

**Environmental Protection Agency**  
Waterview Connection Project: Report  
under Section 42A Resource  
Management Act 1991

**Prepared For:**

Environmental Protection Agency  
PO Box 10720, The Terrace  
Wellington 6143

**7 December 2010**

**FINAL**

ENVIRONMENTAL MANAGEMENT SERVICES  
*Limited*

## Executive Summary

This Section 42A Report has been commissioned by the Environmental Protection Agency to report on the Western Ring Route-Waterview Connection Project. This is to assist the Board of Inquiry chaired by Judge L. Newhook identify and determine key issues in making its decisions on the designations and resource consents required under the Resource Management Act 1991.

The New Zealand Transport Agency is the promoter of the project and seeks to complete the connection between SH16 and SH20 to provide an alternative motorway route to SH1, and form a strategic part of the New Zealand State Highway network. NZTA is both a resource consent applicant and a requiring authority for the purposes of this Board of Inquiry hearing, and hereafter is referred to as 'the Applicant'. The project is identified by central government as a Road of National Significance being an essential route to be advanced quickly to construction.

Forty-three volumes of documents comprise the application and Assessment of Environmental Effects. Understanding the complexity of the project is a challenging task. These documents are extensively cross referenced in our report to avoid repeating material in the application as also are submissions from the Summary of Submissions Report that forms an Appendix. Independent marine and freshwater ecology advice is provided by Ryder Consulting Ltd as part of our s42A Report.

The specific statutory planning matters under the Act are reported on in a summary manner in our s42A Report based upon the assessment of policy and effects assessments at a project wide and sector level. Our report format mirrors the way the project has been described and assessed in the application documentation.

Our overall assessment is generally favourable towards the project; however there are areas where further evidence is necessary to fully understand effects or provide appropriate mitigation in a timely manner. An overview opinion is provided in many cases. Issues that could benefit from the further definition of options and condition setting are identified and suggestions made regarding caucusing these matters.

We consider that once fully constructed the design, mitigation and environmental compensation is for the most part appropriate. However, we consider that the effects on certain communities and individuals during the construction period will be significant despite best practice management. This includes a large part of Waterview and parts of Owairaka and New Windsor communities.

We consider that some design changes and further mitigation warrant careful consideration. The highest priority areas include:

- Burial of both tunnel ventilation buildings and related ventilation stack design issues;
- Sector 8 off road cycleway;
- Wider public transport improvements;
- Marine reserve environmental strategy; and
- Refinement of the open space and sportsfield strategy including early replacement provision.

A comprehensive set of Conditions is promoted by the Applicant and commented on by submitters to address actual and potential adverse effects. During the course of the hearings and the Board's consideration of evidence we expect refinement of these



conditions and adoption of additional conditions, so the Project is, on balance considered to promote the purpose of the Act. As outlined in Chapter 14 a key area of inquiry should be around the conditions associated with the 12 Management Plans and whether they provide a suitable and certain process for the management of the Project's effects, if the consents and statutory approvals are granted.



## Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	INTRODUCTION .....	1
1.2	PURPOSE OF REPORT .....	1
1.3	DOCUMENTS REVIEWED & CROSS REFERENCING .....	1
1.4	REPORT AUTHORSHIP .....	2
1.5	SCOPE OF PROFESSIONAL OPINIONS OFFERED .....	3
1.6	SITE VISIT .....	3
1.7	NOR 6 EMERGENCY EXHAUST SH20 .....	3
1.8	FORMAT .....	4
<b>2</b>	<b>PROJECT OUTLINE .....</b>	<b>5</b>
2.1	INTRODUCTION .....	5
2.2	SECTORS OF THE PROJECT .....	5
2.3	STATUTORY APPROVALS AND APPLICATIONS .....	5
2.4	ROLE AND STATUS OF NEW ZEALAND TRANSPORT AGENCY (NZTA) .....	6
2.5	DOCUMENTATION .....	7
2.6	PROJECT OBJECTIVES .....	7
2.7	PROJECT HISTORY .....	8
<b>3</b>	<b>PRELIMINARY MATTERS.....</b>	<b>10</b>
3.1	LATE SUBMISSIONS.....	10
3.2	SCOPE OF SUBMISSIONS.....	10
3.3	NOTICES OF REQUIREMENTS.....	10
3.4	THE COUNCIL .....	11
<b>4</b>	<b>STATUTORY FRAMEWORK FOR DECISIONS .....</b>	<b>13</b>
4.1	INTRODUCTION .....	13
4.2	NOTICES OF REQUIREMENT .....	13
4.3	RESOURCE CONSENTS .....	14
4.4	ASSESSMENT OVERVIEW.....	14
<b>5</b>	<b>OVERVIEW OF SUBMISSIONS RECEIVED.....</b>	<b>16</b>
5.1	OVERVIEW .....	16
5.2	KEY PROJECT WIDE ISSUES .....	16
5.3	KEY SECTOR ISSUES .....	17
<b>6</b>	<b>SECTION 149G REPORTS.....</b>	<b>20</b>
6.1	OVERVIEW .....	20
6.2	WAITAKERE CITY COUNCIL.....	20
6.3	AUCKLAND CITY COUNCIL.....	21
6.4	AUCKLAND REGIONAL COUNCIL .....	22
<b>7</b>	<b>REGIONAL &amp; PROJECT WIDE EFFECTS .....</b>	<b>24</b>
7.1	INTRODUCTION .....	24
7.2	TRANSPORT.....	24
7.3	SOCIAL IMPACTS .....	27
7.4	CULTURAL IMPACTS.....	29
7.5	COASTAL PROCESSES .....	29
7.6	MARINE ECOLOGY .....	29
7.7	AVIAN ECOLOGY .....	30
7.8	AIR QUALITY .....	31
<b>8</b>	<b>PROJECT WIDE ALTERNATIVES, ROUTES &amp; METHODS .....</b>	<b>34</b>
<b>9</b>	<b>NATIONAL AND REGIONAL POLICY ASSESSMENT .....</b>	<b>35</b>
9.1	INTRODUCTION .....	35
9.2	RELEVANT STATUTORY DOCUMENTS .....	35
9.3	NATIONAL ENVIRONMENTAL STANDARD – AIR QUALITY 2004 .....	35
9.4	NEW ZEALAND COASTAL POLICY STATEMENT 1994 .....	36
9.5	NEW ZEALAND COASTAL POLICY STATEMENT 2010 .....	36
9.6	HAURAKI GULF MARINE PARK ACT 2000.....	37





9.7	AUCKLAND REGIONAL POLICY STATEMENT & PROPOSED PLAN CHANGE 6 .....	37
9.8	AUCKLAND REGIONAL PLAN: COASTAL 2004 .....	38
9.9	AUCKLAND REGIONAL PLAN: SEDIMENT CONTROL 2001 .....	40
9.10	PROPOSED AUCKLAND REGIONAL PLAN: AIR, LAND, WATER 2001 .....	40
9.11	TRANSITIONAL REGIONAL PLAN 1991 .....	42
<b>10</b>	<b>SECTOR &amp; LOCAL EFFECTS .....</b>	<b>44</b>
10.1	OVERVIEW .....	44
10.2	SECTOR 1 (NOR 1): TE ATATU INTERCHANGE .....	44
10.3	SECTOR 2: WHAU RIVER.....	49
10.4	SECTOR 3 (NOR 2): ROSEBANK TERRESTRIAL .....	51
10.5	SECTOR 4 (NOR 2): RECLAMATION .....	53
10.6	SECTOR 5 (NOR 4): GREAT NORTH ROAD INTERCHANGE .....	56
10.7	SECTOR 6 (NOR 3): SH16 TO ST LUKES.....	62
10.8	SECTOR 7 (NOR 4 & 5): GREAT NORTH ROAD UNDERPASS .....	65
10.9	SECTOR 8 (NOR 5): AVONDALE HEIGHTS TUNNEL.....	76
10.10	SECTOR 9 (NOR 7): ALAN WOOD RESERVE.....	81
<b>11</b>	<b>LOCAL POLICY ASSESSMENT .....</b>	<b>96</b>
11.1	FRAMEWORK.....	96
11.2	THE AUCKLAND DISTRICT PLAN – ISTHMUS SECTION 1999 .....	96
11.3	THE WAITAKERE DISTRICT PLAN 2003.....	97
<b>12</b>	<b>PROJECT NECESSITY FOR ACHIEVING NZTA OBJECTIVES .....</b>	<b>100</b>
<b>13</b>	<b>OTHER RELEVANT PLANS AND STATUTES.....</b>	<b>102</b>
13.1	NON RMA PLANS.....	102
13.2	OTHER STATUTORY APPROVALS .....	105
<b>14</b>	<b>PROPOSED CONDITIONS.....</b>	<b>106</b>
14.1	OVERVIEW .....	106
14.2	GENERAL OBSERVATIONS .....	106
14.3	SUBJECT CONDITIONS.....	108
14.4	ISSUES RAISED BY THE COUNCILS .....	109
14.5	AUCKLAND CITY COUNCIL.....	110
14.6	WAITAKERE CITY COUNCIL.....	111
14.7	AUCKLAND REGIONAL COUNCIL .....	112
<b>15</b>	<b>PART 2 MATTERS.....</b>	<b>114</b>
<b>16</b>	<b>CONCLUSIONS .....</b>	<b>116</b>

---

## APPENDIX

- A WESTERN RING ROUTE-WATERVIEW CONNECTION: REVIEW & ASSESSMENT OF MARINE ECOLOGICAL EFFECTS & SUBMISSIONS WITH RELEVANCE TO MARINE ECOLOGY.  
RYDER CONSULTING, NOVEMBER 2010
- B WATERVIEW CONNECTION PROJECT: FRESHWATER ECOLOGY REVIEW  
RYDER CONSULTING, NOVEMBER 2010
- C WATERVIEW CONNECTION PROJECT: SUMMARY OF SUBMISSIONS.  
ENVIRONMENTAL MANAGEMENT SERVICES, NOVEMBER 10, 2010
- D APPLICATION DOCUMENTATION



REPORT INFORMATION		
© Environmental Management Services Limited 2010. This document and its contents is the property of Environmental Management Services Limited. Any unauthorised employment or reproduction, in full or in part, is forbidden.		
Status of Report	FINAL: 7 DECEMBER 2010	
File Location	c:\users\murray\documents\h1073_waterview_boi_advice\report_7dec2010.docx	
Our Ref	H1072	
		Signatures
Author(s)	Murray Kivell Paul Thomas	
Reviewer	Stephen Daysh	
Revision Dates	Authorised by:	
18 November 2010: Review	Murray Kivell	
25 November 2010: Board of Inquiry	Murray Kivell	



# **1 INTRODUCTION**

## **1.1 INTRODUCTION**

- 1.1.1 Environmental Management Services Limited (EMS) has been commissioned by the Environmental Protection Agency (EPA) to prepare a section 42A report for the Board of Inquiry (the Board) into the Western Ring Route – Waterview Connection Project (the Project). This includes the preparation of a report summarising and analysing the submissions.
- 1.1.2 Ryder Consulting Limited has provided specialist advice and a supporting technical evaluation to our report. Their two reports focus on marine and freshwater ecology matters associated with the Project. We draw on that advice where necessary and again cross reference the key sections of their respective reports for ease of further consideration.
- 1.1.3 The Waterview Connection Project has been identified by the Government as a Road of National Significance (RoNS). It is considered one of seven of New Zealand's most important transport routes that require significant and urgent development.
- 1.1.4 The project seeks to complete the connection between SH16 (North Western Motorway) and SH20 which currently ends at Maioro interchange, and also to significantly upgrade SH16 between St Lukes and Te Atatu. The connection of the two motorways involves a substantial modification of the interchange at Great North Road. Once completed, this connection will provide an alternative route to SH1 between Manukau and Albany, and be a strategic part of the New Zealand State Highway network.
- 1.1.5 The New Zealand Transport Agency (NZTA) as a requiring authority has the authority to seek the designation of land, airspace and or sub-soil through Notices of Requirements to construct and operate a State highway. NZTA as a Crown entity is the promoter of this Project. A wide range of regional resource consents are also required to authorise the Project and have been sought.
- 1.1.6 For the purposes of this report, and considering the integrated nature of the NORs and resource consent applications, the AEE and proposed Management Plan conditions, NZTA is referred to generically as “the Applicant”.

## **1.2 PURPOSE OF REPORT**

- 1.2.1 This report is to assist the Board identify and determine the key issues in making decisions on the designations (seven Notices of Requirement) and resource consents (fifty-four) required under the Resource Management Act 1991 for the construction and operation of the Project having regard to the requirements of the Act and the submissions lodged.

## **1.3 DOCUMENTS REVIEWED & CROSS REFERENCING**

- 1.3.1 Forty-three volumes of documents comprise the application and supporting Assessment of Environmental Effects (AEE). While every effort has been made to



review these documents in the available time we note that the 'core' planning documents are:

- Overview NOR and Consent Applications;
- AEE Parts A-D;
- AEE Part E, Appendices and Part F, Plans and Technical Drawings;
- G.20 Assessment of Visual and Landscape Effects;
- G.21 Construction and Environmental Management Plan; and
- G.31: Technical Addendum.

1.3.2 Our focus has therefore been primarily on the review of these core documents. With the exception of G.20, G.21 and G.31, we refer to the specialist G-series reports where this assists in understanding specific issues. These core documents provide a very useful overview understanding of the Project. For completeness we list all the documents that comprise the application documentation as an Appendix D.

1.3.3 In general, we commend the applicant for the quality of documentation provided. The quantity of documentation will however have been challenging for all parties especially submitters and we hope that this report may assist with distilling the important issues and will provide a useful reference point for the Board as well as other parties.

1.3.4 Three reports have been prepared by the Auckland Regional Council, the Auckland City Council and the Waitakere City Council as commissioned reports to the Environmental Protection Agency (EPA) to assist the Board with its decision making. These section 149G Reports consider the project against the provisions of the respective statutory plans of these former Councils. These reports are commented on and cross referenced in this Section 42A Report as appropriate.

1.3.5 In a similar way the application documents prepared by the NZTA are extensively cross referenced to avoid repeating material in the application, as also are submissions referenced from the Summary of Submissions Report in Appendix C of this Report. We have accordingly sought to apply the enabling provisions of s42A(1A) and (1B) Resource Management Act 1991 (RMA 1991); namely:

- the report does not need to repeat material from an assessment of environmental effects provided by the applicant; and
- the report may adopt the whole assessment; or adopt any part of the assessment by referring to that part adopted.

1.3.6 Notwithstanding this, in order to canvass the issues associated with the Project and comment on submissions it has been necessary to encapsulate in summary form the relevant information from the AEE. Cross referencing is by way of bracketed references to reports, chapters or page numbers. Direct quotations from the referenced reports are in *italics* and supported by chapter or page references for traceability.

## 1.4 REPORT AUTHORSHIP

1.4.1 The report has been jointly authored given the volume of documentation provided to support the statutory approvals and applications, and the limited timeframes within which the report is required to be prepared.





- 1.4.2 Murray Kivell is a full member of the New Zealand Planning Institute. Murray also has a Diploma in Business Studies (Dispute Resolution) (Massey University) and is an Associate of the Arbitrators' and Mediators' Institute of New Zealand. Murray is a Director of Environmental Management Services Ltd and has thirty years professional planning experience. We record that Murray was Planning Manager and Deputy Team Leader for the Rangiriri Bypass Project (from 2007-2010) which forms a section of the Waikato Expressway project, a RoNS project that has recently proceeded through the statutory planning processes.
- 1.4.3 Paul Thomas is a resource management planner and Director of Environmental Management Services Ltd, Paul has over 30 years professional experience most of which has been in New Zealand. Paul is a member of the New Zealand Planning Institute, Royal Town Planning Institute and Resource Management Law Association and is an Independent Commissioner accredited as a Chair by the Ministry for the Environment. While Paul has undertaken studies for NZTA and its former organisations, Paul does not currently have any NZTA commissions.
- 1.4.4 Stephen Daysh is a resource management planner and Director of Environmental Management Services Ltd, based in Napier. He has undertaken a peer review of this report (in tandem with a site visit with Murray Kivell on 24 November 2010, but with reference to only a few of the key documents due to the time constraints of the Peer Review). This internal EMS Peer Review was undertaken in parallel with the draft being commented on by the Board.

## **1.5 SCOPE OF PROFESSIONAL OPINIONS OFFERED**

- 1.5.1 It is not within the scope of our professional expertise as resource management planners to provide our technical review of expert technical assessments that have been provided across a range of topics, other than to draw on the independent marine and freshwater ecology advice provided by Ryder Consulting as part of our s42A report.
- 1.5.2 However the report does identify and crystallise the principal issues, environmental effects and policy that will be contested through the inquiry process and the questions that are expected to be resolved.
- 1.5.3 Where appropriate an overview opinion is provided on these matters and the nature and extent of those environmental effects assessed and the prospect for their mitigation along with the appropriateness of the proposed conditions.

## **1.6 SITE VISIT**

- 1.6.1 A site visit was completed on Thursday 28 October 2010 in the attendance of Kim Morgan from the EPA, Amelia Linzey (Beca), Nesh Pillay (Green Group Ltd) and Deepak Rama from the NZTA. Murray Kivell, Paul Thomas and Ian Johnson from EMS attended along with Greg Ryder and Brian Stewart from Ryder Consulting Ltd.

## **1.7 NOR 6 EMERGENCY EXHAUST SH20**

- 1.7.1 On 15 November 2010 the Applicant advised the EPA that NOR 6 relating to the Cradock Street Emergency Exhaust facility has been withdrawn from the Project. In the absence of further information or explanation we are unclear as to the



consequential effects this may have on the operation of the tunnel ventilation system and the safety of the motoring public using the proposed tunnels. The Applicant needs to advise the Board fully on this and any related changes to the design of the Project, and the associated environmental effects and mitigation measures.

1.7.2 On this basis, our Chapter 10: Sector and Local Effects no longer discusses NOR 6.

## 1.8 FORMAT

1.8.1 The format for our report is:

Section 2 provides an **Overview of the Project**.

Section 3 addresses **Preliminary Hearing Issues** that need to be highlighted.

Section 4 sets out the **Statutory Framework for Decisions** for decisions on the NORs and resource consents.

Section 5 provides an **Overview of Submissions Received**.

Section 6 comments on the three **s149G reports**.

Section 7 considers the **Project Wide Effects** of the Project.

Section 8 considers the extent to which there has been consideration of **Alternative Routes and Methods**.

Section 9 considers relevant **National and Regional Policy issues**.

Section 10 then considers the **Local Effects Issues** divided into the 9 sectors of the project.

Section 11 then considers any **Local Policy Issues** associated with local effects.

Section 12 addresses the statutory test of **whether the project is necessary** for achieving the Objectives of the Requiring Authority.

Section 13 considers **other relevant statutes and plans**.

Section 14 comments on the **conditions proposed** and issues arising.

Section 15 considers **relevant Part 2 matters**; and finally

Section 16 provides the **conclusions**.



## **2 PROJECT OUTLINE**

### **2.1 INTRODUCTION**

- 2.1.1 The Waterview Connection Project (the Project) completes the missing link between two sections of the State highway network, the Western Ring Route, SH16 (WRR) and the Waterview Connection SH20 by providing a motorway-to-motorway connection.
- 2.1.2 Once the Project is complete, this will create a motorway link between Manukau (in South Auckland) and Albany (in the North Shore) comprising SH20 (the South Western motorway), SH 16 (the north western motorway), and SH18 (Upper Harbour motorway). Figure 1.1 provides an illustration of the regional context for this Project (Assessment of Environmental Effects Parts A, B and C; Page 1.3).
- 2.1.3 The Project's strategic significance is that completion of the works will provide an alternative route to SH1 through the Auckland region, and particularly through the Auckland Central Business District (CBD) (Overview, Pages O.3-O.7). The Project also maintains the land corridor for the Avondale to Southdown Rail Line. (Overview, Pages O.12)
- 2.1.4 Given this strategic context, the Project is recognised by central government as part of a Road of National Significance (RoNS).

### **2.2 SECTORS OF THE PROJECT**

- 2.2.1 The Project is described and assessed in nine geographic sectors which in turn provides the basis for supporting analysis of the seven, severable/stand alone Notices of Requirement (NORs) and fifty-four regional resource consents.
- 2.2.2 Physical works associated with the upgrade of SH16 comprises sectors 1 to 6, for works associated with the upgrade between Henderson Creek and the Te Atatu Interchange and the St. Lukes Interchange, and sectors 7 to 9 that comprise the SH20 corridor between the existing Great North Road Interchange and the Maioro Street Interchange. (Overview Page O.5)
- 2.2.3 A most useful reference table is Figure 5: Summary of Notices of Requirement in Relation to Geographic Sectors of the Project. (Overview: Page O.15). This is key to understanding the 'breakdown' of the Project into its geographical areas and the component NORs. The framework for our assessment of the Project adopts this sector breakdown.
- 2.2.4 An equally informative set of plans is provided in G.21 Construction Environmental Management Plans, Appendix C – Environmental Maps and Plans, to provide an overview of the physical works associated with the Project.

### **2.3 STATUTORY APPROVALS AND APPLICATIONS**

- 2.3.1 The advice provided in each of the three s149G reports received by the Board of Inquiry affirms that, in their assessment, all resource consents required have been



applied for. We are satisfied that the EPA and Councils have been diligent in determining the resource consents required and the statutory approvals necessary within their respective boundaries in consultation with the NZTA project team. However, we do discuss some related issues in Section 3.

2.3.2 It is therefore noted that the *Overview, Notices of Requirements and Consent Application Forms* record:

- One NOR and land use consent is required from the former Waitakere City Council;
- Six (now 5) NORs and one land use consent is required from the former Auckland City Council; and

Fifty-two regional consents and permits are required from the former Auckland Regional Council.

2.3.3 Legal advice should confirm the nature of the transitional provisions under the Local Government (Auckland Council) Act 2010 that apply for the new Auckland Council consideration of these consents and designations.

## 2.4 ROLE AND STATUS OF NEW ZEALAND TRANSPORT AGENCY (NZTA)

2.4.1 NZTA is a Requiring Authority, with scope to utilise the powers under Section 8 - Designations, of the RMA to designate or alter an existing designation. (*Overview, Notices of Requirements and Consent Forms: Appendix D: Order in Council*).

2.4.2 It is noted on *Overview, Page O.13* that NZTA is seeking to, with reference to *Figure 5, Page O.15*:

- Designate four (now three) contiguous areas of land as a new designation and these are recorded as being NOR 4 (Highway Purposes), NOR 5 (Sub-Strata), and NOR 7 (Highway Purposes); and
- Alter three existing designations and these are recorded as NOR 1 (Alteration to NZTA1), NOR 2 (Alteration to A07-01), and NOR 3 (Alteration to A07-01).

2.4.3 The Requirements can be summarised in relation to the State highway network and Project sectors as follows:

NOR	Sector 1	Sector 2*	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Sector 8	Sector 9
1	SH16								
2			SH16	SH16					
3						SH16			
4				SH16	SH16/SH20		SH20		
5							SH20	SH20	
6								<b>Withdrawn</b>	
7									SH20

\* Denotes land use consent is required, referenced as WCC: LUC -2010-1035 and ACC: R/LUC/2010/3396; reclaimed land for SH16 and Ancillary Activities (Section 149E RMA 1991 Submission Form)

2.4.4 NOR 1 is in the jurisdiction of the former Waitakere City Council. NORs 2-7 are in the jurisdiction of the former Auckland City Council. There is an overlap between the sectors and the land requirement boundaries for each NOR.



## 2.5 DOCUMENTATION

2.5.1 The forty-three volumes of information lodged in support of the Project can be grouped into:

- Overview, Notices of Requirement and Consent Application Forms – the presentation of the formal applications are in Appendices A, B and C; and
- Assessments of Environmental Effects (Parts A, B, C, D (Vol 1 and 2), E, and F); and
- G-series technical reports (G1-31).

2.5.2 We note that the NORs are severable to the extent that any one or all Notices of Requirement will be subject to the Board being able to cancel, confirm or confirm the requirement but modify it or impose conditions through their decision making powers under section 149P and section 149Q and R, RMA 1991. Similarly, all the resource consents are potentially severable.

2.5.3 The Project has been presented by the Applicant as one project from a strategic level and then in terms of its localised elements or sectors. We have followed that structure of assessment in our report.

## 2.6 PROJECT OBJECTIVES

2.6.1 The Agency's mandate in terms of its statutory functions is prescribed under the Land Transport Management Act 2003, and the applicant notes that sections 94, 95 and 96 (Page 0.8) requires the Agency to fulfil certain functions. Each NOR records the Agency's objective under section 94 as "to undertake its function in a way that contributes to an affordable, integrated, safe, responsive and sustainable land transport system." (NOR, Page 5 for example). This is the statutory objective for the Agency and is distinct from the Project objectives noted below.

2.6.2 It is understood that the Government Policy Statement on Land Transport Funding 2009/10-2018/19, March 2009 identified Roads of National Significance (RoNS) and identified this project as an essential route to be advanced quickly.

2.6.3 We note from Chapter 3 of the AEE (Parts A, B, and C) that the objectives for the project are stated as:

1. To contribute to the regions critical transport infrastructure and its land use and transport strategies.
2. To improve accessibility for individuals and businesses and support regional economic growth and productivity.
3. To improve resilience and reliability of the State Highway network.
4. To support mobility and modal choices within the wider Auckland Region, and
5. To improve the connectivity and efficiency of the transport network.

2.6.4 The application imply that the Project Objectives flow from the strategic guidance set down in the Government Policy Statement referred to above and other Plans referenced as the State Highway Plan and Forecast 2008/09-2017/2018 and the National Land Transport Programme (NOR 1, Page 5).



## **2.7 PROJECT HISTORY**

- 2.7.1 The history of the Project is presented in the AEE Chapter 9 - Investigation Process. This provides useful background to the lengthy evolution of this project over some ten years. From the AEE Chapter 10 – Consultation, it is clear that the Project has undergone considerable refinement in terms of the overall integration of two separate projects (SH16 and SH20 projects) and the preferred route alignment based on investigations, community feedback and route option generation and refinements.
- 2.7.2 The community has been involved extensively throughout the investigation phases and while for some this is positive for others it creates considerable uncertainty and stress.
- 2.7.3 We comment later in this report on the adequacy of the consideration of alternative methods and routes.





### **3 PRELIMINARY MATTERS**

There are a small number of preliminary issues to note.

#### **3.1 LATE SUBMISSIONS**

3.1.1 Eighteen late or non-conforming submissions were received. These were passed to the Chairman of the Board of Inquiry for determination. All eighteen submissions have been accepted, and are recorded as submission numbers 233-250. One late submission was allocated submission number 189.

#### **3.2 SCOPE OF SUBMISSIONS**

3.2.1 Submissions have in some cases sought outcomes that require works by NZTA to be provided beyond the footprint of the land required for designation of the works, or actions/commitments beyond the statutory powers of the NZTA as a road controlling authority to commit to such matters.

3.2.2 Some submitters are seeking agreements with the NZTA as part of the mitigation package associated with the Project. Examples are the Auckland Council and Housing New Zealand.

3.2.3 If agreements of memorandums of understanding are reached during the course of this process then copies of these documents should be made available to the Board for their consideration.

3.2.4 We also note that some of the relief sought in submissions, if accepted, would require additional resource consents. Providing additional cycle bridges in Sector 8 is an example.

#### **3.3 NOTICES OF REQUIREMENTS**

3.3.1 It is noted that the new NORs, in each case refer to the designation of the 'project', and the works that comprise the project in each NOR are described. Section 168(2) enables a project to be designated. However, Overview, Figure 5 at page O.15 describes the new designations as being for 'Highway Purposes'. We note that the works described in the NOR specify that the road will be a motorway which we understand to have a specific legal meaning. We also note that the designation using the term 'Project' is appropriate and avoids difficulties with works proposed that are ancillary to the highway such as open space development and that Figure 5 should be amended accordingly.

3.3.2 We also note that the alterations to existing designations are for a designation titled 'State Highway 16 (SH16)'. We are aware that there are a few examples of where works within the altered designation will not at any time have the status of being part of the 'State Highway'. An example is the private driveway realignment on the north side of Te Atatu Road west of the Interchange. In the event that the designation alterations are approved, then it could be argued that this work is not within the scope of the designation. It is important that all works are correctly legally authorised





and this matter is therefore brought to the attention of the Board and the Applicant so that if necessary it can be addressed.

- 3.3.3 We note that the consent authorities consider that all consents required have been sought.

### **3.4 THE COUNCIL**

- 3.4.1 The reorganisation of local government has seen the creation of the Auckland Council and the disestablishment of the previous Councils including:

- Auckland Regional Council;
- Waitakere City Council; and
- Auckland City Council.

- 3.4.2 In addition the Auckland Regional Transport Authority has been replaced by Transport Auckland.

- 3.4.3 These parties all made important submissions on the project. We note that Section 78(18) of the Local Government (Auckland Transitional Provisions) Act 2010 states that:

*“Any matter under the RMA that was lodged, notified, or commenced by or with an existing local authority but which has not been determined or completed by the existing local authority is transferred to the Auckland Council.”*

Similar provisions apply to Transport Auckland.





## 4 STATUTORY FRAMEWORK FOR DECISIONS

### 4.1 INTRODUCTION

- 4.1.1 The specific statutory planning matters to be considered under the Act in relation to the Project are summarised in section 4.4. These relate to the Notices of Requirement for new designations under s168 RMA 1991 and the alteration of existing designations under section 181 RMA 1991, and the resource consents that would normally be considered by the Councils, and now are to be considered by the Board of Inquiry. (Overview, Notices of Requirements and Consent Application Forms; Appendix A: Notices of Requirements; Appendix B: Consent Application Forms; Appendix C: EPA Application Forms, and AEE, Chapter 7.3).
- 4.1.2 The Assessment of Effects, Parts A, B, and C - Section 1.4.1 notes that *“the elements of the Project subject of an Outline Plans of Works are incorporated into the documentation supporting the NORs and applications for resource consent. Accordingly, it is considered that no Outline Plan(s) of Works need be submitted prior to the commencement of construction.”*
- 4.1.3 The implication is that a waiver is requested under section 176(A), albeit this is not formally sort or stated as part of each NOR. This matter needs clarification by the Applicant. We note however that the drawings are comprehensive and detailed to sufficiently inform on those matters required to be provided for under this section of the Act. We also discuss the matter in Chapter 14 – Proposed Conditions.
- 4.1.4 The resource consents sought are bundled to be considered as a Non Complying Activity according to the assessment of the applicant (Page 23.1) and the advice provided in the section 149G Reports. This approach is appropriate in our opinion.

### 4.2 NOTICES OF REQUIREMENT

- 4.2.1 The seven (now six) Notices describe the key elements under the “nature of the proposed works”, and with a fuller description of the works being provided for, by way of references to sections of Chapter 4 Project Description (Operation) and Chapter 5 (Project Description (Construction)) and the AEE. The Drawings (Part F1: Designation Plans) further inform on the works in each section.
- 4.2.2 We note, that the description of the proposed works presented in each NOR is generic, but does link to subsequent chapters (and G-series reports), plans and drawings from which it can be determined that all specific works or structures appear to have been adequately recorded. These matters are discussed further in our Chapter 14 – Conditions.
- 4.2.3 Those matters required under Form 18 are cross referenced to other chapters of the AEE. Each Notice is for a severable and identifiable section of the Project corridor. The designation for the whole Project is collectively shown on Plan F.0: Notice of Requirement Plans.



