing New Zealand Corporation.

Advice note: The purpose of the Community Liaison Group(s) is to provide a regular forum

through which information about the Project can be provided to the community, and an opportunity for concerns or issues to be raised.

Construction

- 34) PI.3 At least 15 working days prior to the commencement of construction, and at 15 working day intervals thereafter, or as required depending on the scale of works and effects on the community, advertisements will be placed in the relevant local newspapers and community noticeboards (as identified in Condition CEMP.6(b)) detailing the nature of the forthcoming works, the location of the forthcoming works and hours of operation. All advertisements will include reference to a 24 hour toll free complaints telephone number. Where relevant, advertisements will also include but not be limited to details of:
- (a) Any traffic disruptions or controls or changes to property access, pedestrian/ cycle routes and bus stops; and
 - (b) Any other construction activities, including night time works, blasting, and structure-borne noise, as identified in the conditions.
- 35) PI.4 The NZTA shall manage, investigate and resolve (as appropriate) all complaints for the duration of the construction works in accordance with the environmental complaints section of the CEMP. The implementation strategy for complaints includes:
- (a) A 24 hour toll free telephone number and email address, which shall be provided to all potentially affected residents and businesses. The number shall be available and answered at all times during the entire duration of the works for the receipt and management of any complaints. A sign containing the contact details shall be located at each site specific work activity;
 - (b) The NZTA shall maintain a record of all complaints made to this number, email or any site office, including the full details of the complainant and the nature of the complaint;
 - (c) Upon receiving a complaint, within 10 days of complaint receipt, a formal written response will be provided to the complainant and Auckland Council;
 - (d) The NZTA shall undertake corrective action where necessary to resolve any problem identified. All action taken and relevant information shall be documented. For the avoidance of doubt, 'where necessary' refers to where the works are not being carried out in accordance with conditions of this designation;
 - (e) Where issues and complaints about effects cannot be resolved through the CEMP complaints management process, a meeting shall be held between the NZTA, the complainant and the Auckland Council representative(s) to discuss the complaint and ways in which the issue may be resolved. If parties cannot agree on a resolution, an independent qualified mediator will be appointed, agreeable to all parties and at the shared cost of all parties, to undertake mediation of the dispute or concerns; and
 - (f) All information collected in Conditions PI.4 (b), (c) and (d) shall be detailed in a Construction Compliance Report (including the means by which the complaint was addressed, whether resolution was reached and how the response was carried out) prepared by the NZTA. This Report shall be submitted to the Major Infrastructure Team Manager, Auckland Council on a quarterly basis commencing at the beginning of the works and for the entire duration of construction.
- 36) PI.6 The Community Liaison Group(s) shall be provided opportunities to review and comment on the following (amongst other things):
- (a) The Outline Plan of Works detailing designs for the northern and southern ventilation buildings and stacks (the outcomes of this consultation will be reported in accordance with the processes required in DC.8(n) and DC.9(k);

- (b) The Open Space Restoration Plans (as required by Condition OS.3);
- (c) Finalisation and amendment to Urban Design and Landscape Plans (UDL Plans) (as required by Condition LV.1);
- (d) The Oakley Inlet Heritage Plan (as required by Conditions OS.5(b)(i) and ARCH.6);
- (e) The detail of the Oakley Creek restoration (as required by Condition STW.20);
- (f) Publicly available results of environmental monitoring as required by the designation and/or these Consents (e.g. air quality monitoring); and
- (g) The finalisation of the STEM assessment required by CEMP.6(o) and a schedule of trees that are required to be removed for consideration of timber use in heritage projects as required by Condition SO.7.

Advice Note: Attention is drawn to the Vegetation conditions concerning identification and protection of Significant Vegetation and Valued Vegetation.

- (h) Detailed design features of the Te Atatu underpass (e.g. lighting and architectural treatment).

TEMPORARY TRAFFIC CONDITIONS

Pre-Construction

- 37) TT.1 The NZTA shall update and finalise the Construction Traffic Management Plan (CTMP) submitted with this application, in accordance with these conditions, and implement it through the CEMP.
- In finalising the CTMP, the NZTA shall:
- (a) Provide simulation modelling demonstrations to better understand the effects of construction of the Project on the affected road network;
 - (b) Include measures to avoid road closures and restrictions of vehicle, bus, cycle and pedestrian movements;
 - (c) Where road closures or restrictions cannot reasonably be avoided the particular vulnerabilities and sensitivities of pedestrian diversions and restricted conditions shall be taken into account in the planning of any closures or restrictions.
- 38) TT.2 The CTMP shall require the development of Site Specific Traffic Management Plans (SSTMPs) and their approval by the Traffic Management Project Governance Group (as defined by the CTMP), for each construction activity that may affect traffic or transportation infrastructure and services. The SSTMPs shall be provided to the Traffic Management Coordinator(s) for the relevant Road Controlling Authority at least 10 working days prior to each construction activity.
- 39) TT.3 Each SSTMP shall describe the measures that will be undertaken to avoid, remedy or mitigate the local and network wide effects of construction of the Project. In particular, the SSTMP shall include the following matters:
- (a) Traffic management measures to address and maintain, traffic capacity, including bus services, at peak traffic periods during weekdays (6:00 to 9:00 and 16:00 to 19:00) and peak traffic periods at weekends (including Te Atatu Road, Great North Road and Richardson Road);
 - (b) Methods to manage the effects of traffic during construction including the requirement to detour or divert traffic. These methods shall seek to avoid, remedy or mitigate effects on access to and from businesses and other organisations in the area;
 - (c) Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or

- (d) Methods to avoid, remedy or mitigate the local and network wide effects of the construction of individual elements of the project (e.g. intersections/ overbridges) and the use of staging to allow sections of the Project to be opened to the traffic while other sections are still under construction;
 - (e) Methods to manage the effects of the delivery of construction material, plant and machinery (including cranes and oversized trucks) during construction;
 - (f) Any routes where construction traffic movements will be restricted (either for particular times for construction periods);
 - (g) Measures to maintain existing vehicle access, as far as practicable, or where the existing property access is to be removed or becomes unsafe as a result of the construction works, measures to provide alternative access arrangements in consultation with the Auckland Council and the affected landowner; and
 - (h) Measures to maintain pedestrian and cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works, where practicable (e.g. unless provision of such access is severed by the works or such access will become unsafe as a result of the construction works). Such access shall be safe, clearly identifiable, provide permanent surfacing and seek to minimise significant detours. (This Condition does not act as a qualification to the commitment to maintain access to open space and education facilities, as required in Condition OS.13).
- 40) TT.4 The SSTMPs shall include traffic management measures developed in consultation with the Auckland Transport, Bus and Coach Association and the Auckland Council, to address and maintain, where practicable, existing levels of service for buses particularly at peak periods (6:00 to 9:00 and 16:00 to 19:00) on weekdays.
- 41) TT.5 The NZTA shall consult with the Traffic Operations Manager, Auckland Transport with regard to the most appropriate means for providing access on Council roads within and adjacent to the designation. The NZTA shall also coordinate and consult directly with the proponents of any major construction or major traffic generating event occurring concurrently with, and in the vicinity of the Project.
- 42) TT.6 The SSTMPs shall include measures developed in consultation with Auckland Transport to, as far as practicable, enable continued public walking and cycling passage along the existing Northwestern Cycleway (between Te Atatu Interchange and St Lukes Interchange) and along Great North Road and the public walkway along Oakley Creek, with any interruptions being as short as feasible.

Construction

- 43) TT.7 The NZTA shall undertake construction works so as to avoid significant long duration impacts or the full closure of Te Atatu Road for all road users heading to or from the Te Atatu Peninsula and to ensure that access for emergency service vehicles is maintained.
- 44) TT.8 The NZTA shall restrict construction truck movements during peak hours (6:00 to 9:00 and 16:00 to 19:00) on weekdays and during the peak periods at the weekends to avoid the following:
- (a) Te Atatu Road Interchange, during both morning and afternoon peak hours
 - (b) Great North Road Interchange, city bound during the morning peak hours
 - (c) Great North Road Interchange, west bound onto SH16 and southbound onto Great North road during the afternoon peak.

Construction truck movements during these hours shall only be allowed under exceptional circumstances agreed in advance with the Traffic Management Project Governance Group.

- 45) TT.9 The NZTA shall maintain at least the existing active traffic lane configuration capacity on SH16, at the Te Atatu Interchange area, Te Atatu Road, Richardson Road and on Great North Road during peak periods being 6:00 to 9:00 and 16:00 to 19:00 on weekdays and during the peak periods on weekends, for the duration of the temporary construction programme.
- 46) TT.10 The NZTA shall monitor the impact of construction traffic in terms of traffic speeds and volumes on SH16, Great North Road, Te Atatu Road and Richardson Road throughout the construction period to confirm the expected traffic effects as set out in the *Temporary Traffic Assessment* (Technical Report G.16) submitted with this application.
- (a) This monitoring will be undertaken on a daily, weekly and monthly basis; and
- (b) Monitoring results will be made available to the Traffic Operations Manager, Auckland Transport on request.
- 47) TT.11 If monitoring undertaken pursuant to Condition TT.10 indicates that traffic volumes or traffic conditions are significantly different from those expected, the SSTMPs will be reviewed and as appropriate amended to the satisfaction of the Traffic Management Project Governance Group.

OPERATIONAL TRAFFIC CONDITIONS

Construction

- 48) OT.1 The NZTA shall prepare in collaboration with Auckland Transport a Network Integration Plan (NIP) for the Project, or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements (identified in the Western Ring Route (Northwest) Network Plan) planned by the Auckland Council. The NIP shall include details of proposed physical works at the interface between the State highway and the local road network, and shall address such matters as pedestrian/ cycle ways, lane configuration, traffic signal co-ordination, signage and provision for buses
- In addition, the NIP will address:
- (a) The commitment of the NZTA to progress bus priority measures northbound on Great North Road as part of the reinstatement of Great North Road, as proposed by Auckland Transport and indicated on the Plans *Great North Road Option 1 Proposed Road Marking* (Schedule A, Row 33), subject to the agreement with Auckland Transport;
- (b) How the works committed to by the NZTA for pedestrian and cycle ways, as detailed in the PT and Active Mode Transport Routes Plan Set (Condition DC.1(d) (refer Schedule A, Row 22)), integrate with pedestrian and cycle ways on the wider transport network;
- (c) The Richardson Road Bridge, which shall be designed in general accordance with the structural plans (Schedule A, Row 9) and the commitment of the NZTA to provide a 2m footpath on Richardson Road Bridge, subject to confirming appropriate bus stop locations with Auckland Transport;
- (d) Integration of the works proposed on Te Atatu Road to appropriately transition between the Waterview Connection Project and any projects being progressed by Auckland Transport;
- (e) Opportunities to review traffic signal timings at the Te Atatu Interchange with a view to minimising delays to all users, including cyclists on the SH16 cycle way; and
- (f) The commitment of the NZTA to provide for cycle “aspects” (cycle signal lights) at the Great North Road Interchange.
- (g) As part of detailed design at the Te Atatu Interchange, the installation of underpasses

Works identified in the NIP which are the responsibility of the NZTA, will be undertaken as at the time of construction works for the Project.

Post Construction / Operation

- 49) OT.2 The NZTA shall prepare a Tunnel Traffic Operation Plan in consultation with the Auckland Transport and Auckland Council. The Plan shall include, but not be limited to:
- (a) Procedures for tunnel operational safety, including fire-life safety;
 - (b) Procedures for maintenance requirements.
 - (c) Procedures for managing traffic to avoid or minimise potential congestion within the tunnel, particularly during peak periods.
 - (d) Procedures for the management of traffic during incidents.
 - (e) Procedures for the operation of tunnel fans and the management of portal emissions.
 - (f) Confirmation that all equipment has been tested and operates in accordance with requirements and specifications.

The Tunnel Traffic Operation Plan shall be completed and provided to Auckland Transport and to the Major Infrastructure Team Manager, Auckland Council (in respect of Condition OT.2(e)), prior to operational use of the tunnelled section of SH20.

Advice note: The operation and maintenance of the air quality monitoring equipment inside the tunnel shall follow manufacturer's recommendations.

NOISE AND VIBRATION CONDITIONS

Pre-Construction

- 50) CNV.1 The NZTA shall finalise and implement through the CEMP, a Construction Noise and Vibration Management Plan (CNVMP) throughout the entire construction period of the Project.

The CNVMP shall describe the measures adopted to meet:

- (a) the noise criteria set out in Conditions CNV.2 and 3 below;
- (b) the vibration criteria set out in Condition CNV.4 below; or
- (c) where (a) or (b) cannot be met, the process that will be followed to appropriately mitigate noise and vibration effects including methods that may be applied outside the designation.

The CNVMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CNVMP, as a minimum, addresses the following:

- (i) Construction noise and vibration criteria (Conditions CNV.2, CNV.3, and CNV.4);
- (ii) Hours of operation, including times and days when noisy and/or vibration inducing construction activities would occur;
- (iii) Machinery and equipment to be used;
- (iv) Vibration testing of equipment to confirm safe distances to buildings prior to construction;
- (v) Preparation of building condition surveys of critical dwellings prior to, during and

- (vi) Roles and responsibilities of personnel on site;
- (vii) Construction operator training procedures;
- (viii) Methods for monitoring and reporting on construction noise and vibration;
- (ix) A hierarchy of mitigation options that will be assessed for the Project noise mitigation, including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
- (x) Management schedules containing site specific information;
- (xi) Measures for liaising with and notifying potentially affected receivers of proposed construction activities and the potential for noise and vibration effects, specifically:
 - PPFs located within a horizontal distance of 35 metres of underground excavation works, along the tunnel alignment shall receive prior notification not greater than 7 days (and not less than 24 hours) prior to the commencement of works.
 - Methods for ensuring residents affected by night works (within 100m of the construction site night works, as defined on the maps (refer Schedule A, Row 35) are notified of such works (i.e. any works during the hours of 20:00 to 06:30) at least 5 days prior to the commencement of any such work.
 - The maps showing PPFs to be notified of night works (refer Schedule A, Row 35, shall be reviewed and included within the CNVMP.
- (xii) Methods for receiving and handling complaints about construction noise and vibration;
- (xiii) Measures for preventing the occurrence of rogue fly rock, including management of charge weights and face loading procedures, stemming of charge holes and profiling of the face to maintain minimum burden (face cover);
- (xiv) Investigations on the practicability of implementing permanent noise mitigation works for construction mitigation (as per Condition CNV.7);
- (xv) Investigations of the practicability of implementing Building Modification mitigation, as required in accordance with Conditions ON.6 and ON.11, prior to commencement of construction within 100m of the relevant PPFs (including those on the Unitec site); and
- (xvi) The process for developing Site Specific Noise Management Plans (SSNMP), in accordance with the SSNMP Flow Chart (refer Schedule A, Row 36), including templates and a certification process for the Major Infrastructure Team Manager, Auckland Council (in accordance with Condition CNV.13) to confirm the process of SSNMP review of noise mitigation options where, the modelled/predicted levels or subsequent actual levels exceed the criteria in Conditions CNV.2 and/or CNV.4.

Construction

- 51) CNV.2 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction noise (excluding noise from blasting Monday to Saturday inclusive) shall be measured and assessed in accordance with NZS 6803:1999 "Acoustics - Construction Noise" and shall comply with the following criteria:

Note: In Condition CNV.2 (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

(a) Project Construction Noise Criteria: Residential Receivers

Time of week	Time period	Project Construction Noise Criteria (Long Term Construction) dB		
		Sectors 1 to 7	Sectors 8 and 9	All Sectors
		$L_{Aeq(T)}$	$L_{Aeq(T)}$	L_{AFmax}
Monday - Saturday	0630-0730	60	45	75
	0730-1800	70	70	85
	1800-2000	65	65	80
	2000-0630	60	45	75
Sundays and Public Holidays	0630-0730	45	45	75
	0730-1800	60	45	85
	1800-2000	45	45	75
	2000-0630	45	45	75

(b) Project Construction Noise Criteria: Commercial and Industrial Receivers

Time period	Project Construction Noise Criteria (Long Term Construction) dB
	$L_{Aeq(T)}$
0730-1800	70
1800-0730	75

(c) Project Construction Noise Criteria: Internal Structure-borne Noise from tunnelling for Residential Receivers

Time period	Project Construction Noise Criteria Inside	
0600-2200	35 dB $L_{Aeq(T)}$	All habitable rooms
2200-0600	30 dB $L_{Aeq(T)}$	Bedrooms

(d) Project Construction Noise Criteria: Internal noise for Licensed Educational Facilities

Time period (School Days)	Project Construction Noise Criteria Inside	
Teaching Hours	45 dB $L_{Aeq(T)}$ or existing, whichever is the higher	Classrooms, library, offices, teaching, laboratories, manual arts, workshops
Teaching Hours	40 dB $L_{Aeq(T)}$ or existing, whichever is the higher	School hall, lecture theatres

Note: In Condition CNV2(d) "Teaching hours" means:

Primary schools and Kindergartens: 9am to 3pm

Unitec: 8am to 9pm

52) CNV.3 Project Construction Noise Criteria: Airblast (excluding Sundays)

Category	Type of Blasting Operations	Peak Sound Pressure Level (LZpeak dB)
Human Comfort Limits		
Sensitive Site	Operations lasting longer than 12 months or more than 20 Blasts	115 dB for 95% blasts per year. 120 dB maximum unless agreement is reached with occupier that a higher limit may apply
Sensitive Site	Operations lasting less than 12 months or less than 20 Blasts	120 dB for 95% blasts per year. 125 dB maximum unless agreement is reached with occupier that a higher limit may apply
Occupied non-sensitive sites such as factories and commercial premises	All blasting	125 dB maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications of levels that can be shown to adversely affect the equipment operation
Damage Control Limits		

Structures that include masonry, plaster and plasterboard in their construction and also unoccupied structures of reinforced concrete or steel construction	All Blasting	133 dB unless agreement is reached with owner that a higher limit may apply.
Service structures such as pipelines, powerlines and cables located above ground	All Blasting	Limit to be determined by structural design methodology

- 53) CNV.4 Except where certified by the Council through the SSNMP (in accordance with Condition CNV.13), construction vibration received by any building shall be measured and assessed in accordance with the German Standard DIN 4150-3:1999 “Structural vibration – Part 3: Effects of vibration on structures”, and shall comply with the criteria set out as follows:

Type of structure	Short-term vibration			PPV at horizontal plane of highest floor (mm/s)	Long-term vibration
	PPV at the foundation at a frequency of				
	1 - 10Hz (mm/s)	1 - 50 Hz (mm/s)	50 - 100 Hz (mm/s)	PPV at horizontal plane of highest floor (mm/s)	
Commercial/Industrial	20	20 – 40	40 – 50	40	10
Residential/School	5	5 – 15	15 – 20	15	5
Historic or sensitive structures	3	3 – 8	8 – 10	8	2.5

- 54) CNV.5 Notwithstanding Condition CNV.3 above,
- (a) Blasting activities shall be conducted so that 95% of the blasts undertaken (measured over any twenty blasts on the foundation of any building outside the designation boundary) shall produce peak particle velocities not exceeding 5mm/s and 100% of the blasts undertaken shall produce peak particle velocities not exceeding 10mm/s irrespective of the frequency of the blast measured.
- (b) Construction activities, which occur within Sectors 1, 6, 8 and 9 which are identified in Technical Report no. G.19 Assessment of Vibration Effects, as being at a ‘High Risk’ of exceeding the DIN 4150-3:1999 criteria (being excavation, piling, compaction and drilling) shall be conducted so that 95% of the activities undertaken (measured over at least 20 representative samples of the relevant activity on any residential building) shall produce peak particle velocities not exceeding the relevant criterion in DIN 4150-3:1999 and 100% of the activities undertaken shall not exceed 10mm/s irrespective of the frequency of the activity measured.
- 55) CNV.6 Blasting shall be undertaken between 09:00h and 17:00h, Monday to Saturday, except that blasting may be undertaken between 09:00h and 17:00h on Sundays where:

- (a) The blasting is at least 50m inside the Sector 8 tunnel;
- (b) The blasting produces peak particle velocities at any residential building not exceeding 0.5mm/s; and
- (c) The Project construction noise criteria set out in Condition CNV.2 for Sundays are complied with.
- 56) CNV.7 Where practicable, permanent (traffic) noise barriers, required in any Sector as Detailed Mitigation Options for operational noise following completion of the Project (in accordance with Conditions ON.3 to ON.5) shall be erected prior to noise generating construction works commencing. Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP, prior to noise generating construction works commencing.
- 57) CNV.8 Pile driving or pile removal shall not be undertaken at night (i.e. during the hours of 20:00 – 06:30).
- 58) CNV.9 The concrete batch plants, rock crushing plants and the loading bays and conveyors for such plants shall be fully enclosed.
- 59) CNV.11 For all other properties, if noise and vibration monitoring of the tunnelling works for the Project (in accordance with Condition CNV.1), indicates that the noise or vibration criteria of Conditions CNV.2 or CNV.4 will potentially be exceeded, then the process set out in the CNVMP will be undertaken including Site Specific Noise Management Plans. Where relocation for residents is proposed, notification of such relocation with residents and property owners will be undertaken in accordance with the processes contained in the CNVMP.
- 60) CNV.13 SSNMPs (required by Condition CNV.1(xvi)) above, shall be submitted to Major Infrastructure Team Manager, Auckland Council for review and certification at least 7 working days prior to the proposed works commencing. A decision will be provided by the Council within 5 working days of receipt of the SSNMP.
- Works will not commence until certification is received from the Major Infrastructure Team Manager, Auckland Council. The Council may, at its discretion, waive the requirement for SSNMPs to be submitted to the Council where an SSNMP is required.
- If monitoring shows that levels specified in a SSNMP are being exceeded, work generating the exceedance will stop and not recommence until further mitigation is implemented in accordance with an amended SSNMP certified by Council.
- Advice note: It is accepted that the criteria of CNV.2 and CNV.4 may not be met at all times, but that the NZTA will take all practical steps to achieve compliance, taking into account the hierarchy of mitigation options outlined in Condition CNV.1 (ix).*

NOISE CONDITIONS

General

- 61) ON.1 For the purposes of Conditions ON.2-ON.14 the following terms will have the following meanings:
- Appendix E – means Appendix E to the Technical Report G.12 ‘Assessment of Operational Noise Effects’ submitted with this application.
 - BPO – means Best Practicable Option.
 - Building Modification Mitigation – has the same meaning as in NZS 6806:2010.
 - Design Year – means a point in time that is 10 years after the opening of the Project to the public

- Emergency Mechanical Services – means mechanical services used for emergency situations only.
- Habitable room – has the same meaning as in NZS 6806:2010.
- Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS 6806:2010 when determining the BPO mitigation option; i.e. Category A - primary noise criterion, Category B - secondary noise criterion and Category C - internal noise criterion.
- NZS 6806:2010 – means NZS 6806:2010 Acoustics – Road-Traffic Noise – New and Altered Roads.
- PPFs – means only the premises and facilities identified in green, yellow or red in Appendix E.
- Structural mitigation – has the same meaning as in NZS 6806:2010.

Pre-Construction

- 62) ON.2 The NZTA shall implement the traffic noise mitigation measures identified as the “Preferred Mitigation Options” in Appendix E as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix E (“Identified Categories”), where practicable and subject to Conditions ON.3-ON.11 below.
- 63) ON.3 The detailed design of the structural mitigation measures of the “Preferred Mitigation Options” (the Detailed Mitigation Options) shall be undertaken by a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council prior to construction of the Project, and, subject to Condition ON.4, shall include, as a minimum, the following:
- (a) Noise barriers with the location, length and height in general accordance with Appendix E and designed in accordance with the ULDF (Section B) (refer Schedule A, Row 38); and
 - (b) A requirement that Open Graded Porous Asphalt (“OGPA”) or equivalent low-noise generating road surface be used on all surface roads throughout the Project, except at the Great North Road Interchange; and
 - (c) For the Great North Road Interchange, a requirement that Twin Layer Open Graded Porous Asphalt (“Twin Layer OGPA”) or equivalent low-noise generating road surface be used as shown in Appendix E.
- 64) ON.4 Where the design of the Detailed Mitigation Options identifies that it is not practicable to implement a particular structural mitigation measure in the location or of the length or height included in the “Preferred Mitigation Options”, either:
- (a) If the design of the structural mitigation measures could be changed and would still achieve the same Identified Category at all relevant PPFs, and a suitably qualified expert approved by the Major Infrastructure Team Manager, Auckland Council, certifies to the Auckland Council that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed mitigation measures; or
 - (b) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any relevant PPF from Category A or B to Category C but Major Infrastructure Team Manager, Auckland Council confirms that the changed structural mitigation measure would be consistent with adopting BPO in accordance with NZS 6806:2010, the Detailed Mitigation Options may include the changed structural mitigation measures.
- 65) ON.6 (a) **Sectors 1 to 8** - Prior to construction of the Project, a suitably qualified and

- i. A noise level increase of 3 decibels or more will occur due to road-traffic noise from the Project; and
- ii. Habitable spaces are likely to receive in excess of 45 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year.

For those PPFs, following the process set out in Conditions ON.7 to ON.11, it shall be determined which Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces.

- (b) **Sector 9** - Prior to construction of the Project, a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council shall identify those PPFs within 100m of the edge of the closest traffic lane of the motorway carriageway where, following implementation of all the structural mitigation measures included in the Detailed Mitigation Options, habitable spaces are likely to receive in excess of 40 dB LAeq(24h) from motorway operational noise with windows closed, in the Design Year. For those PPFs, following the process set out in ON.7 and ON.8, it shall be determined if Building Modification Mitigation may be required to achieve 40 dB LAeq inside habitable spaces. For those PPFs where Building Modification Mitigation is required to achieve 40 dB LAeq inside habitable spaces, this shall be implemented following the process set out in ON.9 to ON.11.

