

Before the Board of Inquiry  
Waterview Connection Project

---

*in the matter of:* the Resource Management Act 1991

*and*

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

Second statement of evidence of Owen Burn on behalf of the  
**NZ Transport Agency**

---

Dated: 14 November 2010

---

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

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

23 Albert Street  
PO Box 2206, Auckland 1140  
New Zealand

www.chapmantripp.com  
Auckland, Wellington,  
Christchurch



**INDEX**

**INTRODUCTION ..... 3**  
**SCOPE OF EVIDENCE ..... 3**  
**EXECUTIVE SUMMARY ..... 3**  
**SUMMARY OF ASSESSMENTS ..... 4**  
**OVERVIEW OF METHODS TO AVOID AND MITIGATE EFFECTS ..... 6**  
**STATUTORY ASSESSMENT OF RESOURCE CONSENT APPLICATIONS ..... 8**  
**COMMENTS ON SUBMISSIONS ..... 23**  
**CONCLUSIONS ..... 24**  
ANNEXURE A – RELEVANT PROVISIONS OF NEW ZEALAND COASTAL POLICY STATEMENT 2010.....26

## **SECOND STATEMENT OF EVIDENCE OF OWEN BURN ON BEHALF OF THE NZ TRANSPORT AGENCY**

### **INTRODUCTION**

- 1 My name is Cedric Owen Burn. I am the joint Planning Team Leader for the Waterview Connection Project (*Project*).
- 2 I have the qualifications and experience set out in the introduction to my first statement of evidence-in-chief dated 13 November 2010. I repeat the confirmation given in that statement that I have read, and agree to comply with, the Code of Conduct for Expert Witnesses (Consolidated Practice Note 2006).

### **SCOPE OF EVIDENCE**

- 3 This statement of evidence will deal with the following:
  - 3.1 Executive summary;
  - 3.2 Summary of assessments;
  - 3.3 Overview of methods proposed to avoid and mitigate effects;
  - 3.4 Statutory assessment of resource consent applications;
  - 3.5 Comments on submissions; and
  - 3.6 Conclusions.

### **EXECUTIVE SUMMARY**

- 4 In this brief of evidence I summarise the resource consents required for the Project and assess these in terms of the statutory tests of the Resource Management Act 1991 (*RMA*). In doing so I acknowledge that the consents are inextricably interwoven such that they should be considered as a "bundle" to be subject collectively to the most rigorous statutory tests i.e. those that apply to consideration of non-complying activities pursuant to sections section 104D and section 104(1).
- 5 In undertaking this assessment I rely on, and refer to the assessments set out in Chapters 13 to 23 of the AEE as lodged, and the suite of technical reports in Part G that underpin these assessments. I also refer, where appropriate to the briefs of evidence provided to the Board by technical experts.
- 6 Based on these technical assessments I conclude that some of the adverse effects resulting from the activities that are the subject of resource consents meet the permitted baseline in terms of section 104(2) of the RMA and therefore may be disregarded.

- 7 I refer to the potential effects that are avoided through the design of elements of the Project and describe, with reference to the relevant technical reports, how other effects can be mitigated through the implementation of the draft conditions of consent appended to Ms Linzey's evidence.
- 8 I also assess the resource consents for the Project against the statutory instruments that apply to consideration of them in terms of sections 104D and 104 of the RMA. Copies of the parts of these documents to which I refer are contained in Part E.3 of the AEE and where necessary appended to my evidence.
- 9 I conclude with respect to the gateway tests of section 104D that there are certain effects that result from the reclamation in the CMA that cannot be avoided and mitigated such that they are reduced to being no more than minor. However, I conclude that the resource consents do not offend against the objectives and policies of the relevant plans and proposed plans, in large part because these documents recognize the importance of State highways as physical resources and anticipate and allow for the enlargement of the SH16 causeway into the CMA where this is necessary.
- 10 Finally I consider the consents in the context of the purpose and principles set out in Part 2 of the RMA. My overall conclusion is that, while the extent of reclamation required does not make it possible to reduce the effects of the Project on the coastal environment to the point where these are no more than minor, the Project achieves the purpose of the RMA because it will deliver benefits to people and communities that outweigh this effect.