### 4.3 RESOURCE CONSENTS

- 4.3.1 The overview describing the resource consents being applied for (Page O.19) notes that the effects of the activities for which consent is sought have been assessed as part of an integrated AEE.
- 4.3.2 The various land use consents for works (3) on reclaimed land under the section 89(2), regional land use consents (6), discharge permits (9), water permits (4), and coastal permits (32) are presented in the Overview volume, and a separate table usefully records the relevant Plan reference and activity status for each consent sought (Pages 7.9 - 7.20).
- 4.3.3 In several cases the Applicant notes that resource consents sought are made “*with an abundance of caution*”.
- 4.3.4 The Applicant assesses that the consents sought are for non-complying activities (on a bundled basis) given the non-complying status accorded many of the coastal permits.
- 4.3.5 As non-complying activities Section 104D requires the so called ‘gateway’ tests are to be applied; either (paraphrased):
- The adverse effects will be minor; or
  - The application(s) will not be contrary to the objectives and policies of relevant plans.
- 4.3.6 Section 105 also records additional matters to be considered in relation to Discharge Permits. Regard is to be had to (paraphrased):
- The nature of the discharge and the sensitivity of the receiving environment;
  - The reasons for the choice; and
  - Possible alternative methods of discharge.

### 4.4 ASSESSMENT OVERVIEW

- 4.4.1 When considering an NOR and any submissions consideration must be given to the effects on the environment of allowing the Project having particular regard to section 171 (a)-(d) as summarised above, and then the whole of section 171 (1) matters is subject to Part 2 of the RMA. In this way Part 2 matters have primacy over these other considerations. In circumstances where a conflict is foreseen then Part 2 matters (the purpose and principles) must be accorded the greatest weight.
- 4.4.2 The consideration and weighting given to Part 2 matters applies equally to the resource consents as noted in the summary table below.
- 4.4.3 Overleaf we summarise the assessment framework with respect to all the statutory approvals required under the RMA 1991:



Assessment Criteria (Summary only)	Notice of Requirement (NOR): RMA Section Reference	Resource Consents: RMA Section Reference
Submissions received	Section 171(1)	Section 104(1)
Part 2 Matters: Sections 5, 6, 7, & 8	Section 171(1)	Section 104(1)
Effects of works on the environment	Section 171(1)(b)(ii)	Section 104(1)(a)
Relevant provisions of policy statements and plans	Section 171(1)(i)(iii) (iv)	Section 104(1)(i)(v)
Consideration of alternatives - sites, routes, methods	Section 171(1)(b)	
Works reasonably necessary – to achieve objectives of requiring authority	Section 171(1)(c)	
Any other relevant matter consent authority considers reasonably necessary to determine application	Section 171(d)	Section 104(1)(c)
Matters relevant to a discharge permit or coastal permit		Section 105
Restrictions on grant of discharge consents		Section 107

4.4.4 Each of these matters is addressed in the following chapters of our report.

4.4.5 The application documents identify and examine to a considerable degree of technical detail many of the potential effects and their scale of impacts on the environment and the communities along the designated corridor. In considering these effects and the adequacy of the supporting assessments we are mindful of the definition provided in the Act of the term “effect” that states at section 3:

- (a) Any positive or adverse effect; and*
- (b) Any temporary or permanent effect; and*
- (c) Any past, present or future effect; and*
- (d) Any cumulative effect which arises over time or in a combination with other effects-  
regardless of scale, intensity, duration, or frequency of the effect, and also includes-*
- (e) Any potential effect of high probability; and*
- (f) Any potential effect of low probability which has a high potential impact.*

## 5 OVERVIEW OF SUBMISSIONS RECEIVED

### 5.1 OVERVIEW

5.1.1 Attached as Appendix 3, is the EMS Report “Waterview Connection Project – Summary of Submissions (November 10, 2010)” prepared for the EPA. This provides a review of the 251 submissions received to the Project. The report provides a narrative structured to inform on the following three matters for the Board:

- What are the key issues?
- How significant are they to submitters?
- Where are the key areas of concern?

5.1.2 The Report provides our qualifications on how the analysis could be interpreted, against the background that:

- The Project is complex and covers a large geographical area and a number of communities;
- The assessment of the Project promoted by the Applicant is based around nine sectors; and
- The submission form enabled responses to be provided on each Notice and each individual consent application.

5.1.3 Appendix A to the Summary of Submissions Report provides a full summary of all submissions. Appendix B records the status of the submissions. Appendix C records submitters who raised non-location specific matters.

5.1.4 Our assessment therefore provides both an issues based assessment and a sector based assessment.

### 5.2 KEY PROJECT WIDE ISSUES

5.2.1 Not surprisingly, given the complex nature of the Project a significant range of issues have been raised in the submissions. Table 3 from the Summary of Submissions Report is set out below to provide an overview of the issues. These issues are not termed the “Principal Issues” referred to under Section 149Q(2)(c) RMA that the Board is to provide assessment on. However, they do point to an initial checklist that we clarify in latter parts of our Report and will no doubt be clarified further at the hearings from the Board’s own enquiries and the evidence presented.

Issue	Scope
Property	Land loss, property values, compensation, Compliance with DP standards, Vibration, stability, subsidence, Risk assessment of tunnelling
Marine Environment	Marine life, native flora and fauna and chenier beaches Extent of Motu Manawa Marine Reserve Effects of reclamation and discharges Tidal flows, increased sedimentation – bridge design Climate change, sea level rise, peak oil Recreational users
Oakley Creek	Potential for flooding Discharge of heavy metals



	Native flora and fauna Loss of historic/archaeological/culturally important sites
Community effects	Health effects of ventilation stacks and untreated emissions Effects on community facilities/schools/crime Demolition of residential property Loss of and reduced quality green/recreational space Severance of communities and facilities Loss of open space connectivity Loss of social housing and reducing school rolls Counselling/support for residents Community consultation processes Construction timelines Combined effects of road and rail corridor
Amenity effects	Light, height, noise, dust, visual effects and mitigation Construction hours
Transport	Urgency to complete the ring road Reliability of modelling data Consideration of alternatives Continuity of bus lanes and cycleways Wider network effects Additional connectivity to SH20 or Waterview Interchange Additional pedestrian/cycle connections Construction Yard traffic 2006 alternative route AR1 Design requirements for HCV Alternative routes for dangerous goods, tunnel safety and emergency procedures Benefits relative to public transport
Process and Regulatory	Methods, timeframes, information and consultation Project Aims and Objectives Existing plans/strategies Overlap with rail designation Robustness of benefits assessment Amendments to provide clarity Protection of assets and operations Ongoing monitoring and reporting – noise, air, stormwater Safeguard options for rail Management Plans and stakeholder involvement
Cultural	Mauri of Oakley Creek and Motu Manawa Reserve Heritage and culturally significant sites Iwi processes and practices
Other	Includes: Tourism impacts Basalt exposures Effects on water quality for Mt Albert residents Leachate from contaminated soils Concrete slurry No comments provided

## 5.3 KEY SECTOR ISSUES

5.3.1 The “headline” sector based issues are summarised in Chapter 4 of the Summary of Submissions Report. Again, these cannot be said to be the “Principal Issues” but do provide a useful starting point for discussion. The issues are noted below along with the Chapter reference of the report in brackets:

Sector 1 (Chapter 4.2):

- Design and reconfiguration of Te Atatu Interchange including public transport provision
- Location of Construction Yard 1 and community use effects



Sector 2 (Chapter 4.3):

- Reduction of Motu Manawa Marine Reserve
- Navigation effects on the Whau River

Sectors 3 and 4 (Chapters 4.4 and 4.5):

- Recognition to Motu Manawa Marine Reserve and marine environment beyond including Waterview embayment and Oakley Creek inlet

Sector 5 (Chapter 4.6):

- Design of the GNI and local connections
- Connectivity between Waterview and Pt. Chevalier communities, the coastal area and Oakley Creek gully
- Impacts on cultural and historic areas
- Loss of open space and its equitable replacement in terms quantity, quality and location

Sector 6 (Chapter 4.7):

- Provision for alternative travel modes (bus prioritisation, pedestrian/cycleway connectivity)
- Noise mitigation treatments

Sector 7 (Chapter 4.8):

- Northern portal building and ventilation stack location and impact on community
- Oakley Creek quality and character
- Connectivity to Unitec Campus

Sector 8 (Chapter 4.9):

- Construction effects of the Tunnel
- Emergency Exhaust Stack
- Future role and location of reserves
- At grade pedestrian/cycleway connectivity

Sector 9 (Chapter 4.10):

- Noise effects associated with the open section of the motorway
- Southern portal building and ventilation stack location and impact on community
- Loss of usable open space
- Stream diversion and stormwater management effects on Oakley Creek
- Integration with wider road network

5.3.2 These matters are discussed further in Chapter 7: Regional and Project Wide Effects, and Chapter 10: Sector and Local Effects of this report. That discussion helps shape the Principal Issues that the Board is to consider.





## **6 SECTION 149G REPORTS**

### **6.1 OVERVIEW**

6.1.1 Section 149G of the RMA requires the EPA to commission each local authority to prepare a report on the key issues that includes:

- (a) Any relevant provisions of a national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposed regional policy statement, and a plan or proposed plan;
- (b) A statement on whether all required resource consents in relation to the proposal to which the matter relates have been applied for; and
- (c) If applicable the activity status of all proposed activities in relation to the matter.

6.1.2 In addition each of these reports have commented on what any permitted baseline might be for different parts of the Project. The ARC Report notes that with respect to the suite of regional resource consents the Project's scale, geographical extent and construction footprint is significant as to dwarf the stated permitted thresholds. The permitted baseline therefore should not apply in these circumstances.

6.1.3 Key matters that warrant the Board's consideration follow from our assessment, in an abridged form, with respect to each s149G Report.

### **6.2 WAITAKERE CITY COUNCIL**

6.2.1 The Report addresses issues concerning Sector 1 and NOR 1. The relevant statutory planning documents directed for further consideration are listed. Relevant only to this part of the corridor is the National Policy Statement on Electricity Transmission 2008 as transmission lines traverse the length of Jack Colvin Park. In our opinion the matter can be dealt with by consent conditions.

6.2.2 This report confirms that all resource consents required under the Waitakere City District Plan have been applied for. In reality the only consents sought relate to authorising the use of the reclaimed land once it has been created. The rest of the project in terms of land use it to be authorised by way of designation.

6.2.3 The report identifies the relevant policy statements and plans but does not identify the relevant provisions of those plans. Relevant sections of the Waitakere District Plan are also identified under Issue headings but the policy thrust of the Plan is not identified. The focus then is on rules with a view to addressing what a permitted baseline might be. It does not offer an opinion on whether a permitted baseline can legally or should be applied. But if it were applied nearly all works proposed within the currently designated area would fall within the baseline, but none of the works proposed for the expanded designation.

6.2.4 At 3.3.5 on page 26 the report identifies Plan Change 16 which aims to integrate urban growth with transport infrastructure. Again it does not identify the relevant provisions and does not offer any position on whether the project is consistent with the proposed Plan Change.



6.2.5 A number of existing designations are affected by the Project (Page 13). Two designations are shown on the Designation Plans (F1 series) concerning Watercare Services Ltd (WSL 9) and Vector Ltd (V3). The NZTA should advise the Board on whether the necessary approvals under s177 RMA 1991 are expected to be agreed with these parties and with other parties similarly affected by the Project.

### **6.3 AUCKLAND CITY COUNCIL**

6.3.1 This report provides a systematic assessment of the one resource consent application and six Notices of Requirement against the provisions of the Isthmus section of the Auckland City Plan.

6.3.2 This report also focuses heavily on permitted baseline issues and the plan rules that would apply if the project was being pursued by way of resource consent. We discuss this matter in some detail in our Chapter 10.10 concerning the proposed works in Alan Wood Reserve. As with the Waitakere Report the relevant policy statements and plans are identified but the relevant provisions are not. Similarly, rules are comprehensively identified but objectives and policies are not.

6.3.3 The report confirms that the bulk of proposed works that are located within the Special Purpose 3 Zone, which applies to the existing SH16 and the Avondale to Southdown Rail Corridor are permitted activities. However works outside this zone have a baseline that is generally not applicable to the project in terms of effects and attention is drawn to the height of the ventilation buildings and associated stacks and the ramp structures as the Great North Road Interchange which are well in excess of permitted height controls.

6.3.4 Some specific matters for further consideration are:

#### National Environmental Standards for Sea Level Rise

6.3.5 The prospect for a National Environmental Standard for sea-level rise and its potential influence on the design of works in the environs of Waterview Inlet where Oakley Creek drains may be pertinent (Page 8). We do not think the Board needs to give consideration to a possible future NES of unknown content. However, the Board does need to be satisfied that that the design itself future proofs the State highway corridor sufficiently given the State highway's strategic status. We have looked at report G.23 Coastal Works Report. This does not seem to provide information on sea level rise design issues but does reference other reports that might. We consider that evidence on this matter should be provided to assist the Board particularly given the NZCPS 2010 now requires consideration of the matter in relation to Policy 24: Identification of Coastal Hazards.

#### Traherne Island

6.3.6 Traherne Island is scheduled as an ecological feature and subject to Rule 5C.7.9 (summarised on Page 13 and Appendix 3). Traherne Island is zoned Open Space 1 and in relation to the permitted baseline the comment made is that the zone rules are the most restrictive in the Plan. We note that the island provides opportunities for ecological restoration and is identified as a potential release site for lizards. Furthermore, we understand that NZTA is carrying out a natural heritage restoration project on Traherne Island for which it has management responsibility. The island supports a delicate habitat so any future public access would have to be weighed against these environmental considerations.



Resource Consent under Section 89(2)

- 6.3.7 The report (Page 41) raises jurisdictional and procedural questions about giving effect to the reclamation of land and the ability to carry out works associated with the Project which are matters the Board may wish to seek legal advice on.

## **6.4 AUCKLAND REGIONAL COUNCIL**

- 6.4.1 We found this report a most helpful input to our assessment. It identifies key issues under the headings coastal works, coastal processes, ecology, land disturbance, contamination, stormwater and streamworks, groundwater and settlement. These issues are addressed in our Chapters 9 and 10. Some issues are of a precautionary nature but in our opinion point to the need for a robust set of conditions and monitoring to ensure performance and compliance over the long term. Some commentary records divergent opinion in relation to coastal processes and groundwater matters.
- 6.4.2 With regard to permitted baseline the report concludes that it has little or no relevance to the granting of the wide ranging regional resource consents. We agree with that assessment.
- 6.4.3 The report also provides some guidance on the relevant provisions of policy statements and regional plans and specifically identifies the relevant provisions in Appendices. Our consideration of these policies is addressed in Chapter 9.



## 7 REGIONAL & PROJECT WIDE EFFECTS

### 7.1 INTRODUCTION

7.1.1 The regional and project wide effects include positive effects as well as adverse effects. We summarise and comment on the issues and effects in accordance with the structure of the AEE Part D, Volume 1, Chapter 13.

### 7.2 TRANSPORT

7.2.1 The project upgrades and completes a critical part of the strategic transport network of the Auckland Region. These strategic routes are identified in the Auckland City District Plan and include routes that link the Region to other regions or connect strategic facilities.

7.2.2 In 2009 the SH20 Mount Roskill extension to Maioro Street was completed. The AEE reports (page 13.5) that this has resulted in a reduction in flows on roads such as Mount Albert Road and an increase in flows on roads such as Gillies Avenue to access the SH 20 extension.

7.2.3 Currently SH16 carries in excess of 100,000 vehicles per day. Growth in the future is reportedly contained by capacity which the project seeks to address. In addition projects such as Upper Harbour Drive Bridge Duplication and SH16 Brigham Creek enable traffic to divert from local roads to this strategic route.

7.2.4 Traffic modelling by the Applicant indicates that without the project travel times on the network in this part of Auckland will continue to increase with the SH16 PM peak being the most congested at a 16% increase.

7.2.5 In 2026 with the project in place the AEE expects there to be:

- An increase in traffic on SH18 Upper Harbour Drive by 2% suggesting that the project will not increase vehicle trips to and from the North Shore.
- A decrease in traffic on SH1 as a result of drivers choosing to use the Western Ring route. However, any available capacity on SH1 is then taken up by traffic diverting onto it from local roads.
- An increase in flows on SH20 at the Motorway network is completed.

7.2.6 Traffic using the project is expected to have the following origin/destination distribution:

- 11% to or from North Shore;
- 30% to or from Manukau and the south;
- 9% to or from Auckland CBD;
- 20% to or/ from Waitakere;
- 30% to or from Auckland City excluding the CBD.

7.2.7 The AEE suggests this shows that the project provides a through traffic function. However, this is not surprising given the lack of local access.



7.2.8 Travel times for all these origins and destinations decrease with the completion of the project with the most significant being those associated with Westgate, Henderson, Avondale and trips to the airport from Westgate, Rosebank and Westlake. Some delays do also arise due to delays on SH16 and SH20 outside of the project.

7.2.9 Overall the effects on the strategic network have been summarised in the AEE as:

- Improving the capacity of the Western Ring Route;
- Improving the resilience and reliability of the State Highway network; and
- Improving the accessibility and the effectiveness and efficiency of the State Highway network.

7.2.10 The SH20 component of the project is expected to attract 83,000 vehicles per day by 2026, which can be compared with a capacity of 150,000 vehicles. Most of the interchange ramps associated with the project are two lane and have been assessed by the Applicant as adequately accommodating predicted 2026 traffic flows.

7.2.11 On SH16 growth of traffic is largely associated with the increase in capacity of this stretch of highway and its long term performance does relate to other widening projects. Between 2006 and 2026 flows within the Project are expected to increase by 25% eastbound and 35% westbound. Eastbound travel times are expected to improve but queuing is still expected east of St Lukes Interchange towards the GNR Interchange. Eastbound queues are also expected at Te Atatu and at GNR Interchange.

7.2.12 Interchanges will also become congested and will require improved management of light phasing for signal controls.

7.2.13 On SH20 there is potential for northbound queuing extending back into the tunnel and a Tunnel Management Plan is proposed to address this. Otherwise SH20 is expected to operate satisfactorily.

7.2.14 With regard to capacity allocation between modes, this is an important issue and raises questions including:

- Is it appropriate (safe and efficient) to use shoulders on SH16 for bus priority;
- What issues will arise at interchanges including can this be controlled through ramp metering;
- Should the project provide for a dedicated bus way as opposed to bus lanes;
- Should the tunnel provide for PT or is it more effective to improve existing Great North Road facilities.

Some of these matters are commented on in our report, but will warrant enquiry during the course of the hearing.

7.2.15 The Project will also result in a reduction on flows on local roads of around 12% in 2016 and 14% in 2026. The Tiverton/Wolverton Roads are noted as an exception to this. The assessment notes particular benefits for the Te Atatu Road corridor and the project contributes to bus lane provision through the intersection.

7.2.16 Travel time improvements on local roads have been assessed and include:

Tiverton Wolverton corridor	13%
Great North Road	10% southbound
Carrington Road	16% AM peak southbound
Dominion Road	9%



Te Atatu Road	12% AM peak
Te Atatu Rd / Lincoln Rd	20-22% AM peak

- 7.2.17 Reductions in heavy commercial vehicles flows on local roads are also predicted due to transfer to the strategic routes.
- 7.2.18 The above assessment indicates that the Project is not a panacea to solve all of Auckland transportation issues. Some congestion areas will arise over time during peak hours. It is essential that the Project is therefore considered as a component in an overall transportation strategy. We consider its role in the current Regional Land Transport Strategy in a later section.
- 7.2.19 For public transport the Project does provide bus shoulders along SH16 as well as improvements to existing bus lanes at the Te Atatu Interchange. Some submissions have questioned whether these lanes will be effective when there is queuing at interchanges and would prefer the provision of a dedicated bus way. The detailed design of these bus lanes is worthy of detailed consideration to ensure that bus priority is maximised.
- 7.2.20 There are no dedicated bus lane facilities on SH20. Some submissions have suggested there should be and ACC have sought that the Great North Road Underpass accommodates an extension of an existing bus lane. Clearly bus priority has benefit where there is congestion enabling queues to be bypassed. We generally agree that if there is no evidence of material queuing occurring over time then bus priority is not necessitated.
- 7.2.21 Cycleways have been planned as part of the overall project except Sector 8 and this involves improved existing cycleways or provision of new cycleways. While there are local design issues raised in submissions this is an important feature of the Project overall. We note that standards require a 3m wide cycleway but that in the ACC submission in some locations a 4m wide provision is sought. We simply comment that commuter cycling can have very different speed characteristics to recreational cycling and there are important safety issues between both fast and slow cyclists and also pedestrians using the same shared path. We consider that this matter deserves further scrutiny before being satisfied that the planned provision is safe for the intended users.
- 7.2.22 We note section 13.2.4 that a Network Integration Plan is proposed to address traffic operational matters in partnership with the local road controlling authorities. We agree that careful management of works between NZTA and the Council is essential to achieving the wider project benefits. Appreciating the scope of approach, responsibilities and partnership arrangements would in our opinion assist the Board fully understand how the Project's "wider benefits" are to be realised.
- 7.2.23 In our opinion it would benefit the Board considerably if there was one integrated set of drawings and descriptions to describe the existing and proposed pedestrian pathways, the existing and proposed cycleways and the provision of bus lanes/bus ways and priority measures associated with the operation of each of the interchanges for the whole Project. This would enable the Board to have an informed overview of the transport management arrangements envisaged and the potential impediments to the efficient performance of the State highway and local road networks.
- 7.2.24 It would also be helpful for the Board to appreciate the current and future bus services provision on the local road network against the Applicant's assessment concerning the merits or otherwise of providing bus lanes on SH20.





- 7.2.25 We are not aware that the documentation includes an economic assessment of the costs and benefits of the project. While we would not want to put undue weight on this form of assessment we think it would assist the Board if such an assessment was available.
- 7.2.26 With regard to construction traffic the AEE considers that traffic will be able to use State Highways for the majority of their routes to Construction Yards. Movements have been estimated at 7,190 for the peak period of which 3,420 will be HCV movements. This is an increase in overall network flows of 2-3%, while minor, this is expected to still affect interchanges.
- 7.2.27 Construction work itself will also affect the functioning of the network and it is estimated that lane narrowing and other measures on the existing SH16 eastbound could increase travel times by between 8% and 29% and westbound 16% and 22%. The highest impact is expected at Te Atatu Road eastbound with an estimate 6 minute increase in travel time through this link. This is affected by the existing traffic lights the operation of which is to be reviewed to optimise capacity.
- 7.2.28 The modelling also shows some sections on SH16 with improved travel times due to traffic diverting off SH16 onto the local network with consequent effects. Worst affected is likely to be Great North Road, New North Road, Rosebank Road and Meola Road.
- 7.2.29 The Applicant proposes Site Specific Traffic Management Plans where lane closures are required to identify when these are permitted to occur. Alongside this, it is proposed that:
- A traffic management governance group be established to monitor traffic issues during construction;
  - Close liaison with passenger transport agencies;
  - Road user campaigns;
  - Advice on detour routes; and
  - Liaison with major traffic generators.
- 7.2.30 The effectiveness of mitigation methods is proposed to be monitored against traffic management auditing, travel speeds and operating efficiency. We consider that this is a robust approach. We note that the Construction Traffic Management Plan as drafted requires reporting on monitoring on a monthly basis and that this includes reporting to the consent authority.
- 7.2.31 Only a small proportion of the submissions have argued that the project is not justified in transport terms irrespective of mitigation. Those that have would prefer to see investment in public transport projects. The completion of this link is regarded as not only regionally important but nationally. The project will have substantial benefits but is only a small part of the regional transport issue. We expect it will take something of a step change in national policy towards comprehensive variable pricing of vehicle travel before it can be assured that infrastructure investments of this nature can achieve a high level of efficiency.

### **7.3 SOCIAL IMPACTS**

- 7.3.1 The following social benefits and impacts have been identified in section 13.4 of the AEE and are paraphrased:



Accessibility and connectivity including:

- Improvements to the network
- Regional public transport opportunities
- Cycle opportunities
- Improved regional access to residential areas, community facilities, education, employment and recreation.
- Passenger transport, cycle and pedestrian facilities will assist those without access to other modes.
- Reduction in traffic from local roads.

Economic growth and development:

- Improved access between centres resulting in improved productivity
- Improved access to employment opportunities
- In the long term improved quality of living and working spaces and overall urban form.

Sustainable Living Spaces:

- Environmental improvements and mitigation compensate for reclamation.
- Provision of stormwater treatment
- Decrease in traffic from local streets

Healthy Communities:

- Improved access and mobility to healthcare facilities
- Improved traffic safety
- Improved access to active modes
- Improvements in air quality regionally and reduced emissions around arterial roads

7.3.2 This summary from the AEE indicates a strong net social benefit. We note that it does not consider the opportunities for communities associated with the construction period nor is there any assessment of regional economic benefits to support the assertions on productivity improvements. These are matters that should be considered in evidence. The only detailed reference we have identified to wider economic benefits is in Report G.14 Assessment of Social Effects, section 62, page 96. This refers to a projection of 18,000-18,500 jobs being generated as a result of the project over 10 years after completion. It also refers to a one off increase in GDP worth \$1.4 and \$2.4 billion, including welfare gains of between \$0.8 and \$1.3 billion. We note that this references a report called "Assessing the Wider Economic Impacts from the SH20 Waterview Connection; Ascari Partners 2007". This report is not part of the AEE documentation.

7.3.3 We note that many of the direct impacts are on the Waterview and Owairaka communities and these matters are commented on further in the assessments of "local effects" for Sector 5, sector 7 and sector 9 (in our Chapter 10).

7.3.4 We also note that at the expense of these project wide benefits is the disruption and nuisance effects of a 5-7 year construction period. In this regard we note that Construction Yards 3, 4 and 6 including the operation of a concrete batching plant are proposed in Sector 5. Construction Yard 7 is to be situated in Sector 7 with the site also adjacent to the Waterview community. Construction Yards 8, 9, 10, 11 and 12 and the operation of a second concrete batching plant are proposed for Sector 9 amidst the Owairaka and New Windsor communities. We consider these matters further in our concluding comments.



## **7.4 CULTURAL IMPACTS**

- 7.4.1 Te Kawaerau a Maki and Ngati Whatua o Orakei are recognised mana whenua for the project area.
- 7.4.2 The AEE reports on the consultation processes with iwi (refer 13.5.1.3 page 13.30) and it is clear that a cultural assessment has not been completed by mana whenua at the time of lodging consents. A submission has been submitted by Ngati Whatua o Orakei but not by Te Kawaerau a Maki.
- 7.4.3 This is not unusual for large infrastructure projects, but the Applicant should be encouraged to continue dialogue with iwi and hapu through the hearing process as in terms of decision making it is important that Section 6 (e) and 7 (a) in particular are recognised and provided for and had regard to, respectively.
- 7.4.4 Notwithstanding this, the issues of concern to iwi have been set out in section 13.5.2.1 and 13.5.2.2. The principle issue is whether values of importance to iwi have been adequately protected or provided for in the project design and mitigation. We will not comment further at this point preferring that those appearing at the hearing address their concerns directly to the Board.
- 7.4.5 However, we do alert the Board to the AEE at Part E, Appendix E.6 which provides a heritage assessment on SH16 and cultural heritage report on SH20 prepared by Ngati Whatua o Orakei dated July 2009 which strongly opposes the proposal. The preference is for investment in public transport and there is concern regarding effects on heritage sites. However, if the project were to proceed a “mainly tunnelled option” would be supported.

## **7.5 COASTAL PROCESSES**

- 7.5.1 Construction will require temporary occupation of the Coastal Marine Area (CMA) for construction of bridges and reclamation. The AEE assessment is that flows will not be adversely affected and there will be negligible changes to flushing.
- 7.5.2 Sheet piling or temporary coffer dams will be used to create a dry working area. Reclamation areas relating to drainage channels associated with Pollen Island are to have vertical retaining walls to avoid/minimise drainage impacts. It is also proposed to manage the creation of new drainage channels where proposed in order to minimise sediment discharges. Affected shell deposits are also to be removed stock piled and replaced.
- 7.5.3 Once completed the assessment concludes that the long term effects of reclamations on tidal flows and associated coastal processes will be no more than minor.
- 7.5.4 Few submissions have raised specific concerns about coastal processes but many are concerned about the wider integrity of the Marine Reserve. This issue is further considered below, and in our Chapter 10: Sector and Local Effects.
- 7.5.6 We are generally satisfied that these issues have been adequately assessed.

## **7.6 MARINE ECOLOGY**



- 7.6.1 Associated with the coastal works are the effects on marine ecology. This aspect has been the subject of technical review by Ryder Consulting and is reported in Appendix A.
- 7.6.2 The AEE reports on this matter in Section 13.7. This acknowledges that the reclamation of 4.7 ha of the CMA will have an “adverse and permanent impact”. However, the affected areas are of moderate to low ecological value. While there will be no permanent change in the area’s overall integrity its significance is still regarded as “moderate”.
- 7.6.3 In terms of cumulative effects the move to treatment of all stormwater is regarded as a material benefit. In addition to construction methodologies to minimise impacts specific ‘off set mitigation’ is proposed involving:
- Provision of a habitat remediation zone on either side of the reclamation revetments. This is to allow marine organisms to recolonise this area over time;
  - Achieving 80% contaminant removal from stormwater;
  - Restoration of coastal fringe habitat; and
  - Removal of litter and debris.
- 7.6.4 Ryder Consulting considers the assessments to be appropriate and that the proposed mitigation goes a considerable way to offsetting the loss of marine reserve. The Ryder Consulting report also considers and comments on the submissions relevant to this area.
- 7.6.5 However, the report does propose that further mitigation be explored; specifically the expansion of the marine reserve to compensate for land lost. We are aware that approval under the Marine Reserves Act is required and will be pursued once the RMA consents have been determined. Expansion of the marine reserve by way of a designation condition is, we think, beyond the Board’s jurisdiction. However, those determining the Marine Reserve Act consent will be able to consider this specific matter as part of their jurisdiction.
- 7.6.6 The Applicant should inform the Board whether there are other measures to provide off-set mitigation (by way of land transfer of Traherne Island to form part of the marine reserve, funding to support ecological enhancement of the reserve or other means) that may be appropriate.

## 7.7 AVIAN ECOLOGY

- 7.7.1 Effects on Avian Ecology are reported in the AEE in Section 13.8. A range of common bird species have been identified both in terrestrial habitats and coastal area. ‘Threatened’ species observed include Caspian tern, pied shag, red-billed gull, reef heron, and wrybill. ‘At Risk’ species included pied stilt, black shag, little black shag, South Island oystercatcher, variable oystercatcher and white fronted tern. The banded rail and fernbird have also been identified on Pollen Island and Traherne Island.
- 7.7.2 The Applicant’s assessment concludes that construction effects will comprise:
- The extent of vegetated habitat removal and its effect on common urban species will both be minor.



- There is a risk of breeding season mortality from tree removal which could be minimised if this works avoids the breeding season.
- There will be an adverse effect on a soft mud intertidal used for feeding by wrybill and others. The affected area is small and this is assessed to be a minor effect.
- There will be a temporary loss of roosting habitat during construction and until new planting is established. This will be mitigated through the provision of temporary roosting structures.
- There is a risk of disturbance of birds during construction but this will be temporary and without any long term consequence.
- The effects of discharges during construction will not have adverse effects given the proposed sediment control regime.

7.7.3 Once constructed operational disturbance is not expected to have any material effect and the same diversity of birds will continue to use the area. The stormwater wetlands will provide additional habitat for some species.

7.7.4 An Ecological Management Plan has been prepared and is located at Report G.21 Appendix C. This includes provision for weed control and animal pest control on Traherne Island to mitigate cumulative impacts of habitat removal, including the permanent loss of reclamation.

7.7.5 We consider that this is generally appropriate and have commented above on submissions seeking expansion of the Marine Reserve.

## 7.8 AIR QUALITY

7.8.1 The Applicant's Air Quality Assessment is reported at section 13.9 and tells us that pollutants are typically dispersed from the Auckland Air Shed in under 24 hours and there is very little evidence of accumulation of pollutants over several days. ARC has reported that emissions from transport contribute 47% of particulate matter and 85% of carbon monoxide.