- 66) ON.7
- (a) Prior to commencement of construction of any sector of the Project in the vicinity of a PPF identified under Condition ON.6, the NZTA shall write to the owner of each-such building seeking access for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.
 - (b) If the owner(s) of the building approve the NZTA's access to the property within 12 months of the date of the NZTA's letter (sent pursuant to Condition ON.7(a)), then no more than six months prior to commencement of construction in any sector of the Project, the NZTA shall instruct a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council, to visit the building to measure internal noise levels and assess the existing building envelope in relation to noise reduction performance.

Construction

- 67) ON.5 The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project.
- 68) ON.8 Where a PPF identified under Condition ON.6 is identified, the NZTA shall be deemed to have complied with Condition ON.7 above where:
- (a) The NZTA (through its acoustics specialist) has visited the building; or
 - (b) The owner(s) of the building approved the NZTA's access, but the NZTA could not gain entry for some reason after repeated attempts; or
 - (c) The owner(s) of the building did not approve the NZTA's access to the property within the time period set out in Condition ON.7(b) (including where the owner(s) did not respond to the NZTA's letter (sent pursuant to Condition ON.7(a) within that period); or
 - (d) The owner(s) of the building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
- If any of (b) to (d) above apply to a particular Building, the NZTA shall not be required to

implement any Building Modification Mitigation at that Building

- 69) ON.9 Subject to Condition ON.8, within 6 months of the assessment required under Condition ON.7(b), the NZTA shall give written notice to the owner of each PPF identified under Condition ON.6):
- (a) Advising of the options available for Building Modification Mitigation to the building; and
 - (b) Advising that the owner has three months within which to decide whether to accept Building Modification Mitigation for the building, and if the NZTA has advised the owner that more than one options for building modification mitigation is available, to advise which of those options the owner prefers.
- 70) ON.10 Once an agreement on Building Modification Mitigation is reached between the NZTA and the owner of an affected building, the mitigation shall be implemented (including the NZTA undertaking any required third party authorisation) in a reasonable and practical timeframe agreed between the NZTA and the owner. Building Modification Mitigation shall be to the standard specified in section 8.3.2 of NZS 6806:2010.
- Advice Note: The NZTA will be responsible for obtaining any necessary building consents or other approvals to undertake the above Building Modification Mitigation.*
- 71) ON.11 Subject to Condition ON.8, where Building Modification Mitigation is required, the NZTA shall be deemed to have complied with Condition ON.10 above where:
- (a) The NZTA has completed Building Modification Mitigation to the Building; or
 - (b) The owner(s) of the Building did not accept the NZTA's offer to implement Building Modification Mitigation prior to the expiry of the timeframe stated in Condition ON.9(b) above (including where the owner(s) did not respond to the Requiring Authority within that period); or
 - (c) The owner of the Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

Post-Construction / Operations

- 72) ON.12 The NZTA shall manage and maintain the Detailed Mitigation Options to ensure that, those mitigation works are maintained to retain their noise attenuation performance indefinitely.
- 73) ON.13 All mechanical services associated with the general operation of the tunnels shall be designed such that noise emissions do not exceed the following noise limits, when measured at or within the boundary of any residential-zoned site:

Monday to Saturday	7 am to 10 pm	50 dB $L_{Aeq(15 \text{ min})}$
Sunday & Public Holidays	9 am to 6 pm	50 dB $L_{Aeq(15 \text{ min})}$
At all other times		40 dB $L_{Aeq(15 \text{ min})}$
		75 dB L_{Amax}

Monitoring

- 74) ON.14
- (a) Prior to construction, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake a minimum of 8 (eight) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of Section 5.2 of NZS6806:2010.
 - (b) Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Major Infrastructure Team Manager, Auckland Council to undertake traffic noise monitoring at the same sites surveyed in Condition ON.14 (a) above, within 2 to 3 years following completion of construction of

- (c) The results of the noise level monitoring in accordance with ON.14(b) above shall be used to verify the computer noise model of the Detailed Mitigation Option. A report describing the findings of the verification shall be provided to the Major Infrastructure Team Manager, Auckland Council within one month of it being completed.

VIBRATION CONDITIONS

Pre-Construction

- 75) OV.1 Existing ambient vibration levels shall be measured at critical locations nominated by the NZTA, and submitted to the Major Infrastructure Team Manager, Auckland Council for approval prior to the commencement of works. These baseline measurements will establish pre-Project vibration levels for comparison with future vibration levels.

AIR QUALITY CONDITIONS

Pre-Construction

- 76) AQ.1 The NZTA shall finalise and implement, through the CEMP, the Construction Air Quality Management Plan (CAQMP) and Concrete Batching and Crushing Management Plan (CBCMP) submitted with the application.

The CAQMP and CBCMP shall be provided to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to construction activities being undertaken for review and certification that the CAQMP and CBCMP includes the following details:

- (a) Daily visual monitoring of dust emissions;
- (b) Procedures for responding to process malfunctions and accidental dust discharges;
- (c) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site;
- (d) Continuous monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;
- (e) Monitoring of the times of detectable odour emissions from the ground;
- (f) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
- (g) Monitoring of construction vehicle maintenance;
- (h) Process equipment inspection, maintenance, monitoring and recording, including baghouses, pressure relief valves and high level alarms;
- (i) Complaints investigation, monitoring and reporting; and
- (j) The identification of staff and contractors' responsibilities.

Construction

- 77) AQ.2 The NZTA shall review the CAQMP and CBCMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition CEMP.13.
- 78) AQ.3 All construction activities shall be operated, maintained, supervised, monitored and controlled at all times so that all emissions authorised by this consent are maintained at the minimum practicable level.
- 79) AQ.4 The NZTA shall undertake construction activities in accordance with the CEMP, CAQMP

and CBCMP, such that:

- (a) Hard surfaced areas of the construction yards and active construction areas are vacuum swept or scraped down at least twice each week and additionally as reasonably required;
- (b) All unsealed areas of the site used for vehicle movement are maintained visibly damp by the use of water sprays or a water cart during weather conditions where the potential for dust emissions exist;
- (c) Wheel wash systems are installed at all truck exits from unpaved areas of the site onto public roads are used for all trucks that depart from the site;
- (d) All stockpiles are constructed and positioned to minimise the potential for dust emissions. The surfaces of all stockpiles are maintained adequately damp at all times to minimise the release of particulate matter;
- (e) Belt conveyors for moving dry materials are fitted with water sprays or enclosed to minimise wind entrainment of dust. Where installed, water suppression is used whenever the conveyors are used for moving dry materials.

- 80) AQ.5 Unless expressly provided for by conditions of this consent, there shall be no odour, dust or fumes beyond the site boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.
- 81) AQ.6 All offensive or objectionable dust beyond the boundary of the site caused as a result of processes on the site shall be mitigated forthwith in accordance with the requirements of the Construction Air Quality Management Plan.
- 82) AQ.7 Beyond the site boundary there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.
- 83) AQ.8 No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.

Monitoring - Construction

- 84) AQ.14 The NZTA shall undertake visual inspections of dust emissions as follows:
 - (a) Visual inspections of all active construction areas at least three times daily during October to April inclusive, whenever there are construction activities. The results of visual monitoring shall be logged.
 - (b) Visual inspections of dust emissions from the concrete batching plants and rock crushing plant shall be undertaken daily while the plant is operating.
- 85) AQ.15 The operation of water sprays shall be checked at least once each day.
- 86) AQ.16 Continuous monitoring of TSP concentrations shall be undertaken in at least one location in Sector 1, in at least two locations in Sectors 5 and/or 7, and in at least two locations in Sector 9 while construction activities are being undertaken in those Sectors. The locations of continuous TSP monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1:2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment.
- 87) AQ.17 Continuous monitoring of wind speed and direction shall be undertaken in at least one location in each of Sector 1, Sectors 5 or 7 and Sector 9 while construction activities are being undertaken in those Sectors. The locations of wind speed and direction monitors shall, as far as practicable, comply with the requirements of AS 2923:1987 Ambient Air – Guide for the Measurement of Horizontal Wind for Air Quality Applications and be at the

same locations as the TSP monitors required by Condition AQ.16.

- 88) AQ.18 The locations and types of continuous TSP and meteorological monitoring sites required by Conditions AQ.16 and AQ.17 shall be selected by the NZTA in consultation with the Auckland Council.

In the event of a failure of the monitoring equipment, this shall be repaired or replaced within 2 working days.

Reporting - Construction

- 89) AQ.19 All records, logs, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an Auckland Council enforcement officer and shall be kept for the duration of the consent.

- 90) AQ.20 If the monitoring required by Condition AQ.16 shows that concentrations of TSP in ambient air at or beyond the boundary of the site exceeds 80 micrograms/m³ as a 24-hour average, the NZTA shall undertake an investigation into the cause of the exceedance in accordance with the CAQMP.

- 91) AQ.21 A report into the outcome of any investigation required by Condition AQ.20 shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 10 working days of the exceedance. If the cause of the exceedance is identified as being an activity undertaken on the site, the report shall also identify additional measures to be taken to reduce discharges of particulate matter into air from that activity.

- 92) AQ.22 Log books shall be maintained that record all relevant information that is required to demonstrate compliance with the conditions of this consent. This information shall include, but is not limited to:

- (a) Visual assessments of any dust emissions from the site and the source;
- (b) Any dust control equipment malfunction and any remedial action taken;
- (c) When a water cart was used and, if so, the frequency of use and the volume of water used (including identification of location);
- (d) All relevant details of the TSP and meteorological monitoring required by Conditions AQ.16 and AQ.17;
- (e) Any additional dust control measures undertaken; and
- (f) The date and time of the entry and the signature of the person entering the information.

- 93) AQ.23 The NZTA shall maintain a log of any complaints received relating to air quality. Details of each complaint received shall be forwarded to the Major Infrastructure Team Manager, Auckland Council within 24 hours of receipt of the complaint. The log shall include any complaints lodged with the Auckland Council where the Council has informed the NZTA of the complaint. The log shall include, but not be limited to the following:

- (a) The date, time, location and nature of the complaint;
- (b) Weather conditions at the time of the complaint (including approximate wind speed, wind direction, cloud cover);
- (c) Any possible other contributing factors (such as a fire, smoky vehicle, a local chimney emission, etc.);
- (d) The name, phone number and address of the complainant (unless the complainant elects not to supply these details);
- (e) Any remedial actions undertaken; and
- (f) The date and time of the entry and the signature of the person entering the

OPERATIONAL AIR QUALITY CONDITIONS

Post Construction / Operations

- 94) OA.1 The vents used to discharge emissions in the tunnels shall discharge vertically into air at a height of 15m, as follows:
- (a) The northern ventilation stack will be at a height of 15m. This height shall be calculated from the lowest existing ground level along the Great North Road boundary, adjacent to the ventilation stack; and
 - (b) The southern ventilation stack will be at a height of 15m calculated from the post-construction ground level of the Alan Wood Reserve averaged at a distance of 10m from the exterior walls the ventilation stack location.
- and shall not be impeded by any obstruction that may in the opinion of the Peer Review Panel (Condition OA. 7) decrease the vertical efflux velocity (in other words, the average velocity of material emitted into the atmosphere).
- 95) OA.2 Prior to the tunnels becoming operational, the NZTA shall establish two ambient air quality monitoring stations and one portal air quality monitoring station. The location and types of these monitoring stations shall be selected by the NZTA in consultation with the Auckland Council and Peer Review Panel (Condition OA.7), providing that one ambient monitoring station will be located within the Waterview Primary School (subject to agreement by the School).
- Ambient air quality shall be monitored continuously in real time, to monitor potential effects associated with the operation of the ventilation system from the tunnels. Ambient monitoring shall include fine particulates (PM10 and PM2.5) and nitrogen dioxide. Portal monitoring shall include nitrogen dioxide. Results shall be compared with the relevant National Environmental Standards for air quality and Auckland Regional air quality targets (as identified in Chapter 4 of the Auckland Regional Plan: Air, Land and Water, 2010). Monitoring shall be undertaken at each site until the Peer Review Panel recommends that monitoring is no longer necessary. The locations, operation and maintenance schedules of the continuous monitors shall, as far as practicable, comply with the requirements of AS/NZ 3580.1.1: 2007 Method for Sampling and Analysis of Ambient Air – Guide to Siting Air Monitoring Equipment, and with methods specified in the National Environment Standards.
- 96) OA.3 Continuous monitoring of wind speed and direction shall be undertaken at each ambient air quality monitoring location as required by Condition OA.2. The locations of wind speed and direction monitors shall, as far as practicable, comply with the requirements of AS 2923:1987 Ambient Air – Guide for the Measurement of Horizontal Wind for Air Quality Applications.
- 97) OA.4 For the first 12 months of tunnel operation, the results of the ambient air quality monitoring shall be reported via validated reports and issued for information via the Project website (monthly). Following this period, and for a period of at least 12 months, reporting shall take place quarterly as follows: Quarter 1 (December to February) by 31 March, Quarter 2 (March to May) by 30 June, Quarter 3 (June to August) by 30 September and Quarter 4 (September to November) by 31 December.
- 98) OA.5 If the monitoring required by Condition OA.2 shows that concentrations of contaminants in ambient air at the monitoring locations exceeds the relevant National Environmental Standards for air quality, or Regional Air Quality Targets (as identified in Chapter 4 of the

Auckland Regional Plan: Air, Land and Water), the NZTA shall undertake an investigation into the cause of the exceedance and report this to the Peer Review Panel (Condition OA.7) and the Major Infrastructure Team Manager, Auckland Council.