### **SUMMARY OF ASSESSMENTS**

- 11 The Assessment of Environmental Effects (*AEE*) lodged with the Project application documents contains a comprehensive discussion of the actual and potential effects of the Project, including in particular Part G of the AEE, the technical assessments. In this section of my evidence I will consider the effects of the elements of the Project that are the subject of applications for resource consents.
- 12 The resource consents required for the Project are detailed in Annexure B to my first brief of evidence. In summary these relate to the following elements of the Project:
- 12.1 Bridging of the Oakley Creek, the re-alignment of the course of this creek and its tributary and construction of stormwater outfalls to the Oakley and Meola Creeks and to the Pixie Stream;

- 12.2 The construction and operation of new bridge structures and piers, and areas of reclamation along the coastal edge of the Whau River, Rosebank Peninsula and the SH16 causeway;
  - 12.3 Discharge of contaminants to air and land during construction of the Project and discharge of stormwater during the construction and operation of the Project;
  - 12.4 Taking and use of ground water and diversion of surface water in the construction and operation of the tunnels;
  - 12.5 Land disturbing activities required for the construction phase of the Project; and
  - 12.6 The formation and operation of the roads and pedestrian/cycle way and stormwater treatment devices on the proposed SH16 causeway reclamation.
- 13 The actual and potential effects of the activities that are necessary for the Project and are the subject of the applications for resource consent are addressed in Part D (Project Assessments) and Part G (Supporting Technical Reports) of the AEE. In addition, further assessments on specific matters raised by the EPA experts were provided post-lodgment and are contained in Addendum Report G.31 of the AEE. In my view the aforementioned parts of the AEE provide a comprehensive and complete description of the effects of the Project. The assessments identify and distinguish between the effects arising out of the construction of the Project and the operational effects. Using this categorisation, the adverse effects that relate to elements of the Project that are the subject of resource consents can be summarised as follows:
- 13.1 Effects of works within streams:
    - Construction: Disturbance of the natural streambed and natural flow, habitat loss and disturbance, stream bank erosion and effects on fish passage.
    - Operation: Loss of stream length, erosion and contamination of water.
  - 13.2 Effects of works and structures within the Coastal Marine Area (CMA) (including reclamations):
    - Construction: Changes to tidal flushing, potential erosion and scouring, discharge of sediment, disturbance and mobilisation of seabed sediments (including contaminated sediments), channel bank instability or slumping and associated backwater effects, changes to coastal geomorphology, destruction of indigenous flora and fauna and habitat.

Operation: Potential changes to flow and drainage, discharge of contaminants within the CMA, permanent habitat loss, discharge of suspended solids and other contaminants, disturbance, shading and vegetation removal.

13.3 Effects of the discharges to air, land and water:

Construction: includes the discharge of dust, and contamination of land and water.

Operation: Increased impervious areas resulting in potential for downstream flooding effects, potential for motorway discharge runoff and dust generation.

13.4 Effects of the diversion of surface water and taking and use of groundwater occur mainly within the construction phase of tunnelling and include the migration of contaminants through groundwater, reduction in flood storage availability, impacts on the Oakley Creek baseflow and potential groundwater drawdown effects from tunneling.

13.5 Effects of land disturbance occur largely within the construction phase and include removal of flora and habitat and the death of native fauna, such as lizards.

**OVERVIEW OF METHODS TO AVOID AND MITIGATE EFFECTS**

- 14 Chapter 24 of the AEE provides a summary of the measures identified to avoid or mitigate the actual and potential effects of the Project as identified in the Project Assessments in Chapters 13 - 23. The Chapter 24 summary is based upon the technical reports in Part G of the AEE, where the relevant experts have recommended measures to remedy or mitigate adverse effects from the construction or operation of the Project, and these recommendations form the basis of the offered conditions contained in Part E.1 of the AEE.
- 15 The additional analyses undertaken since lodgement and described in the expert evidence have lead to these conditions being further refined. An edited compilation of the proposed conditions is attached to Ms Linzey's evidence which reflects the recommendations of the experts both in their technical reports and in evidence.
- 16 The same categories I have used in summarising the effects of the Project provide an appropriate framework to summarise the suites of mitigation measures that are proposed to address these effects. These measures include:

### 16.1 Mitigation for works within streams:

Construction: Streamworks to be undertaken in accordance with erosion and sediment control measures as set out in Technical Report G.22 (Erosion and Sediment Control Plan), works to be undertaken offline to allow the continued run of water and fish passage during construction, temporary stormwater management, freshwater ecological monitoring and management of potential spills of hazardous substances.

Operation: Enhancement and restoration in accordance with Oakley Creek Realignment and Rehabilitation Guidelines,<sup>1</sup> riparian planting and stormwater treatment.