7.8.2 The AEE assessment concludes that:

- Once operational the Project will have negligible impact on the total emissions from road transport to the Region's air shed.
- Across the project area concentrations of pollutants to decrease with or without the project.
- People living close to busy roads in the Project area are predicted to have a reduced exposure to vehicle related air pollutants as a result of the project.
- The project will result in an increase in PM10 and NO2 for one quarter of the receptors identified across the project area, while another quarter have a decrease in PM10.
- The biggest increase in concentrations is in Sector 9 due to low levels of traffic in this area, however exposure levels in all areas is assessed to comply with the Air Quality National Environmental Standard.
- The ventilation stacks have been designed to provide effective and efficient dispersion of vehicle emissions and the operation of the tunnel is expected to improve air quality due to removal of emissions and high level dispersion.

7.8.3 Overall it is concluded in the AEE that there will be no adverse air quality effects. However, monitoring is proposed to test the modelled effects.



- 7.8.4 We note that the emissions from the ventilation stacks are of particular concern to a number of submitters despite the technical evidence of reduced effects. A commitment to careful monitoring and effective communication over time will be important to address this community concern.
- 7.8.5 We also note that perceptions of adverse effects could be addressed through a commitment to treat the emissions which in turn may enable a lower stack with both cost and environmental benefits. We raise this again in relation to sector discussions but consider these issues should be carefully explored in the evidence presented to the Board.





## 8 PROJECT WIDE ALTERNATIVES, ROUTES & METHODS

- 8.1 The consideration to alternative sites, routes or methods is required when a requiring authority does not have an interest in the land to enable the works to be carried out or it is likely that the effects will have a significant adverse effect on the environment. Both situations apply in respect to this Project.
- 8.2 The Applicant considers this matter in the Overview Report (Page O.20) and in detail in Chapter 11: Assessment of Alternatives. Further, a number of the supporting G-series technical reports address a range of route, design and construction methodologies and approaches which we acknowledge has been an iterative exercise carried out over a considerable period of time.
- 8.3 An extensive period of consultation has mirrored this developmental process and has influenced corridor, route, alignment and the preferred design and construction details for the Project as a whole. Chapter 10 of the AEE records this and it is acknowledged the influence consultation with stakeholders and the community has had on the alternatives assessment.
- 8.4 Chapter 11 of the AEE records in summary the assessment framework in sufficient detail to satisfy us that alternative corridors, routes, alignments and interchange arrangements has been carried out influenced by the NZTA's statutory obligations, regional policy influences, constraints analyses, and options assessments incorporating the integration of the former two State highway projects into this Project.
- 8.5 Evidence of the recent assessment of combined tunnel options reflects the iterative nature of the Project. Further, records are presented of the design assessments undertaken for each of the nine sectors of the Project.
- 8.6 Overall, the consideration of alternatives is summarised and structured in the AEE to give an assessment of the preference for the final alignment and design of the Project. This is well supported by information collection and mapping. The detailed technical studies (G-series reports) support the generally thorough assessments of effects and have identified where those effects could potentially have been considered significant without changes to the design and the adoption of appropriate mitigation.
- 8.7 Mindful of recent caselaw on this matter we note that the assessment has been comprehensive crossing several territorial boundaries and presents evidence that the Project is appropriate while it is not necessary to show that it is the "best". We do note however that there is no specific Options Report that records or references supporting assessments or presents a single evaluation framework for the options assessments. Notwithstanding this, in our opinion the assessments that are summarised demonstrate that adequate consideration has been given to alternative sites and routes.
- 8.8 However, we suggest the Applicant provide further fuller documentation to the Board to confirm the adequacy of the multi-disciplinary options analysis of alternatives carried out.
- 8.9 The adoption of the designation process for the overall delivery of the Project is a common, well established and proven process for network infrastructure providers such as NZTA to use, and in our opinion is appropriate for the delivery of this Project.





## **9 NATIONAL AND REGIONAL POLICY ASSESSMENT**

### **9.1 INTRODUCTION**

- 9.1.1 The review of the policy framework is a challenging task given the number of statutory planning instruments to consider in the time available for completing our section 42A Report.
- 9.1.2 Our abridged assessment has been assisted by the guidance offered from the ARC section 149G Report, and the assessments carried out by the Applicant and presented in the 'core' planning documents to the applications. The Freshwater Ecology Review (Appendix B) and the Marine Ecology Review (Appendix A) both prepared by Ryder Consulting, as companion reports to this section 42A Report assists considerably with our assessment. Considered together, an overview opinion is presented with respect to each of these Plans, but this does not constitute a detailed audit of the policy.
- 9.1.3 Our general observation is that there is an alignment in the selection of the policy relevant to the consideration of the Project between the s149G Reports and the Applicant's assessments. The ARC report also acknowledges that various specialists have completed peer reviews of the Project from their respective professional disciplines as contributions to the ARC Report.

### **9.2 RELEVANT STATUTORY DOCUMENTS**

- 9.2.1 These relevant statutory planning documents are listed in the AEE at Page 6.1 and Page 6.17 to include, from a national or strategic consideration of the Project:
- National Environmental Standard – Air Quality 2004;
  - New Zealand Coastal Policy Statement 1994 (and 2010);
  - Hauraki Gulf Marine Park Act 2000;
  - Auckland Regional Policy Statement 1994;
  - Auckland Regional Coastal Plan 2004;
  - Auckland Regional Plan: Air, Land and Water 2001;
  - Transitional Regional Plan.
- 9.2.2 From a district perspective the relevant statutory planning documents are:
- Auckland City District Plan – Isthmus Section 1999; and
  - Waitakere City District Plan 1995.
- 9.2.3 Our consideration of each of these plans and policy statements follows. The consideration of the relevant provisions of the two District Plans is presented in Chapter 11 Local Policy Assessment.

### **9.3 NATIONAL ENVIRONMENTAL STANDARD – AIR QUALITY 2004**

- 9.3.1 The Applicant considers the obligations placed on the Project (23.2) and with reliance on G.1: Assessment of Air Quality Effects, concludes that for all modelled emission



scenarios, predicted pollutant concentrations will be less than the levels set (Page 23.3).

#### **9.4 NEW ZEALAND COASTAL POLICY STATEMENT 1994**

- 9.4.1 From 3 December 2010 the NZCPS 2010 has effect and therefore will be in effect when decisions are made on this project.
- 9.4.2 The Applicant considers the 1994 Policy Statement in Chapter 23 - Assessment of Planning Documents, and Appendix E3. The assessment addresses the four part policy framework relevant to the Project concerning natural character, special values to tangata whenua, activities involving subdivision, use and development, and the Crown's interest in land in the CMA. The assessment is that the Project is not inconsistent with these policies.
- 9.4.3 The ARC s149G reports also consider the Policy Statement. The report (Pages 28-29) is circumspect/ambivalent in determining consistency. We note that concerns expressed in the Ngati Whatua report on SH16 (refer AEE Appendix E.6) have largely been addressed and are largely environmental issues.
- 9.4.4 The impacts on the coastal environment are, based on the technical evidence presented by the Applicant, no more than minor so long as the mitigation measures provided are effective (Page 23.10). From our interpretation and summation of the advice provided by Ryder Consulting Limited (Appendix A) their opinion is similar, albeit an extension to the marine reserve is promoted as a compensatory mechanism for further consideration.

#### **9.5 NEW ZEALAND COASTAL POLICY STATEMENT 2010**

- 9.5.1 The objective and policy framework is more detailed in the New Zealand Coastal Policy Statement 2010. The new CPS provides more informed national guidance on protecting and managing the coastal environment. Seven objectives and twenty nine policies are more specific about how matters of national importance should be protected.
- 9.5.2 The key new policies pertinent to the Board's consideration of the Project are (paraphrased):

Policy 6 - Activities in the Coastal environment: (1) (a) and (b) recognise the provision of infrastructure important to the social, economic and cultural well being of people and communities, and built development and associated public infrastructure should be enabled to provide for the reasonably foreseeable needs of population growth without compromising values of the coastal environment.

Policy 10 – Reclamation and de-reclamation: avoid reclamation in the coastal marine area unless land options are not available, the activity cannot occur anywhere else, and or significant regional or national benefits accrue.

Policy 21 – Enhancement of water quality: give priority to improving water quality in situations where water quality has deteriorated so that it is having a significant adverse effect.



Policy 22 – Sedimentation: require use and development does not result in significant increase in sedimentation, and reduce sediment loads in runoff and in stormwater systems.

Policy 23 – Discharge of contaminants: manage discharges having regard to the sensitivity of the receiving environment and the nature of the contaminants.

Policy 24 – Identification of coastal hazards: identify areas in the coastal environment having regard to the cumulative effects of sea level rise, storm surge and wave height.

Policy 27 – Strategies for protecting significant existing development from coastal hazard risk: identify options for reducing hazard risk including (b) identifying the consequences of options relative to “do nothing”; (c) recognise hard protection structures may be the only practical means to protect existing infrastructure of national or regional importance; (d) recognising and considering the environmental and social costs of permitting hard protection structures against two criteria one of which is how change might occur over at least 100-year timeframe.

Policy 29 – Restricted Coastal Activities: clause (3) provides for already notified restricted coastal activities prior to 3 December 2010 to continue to be treated as such, and on this basis the Board is still required to make a recommendation to the Minister of Conservation for this activity. Legal advice should confirm whether this procedural step is in fact correct.

- 9.5.3 The Board is required to consider the 2010 Statement as part of its decision making. A balancing exercise remains to weigh up the potentially “competing” policy outcomes characterised by the Project with the most evident being between Policy 6 matters and those of Policies 10 and 27 for example when considering the Project’s overall merits.

## **9.6 HAURAKI GULF MARINE PARK ACT 2000**

- 9.6.1 In the opinion of the Applicant the Project also satisfies the requirements of this Act with respect to the works impacts on the wider Waitemata harbour.
- 9.6.2 In our opinion, the over arching policy framework of the NZCPS will determine whether the Project is consistent with this Act.

## **9.7 AUCKLAND REGIONAL POLICY STATEMENT & PROPOSED PLAN CHANGE 6**

- 9.7.1 The Applicant’s assessment of these two policy documents is presented in Chapter 23.5 (with a detailed assessment against all policy assessed as being relevant), in Chapter 6.4 and 6.5.3 (by way of a summary), and with the relevant provisions detailed in Appendix E.3.
- 9.7.2 The ARC Section 149G Report commentary is at Section 5.6. Specific policy is referenced, and while no clear conclusion is presented, our assessment is that the commentary points to the Project’s general conformance with the regional policy framework. However, the absence of an updated cultural assessment is noted and we request the applicant to inform the Board on the current position at or prior to the



hearings (Page 32). One further matter raised is the prospect that air discharges from the ventilation stacks dispersing towards adjacent dwellings may not maintain or enhance air quality and for this reason could be inconsistent with the objectives and policies for air quality (RPS Chapter 10). However, we note that the Applicant's technical assessment concludes that air quality will be improved.

9.7.3 The ARC report also recommends some weight is given to the provisions of Plan Change 6 (Page 36) which 'sought to codify the growth and transport strategies that have been agreed to in the Regional Growth Strategy.' This includes "a strategy to promote high density centres and corridors in Avondale, Mt Albert, Pt. Chevalier and future urban areas such as SH20/Stoddard Road, and Te Atatu Peninsula".

9.7.4 While it is unwise to 'cherry pick' policy, one policy relevant to this discussion is:

*Policy 2.6.14-1-The operation of existing regionally significant infrastructure and the provision of new or upgraded regionally significant infrastructure shall;*  
*(a) Be consistent with the Strategic Direction of the Regional Policy Statement;*  
*and*  
*(b) Support and reinforce the Regional Growth Strategy and the proposed outcomes of that strategy;*  
*(c) Ensure that any adverse effects of those activities on the environment (including human health) are avoided, remedied or mitigated in a manner consistent with the relevant provisions of this RPS.*

9.7.5 The Applicant has provided a detailed assessment of the Project's development impacts alongside the range of policy 'headings' presented in the RPS; for example Regional Overview and Strategic Direction (Chapter 2), Matters of significance to Iwi (Chapter 3), Transport (Chapter 4) for example. Commentary argues persuasively that the Project aligns with the Policy Statement.

9.7.6 There is a crossover to the regional level assessments in Chapter 13 of the AEE. The assessment also affirms the Project's alignment with the strategic policy direction of the RPS.

9.7.7 We note that Plan Change 6 is subject to extensive appeal, however it does significantly amend relevant sections of the RPS. We agree that appropriate weight should be given to this plan change and from an initial review we have not identified any inconsistencies with the intent of this Project. We also note that the nationally important/regionally significant infrastructure of the SH16 corridor has been located in part on and adjacent to the coastal environment since the 1950's. It therefore seems an efficient strategy to upgrade the corridor to continue to serve as a national and regionally significant transportation facility, and for the 'missing link' in the overall network to be completed and upgraded.

9.7.8 We take support for our view from the recognition that the ARLTS accords this network regional status as a strategic transport corridor.

## **9.8 AUCKLAND REGIONAL PLAN: COASTAL 2004**

9.8.1 The ARC Section 149G Report commentary is at Section 5.7. The referencing is extensive. The report advises that the objectives and policies of the Values section of the Plan provide part of the assessment criteria for determining the resource consent applications (Page 37).



- 9.8.2 General conclusions are recorded against the suite of provisions in the chapters of the RCP (Pages 37- 45). Our interpretation is that the Project measures favourably against some policy (Chapter 7 – Public Access, Chapter 10 – General, Chapter 11 – Activities, Chapter 12 – Structures) and less so against others (Chapter 3 – Natural Character, Chapter 4 – Landscape, Chapter 5 – Natural Features and Ecosystems, Chapter 13 – Reclamation and Drainage) for example.
- 9.8.3 The Applicant’s assessment is presented in Chapter 23.6 (with a detailed assessment against all policy assessed as being relevant), in Chapter 6.4 and 6.5.4 (by way of a summary), and with the relevant provisions detailed in Appendix E.3.
- 9.8.4 The detailed assessment of the Project’s development impacts is measured against the range of policy ‘headings’ presented in the RCP. For example, areas of significant ecological, landform or geological value are identified as Coastal Protection Area 1 (CPA 1) such as the seaward side of the causeway at the mouth of the Oakley Creek, and CPA 2 being the landward side of the causeway (Page 6.24). Particular regard has been had to these areas in the assessment of effects in the CMA. Overall, the assessment of the impacts on natural character are said to be minor and restoration of coastal fringe habitat along the causeway and other areas of reclamation as well as revegetation within Pollen Island are seen as bringing environmental benefits (Page 23.24).
- 9.8.5 Whau River, Traherne Island and Rosebank Reserve are identified as an Outstanding Landscape (Ranking 6). This is in the context of an environment already highly modified. It is concluded that the changes to the causeway profile will not be ‘noticeable’ and so maintain the values associated with this landscape.
- 9.8.6 The most significant policy challenge is with respect to the reclamation works associated with the Project. The arguments in support of reclamation and therefore qualified conformance to the policy are summarised in Chapter 23.6.1.11 (Page 23.30) and it is noted that:
- Upgrading the existing causeway is the best practicable option;
  - The design has sought to minimise the extent of reclamation while improving multi modal use of the causeway;
  - The design and increased height “address future sea level rise predictions”;
  - Public access is maintained across the CMA;
  - The materials for use in the reclamation will not result in contaminants being discharged to the CMA;
  - Restoration planting will mitigate the loss of saline vegetation during the construction and restoration works; and
  - Stormwater runoff quality from the causeway will improve.
- 9.8.7 The Applicant concludes that the disturbance to the foreshore and seabed will not result in adverse effects on natural features and ecosystems (Page 23.32), so on this basis consistency is achieved with the policy.
- 9.8.8 Determination of the overall degree of consistency with this Plan goes to the weight to be given to particular aspects. This will be considered further on the basis of evidence presented.



## 9.9 AUCKLAND REGIONAL PLAN: SEDIMENT CONTROL 2001

9.9.1 The ARC Section 149G Report commentary is at Section 5.8. Again it provides useful commentary on the application of the Plan's provisions. We note that the Plan *"defines mechanisms the ARC has chosen for avoiding, mitigating or remedying any adverse effect on the environment due to sediment discharge from bare earth surfaces."* (Page 46).

9.9.2 The report then notes:

*"The relevant objectives and policies of the ARP: SC have been taken into account in developing a comprehensive erosion and sediment control methodology for consultation of the Waterview Connection (refer to applicant's AEE, G.22)."*

9.9.3 The Applicant's own assessment is concise with reliance on Sediment and Erosion Control Plan outlined in G.22 to adopt management measures to reduce the risk of surface erosion during construction. The management approaches adopted are understood to reflect best practice.

## 9.10 PROPOSED AUCKLAND REGIONAL PLAN: AIR, LAND, WATER 2001

9.10.1 The ARC Section 149G Report commentary is at Section 5.9. The report notes that the objectives and policies form part of the assessment framework against which the resource consent applications are to be evaluated.

9.10.2 Commentary usefully focuses on the Project's consistency against the various assessment chapters. At Page 48 it is noted *"Issues considered relevant to this proposal have been discussed in the applicant's AEE and as part of the specialist reports and are considered to have been fully addressed."*

9.10.3 There is extensive commentary with respect to the proposed works consistency with each of the policy chapters. Our "headline summaries" are:

Chapter 2 (Use and Development): there are wide ranging benefits arising from the continued efficient and effective operation of motorway networks. Landscape enhancement of the Oakley creek corridor and reserves is expected to improve habitats and public open space. On the other hand there will be degradation of the coastal and freshwater resources of Oakley Creek and the Waitemata Harbour, and this will detract from the amenity values of the existing marine reserve and the natural character of the coastal environment in the area. It may also affect cultural associations tangata whenua has with the harbour. We draw from this assessment that the Project aligns with some but certainly not all elements of the policy.

Chapter 3 (Management Areas): Oakley Creek has no high quality reaches. We draw from this assessment that there is no challenge to the policy.

Chapter 4 (Air Quality): effects on public health and safety may result from air discharges due to the concentration of air discharges during construction and operation particularly in the vicinity of the ventilation stacks. We draw from this assessment that there are misgivings over the Project's consistency with the policy but this may be a matter of perception.



Chapter 5 (Discharges to Land Water and Land Management): In terms of best practicable option it is noted that the proposed stormwater management measures are all technically feasible and have been used elsewhere in the state highway network. We draw from this assessment that there is no challenge to the policy.

Chapter 6 (Water Allocation): the duration of the construction period is 5-6 years and the applicant addresses this by promoting monitoring and contingency plans to effectively avoid, remedy or mitigate any actual effects. We draw from this assessment that there is no challenge to the policy.

Chapter 7 (Beds of Lakes and Rivers and Diversion of Surface Waters): the policy requirement is to ensure that infrastructure protects streams of value. The applicant has determined that there is no practicable alternative to realigning a section(s) of Oakley Stream. At the same time the proposal must be consistent with the Urban River and Stream Management Framework which records Oakley Stream as Highly Disturbed Urban River or Stream (Type 4).

The report notes *“The cumulative effect of realigning Oakley Creek...cannot be considered insignificant, but must also be considered in terms of the public benefits of developing regionally significant transport infrastructure.”* (Page 52)

The report then concludes *“While Policy 7.4.8 is not immediately achieved in the Oakley Creek catchment, the document Western Ring Route – Oakley Creek Realignment and Rehabilitation Guidelines has prepared and finances are set aside for undertaking the work using the compensation figure derived from the SEV calculation for the site (refer applicant’s AEEG.6)”* (Page 52)

In terms of reclamation and drainage of permanent streams such works are inappropriate unless to promote the “safe and efficient operation of transport infrastructure...” The strategic nature of the Project supports the assessment that the works are acceptable in terms of this policy (Page 53) particularly when the rehabilitation of this section of the stream is taken into account.

9.10.4 The Applicant’s assessment again is detailed and systematic in evaluating the Project against the policy framework in a similar manner to that presented in the s149G Report (Pages 23.35-23.46). The Applicant’s assessment also addresses the various policy “challenges” noted in the ARC Report.

9.10.5 Guiding our overall broad judgement regarding the Project’s consistency with this Regional Plan we are informed by the Freshwater Ecology Review Report (Appendix B) by Ryder Consulting Limited. While this report does not address policy it does inform on the overall adequacy of the Applicant’s technical investigations and assessments concerning freshwater ecology resulting from the construction and operation of the Project and therefore is relevant to the consideration of policy matters in Chapters 5, 6 and 7.

9.10.6 In summary, the conclusions from the Freshwater Ecology Review are (Paragraph 4.1):

- Any significant adverse effects on freshwater ecology resulting from construction and operational phases can be mitigated to appropriate levels such that the overall ecological effects will be minor or less than minor;
- Some adverse effects will be unavoidable, but the more significant ones will be temporary only with no significant long term effects;



- There are potential benefits from the Project through the establishment of stormwater treatment facilities to treat new and existing motorway surfaces;
- There are opportunities to enhance existing stream environments particularly Oakley Creek; and
- Consent conditions should be structured to ensure that the quality and quantity of proposed mitigation and environmental compensation is retained and achieved.

9.10.7 Underpinning these conclusions is an acknowledgement that the survey and assessment techniques used by the Applicant have been appropriate and conducted to an acceptable level (Paragraph 5.9), there is support for the Stream Ecological Evaluation (SEV) to determine an appropriate amount of environmental compensation (Paragraph 5.10 and 5.11), the sediment control measures are appropriate measures which appear consistent with regional plan policies (Paragraph 6.19), and the stormwater detention treatment techniques have been designed to meet the requirements of the ARC Proposed Regional Plan: Air, Land and Water (Paragraph 6.27).

9.10.8 In terms of mitigation and environmental compensation, Ryder Consulting conclude that the options presented are robust (Paragraph 7.2) with the suggestion made is to enhance the upstream fish community through transfer to these new habitats.

9.10.9 The Marine Ecology Report (Appendix A), the companion report prepared by Ryder Consulting Ltd presents the following conclusions:

- The assessment methodologies are generally thorough and robust in the examination of ecological values and the likely effect of Project construction and operation;
- Ecological values are moderate to high to the north of SH16 and within the marine reserve;
- The temporary occupation of land and or disturbance of inter tidal habitats and sediment discharges were of negligible significance;
- Permanent occupation of the coastal marine area during and after construction “is of some concern” and is described as having moderate adverse ecological effects.
- Expansion of the reserve could be viewed as appropriate mitigation for the permanent reclamation.

9.10.10 Our overall opinion, based on the consideration of the assessments from the ARC s149G Report, the documentation provided by the Applicant and their policy assessment, and the independent advice received from Ryder Consulting is, that the Project can, with the mitigation proposed and with the implementation of further mitigation, achieve compatibility with the policy of this Plan.

## **9.11 TRANSITIONAL REGIONAL PLAN 1991**

9.11.1 The advice provided in the section 149G Report is that the TRP will have no influence on the consideration of the Project given the whole application (suite of resource consents required) is bundled and the activity status is non-complying whereas under the TRP they would have been considered Discretionary. We agree with this conclusion.







## 10 SECTOR & LOCAL EFFECTS

### 10.1 OVERVIEW

10.1.1 A sector based analysis is adopted in all the application documents for the assessment of the Project's effects on the environment. This section summarises the Applicant's assessment for each of the nine sectors that comprise the designated corridor, and cover:

- The main physical works;
- The potential environmental effects; and
- Our assessment of the key issues raised in submissions relevant to each sector.

10.1.2 This Overview commentary draws from the core planning documents noted in paragraph 1.3.1 as well as some of the supporting technical (G series) reports. G.21 Construction Environmental Management Plan and Appendix C: Environmental Maps and Plans, and Appendix H: Ecological Management Plan are particularly useful. Appendix C plans and maps inform on human health and nuisance effects by sector, aquatic receiving environments by sector, and terrestrial environment values by sector. We provide comment and raise questions where there are matters that could be clarified to assist understand the approach to mitigation proposed by the Applicant.

10.1.3 We also note that G.21 Construction Environmental Management Plan provides a summary of the construction activities, receiving environment and sensitive receptors by sector (Table 2.1, Pages 13-15).

10.1.4 It would be useful information for the Board to have the Applicant's assessment of the general percentage of the various NOR sections that are already designated for these Project related works.

### 10.2 SECTOR 1 (NOR 1): TE ATATU INTERCHANGE

10.2.1 The main elements of the Project in this sector are (Page O.26):

- Widening and re-alignment of SH16 west of Te Atatu Interchange to the Whau Bridge to provide a shared use cycle and pedestrian way (Page O.5)
- Improvements to Te Atatu Interchange to accommodate additional lanes and provide a shoulder for bus priority and High Occupancy Vehicles (HOV's) (Page O.5)
- The motorway will be lowered by approximately 370mm to achieve minimum clearance standards under the Interchange bridge ( Page 4.11)

10.2.2 Specific details of the works proposed are described in summary form in Section 4.4.12 of the AEE. Construction activities are spread over at least 3 years (G.21, page 16).

10.2.3 Related works include:



- an area of reclamation in the inter-tidal area of Pixie Stream (14.26) and a stormwater wetland pond at Jack Colvin Park gazetted as recreation reserve (14.6); and
- Operation of Construction Yard 1 on Harbourview-Orangihina Park, currently managed as recreation reserve.

10.2.4 The existing environment is dominated by the existing interchange with residential activities and education services (Rutherford High School) adjacent to the transport corridor. Open space areas such as Harbourview-Orangihana Park, McCormack Green and Jack Colvin Park are the other main features.

10.2.5 The consideration of the design issues and options canvassed in development of the detailed design for the Interchange are covered in Chapter 11.6.1 of the AEE.

### **Potential Environmental Effects**

10.2.6 The Applicant's overall assessment (Page O.26) is that most effects can be managed to be no more than minor. The majority of the physical works are within land already designated for Motorway purposes (F.1 Plans).

#### Land Use Effects (Page O.26, AEE Chapter 14):

10.2.7 There will be impacts on the established residential communities from the construction and operation of the State Highway. Land take in the residential area is likely to affect 40 residences in Titoki Street, Alwyn Street, Marewa Street, Milich Terrace, Te Atatu Road, McCormack Road and Paton Road (Page 14.7).

10.2.8 There will be impacts on the open space environments:

- Approximately 0.7 ha (of 83 ha) of Orangihina Park will be permanently acquired to accommodate the upgraded interchange (Page 14.6);
- Approximately 0.2 ha (of 1.5 ha) of McCormick Green is required for the upgrade of the Northwestern pedestrian/cycleway (Pages 14.4 and 14.6); and
- Approximately 0.9 ha (of 4.3 ha) of Jack Colvin Park (and approximately 0.1 ha of inter tidal CMA – Page 14.28) is required for a stormwater wetland and for road widening (Pages 14.4, 14.6 and 14.7).

10.2.9 The AEE assessment is that the design evolution has sought to minimise land use impacts, avoiding where possible residential land take and minimising the size and "optimising" the location of the Construction Yard to enable the ongoing operation of the Te Atatu Pony Club, the principal user of the reserve (Page 14.8).

#### Traffic Effects

10.2.10 Impacts during the construction phase are associated with upgrade (re-alignment and narrowing of lanes to enable off-line construction activities of the interchange) (Page 14.10) and temporary road closures (Page 14.12).

10.2.11 Mitigation of these effects is proposed with development of Site Specific Traffic Management Plans (SSTMP) (Page 14.12) and further management measures are noted (G.16 Assessment of Temporary Traffic Effects). Culvert extension under SH16 will result in the loss of 15-20m of stream channel which may pose a risk of affecting Pixie Stream habitat and communities (14.33).



10.2.12 Traffic noise effects are most likely to affect neighbouring residences, particularly on Alwyn Ave (Page 14.39). Pedestrian and cyclist connectivity will improve across SH16 which is an accessway to Rutherford College and Rutherford Primary School (Page 14.17). While enhancement is suggested by the Applicant, in our opinion further consideration could be given to options that directly enable safe pedestrian and cycle movements through the interchange that meet the (presumed) dominant (north-south) desire lines between the communities in the Te Atatu Peninsula.

#### Social Impacts

10.2.13 The assessment makes reference to G.14 Assessment of Social Effects to note that there are strong social connections between the schools, community facilities, shopping areas and residences that SH16 already divides. It is further noted in the AEE and from our wider reading that the Te Atatu Peninsula is an important growth area. It therefore seems important to future proof connections within the Peninsula for alternate travel modes as the opportunity arises.

10.2.14 The AEE assessment is that the Project will improve accessibility and connectivity (Page 14.17), will be neutral with respect to recreation opportunities (Page 14.18), and the impact on school roll numbers "is not considered adverse" (Page 14.18).

#### Cultural Impacts

10.2.15 It is noted that the Project avoids sites of known archaeological/Maori heritage. The recommendations of Ngati Whatua o Orakei have been adopted concerning the use of native plantings, stormwater treatment for all new road surfaces and some currently untreated areas, and to minimise visual impacts by limiting vertical structures in the landscape (Page 14.22). We note that an updated commentary from Ngati Whatua o Orakei has not been received (Page 14.21), but are unsure of the significance of this in the light of the submission lodged to the Project (Submission 170). The Applicant and relevant submissions reviewed are silent on whether there are any effects on the marae proposed for the Harbourview-Orangihina Park. The Applicant should confirm these details.

#### Landscape and Visual Effects

10.2.16 Technical Report G.20 assesses these matters. For this sector the report notes "*a significant and fundamental change to the local environment and outlook of many residents in close proximity to the motorway corridor e.g. Alwyn Avenue and Titoki Street will occur.*" As a result significant change at the interface between the transport corridor and residential areas will result. Mitigation is around bunding, planting and noise walls between 2.5-3.5 metres (F.17 Noise Walls). Integration of these works into the landscaped treatments is important to achieve effective amenity safeguards for residents. Additional landscaping and re-instatement of seating will be developed through Open Space Restoration Plans with Council (Page 14.6)

10.2.17 The same areas will be affected during the construction phase. The report acknowledges that in some areas remediation will not entirely off-set or mitigate the loss of the current vegetation cover (Page 14.24).

#### Amenity Trees

10.2.18 While no scheduled trees are affected by the Project, vegetation removal along the corridor will require replacement planting. This is noted as not mitigating the removal of larger trees in the short term.



### Coastal Processes

10.2.19 The report notes that the works to widen Pixie Stream where reclamation is to occur will have only minor effects (Page 14.27).

### Marine Ecology

10.2.20 The marine environment consists of the estuarine area of the Pixie Stream. The report concludes that overall habitat loss and disturbance is minor (Page 14.29).

### Effects on Herpetofauna

10.2.21 Potential effects on the copper skink population are to be addressed through the implementation of an Ecological Management Plan outlined in G.8 Assessment of Herpetofauna Ecological Effects. From our experience the approach adopted project wide for translocation of copper skink is an accepted best practice approach.

### Freshwater Ecology

10.2.22 The proposed construction works have a “relatively high risk of affecting this small waterway” (Pixie Stream). The assessment notes however that the effects have been determined as not likely to be ecologically significant (Page 14.33). Sediment control is targeted to achieve 94% capture during the construction phase (Page 14.33). This assessment is supported by the two specialist reports provided by Ryder Consulting Ltd.

### Air Quality

10.2.23 The assessment focused on “key receptors” such as residential areas, schools, pre-schools located within 100m of the work areas. There is unlikely to be any significant effects with appropriate mitigation in place as described in the Construction Air Quality Management Plan based around sensible work practices, monitoring and visual inspections.

### Noise

10.2.24 The existing environment is described as a relatively high noise environment particularly in the adjacent residential areas such as Alwyn Ave, Titoki Street, and Milich Terrace. Noise associated with day time construction activity is expected to be “reasonable” (Page 14.38), but mitigation measures will be required. Table 14.5 (Page 14.39) records the preferred mitigation with respect to directly affected properties. Noise walls up to 3.5 m are noted. Ongoing discussion with land owners is necessary to ensure amenity effects are managed to acceptable levels for residents through the adoption of appropriate mitigation measures.

### Vibration

10.2.25 Similar issues arise in terms of the potentially sensitive receiving environment for selected properties along Milich Terrace, Alwyn Avenue and Titoki Street, and Royal View Way and Table 14.6 summarises this (Page 14.41). No specific measures are proposed once the Project is operational.