- 99) OA.6 The air quality monitoring shall be undertaken in general accordance with the Operational Air Quality Management Procedure (Appendix O of *Technical Report G.1 Assessment of Air Quality Effects*) submitted with this application.
- 100) OA.7 A Peer Review Panel shall be appointed by NZTA with the agreement of Major Infrastructure Team Manager, Auckland Council for the purpose of reviewing the ambient air quality monitoring programme and results. The Peer Review Panel shall consist of two independent experts in air quality with experience in ambient air quality monitoring and emissions from motor vehicles. The Peer Review Panel shall review all ambient monitoring, relevant traffic data and tunnel emissions and provide a summary report including any interpretation and recommendations to NZTA, Auckland Council and the Community Liaison Group(s) within 6 months of the tunnels becoming operational and annually thereafter.
- 101) OA.8 The tunnel ventilation system shall be designed and operated to ensure that any air emitted from the tunnel portals does not cause the concentration of nitrogen dioxide (NO₂) in ambient air to exceed 200 micrograms per cubic metre, expressed as a rolling 1 hour average, at any point beyond the designation boundary that borders an air pollution sensitive land use.
- Advice Note: The above standard reflects the National Environmental Standard for Nitrogen Dioxide (NO₂) concentration in ambient air.*

LANDSCAPE AND VISUAL CONDITIONS

Pre-Construction

- 102) LV.1 The Urban Design and Landscape Plans (UDL Plans) (Plan Set F.16, refer Schedule A, Row 17) shall be reviewed and revised in accordance with the conditions and submitted to the Major Infrastructure Team Manager, Auckland Council for certification that they comply with the conditions of the consents/ designation prior to construction of the relevant Project stage, at least 20 working days prior to the commencement of construction.
- The UDL Plans shall be updated to:
- (a) Reflect relevant details from the PT and Active Mode Transport Routes Plan Set (Schedule A, Row 23);
 - (b) Remove the playing field at Waterview Reserve;
 - (c) Confirm the reconfigured bund design at Alwyn Avenue (Schedule A, Row 42);
 - (d) Reflect landscaping required in relation to the northern vent stack in Waterview Glades pursuant to Conditions DC.8.
- 103) LV.2 In certifying the UDL Plans, prepared in accordance with Condition LV.1, the Major Infrastructure Team Manager, Auckland Council shall be satisfied the UDL plans includes:
- (a) The visual mitigation of infrastructure as detailed in Section B of the UDLF (refer Schedule A, Row 38).
 - (b) Incorporation of art or art through design of structures, particularly as it relates to noise barriers and the Great North Road Interchange piers and ramps (Refer to clauses (g) and (i) below).
 - (c) Planting to screen houses and noise walls (including cross section details);
 - (d) Planting along the corridor on Traherne Island, in accordance with these conditions

- (e) Specimen planting on the Great North Road Interchange and the Te Atatu Road Interchange;
- (f) Specimen planting at the tunnel portals (except where this is within the OPW area);
- (g) Finalisation of the noise barriers (as required by Condition ON.3(a)) in accordance with the design principles for noise walls (refer Schedule A, Row 32);
- (h) Delineation of the final areas of the Open Space Restoration Plans in accordance with the Open Space Restoration Plans (Schedule A, Row 30), and reference that all works within the Open Space Restoration Plan Areas are subject to Conditions OS.1 to OS.8;
- (i) Oakley Inlet Heritage Plan, prepared in accordance with Conditions OS.5, and in particular, consideration shall be given to the design treatment of the Great North Road Interchange piers and ramps to take into consideration the impact of the structures on the visual quality of the open space beneath;
- (j) Ecological Management Plan, prepared in accordance with Conditions V.1, A.1, H.1, F.1 and M.1;
- (k) Western Ring Route: Maioro Street Interchange and Waterview Connection - Oakley Creek Rehabilitation and Restoration Guidelines (Boffa Miskell, 2010); and
- (l) Details of artworks or art through design of structures within the Project (e.g. design detailing of median barriers, bridge railings, safety barriers, piers, retaining walls and tunnel portals), in accordance with Section B of the Urban Landscape and Design Framework (UDLF June 2010) (refer Schedule A, Row 38) and F.8:Plans of Structures and Architectural Features, but excluding the north and south ventilation buildings, plans sections and elevations.

104) LV.8 The NZTA shall ensure that any areas within the designation affected by construction activities have sub-soil rehabilitated and top-soil replaced so that the hydrological response including the volume of stormwater runoff generated is as close as practicable to the predevelopment situation. The methodologies to achieve this shall be documented and provided to the Major Infrastructure Team Manager, Auckland Council with the revised ULD Plans submitted pursuant to Condition LV.1.

105) LV.10 The UDL Plans shall identify all Amenity Trees required to be removed over the construction of the Project (in accordance with Condition CEMP.6(o) and (p)). Replacement trees shall be sized at 160Lt and will either draw from the Coastal Forest or Basalt Rock Forest ecotypes listed in the Landscape Planting Schedules (provided in F.16, refer Schedule A, 17) or an agreed alternative species (confirmed by Major Infrastructure Team Manager, Auckland Council), except in the case of those trees subject to Condition ARCH.9.

Advice note: This does not necessary apply to any replacement planting in the Open Space Restoration Plan areas, which will be confirmed in approval from Auckland Council and will be in accordance with relevant Auckland Council Park guidelines (see Condition OS.4).

Post-Construction / Operations

106) LV.3 The NZTA shall have implemented the UDL Plans within 6 months of practical completion of construction of the Project.

107) LV.4 The landscaping shall be implemented in accordance with the UDL Plans within the first planting season following the completion of the construction works, provided that climatic conditions are suitable, otherwise at the first practicable opportunity thereafter, and shall be maintained for a period of 10 years thereafter. Should the landscaping be implemented in stages (depending on construction phases), landscaping shall be implemented in

accordance with this Condition for each stage unless subsequent construction staging requires use of the proposed landscaping area.

Advice note: On-going control and management of the landscaping within the designation is the responsibility of the NZTA.

- 108) LV.5 The NZTA shall implement the UDL Plans taking into account the pest plant management guidelines detailed in the Ecological Management Plan (as required by Condition CEMP.3).

OPEN SPACE CONDITIONS

General

- 109) OS.1 For the purposes of Conditions OS.2 – OS.15 the following terms will have the following meanings:
- Full size – means a football (soccer) field with the dimensions 100m x 60m.
 - Half size – means a football (soccer) field with the dimensions less than 100m x 60m but no smaller than 50m x 30m.
 - Toddler – means a playground specifically designed for children between the ages of 1 and 3
 - Junior – means a playground specifically designed for children between the ages of 4 and 8
 - Youth – means a playground specifically designed for children between the ages of 9 – 14 years
 - Open Space Restoration Plans – means those plans listed in Schedule A, row 30.
 - Open for Play - means the sports field has a level surface and a dense weed-free sward of mature grass, goal posts and lighting if indicated in the Open Space Restoration Plans approved by the Auckland Council.
 - Sand - carpeted - means the field has been levelled and irrigated, and conventional sub-soil drains, slit drains and a 50mm deep sand carpet have been installed. The field has been stolonised with a warm season grass such as kikuyu or couch.
 - Auckland Council Park Guidelines – means the document by Auckland City Council titled “Furnishing our parks: design guidelines for park furniture”, dated September 2009
 - Park furniture – means those items described in the Auckland Council Park Guidelines
 - AS2560 – means the Australia New Zealand Standard for lighting of sports fields.
 - AS4282 – means the Australia New Zealand Standard for the control of the obtrusive effects of outdoor lighting.
 - Way finding exercise – means a process for determining the number, size, location and content of signage to provide clear direction for all park users.
 - Skate-park for the purpose of conditions os.5(b)(iii) means a skate park with a size of approximately 1,400 sq. m. (generally 25 wide x 55m long), incorporating a range of design variations. Suitable for beginners (providing training facilities to develop their skills) but primarily catering for intermediate to advanced level skaters.
 - BMX bike track for the purpose of condition OS.5(b)(iii) means a low maintenance, non-competition BMX bike track, incorporating a range of design variations. Primarily catering for beginner and intermediate riders.

Pre-Construction

- 110) OS.9A Prior to occupation of Construction Yards 8, 9 and 10, access to the following areas will be maintained or provided (as shown as Area A on the Accessible Open Space in Sector 9 During Construction Plan (Refer Schedule A, Row 29)):
- (a) Approximately 4.6ha of existing passive open space from Methuen Road to New North Road.
 - (b) Approximately 2.2ha of newly established active recreation open space and existing passive open space, in the vicinity of the Valonia Street Reserve.
- 111) OS.9B Following the stream realignment, a passive recreation linkage (including a gravel walkway) between the above open spaces will be provided, establishing a continuous open space linkage from Valonia Street to New North Road (identified as Area B on the Accessible Open Space in Sector 9 During Construction Plan (see Schedule A, Row 29).

Construction

- 112) OS.2 The NZTA shall prepare Open Space Restoration Plans to outline how the open space replacement land, as defined in the Open Space Restoration Plan Areas (Schedule A, Row 30) (including land occupied during construction) will be reinstated or replaced on completion of construction, for handover to Auckland Council and those areas identified in Condition DC.1A(f) and RC.3(f).
- Following the consultation detailed in Condition OS.3 below, the Open Space Restoration Plans listed in Condition OS.3(a) to (f) shall be submitted within 12 months of construction commencing in the specific areas affecting the reserves or within 12 months of occupation of open space, whichever is the sooner, to the Major Infrastructure Team Manager, Auckland Council.
- Advice note: Conditions OS.9 and OS.10 require certain works to be provided prior to occupation of Construction Yards 6 and 7 (Waterview Reserve) and Construction Yards 9-12 (Alan Wood Reserve) and this may impact on the timing of Open Space Restoration Plans for these areas.*
- 113) OS.3 The Open Space Restoration Plans shall be prepared in consultation with the Auckland Council, Iwi, the Community Liaison Groups (Condition PI.5), NZHPT, and other recreation users and other user representatives identified by Auckland Council. The Open Space Restoration Plans shall comprise the following specific plans:
- (a) Waterview Reserve Restoration Plan;
 - (b) Alan Wood Restoration Plan (including Hendon Park and 25 Valonia Street);
 - (c) Oakley Creek Esplanade (Waterview Glades) Restoration Plan;
 - (d) Jack Colvin Park Restoration Plan;
 - (e) Rosebank Domain Restoration Plan;
 - (f) Harbourview-Orangihina Reserve Restoration Plan.
 - (g) The areas of the Open Space Restoration Plans are shown in the Open Space Restoration Plan Areas (Refer Schedule A, Row 30).
- 114) OS.4 All Open Space Restoration Plans shall be prepared in general accordance with the UDL Plans (Schedule A, Row 30), and shall include, but not be limited to, the following:
- (a) Details of, including the location, of any artworks and educational signage, and directional signage. In the case of Alan Wood Reserve, Waterview Reserve and Oakley Creek Esplanade (Waterview Glade) this shall include a “way-finding exercise” in accordance with Auckland Council practice, to determine all signage to be provided; and
 - (b) Evidence of integration with the Oakley Creek restoration works required under

- (c) Details of any vehicle access through the reserves and parking areas; and
- (d) Park furniture (including quantity and quality) to be provided in accordance with relevant Auckland Council Park guidelines, except for:
 - (i) The riparian area within Alan Wood Reserve where the only furniture required is a maximum of 10 seats; and
 - (ii) Oakley Creek Esplanade (Waterview Glades) where the only furniture required is replacement of 3 existing seats; and
- (e) The inclusion and integration of the design for all pedestrian and cycleway linkages and facilities detailed on the PT and Active Mode Transport Routes (Schedule A, Row 22). The design integration shall be in accordance with CPTED principles;
- (f) Implementation programme, including sequencing of works and completion dates. This shall include works that could be implemented prior to practical completion of construction works or are outside the Project area (e.g. upgrading of the Waterview Esplanade Reserve set out in Condition OS.5(b)(vii));
- (g) Implementation programmes for planting and field reinstatement. This shall include:
 - (i) A 12 month maintenance period for built structures and soft landscaping; and
 - (ii) For any landscaping accessible to horses an assessment to demonstrate that the planting schedule is not toxic to horses and that consultation on this has been undertaken with the Te Atatu Pony Club;
- (h) The specific requirements for each Restoration Plan area as set out in Conditions OS.5 – OS.8;
- (i) Documentation of consultation undertaken required by Condition OS.3 and the views and concerns expressed by this consultation and the written approval of the Manager Community and Cultural Policy.