### 16.2 Avoidance and Mitigation for works and structures within the CMA (including reclamations):

Construction: Temporary stormwater treatment, erosion and sediment control measures, managed excavations for new by-pass channels, temporary stockpiling of chenier shell deposits and repositioning, removal of mangroves to facilitate natural channel migration, use of steel casings for new piers, use of temporary coffer dams or sheet piling to create dry working area and thus avoid the disturbance and mobilization of sediments during construction, monitoring of suspended sediments and of pH and benthic invertebrate community composition, mudflat remediation zone, vegetating revetments, restoration works on Traherne Island and adjacent to Eric Armishaw Park, and removal of gross litter and debris from the CMA.

Operation: Pier locations as shown on plans, stormwater treatment, restoration of coastal fringe habitat and removal of gross litter and debris from the CMA.

### 16.3 Mitigation for the discharges to air, land and water:

Construction: Temporary stormwater treatment in accordance with the Auckland Regional Council's Technical Publication 10 – Stormwater Management Devices: Design Guidelines Manual (*TP10*), erosion and sediment control measures, buffer zones where possible between residential properties and construction activities, use of air filter bags for machinery, construction in accordance with a Construction Site Management Plan and a Site Health and Safety Plan, specific sampling to confirm nature of materials and screening of all fill and excavated material and any soil classified as 'contaminated' or 'managed fill'.

---

<sup>1</sup> Refer to Technical Report G.6, Appendix C, and the evidence of Mr Eddie Sides (Freshwater Ecology), para 56.

Operation: Permanent stormwater treatment in accordance with the Best Practicable Option and TP10, energy dissipation and erosion protection at discharge outlets, monitoring of emissions.

- 16.4 Mitigation for the diversion of surface water and taking and use of groundwater includes, through design of increased capacity within streams and with open space reinstatement, monitoring and remediation action in accordance with a Groundwater Management Plan and Construction Environmental Management Plan.
- 16.5 Avoidance and mitigation of effects from land disturbance activities includes monitoring of habitat relocation where required, vegetation clearance outside of main breeding season where practicable, and the provision of temporary roosting structures for birds. Post-construction mitigation includes restoration of habitat and replanting with locally sourced and appropriate indigenous species and the relocation of indigenous lizard species to new habitats.
- 16.6 The management of specific effects (e.g. construction air quality, noise, vibration, etc) will be more specifically detailed within a suite of environmental management plans that will be included as appendices to an overarching Construction Environmental Management Plan (*CEMP*) as set out in the evidence of Mr Hugh Leersnyder.<sup>2</sup>

### **STATUTORY ASSESSMENT OF RESOURCE CONSENT APPLICATIONS**

- 17 A detailed list of the resource consents required for the Project are contained in Section 7.3 of the AEE and in Annexure B of my first brief of evidence. I note that the reports prepared for the Board of Inquiry (*BOI*) under section 149G of the RMA confirm that this list is complete.
- 18 The resource consents required are for activities ranging from controlled to non-complying activities. Given the nature of the Project, which involves a number of closely integrated activities with different consenting requirements, I have applied the “bundling” principle to these activities and made an overall assessment of the applications against the statutory matters that apply to non-complying activities.
- 19 The reclamation component of the Project is a Restricted Coastal Activity in terms of Rule 13.5.4 and 13.5.6 of the Auckland Regional

---

<sup>2</sup> Refer evidence of Mr Hugh Leersnyder – Construction Environmental Management, para 29 and 30.



Plan: Coastal and section 12(1)(a) of the RMA and also requires assessment as a non-complying activity.

### **Sections 104D and 104(1)(a) RMA**

- 20 It is first necessary to measure the applications against the tests of section 104D of the RMA, which provide a high level “filter” for non-complying activities. An application which passes the tests of section 104D must then be considered with regard to all of the factors referred to in section 104(1) before a consenting decision can be made.
- 21 Accordingly, I will assess the suite of applications in terms of the tests in section 104D before moving to an examination of the additional matters to be considered in terms of section 104(1). In undertaking these assessments I rely upon the technical analyses set out in the AEE and the evidence presented to the Board by the technical experts.
- 22 Section 104D(1)(a) requires an evaluation of the adverse effects of the activity on the environment. In undertaking this assessment I have considered the extent to which any adverse effects may be avoided, remedied or mitigated by the offered conditions of consent appended to Ms Linzey’s third statement of evidence.
- 23 Where appropriate, I will also compare effects with the permitted baseline in accordance with section 104(2) of the RMA.