### Lighting

- 10.2.26 The potential effects for lighting emissions relate to the potential for light spill to adjoining residential areas from the greater footprint for the interchange and the new roading layout for the interchange. There will be minor changes in illumination only in an environment that already experiences similar effects (Page 14.43).
- 10.2.27 During the construction phase and the operation of the Construction Yard these effects will be managed through compliance with provisions of the Temporary Construction Lighting Management Plan (Page 14.44).

### Stormwater

- 10.2.28 Stormwater treatment is to be in accordance with ARC's TP10 guideline and beneficial effects are noted associated with the operation of the Project (Page 14.45). Overall effects of stormwater discharges have been avoided through the design approach and treatment system adopted, and will improve the overall treatment level. Enhanced stormwater treatment (designed to remove on average 80% of total suspended solids – Page 14.27) and treating runoff from currently untreated existing State highway (Page 14.29) is viewed as being an "off-set" to other ecological effects associated with the Project (Page 14.47). The two specialist reports by Ryder Consulting Ltd state that the mitigation measures are considered adequate.

### Land Contamination

- 10.2.29 The assessment is that approximately 45% of construction material is "cleanfill" that could be reused within the Project. The remaining material is likely to require disposal off-site to an appropriately consented facility. The Contaminated Soils Management Plan (CSMP) addresses these matters.

## **Key Issues Raised in Submissions**

### Location of Construction Yard 1

- 10.2.30 Two Pony Club groups (Submitters 64 and 105) and two others (Submitters 145 and 150) seek alternative locations for the Construction Yard 1 on the Harbourview-Orangihina Park to maintain the functioning of their club facilities. Submitter 12 seeks its relocation on traffic/access safety grounds along with concerns about visual amenity. We have no doubt that the location of the yard will be disruptive and will affect the pony club operations over this period. The site area has been selected to ensure safe access, reasonably level land and avoid the most popular bird roosting areas. We consider there is potential to further mitigate these effects and that this might best be advanced through direct discussion between the parties. In particular refinement of the size and shape of the yard may have benefits.

### Residential Amenity

- 10.2.31 Residential amenity concerns are raised by a number of submitters on Alwyn Ave (Submitters 38, 46, 73, and 124). They seek improved design of the buffer interface between themselves and the SH16 re-alignment with earth contouring, planting and fencing that is screened from their outlooks, and underground services. We consider that there is an opportunity to improve the design to accommodate residents' concerns and the appropriate design experts should give further consideration to this in evidence.



10.2.32 Submitter 12 requests their property is purchased given the land take already required will compromise residential amenity in the future. This is a matter the applicant can be expected to consider. We are aware that in other parts of the Project the decision has been taken to acquire whole properties where only part is required where the construction effects are expected to be severe. In this case the submitter is concerned about the amenity effects of the land take and in particular that the loss of private open space will mean the remaining dwelling does not meet permitted activity standards. We have not had the opportunity to inspect this property or verify the applicable permitted activity standards. However, the loss of the majority of private open space may form adequate justification for purchase and this matter requires further consideration by the Applicant.

#### Interchange Improvement

10.2.33 Submitter 79 seeks further improvements to the cycleway network in the vicinity of the Te Atatu Interchange, and specifically access from Marewa Street, retention of access from McCormack Street, grade separation of cycle access across the interchange, grade separation from Te Atatu north, design modifications from the island waiting areas, and access from the eastern end of Alwyn Ave. We consider that these design treatments do have the potential to make the Interchange more pedestrian and cyclist friendly and to future proof the design to be more public transport oriented. These matters should be explored further by the Applicant.

### **10.3 SECTOR 2: WHAU RIVER**

10.3.1 The main elements of the Project in this sector are:

- Widening of Whau River Bridge to accommodate additional lanes in both directions (7.25m on east bound carriageway and 8.0m on west bound carriageway) (Page 15.1) and G11, Page 56);
- Provision of a new separate 3m wide pedestrian/cycle bridge;
- Localised permanent reclamation (approximately 0.25 ha) to provide for the widened bridge abutments (Page 15.1); and
- Outlet structures comprising two rock lined channels, to the CMA (Page 4.18).

10.3.2 We note that the various reclamation areas vary between the various technical reports. We are unsure whether the matter is an “accounting error” that has arisen as a function of the complexity of the assessments and the various contributing specialist reports. The Applicant should be requested to clarify this discrepancy.

10.3.3 The existing environment has the Whau River Bridge operating with three lanes in each direction. The pedestrian/cycleway is narrow (1 metre wide) (Page 15.3). We note that Whau River Bridge is not designated or zoned as the structure is within the CMA (Page 15.3). We note that the construction period covers a five year period presumably because the works programme integrates construction management across sectors 2, 3, and 4.

#### **Potential Environmental Impacts**

10.3.4 The Applicant has assessed the following potential environmental impacts for this sector of the Project:

#### Transport Effects



10.3.5 Potential adverse effects associated with Project construction are noted as being the reduced capacity causing congestion and delays resulting from construction traffic on the road network. Bridge widening is to proceed off-line to ensure that the existing number of lanes is maintained at all times (Page 15.4). However the carriageway will be narrowed and speed restrictions put in place. The sequencing programme for the works is recorded in Table 15.1 (Page 15.4).

10.3.6 Construction Yards 1 and 2 will serve the sector (Page 15.5). The overall effects resulting from the construction works are judged to be no more than minor (Page 15.5). Effects on navigation are minimised by limiting the installation of beams and other structures to 2 hours either side of high tide (Page 15.5). The Construction Management Plan (G.21 Construction Environmental Management Plan) indicates the typical mitigation and management measures proposed and the key responses (Page 15.6).

#### Cultural Effects

10.3.7 The response provided by Ngati Whatua o Orakei seeks similar environmental outcomes to those matters noted for Sector 1 and have been incorporated into the overall design approach for this sector of the Project. Our earlier comments concerning the absence of an updated report remain relevant.

#### Landscape and Visual

10.3.8 The river is noted as being a significant landscape feature (Page 15.8) and it is acknowledged that its landscape treatment will be integrated with related works affecting sectors 3 and 4.

#### Coastal Processes and Marine Ecology

10.3.9 Considered together, the receiving environment is the coastal marine area (CMA) with potential discharges to the coastal area occurring during construction and operation of the Project (Page 15.2).

10.3.10 Construction activities will result in permanent habitat loss which is considered to be a moderate adverse effect (Page 15.13). Total permanent habitat loss will be approximately 4,250m<sup>2</sup> in the inter tidal area and 60m<sup>2</sup> in the sub tidal habitat. Permanent loss of mangroves is approximately 2,350m<sup>2</sup> of intertidal habitat. Approximately 3,150m<sup>2</sup> will be located in the Motu Manawa Marine Reserve (Page 15.13). These are specific footprints and it is assumed that all works can therefore be carried out within these parameters.

10.3.11 Occupation of the CMA is necessary for piling (88 temporary piles, Page 15.9) to support temporary staging platforms and excavation for the widened bridge abutments and ground treatment works in the Whau River. The eastern abutments of the Rosebank Peninsula are identified as an Outstanding Landscape in the Auckland Regional Plan: Coastal (15.7 and 15.9).

10.3.12 In-situ concreting of piles poses a potential risk to the marine environment. The proposed construction method is "use of steel casings and the Tremie Concrete method" (Page 15.14) which aims to minimise the cement discharge. Stringent management is to be relied upon to ensure negligible effects result on the receiving environment. Construction requires 42 permanent piers (Page 15.10) and seven piers to support the new pedestrian/cycleway bridge.





10.3.13 The marine ecology review by Ryder Consulting indicates further mitigation is warranted in this sector to off-set the permanent habitat loss.

#### Stormwater

10.3.14 As noted for Sector 1, the proposed treatment devices are suggested to increase the level of stormwater treatment and this is identified as an “off-set” to other ecological effects associated with the Project.

### **Key Issues Raised in Submissions**

#### Recognition of Motu Manawa Marine Reserve

10.3.15 The key issue raised in submissions is the inadequate recognition given to the nationally significant Motu Manawa Marine Reserve (MMMR) in terms of the Project’s potential effects on its habitats, natural values, and bio-diversity. (Refer Sector 4 Summary of submission points raised.) While the Ryder assessment is that adequate recognition and mitigation is proposed further mitigation should focus on the expansion of the Marine Reserve. We note that this is not within the jurisdiction of this Board but could be considered through subsequent approval processes.

#### Navigation

10.3.16 Te Atatu Boating Club is concerned that any reduction in the clearance heights below new permanent/temporary structures over the Whau River could restrict boat movements between the mooring area and the Waitemata harbour. An option promoted is for the NZTA to dredge a channel between the western most span (pier H and pier G) of the bridge as a permanent channel.

10.3.17 Our understanding is that the design of the bridge has specifically sought to maintain the existing height clearances however there may be some risk of construction platforms limiting the navigable width. If this is correct then we consider that construction management measures should be able to be applied to ensure that access is not unduly restricted without the need for additional dredging.

## **10.4 SECTOR 3 (NOR 2): ROSEBANK TERRESTRIAL**

10.4.1 The main elements of the Project in this sector are (16.1):

- Widening of SH16 to provide four lanes in both directions (Page 4.20);
- A dedicated bus shoulder in both directions (Page 4.20);
- Minor reconfiguring of the existing Rosebank Road and Patiki Interchanges;
- New pedestrian and cycle way bridge;
- Re-alignment of the road to Rosebank Park Domain;
- The operation of Construction Yard 2; and
- Demolition of four settlement ponds (Page 16.7)

10.4.2 The existing environment is characterised by the existing SH16 transport corridor, limited open space and commercial and industrial activity. Some industry is described as “heavy, noxious or otherwise unpleasant” (Page 16.4). The area is a regionally significant employment hub (Page 16.6). The construction programme records works being carried out over a five year period (G.21, Page 16).



## Potential Environmental Impacts

10.4.3 The applicant has assessed the following potential environmental impacts for this sector of the Project:

### Land Use

10.4.4 Partial land take is required for some business properties that front SH16 (Page 16.5). Permanent occupation is required of 1.19ha open spaced zoned land within Rosebank Park Domain (a recreational reserve under the Reserves Act 1977), and upgrading road access and the pedestrian/cycleway (P16.5). Land is required for Construction Yard 2 (Patiki) and temporary stormwater wetland areas (1.43ha) located within Rosebank Park Domain.

10.4.5 The Applicant suggests that the permanent occupation of Rosebank Domain for the upgraded access and widened pedestrian/cycleway is consistent with the current use; however it is not clear to use that this use is consistent with its recreation reserve status. The Applicant should clarify this for the Board and further, advise whether any 'offset' for such land loss for recreational activity is necessary.

### Social Impacts

10.4.6 Impacts on local employment have been determined to range from minor negative to minor positive (Page 16.6). Social impacts on Rosebank Park are considered negligible (Page 16.6). Overall, the operation of the new road network is expected to deliver minor positive social impacts with improved accessibility for vehicles and pedestrians and cyclists (Page 16.6).

### Cultural Effects

10.4.7 A similar set of mitigation measures is adopted for this sector of the Project as have been adopted for sectors 1 and 2. We note also that feedback from Te Kawerau Iwi Tribal Authority has been sought (Page 16.7). Their submission is referenced No.241.

### Landscape and Visual

10.4.8 Temporary landscape impacts on the harbour environment during construction are assessed as "quite significant" (Page 16.9). The construction environment associated with reclamation activities and the placement of rock armouring will not be softened until the coastal planting is established. The mitigation is to provide the replanting of vegetation in a specific area once construction is completed. It is assumed the staging programme is included in the relevant Management Plan to determine the overall timing of the replanting over the period of construction. We conclude that a reclamation and bank stabilisation programme is essential to ensure a successful programme of re-vegetation.

### Archaeology

10.4.9 Effects on a number of archaeological sites are noted (Maori and European) (Pages 16.10-16.12). Figure 16.2 provides an annotated aerial photograph locating these sites (Page 16.11). The Archaeological Site Management Plan sets out the methods to avoid and monitor construction works near specific sites (Page 16.11). We note that separate approvals will be required from the New Zealand Historic Places Trust for works potentially affecting recorded archaeological sites. The Applicant should advise the Board of the timing for securing these approvals.



### Effects on Herpetofauna

10.4.10 Effects on skink habitat are considered (Page 16.12). Rainbow skinks and copper skinks have been found in this area. The process for collection and relocation management proposed is common to other sectors where herpetofauna have been identified.

### Noise and Vibration

10.4.11 In both assessments the effects are considered no more than minor and manageable under the framework of the respective management plans.

### Stormwater

10.4.12 Following the demolition of the present treatment facility new treatment measures are promoted that will improve the existing system which afforded little if any effective treatment of stormwater before discharging to the marine environment. The assessment is that the new system offers a beneficial environmental effect. The proposed mitigation measures are considered appropriate by Ryder Consulting Ltd.

### Land contamination

10.4.13 It is noted that the area is predominantly industrial and commercial, and that prior to 1970 supported horticultural activities. The soils may hold contaminants and re-use or disposal needs care (Pages 16.18-16.19). Specific management approaches are proposed and will be managed through the Contaminated Soils Management Plan which has been prepared by appropriately qualified experts.

### **Key Issues Raised in Submissions**

10.4.14 The issues raised in submissions for this sector are common to sector 4 and have therefore been addressed in the following section.

## **10.5 SECTOR 4 (NOR 2): RECLAMATION**

10.5.1 The main elements of the Project in this sector are (Page 17.1):

- Widening (by an additional 20-25m, Page 17.12) and raising the causeway (1.5 metres) including reclamation to protect it against inundation and future proof against sea-level rise (NOR 2, Page 2);
- Widening and raising the causeway bridges (which will require additional piling, page 17.12) to create additional east and west bound lanes from Rosebank Interchange to Great North Road Interchange (to create five lanes each way and a dedicated bus shoulder in each direction (NOR 2, Page 2); and
- Construction of a new pedestrian/cycleway bridge to the south of the causeway bridges will have four additional piles in the CMA (Page 17.12) and new connection at Patiki Interchange.

10.5.2 Related works include:

- Total reclamation of 4.2 ha (17.2), and permanent occupation of the coastal marine environment is approximately 2.68 ha (Page 17.12);



- Approximately 5.66 ha of temporary occupation of the CMA is required to provide for sufficient working space (Page 17.13); and
- Temporary staging and piling (52) associated with establishing these platforms (Page 17.13).

10.5.3 The existing environment comprises the existing motorway causeway, Traherne and Pollen Islands and the coastal marine area. The area forms part of the Motu Manawa Marine Reserve. The construction programme records works being carried out over a five year period (G.21, Page 16). It would be useful for the Board to understand the distinction between the terms “total reclamation” and “permanent occupation of the CMA” as summarised in 17.6.2 (Page 17.12).

### **Potential Environmental Impacts**

10.5.4 The applicant has assessed the following potential environmental impacts for this sector of the Project:

#### Land Use

10.5.5 Traherne Island is affected by the widening of the causeway, and the effects of this are assessed as being no more than minor (Page 17.3). The majority of the land in this sector is already designated (Page 17.4).

#### Transport Effects

10.5.6 The potential effects of construction traffic are acknowledged with impacts associated with reduced capacity resulting from lane closures, speed restrictions and associated delays in travel times (Page 17.5). Temporary road management procedures are outlined in Table 17.1 (Page 17.6). Effects on pedestrians and cyclists are suggested to be negligible during the construction phase.

10.5.7 Site specific management plans are the main management tool through the construction process which is suggested to be between 6-12 months. It is unclear how this reconciles with the timetable presented in G.21 Construction Environmental Management Plan.

#### Cultural Effects

10.5.8 Ngati Whatua o Orakei requests the works minimise the resulting visual impacts and promote replacement planting in the marine reserve (Page 17.9).

#### Landscape and Visual

10.5.9 Pollen Island and Traherne Island are identified as being Outstanding Landscapes in the Auckland Regional Plan: Coastal (Page 17.10). As identified for Sector 3, the construction environment associated with reclamation activities and the placement of rock armouring will not be softened until the coastal planting is established. The mitigation is to provide the replanting of vegetation in a specific area once construction is completed.

10.5.10 Planting treatments are proposed to reflect localised landscapes (Page 17.11). Overall, the construction effects in relation to visual and landscape are considered to be no more than minor (Page 17.11).

#### Coastal Processes and Marine Ecology



- 10.5.11 The proposed widening will result in reclamation of the coastal marine area, permanent occupation, temporary occupation and the loss of habitat in and around Traherne Island, Pollen Island, and Motu Manawa Marine Reserve (including the Waterview estuary). Disturbance effects are noted to be 1,400m<sup>2</sup> sub-tidal habitats and approximately 51,700m<sup>2</sup> intertidal habitats (Page 17.17).
- 10.5.12 Re-alignment of three sections of channel within Waterview estuary and Oakley Inlet and temporary damming within the inlet associated with construction activities will occur (Page 17.13). Chenier deposits (dry shell banks) located in the permanent area of reclamation will be excavated, stockpiled and repositioned following completion of the works (Page 17.15).
- 10.5.13 A range of mitigation measures is noted to protect the marine environment from potential sediment and contaminant discharges during construction and operation. Examples are noted (Page 17.21) which brings into play a range of measures suggested to off-set potentially moderate adverse effects. These need to be fully understood to determine whether the outcomes can be achieved and are sustainable. The marine ecology report from Ryder Consulting recognises the sensitive marine and estuarine habitats affected by the Project and concludes that further mitigation measures are warranted.

#### Vegetation

- 10.5.14 Works within Traherne Island is suggested to affect the *Minimulus repens* which is recorded as being regionally significant. Removal and relocation of the plant is proposed (Page 17.23).

#### Stormwater

- 10.5.15 An increasing level of stormwater treatment is proposed, and is noted to be a positive outcome for the Project (Page 17.25).

#### Land Contamination

- 10.5.16 Land contamination issues and mitigation measures to address the potential risks are the same as noted for Sector 3 (Page 17.25). Ryder Consulting are cautious in advising whether the *“effects of existing sediment-bound contaminants from marine disturbance are likely to be negligible.”*

### **Key Issues Raised in Submissions**

#### Recognition of Motu Manawa Marine Reserve

- 10.5.17 The key issue from the submissions is the view that inadequate recognition is given to the nationally significant Motu Manawa Marine Reserve (MMMR) in terms of the Project's potential effects on its habitats, natural values, and bio-diversity. Concerns were also expressed about effects on the Whau River, and Pollen Island itself.
- 10.5.18 There is general support from those interested submitters for compensatory measures in recognition of the potential loss or reduction in the unique values noted above. Suggested strategies include:

- An extension of the reserve to include foreshore and seabed of the Te Atatu peninsula;



- The inclusion of Traherne Island in the reserve;
- Widening of the causeway only on its southern side;
- Stronger protection of the mangrove habitat;
- The maintenance and if possible improvement of tidal flows;
- Ensuring the shell beds and chenier plain were not threatened by sedimentation and erosion from the Project works; and
- Vesting esplanade reserves along these coastal margins.

10.5.19 Sections 6 and 7 of the Marine Ecology Review by Ryder Consulting examine the issues raised by submitters and these are usefully summarised in their Table 5. The permanent loss of habitat due to reclamation together with submitters' concerns underpins their suggestion that further mitigation be investigated in line with the options summarised above.

10.5.20 Determining the further mitigation options and their implementation is a matter that we consider may warrant caucusing between the NZTA and local and central government agencies that have an interest in and/or administer the reserve. Those community/interest groups that submitted on these matters should also be involved. Any change to the boundaries of the Marine Reserve of course involves a separate and extensive legal process under the Reserves Act.

## **10.6 SECTOR 5 (NOR 4): GREAT NORTH ROAD INTERCHANGE**

10.6.1 The main elements of the Project in this sector are (Pages O.27 and O.28, NOR 4, Page 2):

- New motorway interchange built at Great North Road Interchange providing motorway connections between SH16 and SH20 that includes four new elevated ramps to 22m above Oakley Creek (Page 5.29);
- Two lane westbound ramp (Ramp2) that will take traffic to west Auckland;
- Two lane southbound ramp (Ramp 3) that will take traffic from west Auckland south;
- Two lane ramp east bound (Ramp 4) for traffic merging with SH16 towards the city in the vicinity of Carrington Road bridge;
- Single lane south bound ramp (Ramp 1 from City (SH16) south);
- New bridge structures to occupy the CMA to accommodate on and off ramps in the vicinity of Waterview Estuary and Oakley Stream;
- Construction of retaining wall approaches to tunnel portals (Chapter 18.2);
- Construction Yards 3, 4, and 6 (Page 5.31-5.35) including the operation of a concrete batching plant, 24 hours a day (Pages 18.25, 18.49 and 18.53); and
- Temporary replacement reserves, for example Saxon Reserve (Page 18.12).

10.6.2 Specific details of the works proposed are described in summary form in Chapter 4.4.5 (Page 4.30). The construction programme is set out in Page 5.28-5.35. The majority of structures for the Project are located within land designated for motorway purposes or zoned for transportation purposes. Construction duration is two years for the GNI Ramps and one year for the approaches to the underpass portal (Page 5.31).

10.6.3 The existing environment is dominated by the Great Northern Interchange (GNI) which straddles residential areas to the north (Pt. Chevalier) and south west (Waterview) and Unitec is the major single land use to the south east. The receiving environment also includes the margins of the Oakley Creek and the Waitemata



Harbour. The Oakley Inlet Heritage Area is also located in the sector. This forms part of a number of open space features in the locality.

- 10.6.4 We note that there are a number of community and amenity impacts that have a cumulative effect or overlap in terms of effects between Sectors 5 and 7. We consider that the assessment of effects may have been more effective if these two sectors had been combined to provide a more integrated assessment.

### **Potential Environmental Impacts**

- 10.6.5 The Applicant has assessed the following potential environmental effects:

#### Land Use

- 10.6.6 The Project proposes permanent occupation of 1.9ha of Waterview Reserve (18.7). Mitigation is proposed based around a partnership with the Auckland Council to develop an Open Space Restoration Plan (Appendix E.4) to *"include replacement of the quantity of land lost at Waterview Reserve and the associated active reserve facilities."* (Page 18.10). These works are acknowledged as being provided outside the footprint of the proposed designation. A programme of temporary reserve replacement also is proposed (Page 18.12) and is to be undertaken in partnership with Auckland Council. The Applicant must inform the Board of the exact nature of the partnership agreed, at the hearings so the likely cumulative effects and mitigation 'package' can be fully assessed.

- 10.6.7 Residential property take is substantial in Cowley Street, Herdman Street, and Waterbank Cres, Waterview (approximately 81 houses – Pages 18.8 and 18.9, 18.22). Additional residential property take occurs immediately to the south in Sector 7. Cowley Street is required as part of the land take, and therefore it is presumed but not stated, that road stopping procedures under the Local Government Act will apply. Can the Applicant clarify this for the Board and note other cases where road stopping will be required as part of the construction of the Project. Our review of F.16 Sheet 221 Plan Note 7 suggests that the section of Valonia Street connecting to Richardson Road is not to be stopped. Can this also be confirmed.

#### Transport

- 10.6.8 While works will be largely undertaken off line traffic management methodologies will be employed to minimise congestion effects associated with realignment and narrowing of lanes (Page 18.16). Table 18.2 (Page 18.17) outlines these methodologies. Site access points for the three Construction Yards identified will be determined in consultation with the Auckland Council (Page 18.18).

#### Social

- 10.6.9 Property acquisition associated with sectors 5 and 7 will affect 8.5% of households in Waterview (Page 18.22). While the social impacts on the community are identified as being wide ranging *"It is acknowledged that this may result in a high degree of change for affected residents and that this initially is a significant impact at least in the short to medium term. Ameliorating factors for longer term impacts include the relatively high natural 'turnover' for housing rates in Waterview and the ability for people (to) join new facilities and adjust their living patterns and social networks."* (Page 18.22).

- 10.6.10 The Applicant concludes by noting that arrangements with Housing New Zealand can be further developed to assist in reducing the severity of these impacts. This



focuses on maximum notice and early resettlement arrangements to meet families and individual needs. The key to this is the availability of alternative rental properties in areas that parties are happy to be relocated to. We are not aware that any surveys of the current tenants that would be affected have been carried out to determine relocation preferences and match those with rental supply. This information would assist in assessing the scale and significance of the social effects of relocation.

10.6.11 In considering the new motorway structures the Report concludes “... *the large scale of the motorway structures will bring a noticeable change in community character as a result of the visual impacts in the public domain. Overall, community character impacts are considered to be minor to moderately negative...*” A process of normalisation is expected as people adjust to the introduction of the new structures in their environment (Page 18.23). However, we are not convinced the assessment is reflective of residents’ opinions in terms of overall impacts on their community as evidenced from the submissions.

10.6.12 The Project is also judged to improve accessibility and connectivity (Page 18.23) although the submissions record divergent opinions from the community. These matters also need reconciliation with the opinions presented in the submissions. The continued sense of severance with Pt. Chevalier is noted whilst it is acknowledged that the situation will be no worse than it is currently (Page 18.24).

10.6.13 Reserve re-instatement is to be based around ‘like for like’ replacement of areas and facilities (Page 18.24). Submissions point to a contrary view and that this approach is not adequate.

10.6.14 Construction effects will be associated with the three construction yards in operation during the 5-7 year construction period. The report concludes “*however, on balance impacts are considered to be minor and not widespread (particularly in the long term).*” (Page 18.26). Impacts on community infrastructure (open space) are assessed to be no more than minor (Page 18.26). Submissions point to a contrary view.

#### Cultural

10.6.15 No comment has been received from Te Kawerau a Maki Trust or Ngati Whatua o Orakei at the time of preparation of the AEE (Page 18.28 and 18.29).

#### Landscape and Visual

10.6.16 The existing landscape is dominated by the interchange and the residential area of Waterview. The visual effects within the sector are assessed as significant with the imposition of a new dominant motorway structure (four elevated ramps) imposed within the community (Page 18.32). However, vegetation and revegetation proposed aims to partly screen land between the ramps and the motorway structure and soften the built interface (Page 18.32). Enhancement planting is therefore offered as a principal mitigation measure (Page 18.33). To understand the planting regime proposed it is necessary to view the vegetation types and visual simulations presented in G.20 Assessment of Visual and Landscape Effects, Appendix G and Appendix B (Viewpoint 5-series) respectively, and read the text at Chapter 6.9.1 at Pages 73-77, view Appendix F.9 Oakley Inlet Heritage Plans and F.16 Urban Design and Landscape Plans, Sheets 211 and 212. Landscape planting schedules appear at the end of these F.16 series drawings. When read and interpreted together we still are unclear exactly what species are proposed, their height at maturity and whether





this affords limited screening of the elevated structures as suggested in the various sections of text. The Applicant should clarify this detail for the Board.

### Archaeology and Heritage

10.6.17 There will be potential impacts on archaeological sites (Maori and European) in vicinity of Oakley Creek (Page 18.29, 18.34-18.36). Figure 18.5 (Page 18.35) provides a visual record of these sites. While works will affect some sites such as the stone wall (R11/2213) the assessment overall is that the impacts are considered to be minor (Page 18.36). Specific mitigation is proposed for the Oakley Inlet Heritage Area (Page 18.37-18.38).

### Coastal Processes

10.6.18 There will be permanent occupation of proposed pier locations in CMA (Page 18.39). Temporary staging platforms are to be located in the CMA with 71 temporary piles. Temporary occupation of CMA is required for piles (42m<sup>2</sup>) (Page 18.40). The mitigation is based around the avoidance of potential impacts through the design process (Page 18.41).

### Marine Ecology

10.6.19 Permanent habitat loss will result (20m<sup>2</sup>) (Page 18.42). Permanent habitat loss is considered to be a moderate adverse effect requiring mitigation (Page 18.44). Temporary habitat loss of intertidal and subtidal areas will occur (Page 18.43). The adverse effects on the marine ecology of temporary loss and disturbance will be negligible (Page 18.43).

10.6.20 The mitigation proposed includes improving the efficiency of the removal of contaminants, treating runoff from the currently untreated sections of the existing State highway and restoring the coastal fringe habitat including weed control (Page 18.44). The matters raised in the Freshwater Ecology Review and Marine Ecology Review have been discussed in our summary concerning Sector 4.

### Effects on Herpetofauna

10.6.21 Copper skinks were found to be of ecological significance in this sector. As with other sectors where they are affected we are confident that they can be managed through the Ecological Management Plan. (Page 18.45 and 18.46).

### Vegetation

10.6.22 A valued stand of karaka is noted (Page 18.47). Ramps 3 and 4 may affect some vegetated areas but not necessarily the karaka grove (Page 18.47). A construction methodology is offered as the best approach to conserve the valued part of the vegetation cover (Page 18.47).

### Air Quality

10.6.23 Dust generation and other air contaminant discharges are noted as the main potential effect during construction (Page 18.49). A number of sensitive receptors are noted (Page 18.49). The concrete batching plant will also operate in this sector, but *“with appropriate controls in place, any potential adverse effects ...will be avoided”* (Page 18.50). Separation from sensitive receptors (80-100m) is proposed, and the handling of cement powder will be fully enclosed (Page 18.50). Monitoring including daily visual inspections is proposed (Page 18.51).



### Noise emissions

10.6.24 Noise emissions will be associated with operation of the three Construction Yards and associated construction works (Page 18.53). Effects will be associated with operation of a concrete batching plant 24 hours a day (Pages 18.50, 18.60). A number of sensitive receiving environments is noted which includes the two local schools (Page 18.53). The overall conclusion is that with the noise mitigation proposed this will provide betterment from the existing situation (Page 18.54).

### Vibration

10.6.25 Testing has indicated that the mean ambient levels for vibration are below the threshold for perceptibility of vibration effects in a residential area (Page 18.55). Consultation and monitoring are considered adequate methods of mitigation for affects assessed as no more than minor (Page 18.56).

### Lighting

10.6.26 The effects of construction lighting are considered minor (Page 18.57).

### Stormwater

10.6.27 An improvement in stormwater treatment is proposed (Page 18.59) with 100% of new impervious surfaces treated and 85% of the existing surfaces treated (Page 18.59).

### Contamination

10.6.28 Historical activities in the area and the effects of construction activities has the potential for contaminated soils which could be used for fill (Pages 18.61 and 18.62). A contaminated Soils Management Plan has been prepared for this purpose (Page 18.62).

## **Key Issues Raised in Submissions**

10.6.29 A significant number of submissions concern the Project's design and the mitigation affecting Sector 5 (Summary of Submissions Report, pages 13-16). The key issues include:

- The design of the interchange – visual dominance for Waterview and neighbouring Pt. Chevalier residents;
- Connectivity - the lack of a local connection to the interchange for Waterview and Pt. Chevalier, and any connection across Oakley Creek;
- Effects on heritage – disturbance of archaeological, historical and culturally important sites could potentially release contaminants into Oakley Creek and eventually the harbour; and
- Loss of open space – while replacement reserves and facilities are proposed the qualitative aspects of some proposals is viewed as of lesser value in terms of amenity, community values and access.

10.6.30 Some submissions adopt or modify a standard submission that covered a large number of the issues affecting part or all the sectors. Often these submissions addressed matters affecting both sector 5 and sector 7 in particular and cover the matters noted above. These include submissions 26, 35, 55, 56, 60, 62, 108, 129,



136, 138, 147, 165, 167, 179, 184, 191, 202, 204, 208, 210, 219, 220, 228, 235, 236, and 248 as examples.

10.6.31 While these submissions generally also cover issues regarding the Waterview Primary School and Kindergarten and proximity to the northern ventilation stack, these form are part of the works associated with Sector 7. Our discussion concerning these and other matters at the neighbourhood level are further developed in our discussion under Sector 7.

10.6.32 It must be said again that the sector approach adopted for the Project has the effect of geographically dividing the Waterview community for analysis of Project impacts which is unhelpful when considering community based impacts and the range of effects whether they be temporary, permanent, short term or long term, particularly in respect to sectors 5 and 7, and sector 9.