Advice note: For the avoidance of doubt provision of (a) to (h) above will require elevations, cross sections, engineering drawings and written documentation to supplement the UDL Plans. It is also noted that the UDL Plans identify landscaping, planting and other works beyond the Open Space Restoration Plans (refer Conditions LV.1 – LV.6, LV.9 and LV.10). Educational signs and artworks are particularly encouraged.

115) OS.6

The Alan Wood Reserve Open Space Restoration Plan, shall be prepared in general accordance with the detail shown for the Open Space Restoration Areas on the UDL Plans (Refer Schedule A, Row 17), the following shall be provided:

- (a) Equivalent reinstatement of the following recreational facilities:
 - (i) Two “open for play” full sized sand-carpeted football (soccer) fields at Valonia Street with artificial lighting (for training purposes to AS2560 and AS4282), associated changing facilities/ ablution block, and associated parking requirements;
 - (ii) If a financial payment in lieu has not been made under Condition OS.9(b) then one half size football field for training purposes at Alan Wood Reserve;
 - (iii) One half basketball court; and
 - (iv) One volleyball court;
 Except that:
 - (v) There shall be a general 10m clear space for spectators around the fields and field layout shall be maximised to provide a continuous playing surface (e.g. for summer sports such as softball and cricket) (e.g. by altering drainage and the

(b) Other Restoration and Enhancement:

- (i) An extension to the pedestrian / cycle access from the Pedestrian/Cycleway to Methuen Road through the existing park access at 174 Methuen Road, following a full CPTED review and response;
- (ii) Details of proposed pedestrian/ cycle access within and to/from the reserve areas (including Hendon Park Bridge) (Refer Schedule A, Row 9) including a full CPTED review and response;
- (iii) Separation of pedestrian access within the reserve (e.g. linking the carpark to the fields) from the SH20 Cycleway (Refer Schedule A, Row 17);
- (iv) Subject to obtaining necessary resource consents and Auckland Council landowner approval, provision of a skate-park;
- (v) Design and provision of the Management Plan elements identified on UDL Plan 218 (Refer Schedule A, Row 17) (with the exception of M3 and M7) and notation M2 on Plan 219, subject to approval from Auckland Council;
- (vi) Design and provision of the Management Plan elements identified on UDL Plan 220 (noted M1 through to M5), on UDL Plan 221 (Refer Schedule A, Row 17) (noted as M1 – M3, M7 - M10, M12 and M13) and on UDL Plan 222 (noted M1 and M2 and M4 and M6), subject to any necessary resource consents and landowner approval from Auckland Council; and
- (vii) Landscape planting as provided on UDL Plan 223 (Refer Schedule A, Row 17) (noted as M1 and M3), subject to landowner approval from Auckland Council.

Advice Note: Condition OS.6(a) needs to be read in conjunction with Condition OS.9(a) as decisions made prior to construction may be relevant to the post construction Open Space Restoration Plan.

- 116) OS.9 At least 20 working days prior to the occupation of the construction areas within Alan Wood Reserve that impact on the following recreation facilities, the NZTA shall, in consultation and agreement with the Auckland Council, provide:
- (a) Three soccer playing fields, maintaining as a minimum the existing dimensions of the playing fields in Alan Wood Reserve that are open for play, including associated access, ablution block and carparking. If the two fields at Valonia Reserve can be provided as an early work these will be done to the standard set in OS.6(a); or
 - (b) An equivalent financial payment in lieu (or part thereof) to the Auckland Council, which has been paid in full at least 20 working days prior to occupation of Construction Yards 9 - 12; and
 - (c) A half basketball court and volleyball court.
- 117) OS.12 The "Hendon Park Bridge" to the Valonia Reserve area shall be provided within three months of completion of construction works on the SH20 carriageway (up to chainage 1300) and the final stormwater pond proposed at Valonia Street.
- 118) OS.13 During construction, the NZTA shall maintain pedestrian accessways to all open space available for public use during construction and education facilities where access is affected by the works, including any public access that crosses private land. Such access shall be safe, clearly identifiable, provide appropriate surfacing and seek to minimise significant detours. The access shall be of a same or similar standard as that disrupted and will be provided and maintained by the NZTA.

Advice note: This specifically includes the existing pedestrian access that provides a connection to the crossing over Oakley Creek between 1510 Great North Road and Unitec

Mt Albert Campus.

- 119) OS.14 Where access to Oakley Creek will be disrupted for more than 3 consecutive days, or over a weekend, or there is no provision for a walkway detour, the Community Liaison Person shall notify the Friends of Oakley Creek at least 20 working days in advance of any planned disruption (except where the disruption is of shorter duration, or an emergency situation).

Post Construction / Operations

- 120) OS.17 (a) The NZTA will facilitate the Crown making the property at 6 Barrymore Road (with the exception of land required for the ongoing operation and maintenance of the State Highway or the future rail corridor land) available to Auckland Council for reserve. Any transfer to Auckland Council would be subject to the agreement of both Land Information New Zealand and Council, and only occur after the designation footprint is withdrawn to the operational requirements of the Project (as per Condition DC.10).
- (b) If the transfer to Auckland Council does not occur within 12 months of commencement of operations of the motorway in Sector 9, the NZTA shall make a financial payment in lieu of that transfer to Auckland Council in the amount of \$1.13 million, for the same purposes as the payment described in condition SO.14, but not further conditional in the manner provided by SO.14(d).
- (c) The purpose of the transfer under (a) or the financial payment under (b) is to mitigate significant adverse effects on passive open space and reserves in Sector 9 (other mitigation having been held by the Board of Inquiry not to be adequate).

Advice Note: The disposal of surplus Crown land is subject to statutory processes (including the Public Works Act) which are managed by Land Information New Zealand and not the NZTA directly.

SOCIAL CONDITIONS

Pre-Construction

- 121) SO.1 In addition to the Community Liaison Groups established pursuant to Condition PI.5, the NZTA shall establish an Education Liaison Group (including representatives from local schools, kindergartens, childcare facilities, Unitec Institute of Technology, the Ministry of Education and Housing New Zealand Corporation), to provide a forum through which:
- (a) Relevant monitoring data can be provided (e.g. air quality monitoring);
- (b) Notice can be provided of when particularly noisy activities will occur in close proximity to schools and education facilities, to enable the opportunity to identify any potential conflict with particular sensitive periods, and the requirement for specific mitigation strategies (e.g. rescheduling of construction activities where practicable);
- (c) Particular concerns can be raised by educational facilities or parents, discussed and potentially addressed;
- (d) Notice can be provided of potential construction impacts on school transport routes (including pedestrian/cycle access) to enable the opportunity to identify specific mitigation preferences of the education facilities (e.g. any detour routes) and to enable these facilities to appropriately inform students and/or parents; and
- (e) Learning and teaching opportunities for educational facilities to participate in Project works (e.g. planting or artworks).

The Education Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period. The Education Liaison Group shall continue to meet for at least 12 months following the completion of the Project (or less if the members of the Education

Liaison Group agree), so that ongoing monitoring information can continue to be disseminated.

122) SO.6 In addition to the Community Liaison Group established pursuant to Condition PI.5, the NZTA shall establish a Working Liaison Group (WLG) inviting the following:

- (a) Auckland Council;
- (b) Housing New Zealand Corporation;
- (c) Te Kawerau Iwi Tribal Authority;
- (d) Ngati Whatua o Orakei;
- (e) KiwiRail;
- (f) Department of Conservation;
- (g) Ministry of Education; and
- (h) Local Boards.

The purpose of this WLG will be to provide a forum through which:

- (a) Opportunities for public work development (including social housing, passenger transport or recreation / open space) are identified in areas where the NZTA confirms that the designation is no longer required (e.g. following construction activities);
- (b) Comment can be provided on updated Urban Design and Landscape Plans, including the finalised designs of structural elements for the Project (prior to their submission to the Auckland Council);
- (c) Opportunities for integration of other environmental projects (e.g. restoration plantings) are identified;
- (d) Consideration is given to appropriate protocols for commencement and completion of construction activities (including blessings for commencement of construction phases); and
- (e) Comment can be provided by Te Kawerau a Maki on the detailed lighting design of SH16, to consider how lighting effects on cultural sites and practices might be mitigated without compromising traffic safety or those performance standards identified in Condition L.1.

The Working Liaison Group shall be established at least 2 months prior to construction commencing and shall have regular meetings (at least three monthly) throughout the construction period.

123) SO.7 A schedule of trees that require removal for construction of the Project will be identified and reported to the Community Liaison Group for their consideration of potential provision of timber for heritage projects (including in particular the provision of *Robinia* wood for heritage boat building). If the demand for this timber is identified to the Construction Team, appropriate measures for felling and removal from the site will be confirmed.

Construction

124) SO.2 In addition to Condition SO.1(b) above, where noisy construction activities (that are projected to exceed the Noise Criteria in the CNVMP) are proposed in close proximity or adjacent to schools/ childcare centres, the NZTA shall, when preparing their SSNMP (in accordance with Condition CNV.1) give specific consideration to options to carry out these works outside school hours or during school holidays as a mitigation option.

Post Construction / Operations

125) SO.13 The NZTA shall appoint a medical specialist qualified and experienced in Environmental and Occupational Medicine for the duration of the operational air quality monitoring of the

Project (as defined by Condition OA.4) to be a point of contact for persons concerned about the discharge from the ventilation stacks. This person must be reasonably available by appointment for advice on matters of concern for residents within the Waterview / Point Chevalier and Owairaka / New Windsor communities, and parents of pupils and prospective pupils at schools, kindergartens, playschools, and child care centres within those areas.

- 126) SO.14 For the purpose of mitigating significant adverse effects on passive open space and reserves in Sectors 5, 7 and 9, both during the construction years and longer term, particularly in the Waterview, Owairaka and New Windsor communities (other mitigation having been held by the Board of Inquiry not to be adequate) the following applies:
- (a) The NZTA shall, subject to conditions (b), (c) and (d) below, construct the following:
 - (i) A pedestrian and cycleway to AUSTROADS standards between Waterview and Owairaka/New Windsor (as generally indicated on drawing labelled as "Indicative SH20 Cycleway Route" (refer to Schedule A, Row 40)), subject to any modifications necessary to address design, property or engineering constraints.
 - (ii) The "Alford St Bridge".
 - (iii) The "Soljak PI Bridge".
 - (b) The NZTA's obligations under condition (a)(i) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals on a permanent basis in respect of the facilities described in condition (a)(i); and
 - (ii) acquired sufficient land to form a cycle and pedestrian way to AUSTROADS standards between Alan Wood Reserve and Unitec; and
 - (iii) obtained all necessary resource consents required for construction and operation of the facilities.
 - (c) The NZTA's obligations under condition (a)(ii) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals on a permanent basis for the Alford St Bridge; and
 - (ii) obtained all necessary resource consents required for construction and operation of the Alford St Bridge.
 - (d) The NZTA's obligations under conditions (a)(iii) arise when the NZTA receives certification from the Auckland Council and Auckland Transport that the Auckland Council and Auckland Transport have:
 - (i) acquired all necessary land, or obtained all necessary interests and/or landowner approvals for the Soljak PI Bridge either on a permanent basis or on the basis that the Soljak PI Bridge may be constructed and operated unless and until its continued existence and / or operation conflicts with or compromises future works pursuant to the designation for rail purposes; and
 - (ii) obtained all necessary resource consents required for construction and operation of the Soljak PI Bridge.
 - (e) The certification from Auckland Council required under conditions (b), (c) and (d)

- (f) Each of the facilities for which certification has been given must be constructed within 1 year of the opening of the motorway, or two years from when certification is given for the relevant facility, whichever is the earlier, subject however to some elements of the facilities towards the northern end needing to await the de-commissioning of Construction Yard 7.
- (g) The value of the construction works to be undertaken by the NZTA pursuant to condition (a) to (d) above shall not exceed a sum equal to \$8 million in June 2011 New Zealand dollars (with any construction costs above that figure being met by the Council.)"
- (h) The pedestrian and cycleway facilities described in condition (a)(i) above are in addition to the cycling and pedestrian facilities required by the other conditions.

Advice notes:

The intention of this condition is to construct a continuous pedestrian and cycleway with bridges at Soljak PI and Alford St. To achieve this, the Council and Auckland Transport will use their best endeavours to obtain the necessary consents and landowner approvals, for all three components of the network.

The approvals required for the Soljak PI Bridge reflect the designation for rail purposes of land under the bridge and the possibility that any bridge structure will be approved for a limited length of time only.