#### *Works within streams*

- 24 With regard to the works within streams that require consent I note that the relevant experts<sup>3</sup> are of the opinion that these can be mitigated such that the effects will be no more than minor. Those works that are to be undertaken within the streams will be undertaken in accordance with Technical Report G.22 (Erosion and Sediment Control Plan) and the Oakley Creek Realignment and Rehabilitation Guidelines<sup>4</sup> and will have a net ecological, environmental and recreational benefit.
- 25 The Freshwater Ecology Assessment<sup>5</sup> notes that Oakley Creek in particular is in poor environmental condition, which is likely due to low water quality. Overall it is considered that the implementation of the Oakley Creek Restoration and Rehabilitation Guidelines will result in the long-term enhancement of the condition of the stream.

---

<sup>3</sup> See AEE Part G Technical Report G.15 (Assessment of Stormwater and Streamworks Effects) and Technical Report G.6 (Assessment of Freshwater Ecological Effects).

<sup>4</sup> See AEE Part G Technical Report G.6(Assessment of Freshwater Ecological Effects), Appendix C.

<sup>5</sup> See AEE Part G Technical Report G.6(Assessment of Freshwater Ecological Effects) (pg 28).

- 26 For Meola Creek and Pixie Stream, I note that Mr Sides concludes that the construction works and operational requirements of the Project can be managed through appropriate mitigation such that the adverse effects on them will not be significant.<sup>6</sup>

*Works and structures within the CMA*

- 27 The coastal processes and marine ecology reports<sup>7</sup> and evidence,<sup>8</sup> which address the works and structures required within the CMA, describe a comprehensive suite of measures to avoid, remedy or mitigate adverse effects. I have already outlined these in my evidence.
- 28 The mitigation for these elements of the Project was addressed by the Project team in an integrated manner, recognizing in particular the need to address the effects of the reclamation required. The expert assessments<sup>9</sup> considered that the existing environmental values of the tidal and intertidal areas within the CMA that were to be permanently occupied by the reclamation were, to a large extent, compromised by the effects of the existing Causeway and other land uses surrounding the Waterview Estuary. These existing effects were most apparent in the historic changes to the morphology of the Estuary over time documented in the coastal processes report<sup>10</sup> and in the elevated levels of contaminants recorded in the marine ecology report. These levels of contaminants were considered to be, in part, a result of the rudimentary treatment of stormwater currently flowing into the CMA from the existing Causeway.
- 29 Notwithstanding the existing state of the coastal environment it is considered by Dr Sharon De Luca that the footprint of the proposed reclamation will remove such an extent of habitat that without some form of mitigation this would constitute a significant effect.<sup>11</sup>
- 30 In order to offset the loss of habitat, the Project incorporates both an area of mudflat remediation, described in the evidence of Dr Sharon De Luca,<sup>12</sup> and a "biofilter" mechanism for the treatment of all existing and proposed impermeable surfaces on the Causeway. This "biofilter" will treat more than 80% of suspended solids and a similar percentage of metals in solution. These levels of treatment are in excess of the recommended levels of treatment for such

---

<sup>6</sup> See AEE Part G Technical Report G.6 (pgs 63-64).

<sup>7</sup> See AEE Part G Technical Report G.4 (Assessment of Coastal Processes) and Technical Report G.11 (Assessment of Marine Ecological Effects).

<sup>8</sup> Refer evidence of Dr Rob Bell - Coastal Processes, para 69-76, and Dr Sharon De Luca - Marine Ecology, para 31-69.

<sup>9</sup> See AEE Part G Technical Reports G.4 and G.11.

<sup>10</sup> See AEE Part G Technical Report G.4 (Assessment of Coastal Processes), Section 3.3.1.

<sup>11</sup> Refer evidence of Dr Sharon De Luca - Marine Ecology, para 40.

<sup>12</sup> Refer evidence of Dr Sharon De Luca - Marine Ecology and Technical Report G.11 para 55.

systems set out in the ARC Guideline TP10, which is the generally accepted standard for stormwater treatment.