10.6.33 As noted, submissions raise a wide range of concerns and those principal concerns not considered elsewhere are considered below.

#### Pedestrian and Cycle Connections

10.6.34 Cycle Action Auckland has sought that the existing planned pedestrian links through the interchange be widened to enable use by cyclists. We consider that this is worthy of investigation to determine its feasibility as it appears to have the potential to significantly enhance north-south connectivity between Waterview and Point Chevalier.

10.6.35 Other submitters have proposed that a pedestrian bridge be constructed linking Waterview with Point Chevalier located west of the interchange. This is sought in conjunction with a high level bridge connecting Alford Street with the Unitec campus which is discussed in Sector 7. The Applicant has considered this option during the course of consultation and concluded that the Project does not itself create adverse effects on the Waterview - Point Chevalier connectivity and that a bridge itself would result in additional adverse effects. We accept that a bridge in this position would provide a more direct connection; however the design does provide for pedestrian accessibility through the Oakley Heritage Precinct to the northern side of the interchange. We consider that an enhancement of this link to provide for cycle connection to Pt. Chevalier would be preferable to a new bridge link.

#### Oakley Heritage Precinct and Oakley Creek

10.6.36 A number of submissions have expressed concern about the archaeological sites and effects on the stream mouth. The Star Mills Preservation Group has a particular interest in this area and seeks further input to detailed design and construction management. We are generally satisfied that the stream mouth restoration will be appropriate. However, we note a number of submissions expressing concern about the public safety of this precinct and the risk of vandalism. We consider that a CPTED (Crime Prevention Through Environmental Design) review of this design would be appropriate and consider that strategies associated with lighting and activity based strategies may be appropriate.

#### Open Space and Sportsfields

10.6.37 Waterview Park and adjacent houses on Waterbank Crescent and Herdman Street lie within the designation and much of this area will be used for Construction Yard 6. A temporary additional playing field is proposed at Saxon Reserve. We agree with Auckland City that using resource on temporary facilities is potentially inefficient and



their proposals for early expansion of Saxon Reserve and Phyllis Reserve appears to have merit.

10.6.38 ACC also does not support the development of a sports field on the former Waterview Reserve once construction is completed and would prefer to see this land used for housing. This is a matter that merits discussion with community interests and the design potential explored. If it is concluded that without this sports field adequate provision is made, then additional housing development would contribute to protecting the viability of the Waterview community and its community infrastructure. This is a matter that merits development during the course of the hearing and possibly caucusing with the appropriate interests. This and related matters are recorded in our Chapter 16: Conclusions.

#### Additional South Bound SH20 On Ramp From Carrington Road

10.6.39 Mount Albert Residents Association and others have sought that an additional ramp to SH20 southbound be provided at the Great North Road Interchange. This would be an additional elevated structure merging with the southbound ramp from SH16 eastbound. The Board is specifically referred to submission 120 which details this proposal. It would provide south bound access onto SH20 for Waterview Pt Chevalier and other communities without having to use local roads to the Maioro Street Interchange or back track to St Lukes Interchange.

10.6.40 The design options for the Great North Road Interchange are discussed in AEE Part D, Vol 1, 11.6.5 page 11.36. This specific issue is also discussed in section 11.6.5.5 which explores a range of different additional local connection options.

10.6.41 We appreciate that this raises technical, design and modelling issues. We also appreciate that reduced flows on the local network will improve accessibility of local communities to the motorways without providing additional on connections. The AEE identifies the principal issue associated with this link as being the effects on Unitec and on the Category 1 Carrington Hospital Heritage Building. It would also increase the width of some of the ramps over the CMA however we do not see the effects associated with this aspect as fatal. We consider that the effects of this link merit further scrutiny and assessment during the course of evidence.

10.6.42 Community inputs into the design and provision of open space areas and the preservation and integrity of the archaeological and heritage features and sites around Oakley Creek inlet are sought (Submissions 111, 158, 179, and 199 provide some sample requests). We emphasise these submissions because if the submission points are accepted, they provide a mechanism for the range of community issues potentially to be addressed. We also note that conditions proposed by the Applicant and those additional conditions sought by the Auckland Council could effectively cement public involvement in the local area development planning process to a greater extent than initially proposed. We anticipate that many of these matters would be the focus of further detailed consultation through this process.

## **10.7 SECTOR 6 (NOR 3): SH16 TO ST LUKES**

10.7.1 The main elements of the Project in this sector are (Page 19.1):



- Widening SH16 to provide an additional lane in each section between Great North Road and St Lukes Interchange (NOR 3 Page 2) to provide an eight lane carriageway.
- A bus shoulder lane will be provided between Carrington Road and the diverge of the Western Springs off ramp. A permanent wetland pond is proposed (NOR 3, Page 2);
- Works affect areas of open space (0.1 ha of Western Springs Gardens Council carpark, and Chamberlain Park) (NOR 3, Page 1 and Page 19.7); and
- Construction Yard 5 (0.2 ha) will be located at 1074 Great North Road, being private open space zoned land (Page 19.7)

10.7.2 Otherwise, works are substantially confined to existing motorway corridor and designation (Pages 19.1 and 19.19).

10.7.3 The existing environment is urban with the existing transport corridor a key feature along with the open space areas of Western Springs and Chamberlain Park. A mix of residential and commercial activities is adjacent to the corridor. The construction programme records works being carried out over a one year period (G.21, Page 16).

### **Potential Environmental Impacts**

10.7.4 The Applicant has assessed the following potential environmental impacts for this sector of the Project:

#### Land Use

10.7.5 Five parcels of land affecting four dwellings are affected in the sector (Page 19.7). A minor take of land from the open space network is noted (Page 19.7).

#### Transport Effects

10.7.6 Night time closure of the corridor is possible as a temporary measure and it is suggested this can be managed effectively through communication protocols and measures recorded in the CTMP and SSTMP (Page 19.10). A similar approach is proposed for the management of construction traffic to and from Construction Yard 5. Effects on pedestrians and cyclists are expected to be negligible (Page 19.10).

#### Social Impacts

10.7.7 The assessment foresees benefits to some major community facilities such as Unitec and the Mason Clinic (Page 19.13). We note the Unitec facility has an interface with Sectors 5, 6 and 7.

#### Cultural Effects

10.7.8 It is noted that there are no known archaeological/Maori heritage sites in the sector (Page 19.17). Stormwater treatment is important in terms of the water quality and mauri of safeguarding Meola Creek.

#### Landscape and Visual

10.7.9 Noise barriers placed near Sutherland Road, Parr Road and Novar Place are suggested to adversely affect the residential outlook from adjoining properties (Page



19.18). These will be of varying heights (Refer Plans F.17) from 2.5-4.0 metres, and in localised situations 5.5 or up to 6 metres. It is important to achieve the integration of these structures in the landscape wherever possible.

#### Effects on Herpetofuana

10.7.10 Some skink habitat is affected in this sector. (Page 19.21). The management approach proposed is common across the nine sectors.

#### Freshwater Ecology

10.7.11 Meola Creek is a 2.6 km stream in the sector. There will be impacts on Meola Creek (Pages 19.22-19.25) although it is noted that the effects on freshwater habitats and communities will not be ecologically significant (Page 19.24). The Freshwater Ecology Review by Ryder Consulting Ltd provides a summary description of the characteristics of Meola Creek, and notes the creek is of moderate ecological values and agrees with the assessments and the mitigation provided by the applicant.

#### Noise Emissions

10.7.12 Construction noise effects are expected to be more than minor where equipment is operating close by (Page 19.28), otherwise such effects are envisaged to be no more than minor. Noise barriers required as mitigation are in the range of 2-4 metres, or 2-6 metres along specified sections of the corridor as is noted above (Page 4.42).

#### Vibration

10.7.13 Sources are noted to be vibration rollers, piling associated with the Carrington Road bridge works and blasting activities (Page 19.31). Specific measures to manage these effects on receiving properties are identified in Table 19.4 (Page 19.31).

#### Stormwater

10.7.14 The proposed Construction Yard has a higher risk for pollution generation and stormwater treatment is seen as desirable (Page 19.35). A permanent stormwater pond is proposed as an early activity in the work programme (Page 19.35).

#### Land Contamination

10.7.15 Specific management approaches are proposed to address any contaminated land. However this is not expected to exceed 6% of the earthworks. (Page 19.38).

### **Key Issues Raised in Submissions**

10.7.16 Few submissions focus on issues concerning this sector. Concerns focus on ensuring adequate measures will be taken to integrate the upgraded State highway corridor with the local road network, and that the corridor is future proofed in terms of providing for multi modal travel; namely bus and high occupancy vehicles, and cycling and walking along and cross the corridor. Several specific submissions warrant further comment regarding possible improvements to the design of the network.

10.7.17 Cycle Action Auckland (Submission 79) identifies an opportunity for improvement to the cycleway network by upgrading the Carrington Road / Sutherland Road crossing and improvements to the St. Lukes Road interchange. Both proposals merit further



consideration by the applicant to enhance the off-road cycleway network in our opinion.

10.7.18 Geoscience New Zealand (Submission 112) seeks the natural rock and columnar jointing of the basalt lava flow exposures are retained as visible structures in the landform. It seems reasonable in our opinion to retain this landform feature within the overall construction programme and methodology for works in this sector.

10.7.19 Several submitters in the Parr Road (Submissions 193 and 197) seek the extension of the noise barriers to protect the residential enclave and local community facilities. A review of the noise barrier layout is worthy of further consideration to determine whether amenity can be further safeguarded in response to the State highway upgrade works in this area.

## **10.8 SECTOR 7 (NOR 4 & 5): GREAT NORTH ROAD UNDERPASS**

10.8.1 The main elements of the project in the Sector are:

- The Great North Road Underpass; and
- The northern ventilation building and stack.

10.8.2 The specific details of the works proposed in this relatively short sector are described in Section 4.4.7 of the AEE.

10.8.3 The existing environment is dominated by the north south arterial of Great North Road with residential activities and Waterview School and Kindergarten to the west and Oakley Creek and associated esplanade reserve to the east.

### **Potential Environmental Effects**

10.8.4 Adverse effects from the operation of the motorway once constructed have been assessed by the Applicant as follows:

#### Land Use Effects

10.8.5 Loss of a currently unused access to Waterview School / Kindergarten from Great North Road.

10.8.6 The loss of 22 residential properties which is estimated by the applicant to be 2.5% of the total number of dwellings in the Waterview area (refer paragraph 20.2.2.2 p 20.6). The AEE does not consider this to be significant in the long term because there is undeveloped potential within the existing residential zone and there "may" be potential for post construction redevelopment for residential activities. However this is not quantified or committed.

10.8.7 The principal mitigation of these effects identified by the assessment is the design evolution to this point, particularly the adoption of the cut and cover tunnel, and the return of land post construction.

10.8.8 During construction it is proposed that 2.7 ha of open space land at Oakley Creek Esplanade Reserve is occupied for Construction Yard 7, but pedestrian and cycle access through this area will be maintained. This land will be returned to open space.



10.8.9 It is noted that the loss of residential properties for construction is concentrated on NZTA owned land in the north east of the Waterview community which is within Sector 5. Notwithstanding this, it is not apparent from the plans and particularly the Urban Design and Landscape Plans (refer sheet 217) where any potential return of land for residential activities in this Sector might occur. The land above the cut and cover sector is dominated by Great North Road itself and the proposed ventilation building and associated works.

#### Traffic Effects

10.8.10 The AEE has identified no material adverse traffic related effects once the project is constructed, however, adverse effects are expected during the construction period including:

- Reduced capacity on existing roads causing congestion and delays;
- Diversions causing congestion and delays; and
- Reduced access through the construction site.

10.8.11 These effects are expected to arise from:

- Narrowing of lanes on Great North Road;
- Temporary signals on Great North Road for site access and construction yard 7, which the AEE estimates will result in additional 2 minutes 30 seconds travel time between Blockhouse Bay Road and Pt Chevalier (refer 20.3.3.1); and
- Temporary lane closures over night or occasional full closure and diversion.

10.8.12 There will also be some limited disruption to pedestrians and cyclists due to the diversion of the eastern pedestrian cycleway onto the western side of Great North Road, and also from temporary relocation of existing bus stops.

10.8.13 Traffic management measures are proposed to manage these effects however inevitably there will be an extensive period of disruption to road users. The extent of this effect will depend on the effectiveness of the management measures and ability to respond and have contingency plans as and when issues arise.

10.8.14 These measures are to be documented in Site Specific Traffic Management Plans to be developed and certified prior to construction.

#### Ground Settlement

10.8.15 In this sector ground settlement risks are largely associated with excavation and construction of the retaining walls for the cut and cover underpass of Great North Road.

10.8.16 Expert assessment (refer report G.13) has concluded that the risk to existing residential buildings is less than minor. However, it is proposed that there be inspection of properties prior to construction to identify any pre-existing defects or sensitive features. This is to be followed up with periodic inspections during critical phases of construction.

10.8.17 Unitec Building 76 is a heritage building of substantial size and risk to this building has been specifically considered. In addition settlement effects on a number of properties within the designation between 1467 and 1481 Great North Road have been identified as at a level up to 'severe'. These properties are within the designation and will therefore be acquired but, as we understand it, will remain





occupied. Any required repair of damage will be undertaken post construction and prior to disposal. The exception to this is the Waterview Superette which will not be purchased but will be monitored and any remedial works undertaken. This is stated to be to enable the business to continue to operate.

10.8.18 A Settlement Effects Management Plan (Appendix H of Report G.13) has been provided which provides for structural condition assessments of all buildings within the designation and nearby at risk buildings including:

- Unitec Building 76;
- Waterview Primary School; and
- BP Service Station at 1380 Great North Road.

### Social Effects

10.8.19 This sector includes residential areas of Waterview and the Unitec residential village on Great North Road. The AEE describes this community as “economically and materially disadvantaged”. Waterview Primary School, with a roll of 144 students in 2010 and Waterview Kindergarten, with a roll of 62 in 2009, are recognised as important community facilities. It is noted that the School Hall is used by community groups and organisations outside of school hours.

10.8.20 It should be noted at this stage that Sector 5 also affects the Waterview community and that from a social effects perspective this boundary is somewhat artificial.

10.8.21 The nature and extent of social effects assessed in the AEE are as follows:

- Effects from rapid change in the short to medium term;
- Nuisance effects from construction; and
- Change in community character from visual impacts of ventilation building and stack.

10.8.22 The assessment considers that there will be improvements for connectivity and accessibility through removal of traffic from local streets resulting in improved travel times for residents and for public buses. However this must be tempered by the fact that there will be no vehicle access onto the motorway system from the Waterview area.

10.8.23 It is also considered that there will be improved accessibility between the Northwestern Cycleway and Waterview Reserve as a result of the additional bridge connection over the Oakley Inlet. We note however that this is a pedestrian link only and therefore will not provide a cycle connection.

10.8.24 The assessment accepts that there will be a perception of significant adverse effects on the School and Kindergarten associated with the northern ventilation stack even though the technical assessment show that air quality and noise will *“be very similar regardless of whether or not the project goes ahead.”* (20.5.2.3 Page 20.20).

10.8.25 The assessment considers that the threat to the viability of the school and kindergarten will be offset in part by redevelopment potential and increased project certainty.

10.8.26 We consider that any redevelopment potential is unlikely to occur until after the project is complete and there is a more stable investment environment. However, we also recognise that the project will involve a significant construction workforce and



this will add a new element to housing demand in this locality which may offset some of the negative effects and indeed, given, these people would be working on the project, they are more likely to feel comfortable locating their children at the school and kindergarten than other groups.

10.8.27 We note that the application considers that some houses will be able to be returned to the market after construction. The current plans for the ventilation building and associated landscaping appears to utilise all the land within the designation north of Oakley Avenue (refer Urban Design and Landscape Plan 217). These dwellings, therefore, will be the small group of properties between Oakley Avenue and Alford Street. The property plans attached to NOR 4 identifies these as 7 properties numbered 13.95 to 13.103. The attached schedule shows that two of these are Housing New Zealand dwellings and 3 are privately owned properties, but for two of these only the driveway has been designated. Property 13.100 appears to be in flats and is owned by Auckland City Council and 13.102 is the dairy. Our assessment is that there is therefore only potentially three dwellings plus the Council flats in this sector that could be returned to the housing stock post construction.

10.8.28 Construction activities are considered to “reduce liveability for the community in this area”. (20.5.3.1 page 20.21). Construction Yard 7 is located within this sector on the eastern side of Great North Road. The assessment of the social effects of this yard are considered to be “minor” and not widespread.

10.8.29 We consider that the “intensity” of construction activities in this sector will be particularly severe with major earthworks for the cut and cover, the northern base for tunnelling, ventilation facilities, a major construction yard and further intensive construction immediately to the north in Sector 5.

10.8.30 Ultimately the extent of social effects will be different for each individual and for some are potentially severe. Mitigation of these effects will be reliant of a wide range of management, communication and relationship initiatives.

10.8.31 The assessment accepts that there will be potentially significant adverse impacts on Waterview Primary School and Kindergarten and that there should be a programme to monitor the school roll and the concerns of the school community.

10.8.32 Temporary relocation of Waterview Kindergarten to 19 Oakley Avenue is proposed. Further discussion with the key parties on whether this should be temporary or permanent may be appropriate.

10.8.33 A number of other mitigation initiatives around monitoring, communication and education are proposed.

10.8.34 We consider that, despite some opportunities arising, the concern for the future of the school is a valid one. We note that Ministry statistics show that the roll at the school has steadily fallen from 229 in 1991 to a current July 2010 roll of only 142, which is less than that reported in the AEE. We also note that the roll is nearly 50% Pacific Island and 18% Maori.

10.8.35 We consider that there is more risk of existing kindergarten children not passing through to the primary school than existing primary school students actively moving to another school. The roll of 62 at the kindergarten is a healthy one and is capable of sustaining the future of the school if it manages to maintain this level and the children graduate on to the primary school. Existing and future kindergarten parents are therefore critical to the schools viability during the construction period. Those



persons in the Waterview community should be given specific attention in terms of mitigation initiatives.

### Cultural Impacts

10.8.36 The AEE reports that Ngati Whatua have a particular concern for the mauri, amenity and ecological health of the Oakley Creek. Ngato Whatua O Orakei has lodged a submission to the project and their principal concern relates to Sector 9.

10.8.37 Notwithstanding this they emphasise that every opportunity to improve the environment of Oakley Creek should be pursued. These matters are considered in more detail in Sector 9.

### Landscape and Visual

10.8.38 In this regard the AEE concludes in paragraph 20.7.2 that:

- The combination of structures and landscape modification within the northern end of Waterview will have a major impact.
- The buildings will appear to have an industrial quality signalling the presence of the tunnel portal;
- The effects on the Waterview Primary School and Kindergarten are moderate;
- The project will have a significant impact on the local residential catchment and on the wider public perception of the suburb;
- Construction will have significant landscape and visual effects for the duration of the construction phase; and
- Significant impacts will occur on local amenity values.

Mitigation proposed involves planting and for the school some 2 m high fencing.

10.8.39 A visual simulation of the project adjacent to the primary school can be found at G.20 Appendix B, Viewpoint 5/68 Waterview Primary School, Waterview. This shows that the ventilation building is largely screened by existing vegetation but the bulk of the 25 metre high ventilation stack has a significant impact.

10.8.40 We do not have a simulation of the ventilation building from other directions which will have less existing screening but planting is proposed. The assessment process would be aided by the Applicant providing visual simulations from other directions in the visual catchment of the building.

### Amenity Trees

10.8.41 The AEE at 20.8.2 states that all established trees in the vicinity of the alignment will need to be removed. This includes the large pine trees on the eastern side of Great North Road. Reportedly some smaller more valuable species are capable of relocation. Of some significance is native regenerating species at the southern end of the sector and a group of large Chinese Poplar trees.

10.8.42 It is proposed that efforts be made to minimise the removal of these species through detailed design and planning in the Construction and Environmental Management Plan and where required there be planting as set out in the Urban Design and Landscape Plans.

10.8.43 Appendix E, Section E7 Schedule of Trees provides a schedule of all amenity trees affected by the Project. This identifies 4 Pohutukawa that should be specifically considered for transplanting. None are identified for specific protection. It is also



noted that the Plan for Construction Yard 7 (F6: Construction Yard Plans) shows amenity trees to the north and south of this area that are intended to be “retained or managed via Construction EMP.” It is not clear how these trees relate to the schedule in E7.

10.8.44 The draft CEMP (G.21) at section 3.4.10.1 addresses amenity trees and gives responsibilities to a Project Arborist in relation to trees that are to be protected.

10.8.45 The Board will need to consider whether there should be any clearer conditions relating to amenity trees once it has heard evidence on this matter.

#### Archaeology

10.8.46 There are a number of archaeological sites along the banks of the Oakley Creek which include middens, pits and terraces and early European sites such as a possible mill site and drystone walls. These sites are recognised as a significant heritage landscape and is scheduled in the District Plan. (Refer 20.9 page 20.29 and figure 20.3.

10.8.47 None of these sites are affected by the project although ground disturbance in the construction yard is proposed to be monitored.

#### Ground Water

10.8.48 The groundwater modelling in the AEE concludes that the northern portal would have a maximum long term draw down of 5m to 10m adjacent to the tunnel walls reducing to less than 5m at a distance of 50 m. Potential settlement effects associated with this are considered to be minor (Ref 20.10.2.1 and Report G 13).

10.8.49 In addition, groundwater flow to the Oakley Creek is expected to reduce by around 2% which is considered by the AEE to be less than minor.

10.8.50 In order to manage uncertainties it is proposed to put in place a groundwater monitoring programme which is explained in section 20.10.3 page 20.32.

#### Fresh Water Ecology

10.8.51 Key conclusions on effects on the freshwater ecology of the Oakley Creek from the AEE are:

- The sensitivity of biological communities to predicted increases in suspended sediment is relatively low.
- There is not expected to be any significant decrease in taxonomic richness or changes in characteristic fauna.
- While temporary or localised effects are expected, mitigation measures will ensure these are less than minor.

10.8.52 Proposed mitigation is based largely around control of sediment discharges and also monitoring in accordance with the Ecological Management Plan.

10.8.53 The Ryder Consultants assessment agrees that the effects on freshwater ecology in this sector will be minor given the mitigation proposed.

#### Air Quality



10.8.54 The local effects discussed in this section relate to dust during construction which is proposed to be subject to a range of mitigation measures and monitoring. This is an issue that will require effective management, monitoring, contingency plans and community follow up. However, the issue of greater concern is any health issues arising from discharges from the stack. This issue is addressed in the project wide effects section and concludes that there will be an improvement in air quality as a result of the project despite the perceived concerns of residents.

10.8.55 The provision of independent monitoring information in readily understandable form should be capable of addressing this perception over time and could form part of the reporting obligations of the Applicant to the Community Liaison Group (or similar) promoted in the draft conditions to the designation and resource consents. This matter is discussed further in our Chapter 14: Conditions. We also note that it is proposed to establish an ambient air quality monitoring station at or near Waterview Primary School.

#### Noise Emissions

10.8.56 The noise assessment finds there may be some localised increases in noise level where the tunnel portal is located. The proposal is that noise from the tunnel services building and ventilation stack will be controlled to meet the District Plan noise limits which are 75 dBA L10 and 85 dBA L1.

10.8.57 A number of types of construction activity are expected to generate noise that exceeds daytime and night time established noise limits, and that mitigation with temporary noise barriers will be necessary.

10.8.58 For Waterview Primary School it is proposed to construct a 2.5 m high temporary noise barrier along Herdman Street and a 4 metre high temporary noise barrier once the adjacent dwellings on Great North Road are removed. Noise levels at the closest school building, however, are still expected to be as high as 60 dBA for certain construction activities. As a result it is proposed that “these be scheduled during school holidays, where practicable”. (20.13.3.1 Page 20.39, para 2).

10.8.59 It is also signalled that mechanical ventilation may be required for the most affected classrooms to enable windows and doors to remain shut.

10.8.60 The Kindergarten provides sleeping facilities for children which requires lower maximum noise levels. Specific mitigation will be required to achieve this and relocation of the kindergarten to 19 Oakley Crescent will better enable this to be achieved. We understand there are ongoing discussions on this issue but ultimately these matters will need to be specified clearly in conditions. Once operational SH20 will be below ground in this sector and no specific mitigation will be required. There does not appear to have been consideration of reduced noise levels as a result of the tunnel. This may or may not be a material benefit and evidence on this would be helpful.

10.8.61 This is clearly a hot spot for construction noise effects and concerns within the community about these effects are likely to be a material factor in decisions on school and kindergarten enrolment given the length of the construction period.

#### Vibration

10.8.62 Specialist studies have concluded that the operation of the highway through the cut and cover and tunnelled sections is not expected to increase general vibration above existing levels. No specific mitigation is proposed.



10.8.63 During construction the AEE proposes to put in place measures to ensure that “superficial damage to buildings” is avoided. This is indicated as including alternative low-vibration construction techniques where required.

10.8.64 The existing Kindergarten is recognised as a “sensitive receiver” as high risk from vibratory roller used in road construction and piling for walls. However, the assessment concludes that vibration effects during construction will be no more than minor.

#### Light Emissions

10.8.65 Measures proposed to ensure that a 100 lux light level before 10 pm and 10 lux thereafter include:

- 10m buffer between any construction equipment and residential boundaries
- Use of asymmetrical floodlights with glass visors not raised more than 3 degrees above the horizontal plane.

10.8.66 A Temporary Construction Lighting Plan for Construction Yards 6 and 7. We note that this management plan is not listed on the table of management plans on Page 12.4 and a draft is not provided in report G.10. The Plan, however, will be required to demonstrate measures to achieve compliance with relevant District Plan rules and the Auckland City Bylaws.

#### Stormwater

10.8.67 Stormwater discharges to Oakley Creek in this sector will be confined to the construction period.

10.8.68 Stormwater within the tunnel area will be conveyed to the low point through a piped network and then pumped to the northern portal and discharged to either the wetland, the trade sewer or tanker trucks depending on the level of contamination.

10.8.69 During construction temporary catchment treatment devices will discharge to the downstream reach of Oakley Creek. A wetland will treat run off from the Construction Yard.

10.8.70 Activities will be managed through the Erosion and Sediment Control Plan and the Temporary Stormwater Management Plan.

10.8.71 The Ryder Consulting assessment considers these measures to be appropriate.

#### Land Contamination

10.8.72 Investigations by the applicant have not identified any potential contamination of land aside from the petrol station. Groundwater and soil testing will be undertaken prior to and during construction to assess whether the material can be reused or requires disposal off site.

10.8.73 In the event of unexpected contamination there is to be a Contaminated Soils Management Plan and Site Health and Safety Plan which is to address how such an eventuality will be managed.

#### **Issues Raised In Submissions**



10.8.74 A significant number of submissions have raised concerns over the effects on the community in this sector. Of particular concern to submitters is the “intrusion” of the ventilation control building and the cumulative effects during the construction period. Currently the community of Waterview is relatively well served in terms of accessibility to surrounding areas via Great North Road. In reality there is a heavy reliance on Great North Road with Oakley Creek to the north and the Marine Reserve to the west.

10.8.75 The community faces the prospect of 6 years of construction in their immediate vicinity which means students of Waterview Primary School could be accommodating the effects of construction from the day they arrive at the school until the day they leave. The principal issues raised in submissions are considered below.

#### The Ventilation Control Building

10.8.76 A large number of submitters have sought that the ventilation hall be located entirely underground or underground except for office facilities. Concerns have been expressed about the scale and size of the building complex. Section F8 of the Plans shows the site layout and elevations (Plans with last six figures 917-410, 919-410 and 919-411). However, in contrast to many of the other proposed structures there is little in the way of architectural detailing. The form and bulk of the building however is evident although the cross section shown on 917-410 appears to be incorrectly located on the site plan above and the elevations also appear to be incorrectly labelled. Notwithstanding this, much of the built form is underground with the above ground form being long (52m) and narrow (6m) and oriented north - south parallel to Great North Road with a smaller built element east - west and then water storage tanks and the emission stack located separately from the main building.

10.8.77 Montages show existing and proposed planting largely screening the building which is 6.35 metres high. The proposed stack is 25 metres high and 4m by 2.5m at the base and cannot be described as anything other than a dominant feature in the landscape.

10.8.78 The building has a single high level row of windows on each side and from the information available we agree with those submitters that consider it to be industrial in appearance. (Looks like a large submarine).

10.8.79 The design options for the ventilation building and stack location are specifically considered in AEE Part D, Vol 1, page 11.42 section 11.6.7.2. This tells us that the above ground activities include the substation infrastructure, control room, equipment removal gantry and vehicle access. In this section a completely below ground option was considered and it is reported that it has the advantage of simplifying the connection between the vent building and the tunnel. It is accepted that the above ground options has some adverse effects but the form of the building also provides noise mitigation for the School from Great North Road.

10.8.80 In our opinion this is an issue that requires close scrutiny. The design issues are technical and complex but we do not consider that a compelling case for the current design has been made in the AEE. One submitter has suggested that the control room remain above ground in a residential style building with all other structures underground. It seems to us that heavy access to the underground facilities is required in some form and, therefore, more of the surface area than just the control room needs to be used for the facility. However, we consider that there is real potential to minimise the surface land take and to use the surface area for compensatory open space.



- 10.8.81 Open space could include design to mitigate noise effects (such as mounding etc) from Great North Road to the extent necessary to achieve acceptable noise levels.
- 10.8.82 We also note that the former ACC has sought that vehicular access to the site be from Herdman Street. Our understanding from the Plans is that this has been adopted.
- 10.8.83 One submitter expressed concern about the ventilation building resulting in a lack of surveillance observation along Great North Road once the houses are removed. There are a number of issues arising that relate to potential crime or vandalism issues and we are not aware that Crime Prevention Through Environmental Design (CPTED) has been explicitly applied to the open space design thinking through this part of the project. We consider that expert review in this area might assist the Board.
- 10.8.84 We consider that the ventilation building issues may be ones where caucusing of appropriate experts may have some merit at the appropriate point in the hearing process.

#### The Ventilation Stack

- 10.8.85 There are a range of issues raised in terms of the ventilation stack. The landscape impact has been raised earlier, but other submissions have concerns about the location in relation to local air quality effects.
- 10.8.86 The expert assessments are that a ventilation stack is an efficient way of dispersing air from the tunnel. The AEE considers that the dispersion results in much lower concentrations of pollutants at ground level than if all the traffic were on a ground level road.
- 10.8.87 A 25m high stack without treatment of the discharge is proposed. However, we understand that the plant has been designed to accommodate treatment systems should these be required at any time in the future. This begs the question in our minds, if treatment was applied now, would this enable a lower stack of say 15 metres with consequent reductions in landscape and visual impacts for the local community and particularly the school.
- 10.8.88 Three locations for the ventilation stack were evaluated, the other two being in the vicinity of Waterview Reserve to the north. None of the submissions have sought that these alternative locations be adopted but some have pointed to opportunities on the eastern side of Great North Road in the vicinity of the existing service station. In our opinion technical evaluation of this location would be of assistance.
- 10.8.89 We appreciate that there are technical reasons why the stack needs to be as bulky in plan as designed. Even if there were opportunities to reduce the footprint of the stack we consider that the need for such a structure presents opportunities as well as threats. The opportunity or challenge is to supplement the stack with artistic design and or features that results for the community in an 'iconic landscape feature' rather than a "blot on the landscape". Such an issue might be advanced through caucusing or separately through conditions. The potential is in our view significant and is also raised in the former ACC submission. This process could even be advanced through a design competition. The preference would clearly be for an artistic contribution rather than commercialisation of the opportunity.





10.8.90 The former ARC has sought clarification of the parameters for operating the ventilation facilities. The application states that during periods of low use the ventilation will not operate. We agree that clarification of these parameters is required.