In the event that, despite their best endeavours, the Council and Auckland Transport cannot obtain all of the necessary landowner approvals, the condition allows each part of the network to be constructed in isolation from the others. That will provide some mitigation of the significant adverse effects on passive open space and reserves in Sectors 5, 7 and 9 that the condition is intended to address. It will also enable the Council and Auckland Transport to complete the network in the future at their expense when and if they are able to obtain the outstanding approvals.

Condition (f) above requires the earlier of the 2 named events to be the trigger for NZTA to undertake the works, in order that the required mitigation or at least some of it occur during the construction years. It also recognises that towards the northern end of the pedestrian and cycleway, some of the works may need to await the de-commissioning of Construction Yard 7.

Subject to landowner approvals, the Council and/or Auckland Transport will be the owner of the pedestrian and cycleway and the bridges described in (a) above and shall have full responsibility for the operation and maintenance of those facilities once they have been constructed by NZTA. Accordingly, NZTA will be under no further obligation in respect of any of the facilities once they have been constructed and, in particular, will have no obligation in terms of the removal, alteration or replacement of the Soljak PI Bridge in the event that it conflicts with or compromises proposed works pursuant to the designation for rail purposes.

Monitoring

VEGETATION CONDITIONS

General

- 127) V.10 Any planting utilising native plants shall use plants genetically sourced from the Tamaki Ecological District where possible or otherwise shall use plants that have been genetically sourced from within the Auckland Ecological Region.

- 128) V.16 All realignments and riparian enhancements of Oakley Creek shall be carried out in accordance with the Oakley Creek Realignment and Rehabilitation Guidelines and in general accordance with the Urban Design and Landscape plans (Refer Schedule A, Row 17).

Pre-Construction

- 129) V.1 The NZTA shall finalise the ECOMP submitted with this application, prior to works commencing on site. The ECOMP shall be implemented through the CEMP. The ECOMP shall clearly identify the location and identity of:
- (a) All Significant Vegetation within the designation that is to be fully protected or relocated; and
 - (b) All Valued Vegetation within the designation that is affected by the works (protected or removed).

Note: Significant and Valued Vegetation shall be as defined in the ECOMP.

- 130) V.2 The NZTA shall employ a suitably experienced botanist ('nominated botanist') for the duration of the works to monitor, supervise and direct all works affecting or otherwise in close proximity to the Significant Vegetation and Valued Vegetation identified in the ECOMP.

- 131) V.3 Prior to any site works commencing, a pre-commencement site meeting shall be held so that the conditions that pertain to the Significant Vegetation and Valued Vegetation and all vegetation in general (both native and exotic) are explained by the nominated botanist to all contractors or sub-contractors who will be working on site within the close vicinity of that vegetation.

- 132) V.12 Should the taxonomic and rarity status of the Geranium species growing alongside Oakley Creek in Hendon Park and Alan Wood Reserve not be confirmed before the commencement of works in this area, then this species shall be treated as Significant Vegetation and shall either be:
- (a) Protected in full or in part, and/or
 - (b) Where protection is not practicable, relocated to a suitable and safe habitat elsewhere; or
 - (c) Where protection or translocation are not practicable, this population shall be cleared in locations where required to allow works to proceed, but replaced with an equal extent of replacement plantings of the same species (from propagated material sourced from the existing population) planted at a safe and suitable habitat nearby in Hendon Park/Alan Wood Reserve.

- 133) V.13 Any clearance of the Geranium in accordance with Condition V.12 shall be restricted to the minimum necessary to facilitate the works.

Construction

- 134) V.4 The NZTA shall minimise the amount of vegetation (both native and exotic) which is to be cleared, with the exception of weeds (both woody and otherwise, unless agreed with the Major Infrastructure Team Manager, Auckland Council and the Community Liaison Group that the retention of these 'weeds' has other environmental or ecological benefits that warrant their retention). All vegetation clearance shall be undertaken in accordance with the measures set out in the ECOMP.

- 135) V.5 The NZTA shall install protective fencing around, or otherwise clearly demarcate, all of the Significant Vegetation identified in the ECOMP as requiring full protection, under the supervision of the nominated botanist.

- 136) V.6 The NZTA shall replace any terrestrial Valued Vegetation that is required to be removed as a result of construction activities, in accordance with the ECOMP and the Urban Design and Landscape Plans.
- 137) V.7 The nominated botanist shall supervise all trimming, pruning and relocation work associated with the Significant Vegetation and Valued Vegetation required as part of the works.

Monitoring

- 138) V.8 Immediately prior to planting, and for a period of 2 years following completion of construction, the NZTA shall undertake weed control and management of all invasive plant pests within the vegetated areas of the surface designation for the Project. Following this 2 year period, on-going control and management of all invasive plant pests within these areas will be the responsibility of the NZTA.
- 139) V.9 The nominated botanist shall undertake a monitoring programme throughout the construction period, including monitoring of:
- (a) The condition, repair and location of the temporary protective fencing or other forms of demarcation used to identify the Significant Vegetation;
 - (b) Any works within the vicinity of the Significant Vegetation and Valued Vegetation;
 - (c) The general health of the Significant Vegetation and Valued Vegetation (including any Significant or Valued Vegetation that has been relocated away from the works area); and
 - (d) Compliance with the vegetation conditions of designation by way of fortnightly inspections during the construction period.

AVIAN CONDITIONS

Pre-Construction

- 140) A.1 The NZTA shall finalise, and implement through the CEMP, ECOMP submitted with this application to include the matters set out in Conditions A.2 to A.6.

HERPETOFAUNA CONDITIONS

Pre-Construction

- 141) H.1 The NZTA shall finalise and implement through the CEMP, the ECOMP submitted with this application to include details of lizard management to be undertaken, including the following:
- (a) Lizard capture methodology, including timing;
 - (b) Lizard release locations(s);
 - (c) Lizard habitat enhancement at population release sites, including a detailed pest control programme for a minimum of one month prior to release and for a minimum of three consecutive years' duration after release;
 - (d) Location(s), monitoring and maintenance of lizard protective fencing;
 - (e) Post-release monitoring methodology; and
 - (f) Lizard captive management methodology.

LIGHTING CONDITIONS

Pre-Construction

- 142) L.2 A Temporary Construction Lighting Management Plan shall be prepared for all construction zones and construction yards prior to commencement of any night time works within the construction zones and construction yards. The Temporary Construction Lighting Management Plan shall be independently verified by a lighting specialist and provided to the Major Infrastructure Team Manager, Auckland Council for certification of compliance 10 working days prior to any night time work commencing.
- The certification process shall ensure that the Plan includes (but is not be limited to):
- a) The layout and arrangement of all temporary lighting required for night time works, and shall show how this avoids the "Light Spill Restriction Zone" identified on the Construction Yard Plans (Refer Schedule A, Row 7) submitted with the application, and that the temporary lighting complies with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - b) Provision for a 10m buffer between the night time work and any residential boundary at all times to minimise potential for light spill; and
 - c) General operating procedures outlined in the CEMP.
- 143) L.3 Asymmetrical floodlights with horizontal glass visors that are not raised more than 3 degrees above the horizontal plane shall be used for any temporary construction night time lighting requirements. Alternative temporary lighting arrangements may be used, subject to the prior approval of the Major Infrastructure Team Manager, Auckland Council, where it can be demonstrated that the proposed lighting is similar or better to asymmetrical floodlights with glass visors. Glare shall be kept below the recommendation given in AS 4282 – 1997 "Control of the Obtrusive Effects of Outdoor Lighting" Tables 2.1 and 2.2.

Post-Construction / Operations

- 144) L.1 Lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas, in general accordance with the Waterview Connection Lighting Plan (Drawing Set F.11 (Refer Schedule A, Row 12):
- a) All motorway lighting shall be designed in accordance with "Roadlighting Standard AS/NZS1158";
 - b) All other lighting shall be designed in accordance with relevant rules provided in Rule 14 of the Waitakere City District Plan or Part 13 of the Auckland City Bylaw (April 2008);
 - c) Fully cut off luminaries shall be used on SH20 from the Southern Tunnel Portal to the Maoro Street Interchange to minimised lighting overspill, as shown on Drawing Set F.11(Refer Schedule A, Row 12).

ARCHAEOLOGY CONDITIONS

Pre-Construction

- 145) ARCH.1 The NZTA shall complete, and implement through the CEMP, the Archaeological Site Management Plan (ASMP) submitted with the notice of requirement, to include, but not be limited to:
- a) Identification of the Project archaeologist, their role and responsibility on the Project;
 - b) Who reports to the Project archaeologist;

- c) Specific sites requiring supervision, and measures to be undertaken to protect and manage these sites;
 - d) Whether NZHPT and/or Auckland Council heritage and/or iwi supervision is required for the specific site (the latter to be determined through consultation with the relevant iwi groups); and
 - e) Accidental discovery protocols in the event that unknown archaeological sites are uncovered.
- 146) ARCH.2 The NZTA shall employ at its expense a qualified archaeologist (the Project archaeologist) who shall be on site to monitor all initial earthworks, including surface stripping of the site, for all specific areas identified in the ASMP to establish whether any sub-surface archaeological features are present. This includes, but is not limited to, the following areas:
- (a) All unmodified areas in the vicinity of Rosebank Road;
 - (b) All works in the vicinity of the "Oakley Inlet Heritage Area", located adjacent to the Great North Road Interchange;
 - (c) Works in the vicinity of two midden sites (recorded R11/2214 and R11/2215) within Great North Road Interchange, and all previously unmodified areas near the banks of the Oakley Inlet;
 - (d) Any ground disturbance works in Construction Yard 7 within Oakley Creek Reserve.
- 147) ARCH.8 All contractors and subcontractors working on the Project shall be trained on the archaeological requirements set out in the ASMP.
- 148) ARCH *Any archaeological sites within the area affected by the Project shall not be modified or disturbed in any way unless written authorisation has been obtained from the NZ Historic Places Trust.*

Construction

- 149) ARCH.3 If any archaeological sites, including human remains are exposed during site works, then the following procedures shall apply:
- (a) Immediately it becomes apparent that a possible archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease;
 - (b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are untouched and notify the Project archaeologist;
 - (c) The Project archaeologist shall inspect the site to assess the relevance of the find, and then the Auckland Council shall be advised of the significance;
 - (d) If the site is confirmed to be an archaeological site by the Project archaeologist, the site supervisor shall then notify tangata whenua, the New Zealand Historic Places Trust, and the Auckland Council that an archaeological site has been exposed so that appropriate action can be taken;
 - (e) In the case of human remains, the NZ Police shall be notified.

GROUND SETTLEMENT CONDITIONS

Pre-Construction

- 150) S.1 The NZTA shall finalise, and implement through the CEMP, the Settlement Effects Management Plan (SEMP) lodged with the application prior to construction activities being undertaken. Prior to construction (following detailed investigation and design), the total estimated settlements and building damage categories shall be confirmed using the methodology in Technical Report G.13 *Assessment of Ground Settlement Effects* and the

SEMP shall be updated accordingly.

In the event that settlement predictions are greater (than those allowed for in Figure E.14 (refer Schedule A, Row 26)) or building damage categories increase in ranking or buildings affected from those identified in Figures G1-G4 (refer Schedule A, Row 27), mitigation measures shall be introduced as part of the detailed design and construction process to avoid any adverse effects greater than predicted by the application lodged in August 2010.

151) S.2

The NZTA shall establish a series of ground settlement monitoring markers to monitor potential settlement in relation to the construction of the tunnels. The survey markers will be located generally as follows:

- (a) Along the tunnel alignment and extending out to a maximum of 400m either side of the tunnels to correlate with cross sections that have been used for the settlement estimates and to infill between them.
- (b) To cover the more extensive eastern zone area of settlement at Chainage 3400 (Figure E.14 refer Schedule A, Row 26).
- (c) On or around buildings or features considered to be particularly sensitive as defined in the SEMP (including those buildings identified in Condition S.7) and as may be updated to reflect detailed analysis and interpretation of monitoring results as the Project proceeds.

Two types of markers shall be established: Framework Markers which shall form the main basis of monitoring, and Intermediate Markers which shall provide additional monitoring information for interpretation of Alerts and Alarms. The locations of each type of settlement monitoring marker shall be confirmed in the SEMP. Each Framework Marker shall have an alert and alarm level set in relation to Figure E.14, where alert = 75% of the theoretical value and alarm = 100% of the theoretical value with due consideration of the seasonal range of ground movement identified by pre-construction monitoring.

152) S.7

The NZTA shall review and update the schedule of buildings and structures considered to be at risk in accordance with the criteria of the SEMP and maintain this for review by the Auckland Council. This shall include, but not be limited to, the following properties identified in the Technical Report G.13 *Assessment of Ground Settlement Effects* provided in support of this application:

- (a) Buildings on properties within the substrata designation;
- (b) Buildings where total estimated settlement is greater than 50mm (defined in Figure E.14 – Refer Schedule A, Row 26);
- (c) Buildings in areas estimated to have a risk of damage more than negligible (defined in Figures G1-G4 as categories 1-5 (Refer Schedule A, Row 27));
- (d) Unitec Buildings 76, and 310-313 (as per Unitec Site Plan in Schedule A, Row 31);
- (e) 1510 Great North Road, Unitec Residential Flats (two buildings);
- (f) Pak'n Save Supermarket;
- (g) Metro Football Clubhouse, Phyllis Street;
- (h) Building at 1550 Great North Road;
- (i) BP Service station at 1380 Great North Road;
- (j) Modern Chairs Building (Richardson Road);
- (k) Waterview Primary School;
- (l) Operational septic tanks where total estimated settlement is greater than 50mm; and
- (m) Buildings on the western side of the alignment between Chainage 3000 and 3400 where total estimated settlement is greater than 20mm.