- 31 The employment of stormwater treatment will result in a net improvement in the quality of stormwater from the enlarged causeway entering the CMA. Dr De Luca<sup>13</sup> considers the environmental benefit of this higher level of treatment for the habitat values to the balance area of the Estuary to be such that it assists in offsetting the permanent habitat area loss arising from the enlarged footprint of the Causeway.
- 32 Offset mitigation for the loss of Ecotone sequences of vegetation on Traherne Island and its coastal margins is also provided through appropriate riparian re-vegetation at the edge of the CMA adjacent to Eric Armishaw Park.
- 33 Effects of the reclamation construction on the benthic environment are also minimized through the use of coffer dams to enclose the works. This will create a dry working environment for the reclamation works and ensure that marine muds are not mobilized during construction and distributed elsewhere in the estuary.<sup>14</sup> In addition, effects on coastal processes resulting from the Project will be mitigated by the pre-emptive re-alignment of estuarine channels affected by the reclamation process. This is described in the evidence of Dr Bell.<sup>15</sup>
- Discharges to air, land and water*
- 34 Discharges to air, land and water will be managed in accordance with standards set out in the relevant regulatory instruments<sup>16</sup> and as described in the various technical reports.<sup>17</sup>
- 35 Section 104(2) allows a consent authority to disregard an adverse effect of an activity on the environment if a national environmental standard or the plan permits an activity with that effect.
- 36 Exposure levels to vehicle related contaminants from the Project will comply with the National Environmental Standards for Air Quality (AQNES).<sup>18</sup> In addition, vehicle exhaust emissions, whether directly from vehicles on surface roads or discharged via tunnel ventilation stacks or portals, are specifically provided for in Rule 4.5.3 of the

---

<sup>13</sup> See AEE Part G Technical Report G.11.

<sup>14</sup> Refer evidence of Dr Sharon De Luca – Marine Ecology, para 42.

<sup>15</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 39.

<sup>16</sup> Operative Auckland Regional Plan: Air, Land and Water, National Environmental Standard for Air Quality, ARC TP10.

<sup>17</sup> See For Example AEE Part G Technical Report G.1 (Assessment of Air Quality Effects), G.6 (Assessment of Freshwater Ecological Effects), G.15 (Assessment of Stormwater and Streamworks Effects).

<sup>18</sup> See AEE Part G Technical Report G.1 (Assessment of Air Quality Effects).

Auckland Regional Plan: Air, Land and Water (Operative in Part) (ARP:ALW) as permitted activities.

- 37 Although the Project will result in an increase in motorway surfaces, and will require resource consent as a discretionary activity pursuant to Rule 5.5.12 (Network Operator Activities within Urban Areas) of the ARP:ALW, the proposed stormwater treatment will meet or exceed the majority of the requirements of the ARP:ALW for controlled activities in Rule 5.5.10 and TP10 to mitigate the effects from stormwater discharges.<sup>19</sup>

*Groundwater and surface water*

- 38 Effects of the activities associated with diversion of groundwater and surface water and the taking of groundwater will be achieved by the control of these activities through a Groundwater Management Plan and Construction Environmental Management Plan which includes on-going monitoring of effects, and through open space reinstatement and increased capacity within streams.

*Land disturbance*

- 39 The construction phase of the Project will require substantial land disturbance works. In order to avoid adverse effects arising from these works it will be necessary to relocate native flora and fauna. This will be undertaken in accordance with the Ecological Construction Management Plan that form part of the suite of conditions. In addition, replacement of vegetation and habitat will also be included as part of the mitigation works for the Project.

*Conclusion regarding section 104D*

- 40 Based on the analysis and opinion provided by the experts I consider that, aside from the overall loss of the CMA created by the reclamation, the activities that require consent can be managed through the measures incorporated in the draft conditions of consent appended to Ms Linzey's evidence, such that they will have not have effects that are more than minor.

**Section 104D(1)(b)**

- 41 The alternative test of section 104D(1)(b) requires that non-complying activities are not contrary to the objectives and policies of the relevant plans and proposed plans.
- 42 Chapter 23 of the AEE contains an assessment of the consent applications against the applicable planning instruments. The overall conclusion of that assessment was that the Project was consistent with the objectives and policies of the relevant plans and proposed plans as these stood at the time of lodgement. I can confirm that I concur with this assessment.

---

<sup>19</sup> See AEE Part G Technical Report G.15.

43 I have also reviewed the consents required against the plan provisions that have evolved out of further statutory processes since lodgement as required by section 88A(2) of the RMA. My comments on these are as follows:

*Auckland Regional Plan: Air Land and Water*

44 Those chapters of ARP: ALW that relate to the resource consents required for the Project remain subject to appeal and therefore are not yet operative. Accordingly I consider that the assessments made of the objectives and policies of this document in the AEE remain current.