#### Effects on Unitec Village and Proposed Computer Centre

10.8.91 Unitec has raised a number of concerns regarding the effects on its operations. Construction Yard 7 is immediately to the north of the Unitec Residential Village and there is concern for nuisance effects on students during the construction periods to the extent that relocation of students may be necessary.

10.8.92 We agree that the Construction Environmental Management Plan should be required to specifically address these issues and once evidence has been presented it may be appropriate to specify specific outcomes that must be achieved to provide Unitec with reasonable certainty for the continued operation of the accommodation facility. Exam and pre exam periods are particularly sensitive and should be had regard to in the construction programme.

10.8.93 Building 76 is located on the eastern side of Oakley Creek where it is planned to accommodate a 24 hour IBM support centre. This building may be particularly sensitive to vibration effects and appropriate monitoring should be put in place.

10.8.94 Unitec submissions also raise concerns about future planned connections in particular, an east west road link through the site connecting with Great North Road in the vicinity of Herdman Street. Such a link is likely to require a separate form of resource consent and the submission concern is largely about the project preventing this future connection. The Applicant's expert will be best placed to respond to this matter.

#### Light Spill

10.8.95 One submission has specifically raised concerns about light spill in this Sector. However we consider this is more particularly a concern for the elevated section of road in Sector 5.

#### Bus Lane for Great North Road

10.8.96 The former ACC seeks the provision of a northbound bus lane between Oakley Avenue and Waterview Interchange as part of the reconstruction of the road above the cut and cover tunnel. It is submitted that this can be accommodated in terms of space available and at little extra cost given that reconstruction is a given.

10.8.97 We agree that opportunities should be taken to upgrade rather than just replace facilities where it is efficient to do so. This is particularly relevant for public transport efficiency. The ACC submission provides a preliminary design which other parties will be able to respond to.

#### Oakley Ave to Waterview Shared Path

10.8.98 Submissions including the former ACC submission also seek a Great North Road western shared path. This would be a pedestrian and cycle route consistent with the standard of other project shared paths on the western side of Great North Road from Oakley Avenue to Waterview interchange. The aim is to improve access to the existing overbridge over Great North Road. This land is all within the designation



and is to have all buildings removed. From our preliminary non-technical assessment there does appear to be a reasonable opportunity to provide this facility.

#### Effects on School and Kindergarten

10.8.99 In this sector twenty-two households will be displaced. The combined effect of property acquisition for Sectors 5 and 7 is reported to be 8.5% of the Waterview households.

10.8.100 The assessments find that the effects on the school and kindergarten will be significant despite mitigation. We consider that the size of the school and its declining roll over the last ten years does make its viability an issue through the construction period.

10.8.101 This is a complex issue driven by personal individual decisions. Consideration should be given to specific initiatives to ensure that the existing roll can be maintained through the construction period. We are surprised that we have not yet found any detailed analysis of the construction workforce for the project and how many of those might be relocating into the area as a result of the project. We can only refer the Board to section 6.2 of Report G.14 Assessment of Social Effects which identifies a potential 1,000 'workers' over the construction period. We do not expect there to be a need for purpose built accommodation in the local area for construction workers but those that are relocating with potential students for the school it may be possible to facilitate appropriate accommodation and to promote enrolment at Waterview Primary School.

10.8.102 As with other matters this can be explored further through the hearing process.

10.8.103 On the basis of the assessments undertaken we support the current proposals to relocate the kindergarten. However, we are unsure of the merit of spending further resource to relocate it back to the original site unless there are demonstrable benefits to this.

#### Waterview Esplanade Reserve

10.8.104 A large part of this reserve is proposed to be used for Construction Yard 7. The former Auckland City has expressed concern regarding the sensitivity of this site and lack of detail on effects. However, we note that the yard area avoids all currently known archaeological sites. One submitter has proposed that the flat part of the reserve be extended southwards and towards the Creek with additional fill from the project. Given the sensitivity of this location we do not support such an idea unless it can be clearly shown to have environmental benefits.

### **10.9 SECTOR 8 (NOR 5): AVONDALE HEIGHTS TUNNEL**

10.9.1 The main elements of the project in Sector 8 are:

- Two 2km long tunnels: and
- The emergency exhaust at 37 Cradock Street, although we note now that this facility is no longer part of the Project and therefore we do not discuss this further in our assessment.

10.9.2 The specific details of the works proposed in this sector are described in Section 4.4.8 of the AEE.



10.9.3 The tunnelled sector of the project involves two parallel tunnels each accommodating three vehicle lanes. The tunnel extends to 50 metres below ground level and follows the general alignment of the Oakley Creek with the southern portal being in Alan Wood reserve.

10.9.4 The existing land uses above the proposed tunnel are from north to south open space, residential and then the rail designation which is zoned Special Purpose.

10.9.5 The application has regarded the southern ventilation control building and stack as being in Sector 9 and therefore this is not addressed in this section.

### **Potential Environmental Effects**

10.9.6 Adverse effects from the operation of the motorway once constructed have been assessed by the applicant as follows:

#### Land Use Effects

10.9.7 We agree that the only land use issue at the surface for this sector was the emergency exhaust stack which is within a residential area. We note that the Applicant has withdrawn the NOR for this work.

#### Social Effects

10.9.8 The AEE concludes that the proposed tunnel will provide a number of social benefits and few if any adverse effects for the residential communities in this sector.

10.9.9 The assessment expects there to be:

- Accessibility and connectivity improvements through reduced traffic on existing local roads.
- Some potential for stress from vibration during construction.
- Positive economic opportunities from the construction workforce.
- The removal of uncertainty.

10.9.10 A number of management and monitoring related mitigation measures are proposed. We generally concur with this assessment.

#### Groundwater

10.9.11 Some drawdown of groundwater will occur during the construction phase. The AEE records that modelling has shown the worst case would be 8 metres adjacent to the tunnel in the Tauranga Group Alluvium (TGA) but significantly more through the Parnell Grit where the drawdown is expected to extend 250 metres from the tunnels. Despite this potential settlement effects have been assessed as minor.

10.9.12 The tunnels pass under Phyllis Reserve which is a former landfill. However beneath the landfill is a thick layer of low permeability soils which is expected to ensure that there is no contamination migration caused by the tunnelling.

10.9.13 During construction groundwater flows to Oakley Creek could be reduced by 4%. However groundwater is stated to make up only 30% of the base flow which means that flow reduction overall will be less than 2%.



10.9.14 Proposed monitoring and management measures should ensure that there are no material adverse effects on the environment.

#### Freshwater Ecology

10.9.15 Oakley Creek runs through this entire sector and some sections are channelized. Water quality is stated to be low. The only fish populations are short fin and long fin eels and there are two pest fish, being mosquito fish and goldfish.

10.9.16 The AEE concludes that the very minor extent of drawdown during operation will not have any effect on the stream ecology. During construction tunnel water will be treated before being discharged to the Creek. The Ryder assessment has not identified major concerns but does point to the potential of further mitigation by providing fish access across the waterfall located in this sector. This is a matter that could be discussed further with Friends of the Oakley Stream and the Council.

#### Ground Settlement

10.9.17 The area of risk for settlement extends out several hundred metres either side of the tunnels. The key findings of the application assessment of ground settlement include:

- Negligible effects for residential dwellings;
- Negligible damage risk for the Pak'n Save supermarket which has a basement car park;
- Non structural and repairable damage to the Unitec Residential Flats; and
- Minor effect on the Watercare Orakei No 2 Trunk Sewer.

10.9.18 A monitoring programme is proposed for prior to, during and after construction.

#### Noise Emissions

10.9.19 Some risk of noise at the surface from tunnelling construction is reported. Some of this is expected to be what is termed as "reradiated" noise from vibration. The assessment concludes that day time noise will comply with accepted guidelines but reradiated noise may not comply particularly at night time.

10.9.20 Again monitoring and mitigation management is proposed. However, the AEE at 21.7.3 page 21.19 does signal that "*if noise levels are unreasonable consideration will be given to temporary relocation of residents.*" This could be for around 7 days at the worst locations as the tunnel moves forward. This specific issue has not arisen in the submissions. It is possible that potentially affected parties are not aware of this risk and further consultation on this matter to alert parties to how this might be managed will be important.

#### Vibration

10.9.22 Assessment of other case studies has found that any adverse effects are likely to be minor. Similarly during construction existing standards are expected to be achieved. However mitigation will involve pre and post construction condition surveys of buildings structures and services.

#### Land Contamination



10.9.23 Former landfills exist in Phyllis Reserve and Harbutt Reserve. Oakley Creek flows through and around these reserves. The AEE investigations state that groundwater sampling initially indicated elevated concentrations of lead, copper and volatile hydrocarbons (refer 21.9.1 page 21.21). Later samples did not identify such high levels and the assessment has come to the position that there are no specific issues in relation to contaminated ground water. However, the initial high levels are not explained and evidence addressing this matter would be of assistance.

10.9.24 The main area of waste is reported to be in the northern corner of Phyllis Street Reserve known as "Albie Turner Field" where there is a thickness of 11 metres. The tunnel is much lower at this point and this area will not be disturbed by construction.

### **Issues Raised In Submissions**

10.9.25 Overall there is considerable support for the tunnel in this Sector. Submissions arguing against the tunnel are generally arguing that the entire project should not be consented for wider reasons. The principal issues raised are discussed below.

#### Tunnel Sector Cycleway

10.9.26 There are a significant number of submissions seeking that there be an off road surface level cycleway constructed for this Sector:

- There is a need for a continuous cycleway link through the project corridor;
- It is inconsistent with NZTA policy not to provide one;
- In previous consultation NZTA has indicated one would be provided;
- The continuous link will ensure the whole network is better used;
- It will contribute to a safe cycling route across Auckland;
- It will provide added connectivity; and
- It will provide an alternative travel mode for longer commuting and other trips.

10.9.27 Two important submissions in this regard are Cycle Action Auckland (No. 79) and Auckland City Council (No. 111). A specific route, with an alternative to Unitec, is identified in the Cycle Action Auckland submission and appears to be consistent with that promoted in the ACC submission. It involves the construction of two new bridges, one is at Soljak Place over the North Auckland Rail Line and the second over the Oakley Creek at Phyllis Street Reserve or at Alford Street.

10.9.28 We expect that these structures would require specific resource consents which are not included in those currently sought.

10.9.29 It is apparent that there has been a history of debate over this link extending even to preliminary design of these bridges. However, the NZTA position is understood to be that, with a move to a tunnelled Motorway through this link, it is causing few adverse effects compared with other options and therefore the Project should not be responsible for cycleway improvements through this part of the local road network.

10.9.30 From the information available at this stage it is not possible to identify all the possible issues associated with the design of this route. In principal we consider that it is important that opportunities are taken in completing the "missing link" in the Motorway system to also complete a missing link in an otherwise high standard cycle/pedestrian network.

10.9.31 However, given the motorway is in tunnel in this section we doubt whether this should be seen as the sole responsibility of NZTA. It is expected that there will be



considerable evidence on this matter and this may be a potential area for caucusing. Discussions between ACC, now The Auckland Council, and NZTA ahead of the hearing may also advance this matter.

#### Bus Lanes in the Tunnel

10.9.32 The Green Party submission (No 156) seeks that dedicated bus lanes are included in either the tunnel or on Great North Road. The bus lane sought by ACC as part of the Great North Road overpass has been discussed in Sector 7. However ACC has not sought to have bus lanes in the tunnel but does seek a wider commitment to the implementation of bus lanes on the local network.

10.9.33 The issue of project specific mitigation versus wider public transport improvements over time and the responsibilities of the various transport agencies needs to be carefully considered during the course of the inquiry.

#### Pak'n Save

10.9.34 There is a Pak'N Save supermarket at New North Road, Mt Albert that sits above the tunnel and is referred to in the 'Ground Settlement' section above. The owners are concerned to ensure there are appropriate conditions to address vibration, settlement or other construction issues. The building has been assessed by the Applicant as subject to "negligible risk". However, notwithstanding this a wide range of measures including a condition survey, monitoring and response are proposed and incorporated into management plans.

10.9.35 We consider that the framework proposed is capable of managing this risk and responding to issues arising however closer scrutiny of the regime proposed will be necessary during the course of the hearing.

#### Unitec

10.9.36 This facility does extend into Sector 8 and we have discussed the principle issues raised in their submission in Sector 7.

#### Reserves

10.9.37 Phyllis Reserve has attracted submissions from individuals, sports organisations and ACC regarding the improvement of the sportsground facilities at the reserve and the need for improved access to the reserve.

10.9.38 The Reserve is not within any proposed project designation and no consents have been sought for works at the reserve. The Applicant has not proposed to include Phyllis Street Reserve in its strategy for provision of replacement open space. While replacement open space has been sought to be provided within the designation this is not exclusive. For example Saxton Reserve in Waterview is proposed to be enlarged as part of the Project.

10.9.39 ACC does not support constructing temporary sportsfields at Waterview Reserve (Sector 5) and Alan Wood Reserve (Sector 9) to provide capacity during the construction period. It considers these resources would be better used by upgrading Phyllis Street Reserve from one senior field to three training fields. This will consolidate provision at a single park that is remote from the effects of construction and should be implemented ahead of the loss of existing fields. The more flexible field layout reportedly would provide for a range of sporting codes.



10.9.40 We agree with the principal that wherever possible replacement of open space and recreation facilities should be implemented ahead of the loss of existing facilities. We think there may well be merit in the submissions on this matter, but it requires closer scrutiny through evidence. Implementation of this would need to be by way of private agreement outside of the scope of conditions on resource consents but would need to be taken into account in the Board's decisions.

10.9.41 Any commitment to expansion of the function of this reserve would need to have regard to effects on local roads, parking and other related matters.

## **10.10 SECTOR 9 (NOR 7): ALAN WOOD RESERVE**

10.10.01 The main elements of the project in the Sector are:

- Southern portal and ventilation building;
- New carriageway through Alan Wood Reserve to Maioro Street Interchange;
- Richardson Road Bridge;
- Hendon Avenue cycle/pedestrian bridge; and
- The northern half of Maioro Street interchange.

10.10.02 The specific details of the works proposed in this relatively short sector are described in Section 4.4.9 of the AEE.

10.10.03 The existing environment is characterised by open space surrounded by residential areas of Owairaka to the east and New Windsor to the west. There is a small commercial centre at the Richardson Road/Stoddard Road intersection and the most important natural feature is Oakley Creek which runs along the alignment of the Project.

### **Potential Environmental Effects**

10.10.04 Adverse effects from the operation of the motorway once constructed have been assessed by the Applicant as follows:

#### Land Use Effects

10.10.05 The alignment of the proposed motorway passes through open space which is highly valued by the adjacent communities for both active and passive values. However, the route sits either within or alongside the Avondale Southdown Railway Designation which is underlain by the Special Purpose 3 Zone (Transportation) which seeks to enable transport infrastructure.

10.10.06 The railway remains part of the long term planning for transportation infrastructure in the region but the Kiwi Rail submission indicates that its construction is unlikely to occur within the next 20 years.

10.10.07 The project will occupy 3.2 ha of open space from Alan Wood Reserve, however, the AEE considers that with the replacement facilities planned the effects will be minor.

10.10.08 The project directly affects residential properties on Valonia Street and Hendon Avenue. However, some affected sites may become available for redevelopment after construction.



- 10.10.09 There are also effects on seven properties in the Stoddard Road business area arising from land take requirements of construction. Although reportedly, land take will not involve loss of existing business premises and they will be able to remain operational during construction. The Project retains a 20 metre wide corridor for the future rail line.
- 10.10.10 During construction there is an additional effect on open space arising from proposed Construction Yards 8, 9 and 10 which are within existing reserves and cover a total of 7.7 ha. It is proposed to address this through temporary and permanent reserve replacement.
- 10.10.11 Residential dwelling direct impacts involve 16 dwellings in Hendon Avenue and 13 in Valonia Street. Some of the Hendon Avenue properties are not required in full but the Applicant has determined that a partial take approach would result in significant adverse effects for the part remaining properties and therefore the whole property is to be designated and acquired. Also within the designation is a single site that has authorisation for construction of 83 dwellings but has yet to proceed.
- 10.10.12 The AEE considers that land use impacts have been minimised through design and locating the route largely within the Special Purpose Zone. This is an aspect where the application of a permitted baseline may be relevant. The AEE has not explicitly sought to do this preferring to acknowledge simply that what is proposed through the designation is in accordance with the general intent of the Special Purpose Zone.
- 10.10.13 Section 104(2) enables a consent authority to choose to disregard an adverse effect on the environment if a plan permits an activity with that effect. However that clause applies to determining resource consents and the principal land use issues in this sector are associated with a Notice of Requirement. There is no equivalent Clause that applies to Notices of Requirement. However Section 171(d) does enable the NOR decisions to have regard to *“any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.”* We are of course also aware of the wealth of case law on this matter much of which predates the amendment of section 104.
- 10.10.14 The Special Purpose 3 Zone rules of the Isthmus Section of the Auckland District Plan are found at section 10.7.3 of that Plan and also the 4<sup>th</sup> page of the Appendix 12 of the ACC’s 149(G) report. This states that “any facility designed primarily for the movement of people and /or goods” is classed as a permitted activity. No permitted activity standards are included in this section but the activity is required to comply with “the relevant development controls and other relevant rules in this Plan”. We have therefore considered the General rules in Part 4A of the Plan. Part but not all of this section is in Appendix 1 to the ACC s149G report. This tells us that the earthworks associated with a project in the Special Purpose 3 Zone would require a resource consent for a controlled activity for earthworks over 500m<sup>2</sup> where the slope is less than 5%.
- 10.10.15 The 149G report also refers at page 11 to Clauses 4.A 4.6 A and B. These rules deal specifically with network utility services within existing roads and also the construction operation and maintenance of roads (including earthworks) which is also a permitted activity. The definition of road does not include motorway but the s149G report regards this as applying once a road has been constructed and vested rather than prior to this.



- 10.10.16 If it was decided that it was appropriate to disregard effects permitted by the Plan, those effects would be the effects of the construction and operation of a road project and associated earthworks up to a scale that could be accommodated by the corridor provided by that Zone. This is potentially a very high permitted baseline. We are not aware of what extent of debate a challenge was made to these provisions during the Plan preparation and hearing stages. However, we are surprised that, given the long history of this project, community interests did not achieve greater protection in relation to permitted baseline application. We note however that it is possible that these Plan provisions were settled before the case law development of this concept and subsequent amendment to the Act.
- 10.10.17 While we emphasise that the Applicant has not relied on any detailed permitted baseline argument in the AEE, nevertheless we consider this is potentially relevant to the consideration of effects particularly in this sector where the physical form of the Project is extensively within the Special Purpose 3 zone which is specifically designed to provide for any form of transportation infrastructure.
- 10.10.18 We consider that this is an important issue because the Special Purpose Zone cuts through the middle of the open space and reserves. The rail designation is not fenced and is leased to ACC and is managed as part of the wider open space. It is likely that the public perception is that the entire area has public open space status and that is in effect the existing environment. However, the District Plan specifically seeks to enable transportation through this corridor whether it be by road or rail or both.
- 10.10.19 This is a matter on which the Board may wish to request further legal advice. Notwithstanding this, our consideration will take a conservative position to disregarding effects.
- 10.10.20 We note that NOR is to include a much wider area of land the final road corridor will occupy. This is to provide for construction yards, realignment of the Oakley Creek and replacement of open space and recreation facilities. The plan at AEE Vol E Appendix E4 is a helpful plan of open space proposals in this area.
- 10.10.21 Key features are:
- Returning 7.75 ha of Alan Wood/Hendon Park to open space after construction;
  - Providing an additional 3.7 ha of open space around the existing open space areas after construction; and
  - Providing two new playing fields at 25 Valonia Street.
- 10.10.22 The Applicant considers that this will provide a net increase in total open space area of 0.5 ha. However, this is perhaps better qualified as an increase in land zoned open space than currently exists rather than land with open space character. To understand how the land area can be returned to open space we think it important to have the status clarified by the Applicant of the various land parcels that comprise "Alan Wood Reserve". The extent to which land is gazetted for recreation may influence the approval process and the final arrangement of open space and sportsfields in our opinion.
- 10.10.23 Sportsfields lost are to be replaced once the motorway is constructed. During that time three temporary playing fields are proposed on land at the northern end of Alan Wood Reserve and at 25 Valonia Street. (Refer AEE part D vol 2 page 22.12 Figure 22.2).



10.10.24 Ultimately these playing fields will be vested in the Auckland Council who will be responsible for the asset. We note that ACC has lodged submissions on this matter which we discuss later.

#### Transport Effects

10.10.25 A cycleway and pedestrian route is proposed on the western side of the motorway through this entire sector. In addition a bridge over the motorway is proposed with a cycle pedestrian route extending east to Richardson Road.

10.10.26 All existing local road connections will be maintained and we generally concur that once complete any adverse local transport effects will be minor.

10.10.27 The AEE also reports that with the exception of the Richardson Road bridge, most of the construction can be undertaken without direct effects on existing roads apart from Valonia Street for example.

10.10.28 Construction traffic will potentially affect congestion and there will be narrowing of some lanes at Richardson Road Bridge along with temporary realignment. The Applicant assesses that this will have little impact on travel times throughout the sector. There will also be some temporary lane closures and night time closure of Richardson Road. While these will be required to be carefully managed through the Site Specific Traffic Management Plans there will inevitably be periods where there is material disruption to community and business activities in this area. Cumulative effects on cycle, pedestrian, bus and road users could be significant.

#### Ground Settlement

10.10.29 In this sector the AEE identifies three areas of interest as follows:

- At the southern portal “relatively minor” settlements are predicted with “negligible” effects on residential dwellings in the area.
- Minor effects on buildings within 20 metres of the Richardson Road retaining walls with a maximum movement behind the walls of 5mm horizontal and 5mm vertical.
- Uniform settlement with no detrimental effects at the Alan Wood Reserve landfill.

10.10.30 The AEE recognises these risks as low probability but high consequence and therefore recommends monitoring in accordance with the Settlement Effects Management Plan (Appendix H of Report G.13). As part of this, specific assessment is proposed for the ‘Modern Chairs Building’ on Richardson Road.

#### Social Effects

10.10.31 This sector includes residential areas of Owairaka and Walmsley to the north of the Project and New Windsor to the south.

10.10.32 Key characteristics reported in the AEE include:

- The area is serviced by the Stoddard Road / Richardson Road business and retail area which is identified as a future growth node;
- A high proportion of the community is “economically or materially disadvantaged”;



- Alan Wood Reserve with Hendon Park provides an important passive and active open space with the rail designation leased to ACC for open space, and part is subject to the Reserves Act 1977 (Page 22.5);
- There is limited pedestrian connectivity between New Windsor and Owairaka.
- Murray Halberg Park has good facilities and is well used;
- There are a number of schools in the vicinity but Christ the King School directly adjoins the project near Maioro Street; and
- The existing Alan Wood Reserve walkway connects New North Road with Hendon Park. This can be seen on AEE Part D Vol 2 page 22.20 Figure 22.3; however, use with caution as Murray Halberg Park and Alan Wood Reserve are labelled incorrectly.

10.10.33 The AEE concludes that there will be effects on “people’s way of life”, particularly those living close to the Project and users of open space and schools. It sees the effects to be “minor to moderately negative” on people’s long term well being and way of life. Residents are generally expected to adjust to the changes in community character.

10.10.34 There will be some positive effects through improved accessibility and connectivity including improved access to the State Highway network, reduced traffic on local roads, and improved access for pedestrians and cyclists. Effects on community infrastructure are assessed to be minor.

10.10.35 However during the planned 5 year construction period for this sector there can be expected to be significant noise and possibly vibration effects. We note the proximity of the Avondale Motor Park where there are permanent residents living in accommodation with little acoustic insulation. The number and size of construction yards are also likely to cause a range of nuisance effects. While these are temporary the length of the construction period means they are significant.

10.10.36 Despite planned temporary replacement of sportsfields there will be a material loss of open space and during the construction period.

10.10.37 A significant number of the directly affected houses are rental properties owned by Housing New Zealand. This provides considerable opportunity to facilitate relocation of these tenants to other properties that meet their needs and a planned approach to this is proposed.

10.10.38 It is noted that on Hendon Street there is some potential for redevelopment for residential activities on land not required beyond construction instead of open space.

#### Cultural Impacts

10.10.39 The AEE reports that Ngati Whatua have a particular concern for the mauri, amenity and ecological health of Oakley Creek and the open space in this Sector. Ngati Whatua O Orakei has lodged a submission to the Project which is discussed later in this section.

#### Landscape and Visual

10.10.40 In this regard the AEE concludes that in the sector there are significant adverse visual and landscape effects. These arise from:

- The ventilation stack and portal building;



- The removal of housing along Hendon Avenue; and
- The occupation of open space by the Project.

10.10.41 South of Richardson Road the effects are assessed in the AEE to be “minor at worst” because a significant part of this is flanked by commercial and industrial uses.

10.10.42 The AEE considers that construction works will also have a significant landscape impact caused by the transformation from open space to construction site and yards. In response, extensive landscape mitigation is proposed however residents will have to wait a considerable time before this is established and provides any amenity. In the meantime construction mitigation proposed involves solid screen fencing and early placement of bunding and noise walls.

10.10.43 We conclude that there are significant effects in landscape and visual terms that will not be fully mitigated and will be particularly severe during construction.

#### Amenity Trees

10.10.44 The AEE reports that no protected trees are affected in this sector. However there will be a loss of amenity trees including:

- A group of flowering cherry trees and a stand of large mature Gum trees in Alan Wood Reserve; and
- A large macrocarpa and pine on the southern side of Alan Wood reserve.

10.10.45 These effects would come within a permitted baseline if applied and will to a degree be mitigated by future landscaping and planting.

#### Streams

10.10.46 Oakley Creek is the “biggest” stream in Auckland City and is in an open channel in this sector.

10.10.47 Stream works involve the realignment of 220 metres of the Stoddard Road tributary and 790 metres of Oakley Creek. This will shorten the waterway by 130 metres. The realignment will be in a naturalised channel form improving the habitat and amenity. There will also be a 40 metre wide motorway bridge across the stream and alongside that a new cycleway / pedestrian bridge crossing the stream. Figure 22.4 on page 22.33 AEE Part D Vol 2 shows the realignment and rehabilitation areas and it is also useful to refer to Plan F.16: Sheet 219 – 222, and Plans F.2: Sheets 17 and 18.

10.10.48 The AEE concludes that the long term effect in the stream will be positive. The detail of this assessment has been reviewed by Ryder Consulting which concluded that the stream realignment measures “are appropriate”.

#### Stormwater

10.10.49 Oakley Stream has a catchment of nearly 13 km<sup>2</sup> and has an estimated 84% of its catchment urbanised. It is proposed that all stormwater associated with the Project will be treated and this includes two stormwater wetlands in this Sector. As a result the AEE concludes that any adverse effects will be no more than minor.



- 10.10.50 The wetlands will also provide stormwater detention of peak flows for flooding events up to the 100 year ARI event. The AEE reports at 12.10.2.2 that the design provides for peak flows to be reduced from the predevelopment level.
- 10.10.51 During construction measures will be taken to remove 75% of solids from all construction areas in accordance with ARC TP10. Special measures are also proposed for the concrete batching plant.
- 10.10.52 The Ryder Consulting review agrees that the measures proposed are not expected to significantly affect water quality in Oakley Creek.

#### Groundwater

- 10.10.53 In hydrological terms Oakley Creek is described in the AEE as a 'flashy river' with significant flow variations and a low base flow component. Groundwater recharge is estimated to be only 30% of the flow.
- 10.10.54 Due to the higher groundwater table within the basalt at the southern portal a permanent drain and 20 metre wide grout curtain is proposed to reduce pressure on the walls. Modelling suggests drawdown of between 2 metres and 15 metres adjacent to the walls extending no more than 100 metres. The AEE regards potential settlement effects of this as minor.
- 10.10.55 Effects of drawdown on Oakley Creek are also considered to be minor and estimated to be 6% of the groundwater inflow. A groundwater monitoring programme is proposed with continuous monitoring along Oakley Creek.

#### Herpetofauna

- 10.10.56 Investigations have found the populations of the rainbow skink and the native copper skink in Hendon Park. There will be significant loss of their habitat in this location and it is therefore proposed to relocate the skink population to suitable alternative habitat managed through the Ecological Management Plan. It is noted that some habitat enhancement at Harbutt Reserve may be required for relocation to this site.

#### Fresh Water Ecology

- 10.10.57 As reported for Sector 7 Oakley Creek has relatively low ecological health. As a result of stormwater treatment the AEE estimates that the future contaminant load from the Project will represent only 6% of the total load to the stream. This is not expected to have any significant effects on biological communities.
- 10.10.58 The AEE concludes that the habitat development proposed with the stream realignment will result in improved waterway conditions although the ecological values will be limited by water quality and fish access limitation of the downstream waterfall.
- 10.10.59 Similarly proposed measures during construction are expected to result in less than minor effects (22.13.4).
- 10.10.60 The Ryder Consulting review generally concurs with this assessment although it is suggested that the applicant consider improving native fish access over the downstream waterfall as part of the mitigation package.

#### Vegetation



10.10.61 Vegetation affected by the project in this sector is largely exotic and introduced with low botanical conservation values. However, mitigation during construction will have regard to a notable fern in the blockwork of the stream channel wall that would be affected by stream works and if confirmed as a rare species will be collected and relocated.

#### Air Quality

10.10.62 The local effects discussed in this section relate to dust and vehicle emissions during construction and the risk of emissions from the concrete batching plant associated with dust from aggregates and cement powder. Cement dust can be corrosive to skin and the plant is within 30-40 metres of residential properties on Methuen Road. The rock crusher does not create an air quality issues because it is to be fully enclosed.

10.10.63 A range of mitigation measures are proposed mostly associated with the monitoring management of construction activities. Specific measures are planned for the concrete batching plant through the Concrete Batching and Crushing Management Plan. The concrete batching plant is within 30-40 metres of residential properties and will need to be carefully managed to avoid dust nuisance. The AEE at 22.15.3.2, page 22.52 refers to partially enclosing load hoppers, conveyors and storage bays. This seems a rather uncertain concept and suggests the need for approval of a specific concrete batching plant designed to minimise dust emissions and not just management measures.

10.10.64 The air quality effects of emissions from the ventilation stack are assessed to be positive.

#### Noise Emissions

10.10.65 Existing noise levels have been measured and characterised as a low urban noise environment. The Sector has 3 distinct noise environments:

- Residential environment to the north of the project;
- Residential environment to the south of the project; and
- Christ the King School and its vicinity.

10.10.66 Noise effects from operation of the motorway without mitigation have been assessed as being severe for all three areas.

10.10.67 A range of mitigation options have been evaluated noise barriers are proposed for all three areas as follows:

North side	Noise barriers 2-2.5 metres high;
South side	Noise barriers 2-5 metres high; and
Christ the King School	Noise barriers 3-4 metres high.

10.10.68 The AEE concludes that this mitigation will achieve specified noise criteria in accordance with NZ Standard 6806.

10.10.69 Noise during construction is assessed by the AEE to largely comply with day time noise criteria. However, there are potential exceptions. The areas of particular concern and mitigation proposed are summarised as follows (22.16.5; page 22.56):



Construction of the grout curtain: Erecting temporary noise barriers and limiting work to day time;

Noise from the concrete batching plant: Enclosing the plant and providing an additional noise barrier. It is noted that this infers total enclosure including the truck load out area whereas the assessment of air quality proposes partial enclosure. This is a matter that should be clarified in evidence. It is also acknowledged that specific mitigation of individual houses may be required.

The rock crusher: To be enclosed within a “well sealed enclosure” and operated only for short periods at a time; and

Blasting: Undertaken in middle of the day after good communication with residents.

10.10.70 Draft management plans have been prepared for the full scope of these activities; however it is recognised that temporary relocation of some residents may be necessary for short periods or alternatively mechanical ventilation and insulation required.