- 153) S.8 The NZTA shall consult with owners of buildings and structures identified in Condition S.7 and, subject to the owner's approval of terms acceptable to the NZTA, shall undertake a pre-construction condition assessment of these structures in accordance with the SEMP.
- 154) S.9 The NZTA shall employ a suitably qualified person (e.g. a Chartered Professional Engineer) to undertake the building assessments required pursuant to Conditions S.8 and S.12 and identify this person in the SEMP.

Construction

- 155) S.10 The NZTA shall undertake monthly visual inspections of the following buildings during the "active construction" phase of the Project as defined in Condition S.3:
- (a) All Type 1 Dwellings within a zone where "more than negligible" effects have been predicted;
 - (b) All Type 2 Dwellings within a zone where "slight" effects or greater have been predicted
 - (c) Unitec Building 76;
 - (d) 1510 Great North Road, Unitec Residential Flats (two buildings);
 - (e) Pak'n Save supermarket; and
 - (f) Waterview Primary School (pool and hall).

Note: Type 1 and 2 Dwellings are those as defined in Technical Report G.13 *Assessment of Ground Settlement Effects*.

- 156) S.11 The NZTA shall undertake level and/or wall inclination surveys on a monthly basis during the "active construction" phase of the Project on the following buildings:
- (a) All Type 1 Dwellings within a zone where "slight" effects or greater have been predicted;
 - (b) Unitec Building 76;
 - (c) 1510 Great North Road, Unitec Residential Flats (two buildings);
 - (d) Waterview Primary School (pool); and
 - (e) Pak 'n' Save Supermarket

Post Construction / Operations

- 157) S.12 The NZTA shall, subject to the owner(s) approval, ensure that within 6 months of completion of construction activities, a post-construction condition assessment covering the matters identified in the SEMP is undertaken and shall be provided to the owner(s). The assessment report shall include a determination of the cause of damage identified (if any) since the pre-construction condition assessments. The NZTA shall agree with the owner(s) appropriate remedial works (if any) in conjunction with arrangements for implementation and/or compensation. The requirements of this condition need not be fulfilled for any particular building with the written approval of the current owner of a building or where the NZTA can provide reasonable evidence to the Auckland Council that the current owner of that building has agreed they do not require such a survey.

Monitoring

- 158) S.3 The NZTA shall survey the settlement monitoring markers at the following frequency:
- (a) Pre-construction
 - i) All Framework Markers – Vertical and selected horizontal at 3 monthly intervals, starting at least 12 months prior to construction commencing; and
 - ii) All Intermediate Markers - Vertical and selected horizontal once.

- (b) During Construction
 - i) All Framework Markers - Vertical on a monthly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.
- (c) During Active Construction
 - i) All Framework and Intermediate Markers – Vertical on a weekly basis; and
 - ii) Selected Framework Markers only - Horizontal on a monthly basis.

“Active construction” shall be defined as:

- (a) Starting when the advancing tunnel face comes within 150m and ending when the final tunnel lining has been installed 150m beyond the section; and
- (b) When excavation in front of a retaining wall comes within 100m of a section and ending when the permanent wall supports are in place beyond a distance of 100m.

159) S.4 Within three days of each monitoring round, the NZTA shall use the settlement monitoring results (together with the results of groundwater monitoring where they may provide an earlier indication of future settlements) to reassess the ground settlements and building damage categories and compare them to those estimated in Figures E.14 and G1-G4 (refer Schedule A, Row 26 and 27).

If alert and alarm levels are exceeded, the trigger marker shall be resurveyed within 24 hours.

If the reassessment indicates that a building has increased its damage category from that in Figures G1 – G4 (refer Schedule A, Row 27) then this shall be considered to be an Alert Level and additional specific assessment of the building shall be carried out by the NZTA to confirm this reassessment within 72 hours.

If the additional assessment confirms the increase in damage category, this shall be considered to be an Alarm Level and the property owner and occupier will be notified within 48 hours. Following consultation with the property owner and occupier(s); subsequent actions may include increased frequency and/or extent of monitoring, modification to the construction approach or mitigation works to the affected building.

160) S.5 Settlement monitoring shall be undertaken for a period of 2 years following completion of the tunnels. The NZTA may reduce the frequency of settlement monitoring, required by Condition S.3, to 6-monthly:

- (a) Once the active construction stage has passed; and
- (b) Monthly monitoring has been undertaken for a minimum of 6 months; and
- (c) The monitoring indicates that any potential settlement effects are within a satisfactory range as specified in the SEMP; and
- (d) The criteria in (a) to (c) above has been certified by the Auckland Council.

161) S.14 The NZTA shall establish inclinometer and surface monitoring of the retaining walls for the tunnel portals and cut and cover tunnel to determine any potential effect from the tunnels. The nature and timing of the monitoring shall be determined during detailed design of the retaining walls and specified in the SEMP.

162) S.16 Prior to construction commencing, the NZTA shall undertake geotechnical investigations of slopes or sites that have been identified as potentially being susceptible to movement. This shall include, but not be limited to:

- (a) 14H and 14J Cradock Street
- (b) 34 Cradock Street
- (c) 40 Cradock Street

- (d) 56 Powell Street;
- (e) 1590A Great North Road; and
- (f) Other sites on the western slopes of Oakley Creek identified under Condition S.7(b) and S.7(m) which are assessed in the course of a pre-construction condition assessment undertaken in accordance with Condition S.8 as potentially being susceptible to slope movement.

The NZTA shall undertake monitoring throughout the active construction period in accordance with Condition S.10 above and shall assess and agree remedial action as required, in consultation with the owner, in accordance with Condition S.12 above.

- 163) S.17 Pairs of settlement markers shall be established on each side of the cross sections identified on Figure E.14 to monitor differential movements. The markers in each pair shall be no more than 20m apart, and each pair shall be within 100m of the centreline of the closest tunnel. Monitoring installed in accordance with Condition S.11 can be utilised for this purpose. Each pair of markers shall have Alert and Alarm values set based on the calculated differential settlements at that location and consistent with the relevant calculated Building Damage Category (Figures G1-G4, (Refer Schedule A Row 27)), Alert and Alarm levels shall be as defined in Condition S.2. Monitoring frequency shall be as defined for Framework Markers in Condition S.3.

Monitoring - Pre-Construction

- 164) S.15 Prior to construction commencing, the NZTA shall undertake CCTV surveys of services identified in the SEMP as being susceptible to damage or particularly critical. This shall include, but not be limited to:

- (a) Waterview Orakei No. 9 trunk sewer.

The NZTA shall monitor these services by undertaking additional CCTV surveys throughout the construction period. If any damage is determined in relation to the Project, the NZTA shall undertake any remedial action as required in consultation with the service provider.

Reporting

- 165) S.6 The NZTA shall collate the results of the settlement monitoring (undertaken pursuant to Conditions S.2 – S.5) and prepare a report that shall be made available to the Auckland Council]. A settlement monitoring report shall be prepared prior to the commencement of construction, and then at monthly intervals throughout the construction period. Following the completion of construction, a settlement monitoring report shall be prepared following each round of settlement monitoring undertaken (i.e. monthly and then 6-monthly when monitoring is reduced pursuant to Condition S.5).

The settlement reports shall highlight any alert or alarm level exceedances and provide a full interpretation and/or explanation as to why these levels are exceeded, the likely effects and detail any remedial or mitigation measures initiated as a result of these trigger exceedances.

- 166) S.13 The NZTA shall ensure that a copy of the pre, post-construction and any additional building condition assessment reports for each building be forwarded to the respective property owner(s) within 15 working days of completing the reports. The NZTA shall notify the Auckland Council that the assessments have been completed. The community liaison person appointed pursuant to Condition PI.1 shall be the contact person for owner(s) subject to assessment and reporting under Conditions S.1 to S.11 and S.16 and remedial works or compensation payments under Condition S.12 and S.16.

STREAMWORKS CONDITIONS

General

- 167) STW.21 The realignments necessary for highway construction will be rehabilitated separately to the Project's SEV off-set mitigation requirement of 343 metres. The Project's SEV off-set mitigation requirements will be undertaken within the areas demarcated as areas A to D on the "Oakley Creek Realignment Layout Plan, drawing 20.1.11-3-D-D-330-21" (Refer Schedule A, Row 23).

Advice Note: The SEV off-set mitigation associated with the Maioro Interchange Project is intended to be undertaken upstream and downstream of those areas shown for Realignment and Rehabilitation (Refer Schedule A, Row 23), for the purposes of creating a coherent ecological corridor in this area.

- 168) STW.31 Design of flood defences for the southern portal shall be in accordance with the catchment management option preferred by Auckland Council with allowances for climate change, sea-level rise and Maximum Probable Development.

Pre-Construction

- 169) STW.2 Any future amendments that may affect the performance of the streamworks shall be approved by the Major Infrastructure Team Manager, Auckland Council in writing, prior to construction. Any amendments to the design shall be in accordance with the Western Ring Route: Oakley Creek Re-alignment and Rehabilitation Guidelines (Boffa Miskell, 2010), appended to *Technical Report G.6 Assessment of Freshwater Ecological Effects*.

- 170) STW.3 The NZTA shall inform the Major Infrastructure Team Manager, Auckland Council in writing at least 10 working days prior to any streamworks commencing, and again 10 working days before any environmental protection measures are removed.

- 171) STW.4 Prior to streamworks commencing on site, the NZTA shall arrange and conduct a pre-construction site meeting between Auckland Council, NZTA and the primary contractor.

- 172) STW.5 At least 20 working days prior to commencement of streamworks associated with the realignments of Oakley Creek and the Stoddard Road tributary, the construction design details associated with these works shall be submitted to the Major Infrastructure Team Manager, Auckland Council for approval. The details shall include but not be limited to:

- (a) Detailed design of the proposed streamworks including long sections, cross sections and details of the design including freshwater habitat improvement and riparian planting;
- (b) Construction erosion and sediment control plans (ESCP).

- 173) STW.6 The NZTA shall forward a detailed construction programme and methodology to the Major Infrastructure Team Manager, Auckland Council at least 10 working days prior to the commencement of works, and shall provide monthly updates during the streamworks. These shall include details of:

- (a) The commencement date and expected duration of the streamworks;
- (b) The location of any works and structures in relation to the streamworks; and
- (c) Dates for the implementation of erosion and sediment controls.

- 174) STW.16 The NZTA shall obtain approval of the constructed stream realignment works from the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to diversion of Oakley Creek into the new channel.

- 175) STW.20 The NZTA shall submit for approval to the Major Infrastructure Team Manager, Auckland

Council a Streamworks Environmental Management Plan (SWEMP) which shall include details of the final freshwater mitigation and environmental enhancement works associated with the Project to give effect to the design set out in Technical Report G.15 and principles of the “Western Ring Route – Maioro Street Interchange and Waterview Connection - Oakley Creek Realignment and Rehabilitation Guidelines” described in Condition STW.22. This SWEMP shall cover the mitigation for the loss of an area of Pixie Stream, Oakley Creek and the Stoddard Road tributary. It shall be submitted to the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to the proposed enhancement works being commenced under this consent and shall include, but not be limited to, the following:

- (a) The nature of works to be undertaken;
- (b) The location of works;
- (c) Detailed design and plans of all enhancements to the stream bed and/or stream channel, including any structures or other engineering works. This includes replication of the existing waterfall located on the Stoddard Road tributary near the confluence with Oakley Creek in a similar position within the new realignment;
- (d) Riparian planting programmes, including detailed planting plans and specifications relating to species mix, location, density, size and maintenance to achieve an overall average of 70% shading of stream at maturity within those reaches where realignments or the SEV off-setting mitigation associated with the Project are proposed;
- (e) Timing of implementation;
- (f) The outcomes of consultation with Iwi (Ngati Whatua o Orakei and Te Kawerau Tribal Authority), the Community Liaison Group (see Condition Pl.6), and Friends of Oakley Creek; and
- (g) How the basalt blocks from sections of the existing Oakley Creek channel that are to be realigned will be reused, with preference given to use within the channel realignment works and within other works identified in the Alan Wood Open Space Restoration Plan. Options for reuse shall take into account, but not be limited to:
 - (i) The heritage (cultural) values of the basalt blocks in the channel walls, in-situ basalt e.g. at the Stoddard Confluence and the basalt columnar blocks; and
 - (ii) The ecological values of the basalt block substrates with terrestrial and aquatic vegetation e.g. endangered moss *Fissidens berteroi*.

Advice Note: The intent is to include the SEV off-setting mitigation associated with the Maioro Interchange Project within Hendon Park and Alan Wood Reserve, and to the same shading standard as specified in Condition STW 20(d).

- 176) STW.22 The SWEMP shall be prepared in general accordance with the “Western Ring Route – Maioro Street Interchange and Waterview Connection - Oakley Creek Realignment and Rehabilitation Guidelines” (Boffa Miskell, 2010) appended to *Technical Report G.6 Assessment of Freshwater Ecological Effects*.
- 177) STW.25 Any material amendments to the SWEMP shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council at least 20 working days prior to any amendment being implemented.
- 178) STW.29 Any amendments to works by the NZTA in the floodplain that may increase the flooding effects shall be submitted to the Major Infrastructure Team Manager, Auckland Council for approval in writing at least 20 working days prior to construction. These proposed amendments shall include updated drawings and hydraulic modelling using the Oakley Creek Catchment Model to assess the effects of the change.

Construction

- 179) STW.1 The streamworks and associated works (such as stormwater outfalls) shall be undertaken in accordance with the plans and information contained within Technical Report G.15 *Assessment of Stormwater and Streamworks Effects* and Technical Report G.22 *Erosion and Sediment Control Plan*, submitted with this application. The design of streamworks and associated works shall follow the approach expressed in the Oakley Creek Re-alignment and Rehabilitation Guidelines, appended to *Technical Report G.6 Assessment of Freshwater Ecological Effects*.
- 180) STW.7 No streamworks shall be undertaken between 1 May and 30 September unless written approval has been obtained from the Major Infrastructure Team Manager, Auckland Council. Any such approval shall be sought at least 10 working days prior to the proposed commencement of the works.
- 181) STW.8 All erosion and sediment controls associated with the streamworks shall be constructed and installed in accordance with Technical Report G.22 *Erosion and Sediment Control Plan* submitted with this application.
- 182) STW.9 The site shall be stabilised against erosion as soon as practicable and in a progressive manner as streamworks are finished.
- 183) STW.10 All uncompacted material shall be kept clear of the channel during and after streamworks.
- 184) STW.11 The NZTA shall ensure that any temporary dam structure built within the stream shall be constructed from non-erodible material (such as sandbags or sheet piles).
- 185) STW.12 The NZTA shall ensure that when dewatering the in-stream works area, no sediment-laden water shall be discharged directly into a watercourse. Any sediment-laden water must be treated in an appropriate sediment treatment device in accordance with TP90.
- 186) STW.13 All machinery shall be maintained and operated in a way which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during refuelling and machinery servicing.
- 187) STW.14 The NZTA shall ensure that:
- (a) Any excavated sediment that requires temporary stockpiling shall not be placed within the 100 year ARI flood plain, and
 - (b) Erosion and sediment control measures around the stockpile perimeter shall be constructed in accordance with TP90.
- 188) STW.18 Any erosion occurring as a result of construction of the Oakley Creek bridge (SH20) shall be remedied as soon as possible and to the satisfaction of the Major Infrastructure Team Manager, Auckland Council.
- 189) STW.19 The area of Oakley Creek beneath the Oakley Creek bridge (SH20) shall be maintained free of debris to ensure stream flows are not restricted.
- 190) STW.26 All proposed stream bed and/or stream channel structures shall not impede the passage of fish both upstream and downstream.
- 191) STW.27 Works in the floodplain (including motorway embankments, ancillary earthworks and streamworks) shall be in accordance with the final design of the streamworks approved by the Major Infrastructure Team Manager, Auckland Council (as per Conditions STW.5 and STW.29) and be undertaken in accordance with the plans and information submitted with this application including, but not limited:
- (a) Waterview Connection Project. Assessment of Environmental Effects Report (Dated August 2010).

- (i) Plan F.2 Operation Scheme Plans (Refer Schedule A, Row 3); and
 - (ii) Plan F.14 Streamworks and Stormwater Discharges (Refer Schedule A, Row 15).
- (b) Technical Report G.15 *Assessment of Stormwater and Streamworks Effects*.

Post-Construction / Operations

- 192) STW.17 The NZTA shall submit a certificate signed by an appropriately qualified and experienced engineer to certify that the Oakley Creek SH20 motorway bridge has been constructed in accordance with the drawings supplied with this application, within 3 months of completion of the structure.
- 193) STW.23 The NZTA shall implement the mitigation and environmental enhancement works contained in the approved SWEMP within 12 months of practical completion of the Project.
- 194) STW.24 The NZTA shall supply to the Major Infrastructure Team Manager, Auckland Council within three months of the completion of the riparian planting works written confirmation from an appropriately qualified landscape architect or ecologist that the riparian plantings have been implemented in accordance with the SWEMP approved under Condition STW.20.
- 195) STW.28 Within three months of completion of the works, the NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council "as built" plans certified by a qualified and experienced engineer to confirm that the works have been carried out in accordance with Condition STW.27.
- 196) STW.30 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council a certificate signed by an appropriately qualified and experienced engineer to certify that the flood protection works for the tunnels have been constructed in accordance with the drawings, approach and standards supplied with this application, prior to the opening of the Project.

Monitoring

- 197) STW.15 The design engineer and Project ecologist shall monitor the construction of the streamworks. The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council a certificate signed by an appropriately qualified and experienced engineer and ecologist to certify that the streamworks have been undertaken in accordance with the drawings supplied with this application, or as otherwise amended under Condition STW.2, within three months of completion of the streamworks.

CONTAMINATED LAND AND CONTAMINATED DISCHARGE CONDITIONS

Pre-Construction

- 198) CL.1 The NZTA shall finalise and implement through the CEMP, the Contaminated Soil Management Plan (CSMP) submitted with this application prior to commencement of any site works. The CSMP shall include, but not be limited to:
- (a) Measures to be undertaken in the handling, storage and disposal of all material excavated during the construction works;
 - (b) Soil validation testing and groundwater testing;
 - (c) Soil verification testing to be undertaken to determine the nature of the excavated spoil and potential reuse or disposal options;
 - (d) Measures to be undertaken in the event of unexpected contamination being identified during construction activities; and
 - (e) Measures to be undertaken for the handling of asbestos containing material.

- 199) CL.2 Prior to the main construction works commencing, the baseline quality of soils and groundwater within Sector 5 (the southern bank of Oakley Creek coincident with the location of the former tannery) and Sector 7 (particularly in relation to works in the vicinity of Great North Road) shall be investigated and established. The investigations shall be carried out in accordance with appropriate Ministry for the Environment and Auckland Council guidelines. The findings of the soil and groundwater investigations shall be used to determine the specific constructions methods during work in this area to manage any likely environmental effects in relation to the Project.
- 200) CL.3 Prior to the main construction works commencing, soils and fill materials within Alan Wood Reserve (Sector 9) shall be further classified so as to determine the distribution and extent of cleanfill, managed fill and contaminated/hazardous fill materials.

Construction

- 201) CL.4 All excavated soil shall be tested by the NZTA in general accordance with the CSMP, prior to either reuse on site or disposal off site. The testing regime shall be submitted for approval by the Major Infrastructure Team Manager, Auckland Council.
- 202) CL.5 The NZTA shall notify the Major Infrastructure Team Manager, Auckland Council within 5 working days of identification of any contamination at the site which was not identified in the reports submitted in support of this application, including contaminated soil, surface water or groundwater.
- 203) CL.6 The removal of any excavated contaminated soil shall be in accordance with the CSMP. The removal and disposal of any contaminated groundwater/ surface water from the site shall be in accordance with the GWMP and the ESCP.
- 204) CL.7 The NZTA shall engage a suitably qualified contaminated land specialist to supervise the works, excavation and removal of any contaminated soils from the site and undertake sampling (if required) of imported material.
- 205) CL.8 All testing / sampling techniques shall be carried out in accordance with the Ministry for the Environment Contaminated Land Management Guidelines or other equivalent standards approved in writing by the Major Infrastructure Team Manager, Auckland Council.

Post-Construction / Operation

- 206) CL.11 The NZTA shall submit to the Major Infrastructure Team Manager, Auckland Council, a Site Closure Report no later than three (3) months after the completion of the earthworks. The Report shall be prepared in accordance with Schedule 13 (Schedules for Reporting on Contaminated Land) of the Proposed Auckland Regional Plan: Air Land and Water and include:
- (a) Results of any soil reuse and imported material testing carried out to ensure compliance with the CSMP;
 - (b) Volumes of soil removed from site;
 - (c) Copies of the waste disposal receipts; and
 - (d) Reports of any non-compliance with the CSMP procedures or complaints received while undertaking the site works.

Monitoring

- 207) CL.9 During and following the tunnel construction works beneath Sector 8, groundwater quality monitoring shall be carried out at locations within and down hydraulic gradient of Phyllis Street Landfill. Monitoring shall be undertaken on at least a monthly basis, and for a period up to 12 months following completion of the tunnel construction works. The monitoring

programme shall be submitted for approval by the Auckland Council as landowner.

- 208) CL.10 Prior to, during and following tunnel construction works beneath Phyllis Street Landfill, monitoring for landfill gas shall be carried out from existing monitoring boreholes within the landfill. Monitoring shall be undertaken on at least a monthly basis, for a period of no less than 6 months prior to, and up to 12 months following completion of the tunnelling works. The monitoring programme shall be submitted for approval by the Auckland Council as landowner.

FRESHWATER CONDITIONS

Pre-Construction

- 209) F.1 The NZTA shall finalise, and implement through the CEMP, the ECOMP submitted with this application. The ECOMP shall be updated to ensure compliance with the conditions of this consent and include changes to the details of construction processes prior to construction commencing. The ECOMP shall include, but not be limited to details of:
- (a) Monitoring of freshwater ecology;
 - (b) Monitoring of freshwater and stream sediment quality;
 - (c) Trigger event criteria for undertaking additional monitoring;
 - (d) Procedures for responding to accidental discharges of contaminants to the freshwater environment; and
 - (e) Contingency plans and/or remedial measures in the event monitoring results identify adverse effects.

Monitoring

- 210) F.2 The NZTA shall engage a suitably qualified ecologist and water quality scientist to undertake freshwater monitoring programme prior to, during and following construction to monitor the effect of the Project on the freshwater ecology. The freshwater monitoring shall be undertaken in Oakley Creek, Pixie Stream and Meola Creek. The freshwater monitoring programme shall be undertaken in accordance with the details set out in the ECOMP and include:
- (a) Cross sectional profiles;
 - (b) Macro invertebrate sampling; and
 - (c) Freshwater fish monitoring.
- 211) F.3 The freshwater monitoring programme shall, as a minimum, be undertaken in accordance with the following frequency:
- (a) Prior to construction – two baseline ecological surveys.
 - (b) During construction – twice per year for fish and macro invertebrates and cross sectional profiles, within one month prior to the beginning of the earthworks season and within one month either side of the end of the earthworks season.
 - (c) Post construction – on an annual basis for a maximum period of three years, or less if the Major Infrastructure Team Manager, Auckland Council is satisfied that no adverse effects have occurred or are likely to occur from the Project.
 - (d) Monthly water quality samples at the five existing Oakley Creek sample locations to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb) and nutrients.
 - (e) Four “event based” samples per annum from each of the current two Oakley Creek sites. The samples are to be analysed for pH, turbidity, suspended solids, metals (Zn, Cu and Pb), hydrocarbons (TPH) and nutrients.

- (f) Two sediment quality samples per annum (January and July) at the five existing water quality Oakley Creek sites (if there is sufficient sediment to sample). The samples are to be analysed for metals (Zn, Cu and Pb), polycyclic aromatic hydrocarbons (PAH), hydrocarbons (TPH) and semi-volatile organic compounds.

Advice note: The sample collection and analysis required under sub-clauses (d) to (f) shall be undertaken following an IANZ accredited methodology by a suitably accredited laboratory (International Accreditation New Zealand).

212) F.4 The NZTA shall undertake additional freshwater monitoring in the event of a 'trigger event' for freshwater habitats. For the purposes of this consent, a 'trigger event' for freshwater habitats is defined in the ECOMP.

213) F.5 The NZTAs ecologist/hydrologist (required by condition F.2) shall review, every six months, the freshwater monitoring results, provided from Conditions F.2 to F.4, and results in monitoring detailed in earthworks Conditions E.9 and E.19 and Groundwater Condition G.10. In the event that potential adverse effects are identified, including through review of the Condition G.10 monitoring results by the hydrologist and freshwater ecologist required by Condition G.12, the NZTA shall develop and submit for the approval of the Major Infrastructure Team Manager, Auckland Council appropriate contingency plans and/or remedial measures in accordance with the measures set out in the ECOMP.

Reporting

214) F.6 Freshwater monitoring reports shall be compiled from the monitoring undertaken pursuant to Conditions F.2 to F.4 and the review of Condition F.5, and a report provided to the Major Infrastructure Team Manager, Auckland Council every 6 months.