10.10.71 We conclude from this assessment that there are material unmitigatable noise effects during the construction period and the extent of nuisance effect will be different for each location and circumstance. While best practice can be employed the residual effects will still be more than minor for some, but how many is not clear.

#### Vibration

10.10.72 The existing ambient vibration level has been measured at 204 Methuen Road and Christ the King School and has been found to be low, with the main sources coming from human activity within residences rather than traffic sources.

10.10.73 The AEE assessment is that there is unlikely to be any building damage due to operational vibration. Vibration levels at the recently completed SH20 Mt Roskill extension have been lower than expected and any effects in Sector 9 are expected to be minor.

10.10.74 Issues during construction include vibration rollers, drilling for grout curtain and secant piles, piling, rock breakers and blasting. The AEE concludes that there is low to medium risk of sensitive receivers not complying with project vibration criteria. However, there may be some exceptions in the vicinity of the grout curtain and when there is blasting. Measures in the Construction Noise and Vibration Management Plan include building condition surveys, monitoring and trial blasting.

#### Light Emissions

10.10.75 The existing light environment is relatively dark. The AEE acknowledges that new lighting will have a significant effect on the visual environment with the closest residents looking down on the motorway with a lit carriageway after dark. More distant residents will see the motorway as an illuminated object or corridor. The cycleway will also have amenity lighting.

10.10.76 During construction temporary lighting will be required for night time works and construction yards will also be lit.



10.10.77 Operational lighting has been designed to reduce light spill but the consequence is additional poles. A change to the existing light environment is regarded as “unavoidable”.

#### Land Contamination

10.10.78 Landfilling occurred in Alan Wood Reserve between the 1940's and 1970's. Investigations by the applicant have been undertaken at Alan Wood Reserve and Maioro Street Interchange. This concluded that 48% of the earthworks in this sector is clean fill, 19% managed fill and 33% contaminated fill. There are also elevated levels of some heavy metals and asbestos at Maioro Street interchange.

10.10.79 As a result it is proposed that all construction activities in this sector are undertaken in accordance with the Contaminated Soils Management Plan and Site Health and Safety Plan.

#### Flooding

10.10.80 In this sector overland flow paths for the 100 year ARI rainfall event intersect the proposed motorway alignment. The AEE reports (22.20.2; page 22.64) that the proposed stream works do not increase upstream flood levels. Indeed the lowering of flood levels as a result of improvements will be beneficial to neighbouring properties and the local drainage systems.

10.10.81 At the more detailed level some existing dwellings are subject to flood risk. The Project will reduce the risk for two houses and leave it unchanged for four others. For properties in general there will be reduced flood risk for properties along Valonia Street, Whittle Place, Methuen Road and Hendon Avenue. However, there is one property in Bollard Avenue where there is a small increase in depth of a 100 year ARI flood event.

10.10.82 There is a net loss in flood storage from 79,400m<sup>3</sup> to 47,600m<sup>3</sup>; however, this occurs mostly from a reduction in floodwater level. The property at 25 Valonia Street provides some 8,000m<sup>3</sup> of storage which will be maintained. This would have been lost if a consented (residential) development were to proceed.

#### **Issues Raised In Submissions**

10.10.83 This Sector has generated a large number of submissions. A significant number of submissions have raised concerns over the effects on the community north and south of the alignment and the effects of a surface level motorway through this part of the corridor.

#### Tunnel Extension

10.10.84 A number of submissions raise concern regarding increased noise and disturbance from the open section of the motorway and request an extension of the tunnel up to Maioro Road. Some affected property owners also consider that this would reduce land requirements and effects on their properties. One submission has sought an extension of the tunnel by 1,000 metres which would take it to north of Richardson Road.

10.10.85 Clearly the history of this Project has included consideration of a full driven tunnel extending through Sector 9 and also cut and cover options. In the AEE Part D, Vol 1, page 11.18 it states that in February 2008 the NZTA Board identified the





Driven Tunnel Option as the “preferred construction method for the Project”. Subsequent processes led to the decision to proceed with a “Combined Surface Tunnel Option”. We have no doubt that the careful evaluation of a full tunnel option to Maioro Street has been documented in previous studies and reports. We are assisted somewhat at AEE Part D, Vol 1, 11.6.9.2; page 11.49 where it is stated that:

*“increasing the length of the tunnel was not considered practicable as this design resulted in conflicts with the floodplain and Oakley Creek. To avoid these constraints, a more southern portal option would need to be located close to Richardson Road which would require the project alignment to descend rapidly from the Maioro Street interchange, resulting in steep north facing ramps for the interchange. In addition to cost issues, this design has potential safety limitation (e.g. the design is not considered appropriate for ramp signals).”*

10.10.86 We consider that more detailed evidence on these issues is necessary to assist the Board with these submissions. In determining this issue the Board may also need to determine whether a permitted baseline should be applied to that part of the Project within the Special Purpose 3 Zone in this Sector. We have discussed this earlier, but also note that in relation to some of the more serious community effects above including noise, vibration and light emissions there do not seem to be rules that apply to this zone and therefore any permitted baseline in relation to these issues appears unconstrained. Full application of the permitted baseline would therefore in our opinion lead to the disregarding of widespread actual effects in this decision making process.

#### Southern Portal Building and Ventilation Stack

10.10.87 At the southern extent of the tunnel the portal building and ventilation stack have attracted submissions raising similar concerns to those regarding the northern building in relation to the visual effects of the building and health effects of unfiltered emissions from the ventilation stack. There is strong support for the undergrounding of the facility which will partly address widespread concerns regarding the loss of and changes to open space provision, and also address concerns from some property owners regarding land take requirements from their property.

10.10.88 We are surprised that this matter is not considered in more detail in Chapter 22 of the AEE which we have reviewed carefully. We note that it is discussed in the design option section 11.6.9.3 which appears to rely on the cost implications of structural issues for the building rather than any more substantive evaluation of all relevant matters.

10.10.89 Report G.20 which includes the visual simulations at Appendix B View Point 8/90a shows the modelled mass and bulk of the ventilation building and the apparent effects over time of massed flax planting within the rail corridor. If one then turns to page 112 of that report the effects of the ventilation building and stack are described as:

*“The effects within this catchment would be profound: the fundamental character of the western end of Alan Wood Reserve will be fundamentally changed. Occupying a geographical ‘pinch point’ within the reserve, the portal building will impose a completely anomalous type of development on both its immediate open space setting and the wider residential domain. Its very industrial and rather utilitarian form will effectively curtail the residual open space extending south*



*from New North Road and impose itself on neighbouring properties in a most unfortunate and intrusive manner.*

- 10.10.90 We consider this assessment to be about as damning as could be conceivable in the context of this open space and residential environment.
- 10.10.91 We also note that the building is in the Open Space Zone and not the Special Purpose 3 Zone albeit that it may not be fanciful that the building could have been located within the Special Purpose Zone immediately adjacent to the current site. We also note that accessory buildings are a controlled activity in this zone. Notwithstanding this, we consider that there may be considerable merit in locating this building underground to avoid significant adverse effects and potentially enhance open space provision.
- 10.10.92 As with the northern ventilation building this is a suitable issue for witness caucusing.
- 10.10.93 Similar issues arise with the ventilation stack as the northern building and innovative design to create a positive land mark should be pursued in both locations.

#### Quantity and Quality of Open Space

- 10.10.94 There are a number of submissions expressing concern about both quality and quantity of open space provision and also wishing to ensure that replacement facilities are developed and available for use before existing facilities are removed.
- 10.10.95 The ACC submission covers most of the issues raised by others, and as a partner in the open space development it is important that the design has regard to the Council's needs and preferences. One example is whether the two sports fields at Valonia Street can be located side by side to provide for summer cricket as well as making provision for future club room facilities and a playground. We are aware that the Applicant and Council will have been working to see if these issues can be resolved.
- 10.10.96 Concern has also been expressed about the residual small areas of open space west of Hendon Avenue and to see this land made available for residential redevelopment. We agree that opportunities for residential redevelopment should be pursued where there is little value in areas remaining as open space. Given the close relationship with Housing New Zealand on this Project and the number of properties that need to be acquired it is possible that some of this land could be earmarked for return to Housing New Zealand for new developments.
- 10.10.97 We have earlier identified that ACC's preference is for investment in the early upgrading of Murray Halberg Park and enlarging Phyllis Street Reserve rather than developing temporary sportsfield facilities west of the southern tunnel portal. We generally agree that it makes sense to invest in permanent facilities rather than temporary ones.
- 10.10.98 It has also been suggested by a number of submissions that the railway corridor which is proposed to be planted in massed flax would be better made available for community gardens. We acknowledge that there is a growing interest of kitchen gardens generally but we are not aware of its extent in this location. Our assessment is that this would not adversely affect the coherence of the urban design and landscape plans but it is for Kiwi Rail to indicate whether this might be acceptable to them.



### Pedestrian and Cycle Connectivity

10.10.99 One submitter has suggested there be an additional pedestrian bridge between Methuen Road and Hendon Avenue at about chainage 1600. We note that the proposed Hendon Bridge does provide for a link northwards to Hendon Avenue as well as the principal link to Richardson Road. Furthermore this is only 200 metres south of the southern portal where a link is provided immediately north of the proposed ventilation building. Our preliminary consideration is that connectivity across the Project in this sector is appropriate and reasonable and a further link as suggested in the submission is not required.

### Protection of Herpetofauna

10.10.100 A small number of submissions express concern about the lizard populations in the Hendon Park area and support their relocation or protection.

### Stream Diversion, Flooding and Stormwater Management

10.10.101 There are a range of submissions expressing concern about the diversion of Oakley Creek, possible increase in flood risk and the location of wetland ponds.

10.10.102 We generally agree with the AEE that once in place the Oakley Creek habitat will be materially improved and that stormwater proposals are comprehensive and appropriate. We also note the conclusions that flood risk will be reduced in nearly all cases despite reducing total flood storage.

10.10.103 Some submitters also refer to a number of properties in the area being serviced by septic tanks and raise concern that the combination of effects from tunnelling and flooding could have serious environmental consequences. This is a matter that requires a technical response from the Applicant's witnesses.

### Integration with Land Use Planning

10.10.104 The Project connects to existing SH20 at Stoddard Road. Concerns have been raised that this could compromise planning proposals for this area which envisage an intensification of activity based around Stoddard town centre. In relation to traffic management submitters refer to the need to ensure that the surrounding arterial road network has the capacity to manage increased or changed traffic flows arising from the Project.

10.10.105 There will be a change in arrangements in relation to traffic flows to and from Sandringham Road which will use the new Maioro Street Interchange and connect to Sandringham Road via Stoddard Road. This is shown best on the final Plan in Appendix C of G21 Construction Environmental Management Plan. This also shows that there are errors in the Operational Scheme Plan Drawing Sheet 19 which should show the south facing ramps as part of the project.

10.10.106 The ACC submission refers to wishing to secure development opportunities in the vicinity of Richardson Road Bridge and also to provide a rail station at Stoddard town centre, behind the Stoddard Road shops and connecting to Richardson Road. We do not have detailed information on the town centre planning for this area but the submission suggests that this will be focussed on the area between Maioro Street and Richardson Road and therefore will not be materially affected by a change in flows to Sandringham Road. However, further



information on this during the course of the hearing is expected from Auckland Council, the applicant and Kiwi Rail to clarify potential effects.

10.10.107 Finally, there are also submissions seeking that any changes to the Avondale – Southdown Railway Designation be pursued as part of this process to avoid future risk to its implementation. Kiwi Rail has retained a corridor protection form of designation given that the rail line is unlikely to be constructed for a further 20 years. Whether the potential for a rail station at Stoddard Road remains an available option is unclear to us. Some alterations to the existing designation may well be required to the rail designation. Kiwi Rail has advised through its submission that it proposes to initiate these changes once the project designations have been confirmed. The Board could be informed further of Kiwi Rail’s proposals to understand the level of integration possible or likely with regard to the road and future rail transit corridor.



## 11 LOCAL POLICY ASSESSMENT

### 11.1 FRAMEWORK

11.1.1 Our assessment of the Project's consistency with the policy framework of the District Plans brings together our understanding of the issues summarised in the Summary of Submissions (in Chapter 5) and the more detailed sector and local effects assessments of the key issues summarised in Chapter 10.

11.1.2 The two statutory plans considered in relation to this Project are:

The Auckland District Plan – Isthmus Section 1999; and  
The Waitakere District Plan 2003.

11.1.3 The two Council section 149G Reports assist understand this policy context to a limited extent. Their focus is on describing the permitted baseline through the review of zone rules and standards rather than any focus on policy.

### 11.2 THE AUCKLAND DISTRICT PLAN – ISTHMUS SECTION 1999

11.2.1 The Applicant provides comment on the relevant provisions not already addressed elsewhere in the application documents (Pages 23.46 – 23.48). Appendix E.3 Statutory References, records a summary of the provisions of the Isthmus Section considered relevant to the Project.

11.2.2 Our abridged comments in respect of the relevant objective and policy sections recorded in Appendix E.3 (pages 53-56) are:

Part 5B Coastal – The conclusions from the Marine Ecology Report by Ryder Consulting suggests that with the mitigation proposed, and strengthened in some circumstances, then these policies can be satisfied.

Part 5C Heritage – Recognition of the heritage and archaeological importance of the Oakley Inlet through conservation measures adopted during and post construction to retain the heritage values of the area is consistent with the policy.

Part 5D Natural Hazards – Flood risk has been addressed but we have suggested additional information on sea level rise be provided.

Part 7 Residential Activity – The Project's impacts on residential character and amenity are most evident in Waterview (sectors 5 and 7) and the environs of Alan Wood Reserve (sector 9). Permanent and considerable change is expected in land use and open space provision. The Project's outcomes introduce change and at best are neutral in their alignment with these policies as the character and amenity of these areas will change as will the makeup of the community as it responds to this change.

Part 8 Business Activity – The Project's impacts at best are neutral with respect to these policies. Social and community services will need to respond to community demands for housing, school and other services and facilities.



Part 9 Open Space and Recreation Activity – Potentially significant land use impacts will occur which have positive and adverse effects on the location, timing and quality of open space provided. With the proposed mitigation and (assumed) partnership arrangements in place with ACC to provide new and improved active and passive recreation spaces, walkways and cycleways then the general intent of the policy can be met. Such arrangements still need to be confirmed as being appropriate mitigation.

11.2.3 The applicant assesses the Project as consistent with the Transport objectives and policies of the Plan (Page 23.48). However the specific policy is not identified. We identify those transport policies as being Part 12 – Transportation. Perhaps the key policy is Policy 12.3.1 that poses the greatest hurdle for this Project.

11.2.4 The objective and policy statement states:

*Objective 12.3.1: To manage the use and development of the City's transportation resources in a way that promotes the protection and enhancement of the City's environment.*

*Policy 12.3.1:*

*By encouraging the efficient use of the existing roading infrastructure*

*By supporting and promoting a transportation system designed and managed to encourage the efficient use of energy*

*By recognising and providing for the interdependence between transportation and the efficiency of other activities*

*By supporting the creation of an efficient public transport network which provides an integrated system, with appropriate levels of convenience and service*

*By minimising the adverse local environmental effects of proposed new roads and other additions to the City's transportation network*

*By adopting planning techniques to discourage traffic in areas where it would have significant adverse environmental effects.*

11.2.5 We consider that implementation of this Project is essential to the efficient use of the overall network but only as part of wider integrated transportation and land use strategies. The Project is supported in all the relevant higher level strategies and is a national priority. While we have extensive information on how the network will operate over time with the Project in place, we have little information on energy savings that might accrue to the Project nor any reduction in carbon emissions. This information would assist the consideration of the policies above.

### **11.3 THE WAITAKERE DISTRICT PLAN 2003**

11.3.1 The Section 149G Report provides a summary table (Table 1) that records the key issues and policy cross referenced to the AEE documentation. No assessment is provided of the Project's consistency with the Plan's policy.

11.3.2 The applicant provides comment on the relevant provisions not already addressed elsewhere in the application documents (Pages 23.49 – 23.52). Appendix 3.3 provides the supporting record of those policies relevant to the consideration of the Project.

11.3.3 The Applicant's assessment informs on the main policy by determining that environmental effects and their management and mitigation are consistent with higher order Plans such as the RPS and or the NZCPS 1994 to therefore be consistent with the relevant district plan policy.



11.3.4 The basis for our policy assessment builds on this but focuses particularly on the key issues identified in our sector assessments, which concern only Sector 1 and NOR 1 in Waitakere City. In this respect the key issue-policy connects to consider are:

Location, size and orientation of Construction Yard 1 – Policy 11.7 concerns infrastructure provision away from sensitive ridgelines and minimising effects on the Waitemata Harbour;

Residential amenity impacts adjacent to the SH16 corridor - Policy 10.8 and Policy 11.4 address the relationship between land use, transportation networks and urban form and amenity;

Capacity to future proof the Te Atatu Interchange for multi modal uses – Policies O.4, O.5 and O.6 concern aligning future urban form with planned public transport provision.

Water quality effects on Pixie Stream – Policy 2.4 and 2.15 seek the conservation of native vegetation and fauna habitat.

11.3.5 We consider that the Project is supportive of achieving a sustainable urban form through the improvements to the State highway network and increasing connectivity and accessibility north and south (in the Te Atatu Peninsula) and to the Auckland CBD. Future proofing this with respect to increased multi-modal opportunities on the State highway corridor would however be a major enhancement to meeting the above policies.

11.3.6 Residential amenity concerns can be addressed through the design phase, so our expectation is that consistency can be achieved with the relevant policies.

11.3.7 Water quality effects on Pixie Stream have been recognised through the design and mitigation proposed and therefore are consistent with the relevant policy.

11.3.8 Overall, and relying on the specialist ecology assessments provided by Ryder Consulting Limited then we also confirm that the Project is broadly consistent with the policy framework of the District Plan.





## 12 PROJECT NECESSITY FOR ACHIEVING NZTA OBJECTIVES

12.1 An important statutory test for the Notices of Requirement is that stipulated in section 171(1)(c) which states that the Board must have particular regard to “*whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.*”

12.2 We note that there are now two elements to this question; firstly, whether the work is necessary, and, secondly, whether the designations that authorise the work are necessary. In this case the tests apply to both the two alterations to existing designations and the five new designations which combine to make the entire project authorisation in land use terms.

12.3 We set out the stated objectives for the overall project in section 2.6 in the Introduction. These are stated in slightly expanded form in each of the NORs and in AEE section 3.3 as follows:

- “1 *To contribute to the region’s critical transport infrastructure and its land use and transport strategies.*
  - *by connecting SH16 and SH20 and completing the Western Ring Route.*
  - *by improving the capacity and resilience of SH16.*
  
- 2 *To improve accessibility for individuals and businesses and support regional economic growth and productivity.*
  - *by improving access to and between centres of future economic development.*
  
- 3 *To improve resilience and reliability of the State highway network.*
  - *by providing an alternative to the existing SH1 corridor through Auckland that links the northern, western and southern parts of Auckland.*
  - *by securing the SH16 causeway against inundation.*
  
- 4 *To support mobility and modal choices within the wider Auckland Region.*
  - *by providing opportunities for improved public transport, cycling and walking.*
  
- 5 *To improve the connectivity and efficiency of the transport network.*
  - *By separating through traffic from local traffic within the wider SH20.”*

12.4 We note that the bullet points capture the key features of this Project and provide an obvious causal link between the Project features and the ‘headline’ objectives. We are aware of the lengthy history of this project and we have documented the extent of endorsement it has in various strategic transport and land use strategies.

12.5 The technical evidence available supports the position that the Project will achieve those objectives but as in all cases the debate will be over the degree. However, the objectives are not expressed as measurable performance standards and therefore do not have to pass a specified threshold.



- 12.6 There is one exception and that is the evidence that sits behind the appropriateness of the extent of the raised height of the SH16 causeway. This is a matter that is capable of being addressed in evidence at the hearing and has been raised elsewhere.
- 12.7 'Necessity' also brings into question alternatives which have also been considered in our Chapter 8. However, this is a different test which does imply a test of showing that it is the best reasonable option for those objectives. An extensive process of route and design testing and consultation has led to this work being proposed. We repeat our earlier qualification that the Applicant should provide fuller documentation to satisfy the Board on this matter. Further, while the documentation incorporates extensive measures to mitigate the effects of the Project there are some areas that require further scrutiny.
- 12.8 Subject to these qualifications we are satisfied that there is no difficulty in meeting this test in general terms.
- 12.9 The second legal test relates to the use of designation procedures to authorise the Project. The context for this is that the existing State Highways are designated and there is a future railway designation associated with the route in Sector 9. However, underlying these designations are plan zone provisions that enable transportation infrastructure in both the Auckland City Isthmus District Plan and the Waitakere City District Plan. The Project, however, goes outside both the existing designation and zone footprints and, therefore, could not be authorised without a plan change, resource consent or designation. Given the nature of the zoning of land outside of the existing designation it is quite conceivable that the path of resource consents may be fatally blocked.
- 12.10 Furthermore, the option of extending the underlying Plan zonings may not have generated the same level of design detail and mitigation planning that has occurred.
- 12.11 We do note that the separation of NOR 6 (the emergency exhaust) from NOR 5 (sub strata tunnel) was perhaps unnecessary and perhaps inappropriate, as NOR 6 is clearly ancillary to NOR 5. However, we have no difficulty in concluding that the use of designations and alteration to designations is the appropriate method and therefore is reasonably necessary to achieve the Project objectives.

## **13 OTHER RELEVANT PLANS AND STATUTES**

### **13.1 NON RMA PLANS**

13.1.1 There are a large number of policy documents that relate to this Project that have either, been prepared and approved under statutes other than the RMA, or are non statutory documents.

13.1.2 The Applicant has identified a list of these in the AEE Part A, B, C page 6.38 section 6.5.10. Some submissions have also identified other non statutory documents which we have considered. We consider the most significant of these individually below:

#### **Government Policy Statement on Land Transport Funding 2009/10-20018/19**

13.1.3 We have reviewed this document and confirm that it gives investment priority to national economic growth and productivity. It identified the completion of the Auckland Western Ring Route as one of seven roads of national significance. These are considered to be New Zealand's most essential routes that require significant development to reduce congestion, improve safety and support economic growth. It states that planning for the future development of the land transport network should reflect the importance of these roads from a national perspective and the need to advance them quickly.

13.1.4 This project is therefore in accordance with Government's investment priorities.

#### **New Zealand Transport Strategy 2008**

13.1.5 This is a comprehensive national strategy prepared by the last Labour Government with objectives that relate to the Land Transport Management Act. Assisting economic development is one of the priorities but there are others such as ensuring environmental sustainability.

13.1.6 The strategy does not generally endorse specific projects but it does give a degree of priority to investment in Auckland and furthering the Waterview Connection is identified as a short term priority under the heading "investing in critical infrastructure and people".

13.1.7 From our preliminary review we consider that the Project as a whole is consistent with that strategy.

#### **Auckland Regional Land Transport Strategy 2010-2040**

13.1.8 This recently completed strategy recognises the completion of the Western Ring Route and Waterview Connection as a key element in the strategic land transport network and the strategy seeks to complete the route by 2016.

13.1.9 From our preliminary review we consider that the Project as a whole is consistent with that strategy.

#### **Auckland Transport Plan 2009**

13.1.10 The Auckland Council has signalled that this Plan is to be reviewed and it is therefore not clear how much weight should be given to it. It places considerable emphasis on an integrated and efficient transport system. The Project is an



important part of the Plan being one of 9 key projects to be delivered through the Plan.

13.1.11 The Project in the form proposed is clearly consistent with this Plan.

#### **Auckland Regional Public Transport Plan 2010**

13.1.12 The Plan specifies how the former ARTA will give effect to the public transport components of the 2010 RLTS. It develops how a more integrated public transport network will be achieved and develops a number of service layers including the Rapid Transport Network (RTN), the Quality Transport Network (QTN) and Local Connector Network (LCN). The Project provides for improvements to the QTN through improved bus priority.

13.1.13 The Plan does not seem to be specific about the level of bus priority that should be achieved on SH16 and from a preliminary review we have found nothing that we consider to be inconsistent with the Plan.

#### **Auckland Regional Arterial Road Plan 2009**

13.1.14 Also prepared by ARTA this plan sets the framework for corridor management plans to protect the efficient and effective functioning of arterial roads. The Waterview Connection is shown as part of the future strategic network and regional arterial network and to that extent it is consistent with the Plan.

#### **Auckland Passenger Transport Network Plan 2006-2016**

13.1.15 This is a 10 year plan to implement the development of a rapid transit network and quality transit network. We note that ARTA seeks in its submission that SH16 corridor is future proofed for continuous bus lanes and that SH20 is future proofed to provide priority vehicle shoulder lanes. This relates back to the plans for the long term quality transit network and is the key question in terms of compatibility with this plan. This will require further consideration during the course of the hearing.

#### **Auckland Regional Growth Strategy 1999**

13.1.16 This strategy includes consideration of land use and transportation growth management and does give a priority to investment in connection between non central parts of the urban area and each other. We consider that the Project is generally consistent with the Strategy.

#### **Auckland City Growth Management Strategy 2003**

13.1.17 This relates to Auckland City's implementation of the Regional Growth Strategy. The strategy states that completion of the Auckland motorway system is a priority to compliment investment in passenger transport.

13.1.18 Point Chevalier, Avondale, Mt Albert, Mt Roskill and Stoddard Road have been identified as areas of residential and mixed use change. In addition, Stoddard Road and Rosebank Peninsula have also been identified as business development areas.

13.1.19 While the construction period may cause some accessibility problems through the corridor, on completion flows on local roads will be reduced and there will be effective access to these business areas. Some issues have been raised regarding a future rail station at Stoddard Road but in the long term the Project should assist in facilitating these outcomes.



## **Auckland City Council Future Planning Framework 2008**

13.1.20 This framework is a long term planning tool and provides for a 'city wide spatial framework', ten 'area plans' and then more local 'precinct plans'.

13.1.21 The issues raised by the document have been considered in the AEE chapters on each sector. We can confirm that the framework incorporates the Project as part of the planned transport infrastructure.

13.1.22 The relevant area plan is the Avondale / Blockhouse Bay Area Plan. Key outcomes for this area that are relevant to the Project include:

- Protecting and enhancing Whau Creek and Oakley Creek and their drainage functions;
- Providing green linkages along the Waitemata Harbour coastline, Oakley Creek, and Whau Creek;
- Managing Motu Manawa - Pollen and Traherne Islands in a way that respects their ecological values;
- The cultural heritage values of Waterview interchange are respectfully managed;
- The impact of development associated with SH20 on Waterview Reserve is minimised;
- Through the SH20 Waterview extension project, the Council's current provision of open space is maintained and the Project assists in delivering the Council's strategic objectives for the open space network for the areas affected by the Project;
- The areas of open space caters well for pedestrians and cyclists;
- Local linkages to the city wide cycle network are provided; and
- A tunnel is used for the State Highway 20 Waterview extension which allows for development along Richardson Road Bridge.

13.1.23 In general we consider that the majority of these outcomes will be met by the Project design to a reasonably extent. Some refinements and further improvements to outcomes will we expect be achieved through the hearing scrutiny process. We have identified and discussed in earlier sections the issues that relate to some of the above outcomes arising from submissions. We note that the current design will not provide for development along Richardson Road Bridge as the Project will pass under this road.

## **Waitakere City Transport Strategy 2006-2016.**

13.1.24 This strategy promotes greater use of sustainable alternatives and a more efficient use of the existing network. It aims to support the Regional Land Transport Strategy and the Regional Growth Strategy.

13.1.25 The strategy seeks investigations on a second Whau River crossing to improve flows on SH16 and Great North Road and to alleviate congestion at the Te Atatu Interchange. The strategy also promotes bus priority measures, HoV lanes and safer cycling and pedestrian networks.

13.1.26 We note that Waitakere City Council has sought in its submission that the designation footprint be future proofed for the possibility of upgrading the bus lane facility to busway standard. However, from our review this is not specifically sought in this strategy.



13.1.27 In general we consider that the Project is consistent with this strategy.

## 13.2 OTHER STATUTORY APPROVALS

13.2.1 We note that in the event that designations are confirmed and resource consents granted, a number of other authorisations and approvals will be required.

13.2.2 The list includes:

Reserves Act 1977: Approval for use of gazetted reserve for the Project and land beneath reserve.

Marine Reserves Act 1971: Approval for works within the Motu Manawa Marine Reserve.

Historic Places Act 1993: Authority relating to possible damage or destruction of archaeological sites.

Public Works Act 1981: Acquisition and disposal of land, and approvals for road closure and use of gazetted reserve for another public work.

Wildlife Act 1953: Approvals for relocation of herpetofauna.

13.2.3 We are aware that submissions have been lodged by the Historic Places Trust and the Department of Conservation. However, these do not provide much guidance on whether the above approvals might be forthcoming and on what conditions.

13.2.4 In order to avoid conflicting conditions between approvals it will be important that these agencies present evidence to the Board and identify the full scope of matters that might be taken into account in determining the consent applications that will come before their decision making processes. It is common for major projects to secure the above consents prior to the overarching resource management decisions. However we agree that given the applicant is an agency of the Crown, these consents are better pursued once the Board has issued a report.



## 14 PROPOSED CONDITIONS

### 14.1 OVERVIEW

- 14.1.1 Appendix E.1 Proposed Conditions presents a set of proposed draft conditions to the designation and resource consents to provide for mitigation of the adverse effects of the Project. In conjunction with this the Board is referred to the Summary of Mitigation Proposed (Chapter 24.4) and Table 24.1: Summary of Key Mitigation Proposed for the Project which provides a useful summary matrix.
- 14.1.2 The conditions have been structured by topic areas and relate extensively to management plans that have been prepared in draft form for review. While conventional practice would be to attach relevant conditions to relevant Notices of Requirement and resource consents, provided the conditions can be made clear and enforceable, it may be more efficient to retain the omnibus approach given that the management plans cover the overall Project. G.31 Addendum Report, Appendix 9 provides a useful reference guide in this regard. This is a matter that may require legal advice, and discussion by the Applicant during the presentation of its case.
- 14.1.3 Our comments are focused on any perceived shortcomings to the proposed conditions and to identify further condition ‘topics’ that could be considered by the Board to ensure that all environmental effects associated with the construction and operation of the Project can be addressed.
- 14.1.4 We note that Ryder Consulting Limited has generally found the conditions and management plans relating to freshwater and marine ecology to be acceptable. As with the technical reports we are not in a position to challenge the technical basis of many of the conditions.

### 14.2 GENERAL OBSERVATIONS

- 14.2.1 Condition DC.1 requires the works to be undertaken “in general accordance with” the information provided and “subject to final design.” We are not comfortable with the qualification of final design if that is seen as overriding the requirement for general accordance. We consider that the ‘subject to final design’ qualification should be deleted. The plans and associated construction detailed drawings attached with the notices of requirement and resource consent applications are appropriately detailed and thorough, and we question the merit of allowing any substantive “final design wriggle room” as sought. We also note there is some case law associated with the use of the term “generally in accordance with” in condition setting, which has become common practice. However our recent experience, particularly at the recently concluded Hauauru Ma Raki Board of Inquiry hearing, suggests that better practice may be (if the requirements are confirmed and resource consents granted by the Board) to require that the Project proceeds “in accordance” with the plans and details lodged.
- 14.2.2 However, to provide appropriate flexibility this could be accompanied with a condition specifying that with the approval of the consent authority (through the certification of the relevant Construction Management Plans and other associated Management Plans) a change that is of no substantive effect and achieves an improved alignment or engineering outcome may be permitted. This warrants further consideration by the Applicant.





- 14.2.3 Some conditions require the final design and finalising of some management plans to be carried out in consultation with the Council. (LV.2, TT.4, TT.5, A.4 are examples). We discuss this further below.
- 14.2.4 We consider there is a need for an additional general condition requiring that final detailed design plans are submitted to the Council for certification that they are in accordance with the consents granted. We conclude that the proposed conditions and management plans require further work before they provide a robust conditions framework.
- 14.2.5 Condition DC.3 requires Management Plans to be submitted for review to ensure “compliance and consistency with conditions”.
- 14.2.6 The Management Plans referred to in the proposed conditions have been included in the formal documentation and therefore have been subject to scrutiny through the public notification process. The expectation in the Applicant’s proposed draft conditions is that as a result of determinations on changes to the Project or additional conditions there will be a need to update and amend the Management Plans. We agree that the use of Management Plans is an important planning technique for the successful implementation of large infrastructure projects under the Resource Management Act, and this has generally been the practice since the Act was implemented.
- 14.2.7 However, our observation is that there has recently been a much greater emphasis by the Environment Court, and Boards of Inquiry regarding how Management Plans are effectively and fairly developed and certified. The approach of specifying in conditions that a range of Management Plans (to manage the key effects of the project to meet what is proposed to the public in applications) will be prepared in the future, following final design, and that these will be “approved” by Council staff is no longer acceptable, in our experience. We note that the Applicant has developed detailed Draft Management Plans as part of its applications, and from our initial assessment of them they are useful draft documents. In our view however, for clear and effective “certification” of Management Plans by the Council to occur, all the proposed Management Plans themselves and/or the associated conditions need to include appropriate objectives and measurable performance standards. Without this, there is nothing for the Council to certify against.
- 14.2.8 We appreciate that many of the draft Management Plans do include some objectives and performance measures, and that it is difficult to prepare final Management Plans until consents are granted and contractors are appointed. However, a mechanism is required to “lock in” relevant and appropriate objectives and performance standards for each Management Plan so those aspects of the Plans dealing with the management of key effects cannot be altered by the Applicant and Council without recourse to further public scrutiny and comment. We consider this is a key area which requires more focus by the Applicant in evidence to the Board.
- 14.2.9 We note that there is provision to prepare and lodge management plans in stages and in each case are to be certified prior to any construction activity commencing. (DC.4). Given that draft management plans are available and are capable of approval through this process we consider that any management plans that are likely to require a staged approach should be specifically identified.
- 14.2.10 We also consider that given the very detailed design plans and associated construction drawings, and with an appropriate and certain conditions regime it would be reasonable to waive any obligation to lodge separate outline plans pursuant to



s176A at a later date, if the Board does determine the Project can be approved. The certification process against the plans and construction drawings is similar to the s176A requirements for Outline Plans of Works and in our view would be more efficiently discharged for that specific element of the Project on certification rather than a separate process.

14.2.11 In circumstances where certification roles are required and receipt is required condition D.3 refers to “at least 20 working days prior to commencement”. The presumption we take from that is that the Council is expected to certify the document within the time specified. We consider that this may not always be reasonable and that the condition should state that no works will commence until the document has been certified.

14.2.12 Many conditions require monitoring, reporting and review to provide a series of checks and balances occurs across the management of the whole construction process. Some conditions require deliverables either say 20 working days prior to something or 3 weeks. It would be beneficial to standardise to either working days or weeks. Our preference is to adopt the term “working days” given it has a definition within the Act.

14.2.13 We have also noted that in some management plans the compulsory reporting seems to be within the Project and only to the Council on request. We consider that compulsory monthly reporting is appropriate to the Council across all management plans. The Applicant should comment whether a single integrated Monthly Report is achievable.

### **14.3 SUBJECT CONDITIONS**

14.3.1 The Construction Environmental Management Plan (CEMP) provides one of the overarching management plans to support the resource consents and the designations. The Plan seeks to provide an integrated document to manage construction activity to minimise adverse effects and promote a proactive management style to the avoidance of adverse effects.

14.3.2 However, it is not clear what the relationship is between Proposed Conditions DC.3 and CEMP.4, when some Plans are referenced in both and others are not.

14.3.3 The provisions of the CEMP will be required to be complied with as a condition(s) to the designation and resource consents.

14.3.4 The relationship between and the reliance on the twelve management plans to achieve the effective and sustainable management of construction activities is usefully summarised in Figure 1.3: Construction Environment Management Framework (Page 8) and Table 1.1: AEE Technical assessment reports that informs each sub-plan (Page 9).

14.3.5 We note that some conditions are required to be “to the satisfaction of the Council.”. An example is A.2 on page 33. This condition is also to be in accordance with the Ecological Management Plan. We consider that if it is to comply with the management plan then there should be no additional discretion given to the Council and “to the satisfaction of the Council” should be deleted. This avoids uncertainty in terms of what is required.



- 14.3.6 Some conditions refer to approval by the Council, as opposed to certification. We consider that this should be replaced with certification. Examples are LV.1 in relation to the preparation of the Urban Design and Landscape Plans. STW.5 and 16 are other examples, in relation to streamworks. As noted, approval of general non specific plans is not appropriate – certification against measureable and defined performance standards which Management Plans need to meet is more appropriate.
- 14.3.7 It is within the Ecological Management Plan (CEMP, Appendix H) that the WRR Oakley Creek Realignment and Rehabilitation Guidelines are provided (as Appendix D to the Ecological Management Plan). This Plan presents “realignment and rehabilitation principles” to guide the location and level of restoration and rehabilitation of sections of Oakley Creek in Hendon Park and Alan Wood Reserve to create improved aquatic habitats than is presently the case. This is a principal management document for the rehabilitation of the Oakley Creek corridor and therefore provides a fundamentally important mitigation tool in our opinion.
- 14.3.8 We note that Condition PI.5 requires the NZTA to establish a Community Liaison Group at least two months prior to construction commencing. The condition states that the Group “shall be open to all interested parties within the Project area...” We consider that more than one group may be necessary to achieve the objective and this may be best split into geographical areas. This group or groups will in our opinion provide the public face to the community on project issues and needs to be extremely well managed. It may be useful for the Community Liaison Group to have involvement in the assessment of draft management Plans prior to certification in order to get community involvement, knowledge and buy-in to the final design solutions.
- 14.3.9 We also note that Condition SO.1 requires the NZTA prepare Open Space Restoration Plans in consultation with Council, iwi and other users representatives. We consider that clearer identification of who the user representatives should comprise would be helpful to making this forum work to achieve the objective of the Project while addressing community recreational needs and aspirations.
- 14.3.10 Condition SO.5 requires the NZTA set up an Education Liaison Group. We note that while meeting frequency is determined within the condition itself, representation is not. It is unclear to us how the NZTA can give effect to the obligation recorded in Condition SO.9 which is to ensure that “appropriate staffing levels are continued over the construction period and up to six months after practicable completion” should various roll numbers drop below certain figures.
- 14.3.11 We note that Condition TT.6 requires the NZTA “shall maintain, as far as practicable, continued public walking and cycling passage...” The extent of this performance obligation should be confirmed by the Applicant.
- 14.3.12 We note that Condition OT.1 requires the NZTA shall prepare a Network Integration Plan “to demonstrate how the Project integrates with the existing local road network and with future improvements...” The extent of this performance obligation should be confirmed by the Applicant.

## 14.4 ISSUES RAISED BY THE COUNCILS

- 14.4.1 The Auckland Council will be responsible for administering any consents granted through this process. We have therefore identified below the specific issues raised in



the submissions from the former three Councils that relate to consent conditions. The Council will also be an important partner in the redevelopment of open space and other related matters.

## 14.5 AUCKLAND CITY COUNCIL

14.5.1 The position of the Auckland City Council is that the Council supports in part the Project. Its support is therefore qualified, and the following paragraphs are quoted for this purpose. The submission at paragraphs 11 and 12 notes:

*“The Council notes that there are two key mechanisms through which mitigation issues can be addressed. The first is directly through consents conditions for the Proposal. The other is through the negotiation of an agreement with NZTA to address effects that cannot be adequately addressed by conditions on the designations or resource consents.*

*At this time of drafting this submission, the Council was negotiating with NZTA over an agreement. The Council is hopeful that such an agreement can be implemented prior to the hearing of applications.”*

14.5.2 The submission seeks relief in relation to 117 aspects of the Project. The key issues have been discussed in the Chapter 10. As stated above some of these matters may be resolved prior to the hearing but, notwithstanding this, the scope of potential changes to conditions or scope of a separate agreement could include, from our overview assessment of the matters raised by Council:

### **Social and Cultural**

- The management of community facilities prior to, during and post construction;
- The management of residents' interests prior to, during and post construction;
- Partnerships to promote community focused redevelopment strategies consistent with local area visions;
- Partnerships to develop reserve management and sportsfield management strategies;
- Promotion of good urban design and landscape management associated with new roading structures.

### **Transport**

- Network performance improvements based around bus, rail and cycleway enhancements;
- Rigorous traffic modelling to validate network design and performance;
- Enhanced construction traffic management planning.

### **Archaeological and Heritage**

- Field work validation of archaeological values prior to construction.

### **Ecological**

- Best practice methodologies to identify and monitor effects;
- Service provider agreements for infrastructure assets management affected by the project;
- Ecological connectivity enhancements for Oakley Creek and Meola Creek.

### **Coastal / Marine/ Sediments**

- Protection of the integrity of Motu Manawa Marine Reserve;



- Protection of Pollen Island;
- Protection and enhancement of Waterview estuary and Oakley Creek inlet;
- Monitoring of Rosebank Domain channel.

#### **Noise/Vibration**

- Certainty of performance in condition setting, monitoring and compliance.

#### **Land and groundwater contamination and settlement**

- Further investigation into groundwater performance and contamination along the reserve corridor, giving effect to the precautionary principle.

#### **Lighting**

- Certainty of performance in condition setting, monitoring and compliance.

#### **Visual and landscape**

- Localised, detailed landscape treatment refinements as part of Open Space Restoration Plans and consistent with the Urban Design and Landscape Mitigation Plan.

14.5.3 We consider that it is important that Council sees itself as an active partner in the implementation of measures as part of the construction programme to mitigate adverse effects across its communities and affecting its infrastructure. While the applicant seeks the establishment of a Community Liaison Group (Condition PI.5) and an Education Liaison Group (Condition SO.5), we note that Council seeks participation in a Working Liaison Group. Coordination of final design and implementation is critical; however, the roles, membership and scope of these Project management responsibilities need to be very clear and with agreed terms of reference for each Group.

14.5.4 We also note that additional fieldwork, modelling and or analysis is requested in a number of areas aimed at improving elements of the detailed designs for the road and its connections to the communities affected, open space and important ecological and cultural resources.

14.5.5 We have identified earlier in this report potential areas for caucusing and we would see the Council as a significant contributor to that process should it be adopted. We also expect that as stated by ACC, some of the issues raised in submissions will have been resolved prior to the hearing. However, that does mean that the solutions will be acceptable to all submitters.

## **14.6 WAITAKERE CITY COUNCIL**

14.6.1 The Council's stated position is that the Council supports in part the Project.

14.6.2 In this submission a number of mitigation and enhancement conditions are sought framed around transport, non-transport and urban and landscape themes:

- Improving public transport infrastructure;
  - Future proofing to cater for a busway standard facility;
  - High quality mitigation of noise and visual impacts; and
  - An alternative location for Construction Yard 1, although no location is promoted.
- Council also seeks local input to the design of local facilities.

## **14.7 AUCKLAND REGIONAL COUNCIL**

14.7.1 The Council's stated position is that the Council supports the Project with amendments to give effect to the relief sought.

14.7.2 Condition related matters raised in this submission include:

- Clarification of the proposed process for approving management plans;
- Further information on air quality effects and its outcomes to be incorporated into consent conditions;
- Amendment to archaeology conditions to involve additional specialist advice to manage activities and their effects in the Oakley Inlet Heritage Plan;
- Improvements to ecological effects management and avoiding effects on the marine reserve;
- Improved clarity to the conditions concerning stormwater, stream works and sediment management, and groundwater contamination and settlement.

14.7.3 We consider that any decisions on these matters will involve a fine tuning of the conditions approach rather than wholesale change. However, some matters involving the Marine Reserve may lie outside the Board's jurisdiction.



## 15 PART 2 MATTERS

- 15.1 Consideration of Part 2 Matters goes to the heart of all decision making under the RMA 1991. Part 2 covers the purpose (section 5) and principles (sections 6, 7 and 8) of the Act. In this case, the consideration of Part 2 Matters applies to the consideration of the NORs and the regional resource consents sought.
- 15.2 Chapter 23.11 presents the Applicant's summation that the Project will achieve the purpose and principles of the Act although the discussion is only in respect of the NORs.
- 15.3 It is acknowledged that sustainable management requires the balancing of competing resource uses and values, so there are often benefits and disadvantages or adverse effects on receiving environments and communities.
- 15.4 For a nationally important and regionally significant project such as this Project a diverse range and scale of effects arise, and these we have summarised in an abridged manner in sections 7 and 10 of the report.
- 15.5 In terms of Section 5 the question is whether the project can enable people and communities to provide for their social, economic and cultural well-being. The national and regional level plans and policy statements point to benefits to these communities being achieved by the completion of this 'missing link' in the State highway network. Economic and productivity benefits are suggested for these economies albeit this is not clearly articulated in the supporting documents. Importantly, the Project provides for the on-going development of the State highway network as a significant national resource. The Project is acknowledged as consistent with a number of national plans and strategies, and in the Auckland Regional Land Transport Strategy 2010-2040. However, the Project is not viewed a panacea to solve Auckland's transportation issues.
- 15.6 At the same time there is evidence of local adverse effects and the Applicant is relying on an extensive set of mitigation measures including monitoring and reporting to avoid, remedy or mitigate those adverse effects firstly on local communities such as Waterview and Owairaka particularly during the 5-7 year construction period, and secondly, on the natural values of the coastal marine area and the Oakley Creek urban catchment for example.
- 15.7 Community focused issues concern the location, form and scale of the ventilation buildings and emissions stacks at the northern and southern portals of the tunnel section of the Project and their operational performance regarding emissions. We have similar concerns over the performance of the emergency stack in Cradock Road.
- 15.8 In terms of section 6 "matters of national importance" the extensive consideration of effects and methods adopted to avoid, remedy or mitigate along with our broad based consideration of the relevant statutory plans points generally to the Project being able to satisfy those specific matters (a)-(g).
- 15.9 The Project requires reclamation works in the coastal marine environment and habitat loss results. While the technical assessments carried out by the Applicant are comprehensive an independent review indicates that with further mitigation such as the possible expansion of the marine reserve Motu Manawa, this will go some way to mitigating this loss overall. Otherwise, we therefore agree with Applicant's summary





assessment that the majority of these matters have been recognised and provided for in the way the Project has been designed and is to be delivered.

- 15.10 In terms of section 7 “other matters” then “particular regard has been had” to specific matters (a)-(j). These are wide ranging considerations and with the exception of (h) – protection of the habitat of trout, and (j) – the benefits to be derived from use and development of renewable energy, the remaining nine matters are relevant.
- 15.11 The Applicant reviews the Project alongside each parameter. The adverse amenity impacts of the Project on several local communities and their services and facilities are acknowledged particularly with regard to the ventilation buildings and stacks at both the northern and southern portals. We have also acknowledged this and suggest further consideration is given to alternative locations including undergrounding which would at least maintain existing local amenity and character more so than the current proposal. As a consequence inadequate regard has been given to sub-sections (c) and (f) in the development of the Project. Otherwise, the Applicant has ably demonstrated that particular regard has been given to those other remaining matters.
- 15.12 In terms of section 8 the principles of the Treaty of Waitangi shall be taken into account. We have not read of any treaty related matters in the documentation lodged or through the submissions received.
- 15.13 With the important qualification noted, in our opinion the confirmation of the designations and alterations to designation and resource consents will serve to promote the overall purpose of the Act provided appropriate conditions are imposed, and monitored on their implementation pre and post the construction of the Project.
- 15.14 A comprehensive set of Conditions is promoted to address actual and potential adverse effects. During the course of the hearings and the Board’s consideration of evidence we expect refinement of these conditions and additional conditions as the project design is refined, so the Project further promotes the purpose of the Act.

## 16 CONCLUSIONS

16.1 During the course of our review we have identified a wide range of issues where further discussion between the Applicant and other parties would assist the Board with its consideration of these matters.

16.2 Those matters are summarised in the following table and referenced alongside the relevant report paragraphs:

Report Paragraph Reference	Topic for further consideration (Paraphrased)	Responsibility
1.7.2	Confirm the changes to the design of the Project, performance outcomes, the associated environmental effects and mitigation measures now the emergency exhaust is no longer part of the Project.	Applicant
2.3.3	Confirm the nature of the transitional provisions under the Local Government (Auckland Council) Act 2010 that apply for the new Auckland Council consideration of these consents and designations.	Legal adviser
3.2.1	Confirm all works are correctly and legally authorised.	Applicant
3.2.3 3.3.3	Provision of Memoranda of Understanding and relevant agreements for consideration by the Board	Applicant
6.3.5	Design of SH causeway and its capability to accommodate sea level rise. NZCPS 2010 now requires consideration of the matter in relation to Policy 24: Identification of Coastal Hazards.	Applicant
6.3.7	Jurisdictional and procedural questions about giving effect to the reclamation of land and the ability to carry out works associated with the Project.	Legal adviser
7.2.14	Address the network capacity allocation and efficiency on the transport network	Applicant
7.2.19	The scope for the detailed design to provide for dedicated bus lanes as part of the Te Atatu Interchange.	Applicant
7.2.20	Provision of at grade cycleway connection on Sector 8.	Applicant
7.2.21 7.2.22	Confirm the scope of approach, responsibilities and partnership arrangements associated with the Network Integration Plan to demonstrate how the Project's "wider benefits" are to be realised.	Applicant
7.2.23	Provision of an integrated set of drawings showing pedestrian pathways, cycleways, bus lanes and bus ways for the Project and detailing for each interchange	Applicant
7.2.24	Provision of current and possible future bus service provision on the local road network in relation to SH20 corridor	Applicant
7.2.25	Provision of an economic assessment of Project's costs and benefits over time.	Applicant
7.6.5 9.4.4	Consider scope for further mitigation associated with habitat loss at Motu Manawa Marine Reserve	Applicant
7.8.5	Alternative design treatments to address/improve air quality emissions from the ventilation stacks and meet community concerns.	Applicant
9.5.2	Is the Board still required to make a recommendation to the Minister of Conservation for a restricted coastal activity under NZCPS 2010, Policy 29?	Applicant Legal adviser
9.7.2	Absence of an updated Cultural Impact Assessment Report.	Applicant
10.1.4	The assessment of the general percentage of the various NOR sections that are already designated for these Project related works.	Applicant
10.2.12	Provision of safe, direct pedestrian and cycle movements	Applicant

10.2.33	through the Te Atatu Interchange.	Caucusing
10.2.15	Confirm there are no effects on the marae proposed for the Harbourview-Orangihina Park.	Applicant
10.2.24 10.2.31	Provision of acceptable mitigation addressing visual and vibration effects for residences adjacent to Te Atatu Interchange (Milich Terrace, Alwyn Avenue, Titoki Street, Royal View Way for example).	Applicant Caucusing
10.2.30	Footprint of Construction Yard 1 to accommodate equestrian activities on the reserve.	Applicant Caucusing
10.2.32	Property purchase request (Submitter 12)	Applicant
10.3.16	Confirm that the navigable width of the Whau River is not compromised by construction effects.	Applicant
10.4.5	Confirm whether permanent occupation of Rosebank Domain for the upgraded access and widened pedestrian/cycleway is consistent with the recreation reserve status of the land.	Applicant
10.4.7	Confirm any feedback from Te Kawerau Iwi Tribal Authority.	Applicant
10.5.3	Confirm the distinction between the terms "total reclamation" and "permanent occupation of the CMA" as summarised in 17.6.2	Applicant
10.5.7	How do site specific traffic management plans reconcile with the timetable presented in G.21 Construction Environmental Management Plan.	Applicant
10.5.13	(Ryder Consulting seek) confirmation that the mitigation measures to protect the marine environment from potential sediment and contaminant discharges can be sustainably implemented.	Applicant
10.5.16	(Ryder Consulting ask) whether marine disturbance activities are likely to be negligible for existing sediment-bound contaminants.	Applicant
10.5.20	Mitigation options and their implementation warrant caucusing between the NZTA and local and central government agencies that have an interest in and/or administer the Motu Manawa Marine Reserve. It is also necessary to involve those community interest groups that submitted on these matters.	Applicant Caucusing
10.6.6	Outline the partnership with the Auckland Council for temporary and permanent reserve management in Waterview.	Applicant
10.6.7	Confirm locations where road stopping procedures under the Local Government Act will apply	Applicant
10.6.10	Surveys of the current tenants in Waterview that would be affected by the Project to determine relocation preferences and match those with rental supply. This information would assist assess the scale and significance of the social effects of relocation.	Applicant
10.6.24	Confirm the adequacy of the noise mitigation when there are a number of sensitive receiving activities as the School and kindergarten in Waterview.	Applicant
10.6.35 10.6.39 10.6.40	Feasibility of enhancing north-south pedestrian/cycleway connectivity between Waterview-Pt. Chevalier.	Applicant Caucusing
10.3.36	Consider CPTED (Crime Prevention through Environmental Design) review of the design for the Oakley Heritage Precinct.	Applicant
10.6.38	Confirm the timing and the provision of temporary and permanent sports fields and open space in and around Waterview (United and the wider environment of the Project).	Applicant Caucusing
10.6.42	Clarify the design and provision of open space areas and the preservation and integrity of the archaeological and heritage features and sites around Oakley Creek inlet.	Applicant Caucusing
10.7.9	Achieve the integration of noise barriers/landscape treatments near Sutherland Road, Parr Road and Novar Place so these structures do not adversely affect the residential outlook from	Applicant



	adjoining properties.	
10.7.17	Evaluate the opportunity to improve the cycleway network by upgrading the Carrington Road / Sutherland Road crossing and improvements to the St. Lukes Road interchange to enhance the safety of the (off-road) cycleway network.	Applicant
10.8.9 10.8.26	Confirm where any potential return of land for residential activities in this Sector might occur.	Applicant
10.8.40	Require visual simulations of ventilation building and stack from other directions	Applicant
10.8.54	Confirm that the provision of independent monitoring information in readily understandable form will form part of the reporting obligations of the Applicant to the Community Liaison Group (or similar) promoted in the draft conditions to the designation and resource consents.	Applicant
10.8.60	Confirm the specific mitigation to safeguard the operation of the Waterview Primary School and relocated kindergarten to 19 Oakley Crescent will be supported by adequate performance conditions.	Applicant
10.8.66	A Temporary Construction Lighting Plan for Construction Yards 6 and 7 is not listed on the table of management plans on Page 12.4 and a draft is not provided in report G.10.	Applicant
10.8.80 10.8.84 10.8.89 10.8.90	Further consideration to the design and location options for the northern ventilation building and stack and its operation that involves Council and community input.	Applicant Caucusing
10.8.91 10.8.92 10.8.93	Address nuisance effects on Unitec student accommodation from the operation of Construction Yard 7 and whether this may extend to relocation of students and other mitigation measures.	Applicant
10.8.97	Assess the merits of a northbound bus lane between Oakley Avenue and Waterview Interchange as part of the reconstruction of the road above the cut and cover tunnel.	Applicant
10.8.98	Assess the merits of a Great North Road western shared pedestrian and cycle route consistent with the standard of other project shared paths on the western side of Great North Road from Oakley Avenue to Waterview interchange.	Applicant
10.8.101	Advise further on merits of relocation of kindergarten and school	Applicant
10.9.16	Response to Ryder assessment for further mitigation by providing fish access above the Oakley Creek waterfall. This is a matter that could be discussed further with Friends of the Oakley Stream and the Council.	Applicant Caucusing
10.9.19	Confirm that reradiated noise from vibration associated with tunnelling operations can comply with proposed night time standards.	Applicant
10.9.23	Confirm that there are no groundwater contamination issues associated with construction works in the vicinity of Phyllis Reserve and Harbutt Reserves (that were in part former landfills).	Applicant
10.9.30 10.9.31	Determine partnership opportunities for an at grade cycle-pedestrian network in Sector 8.	Applicant Caucusing
10.9.33	Determine whether wider public transport improvements over time can be achieved in part through the Project and with support from the various transport agencies.	Applicant Caucusing
10.9.35	Confirm there are appropriate conditions to address vibration, settlement or other construction issues associated with the operation of the Pak N' Save supermarket on New North Road.	Applicant
10.10.63	Confirm the actual design for the operation of the concrete batching plant through the Concrete Batching and Crushing Management Plan to minimise dust emissions.	Applicant
10.10.70	Confirm whether noise effects associated with the construction	Applicant



10.10.71	activities in Sector 9 can be mitigated through management plans and performance standards and the circumstances where temporary relocation is necessary.	
10.10.19 10.10.85 10.10.86	Consider the merits of adopting the permitted baseline assessment for that part of the Project route within the Special Purpose 3 Zone in this Sector if at grade, in comparison to the tunnel extension option.	Applicant Legal adviser
10.10.87 10.10.91 10.10.92	Consider the merits for locating the southern ventilation building underground and make comparison with the permitted baseline for structures in the Open Space Zone.	Applicant Caucusing
10.10.93	Consider creating the ventilation stack as a positive landmark (for both the northern and southern facilities).	Applicant Caucusing
10.10.95	Confirm arrangements with Auckland Council for the provision of sports facilities that better meet the future demands of the community.	Applicant
10.10.96 10.10.97	Confirm any arrangements with Housing New Zealand for the residual small areas of open space to be used for residential redevelopment.	Applicant
10.10.98	Confirm Kiwi Rail's views regarding the use of the designated rail corridor for amenity purposes.	Applicant
10.10.103	Confirm that the combination of effects from tunnelling and flooding will not have adverse effects on residential areas served by septic tanks.	Applicant
10.10.106	Clarify that the Project does not compromise the prospect for a rail station precinct provided at Stoddard town centre Road shops.	Applicant
11.2.5	Confirm the extent of the energy savings that might accrue to the Project and the level of reduction in carbon emissions.	Applicant
13.1.15	Confirm the Project's compatibility with a 10 year plan to implement the development of a rapid transit network and quality transit network under the Auckland Passenger Transport Network Plan 2006-2016.	Applicant
13.2.3 13.2.4	Confirm the approach and timing for other authorisations and approvals required, and how the Board should consider these matters.	Applicant Legal adviser
14.1.2	Confirm the validity of the omnibus approach for the provision of management plans to support both NORs and the resource consents.	Applicant Legal adviser
14.2.1 14.2.3 14.3.5 14.3.6	Confirm the overarching requirement for: "accordance" rather than "general accordance"; Deletion of the term "subject to final design"; Deletion of the term "to the satisfaction of the Council"; and Detail Council's role is "certification."	Applicant Legal adviser Caucusing
14.2.11 14.2.12	Confirm the standardisation of timeframes to working days	Applicant Legal adviser
14.2.13	Clarify that all reporting obligations can be provided in monthly reporting to the Auckland Council.	Applicant
14.3.8 14.3.9 14.3.10 14.5.3 14.5.4	Confirm the purpose and makeup of the groups promoted within the Proposed Conditions advising on the construction programme, determining final designs, the assessment of draft management plans and the provision of information to the directly affected communities	Applicant Caucusing

16.3 To further summarise, the Principal Issues that could benefit from the further definition of options, caucusing and condition setting are:

- Northern Ventilation building – location and profile;
- Northern ventilation stack – location and emissions quality;



- Southern Ventilation building - location and profile;
- Southern ventilation stack – location and emissions quality;
- Construction Yard 1 - location and orientation;
- Wider public transport improvements as part of Project specific mitigation;
- Off road tunnel sector cycleway opportunity;
- Integrated reserves strategy – refining the terms of the NZTA/AC ‘partnership’;
- Tunnel extension option;
- Motu Manawa Marine Reserve environmental off-set/compensation strategy;
- Contaminated sediments management and disposal.

16.4 At a strategic level the topics can be integrated under four themes:

1. Location, profile and operational performance of the ventilation buildings, and stacks;
2. Integrated reserves strategy;
3. Wider public transport improvements as part of the Project; and
4. Motu Manawa Marine Reserve Environmental Strategy.

16.5 At this time we have not reviewed the Summary of Submissions Report to identify the extent of submitter involvement in each of these caucusing topics. However, we acknowledge a significant role for the Auckland Council in all these topics.

16.6 From our overview assessment presented in Chapter 14 we also note that the one remaining key area of further inquiry should be focused on the conditions associated with the implementation of the twelve Management Plans and resource consents, and whether they provide a suitable and certain process for technical certification, if the consents and statutory approvals are to be considered favourably by the Board.

16.7 Clear objectives and measurable performance standards will be essential elements for all management plans prepared to enable Council certification to be completed governing the implementation of works to avoid, remedy or mitigate potential effects. Details of all monitoring and reporting systems need incorporation into final condition setting. Following this approach to the certification of management plans then the Outline Plan of Works processes can also be discharged for those specific work elements including the various staged programmes of works for the Project.

---

## **APPENDIX A**

### **WESTERN RING ROUTE-WATERVIEW CONNECTION: REVIEW & ASSESSMENT OF MARINE ECOLOGICAL EFFECTS & SUBMISSIONS WITH RELEVANCE TO MARINE ECOLOGY.**

**RYDER CONSULTING, NOVEMBER 2010**

---



---

## **APPENDIX B**

### **WATERVIEW CONNECTION PROJECT: FRESHWATER ECOLOGY REVIEW**

**RYDER CONSULTING, NOVEMBER 2010**

---

---





---

## **APPENDIX C**

### **WATERVIEW CONNECTION PROJECT: SUMMARY OF SUBMISSIONS.**

**ENVIRONMENTAL MANAGEMENT SERVICES, NOVEMBER 10, 2010**

---

---



---

**APPENDIX D**  
**APPLICATION DOCUMENTATION LODGED**

---

---



## **Western Ring Road – Waterview Connection: Application Documentation**

Overview, Notices of Requirement and Consent Forms

Assessment of Environmental Effects Parts A, B and C

Assessment of Environmental Effects Part D (Volume 1)

Assessment of Environmental Effects Part D (Volume 2)

Assessment of Environmental Effects Part E (Appendices)

Assessment of Environmental Effects Part F (Plans and Drawings)

- G1: Assessment of Air Quality Effects
- G2: Assessment of Archaeological Effects
- G3: Assessment of Avian Ecological Effects
- G4: Assessment of Coastal Processes
- G5: Assessment of Construction Noise Effects
- G6: Assessment of Freshwater Ecological Effects
- G7: Assessment of Groundwater Effects
- G8: Assessment of Herpetofauna Ecological Effects
- G9: Assessment of Land and Groundwater Contamination Effects – Volume 1
- G9: Assessment of Land and Groundwater Contamination Effects – Volume 2
- G10: Assessment of Lighting Effects
- G11: Assessment of Marine Ecological Effects
- G12: Assessment of Operational Noise Effects
- G13: Assessment of Ground Settlement Effects
- G14: Assessment of Social Effects
- G15: Assessment of Stormwater and Streamworks Effects – Volume 1
- G15: Assessment of Stormwater and Streamworks Effects – Volume 2
- G16: Assessment of Temporary Traffic Effects
- G17: Assessment of Terrestrial Vegetation Effects
- G18: Assessment of Transport Effects
- G19: Assessment of Vibration Effects
- G20: Assessment of Visual and Landscape Effects
- G21: Construction Environmental Management Plan
- G22: Erosion and Sediment Control Plan
- G23: Coastal Works Report
- G24: Geotechnical Interpretive Report
- G25: Traffic Modelling Report
- G26: Operational Model Validation Report
- G27: Stormwater and Streamworks Design Philosophy Statement
- G28: Geotechnical Factual Report 500 Series – Volume 1
- G28: Geotechnical Factual Report 500 Series – Volume 2
- G28: Geotechnical Factual Report 500 Series – Volume 3
- G29: Geotechnical Factual Report 700 Series - Volume 1
- G29: Geotechnical Factual Report 700 Series - Volume 2
- G29: Geotechnical Factual Report 700 Series - Volume 3
- G30: Assessment of Associated Sediment and Contaminant Loads
- G31: Technical Addendum Report