*The Auckland Regional Policy Statement: Proposed Plan Change 8*

45 There are no statements of objective or policy within the provisions of Proposed Plan Change 8 that are subject of the consent order of 19 October 2010 that apply to the consents.

**Section 104(1)(b)**

46 Section 104(1)(b) requires consideration of national environmental standards, other regulations, a national policy statement, the New Zealand Coastal Policy Statement, a regional policy statement or proposed policy statement and any relevant provisions of a plan or proposed plan.

*National Environmental Standards*

47 I have already noted that emissions from the tunnel vents will comply with the relevant AQNES. The evidence of Mr Gavin Fisher<sup>20</sup> explains in some detail how this will be achieved on an on-going basis.

*New Zealand Coastal Policy Statement*

48 In my first brief of evidence I noted that the New Zealand Coastal Policy Statement 2010 (*NZCPS 2010*) had been approved since lodgement of the application documents. The NZCPS 2010 was not assessed in the AEE. However, I note that it is to take effect on 3 December 2010 at which time it will replace the current NZCPS 1994.

49 In recognition of the NZCPS 2010 I have undertaken an assessment of the new provisions that are relevant to the Project. The relevant provisions are appended to my evidence as Annexure A.

50 In my view, the mitigation provided with the Project is consistent with the Objectives of the NZCPS 2010. With respect to Objective 1 it is important to note that the Waterview Estuary has been significantly modified by the existing Causeway land use activities that surround it. Notwithstanding this, the avoidance works within

---

<sup>20</sup> Refer evidence of Mr Gavin Fisher – Air Quality, para 32.

the Estuary that are described in Dr Bell's evidence<sup>21</sup> will ensure that the existing natural processes are maintained.

- 51 Mr Slaven's evidence<sup>22</sup> also describes how the portions of representative ecotones lost at Traherne will be replicated and how regionally valued species of plants affected by the work will be relocated as part of a wider restoration programme for Traherne Island thus assisting the project achieve bullet point two of objective 1.
- 52 Objective 6 provides direction as to the extent to which subdivision, use and development in the coastal environment may be acceptable. This objective acknowledges that protection of the values of the coastal environment does not preclude use and development and that functionally some uses can only be located in the CMA. Further development of the existing SH16 causeway which requires work within the coastal environment is thus acknowledged by this objective
- 53 Policy 1 recognises that the coastal environment includes *inter alia* "physical resources and built facilities, including infrastructure, that have modified the coastal environment". Accordingly this policy recognizes that the SH16 causeway forms part of the coastal environment
- 54 Policy 3 requires that a precautionary approach be taken to the use and management of coastal resources potentially vulnerable to effects from climate change so that avoidable social and economic loss and harm to communities does not occur. In this regard, the Project includes the future proofing of the existing SH16 Causeway (which is a physical resource) so that it can withstand the effects of sea level rise caused by climate change. Dr Bell's evidence<sup>23</sup> explains how the design of the Causeway addresses this requirement.
- 55 Policy 5 has particular relevance to the Project in that it requires the consideration of effects on the Motu Manawa/Pollen Island Scientific Reserve and on the Motu Manawa (Pollen Island) Marine Reserve. This Policy requires that effects of activities be avoided, remedied or mitigated in relation to the purposes of the relevant Acts under which these reserves are managed (namely the Reserves Act 1977 and the Marine Reserves Act 1971, respectively).

---

<sup>21</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 86.

<sup>22</sup> Refer evidence of Mr Dave Slaven – Terrestrial Vegetation, para 35.

<sup>23</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 25-36.

56 The purpose of Scientific Reserves is as set out in Section 21(1) of the Reserves Act 1977 as:

*Protecting and preserving in perpetuity for scientific study, research, education and the benefit of the country, ecological associations, plant or animal communities, types of soil, geomorphological phenomena and like matters of special interest.*

57 The Project includes design elements which ensure that the attributes of Pollen Island for which it is classified as a scientific reserve are not affected. In particular, the evidence of Dr Bell has described the manner in which the reclamation along the Rosebank Peninsula coast is to use vertical piling to ensure the intertidal channel that passes by Pollen Island is unaffected. This construction methodology will assist in maintaining the physical form of the Island and hence its scientific values. The closure of an existing culvert at Rosebank Peninsula is also intended to achieve this end.<sup>24</sup>

58 The purpose of the Marine Reserves Act 1971 is stated in section 3(1) of that Act as:

*Preserving, as marine reserves for the scientific study of marine life, areas of New Zealand that contain underwater scenery, natural features, or marine life, of such distinctive quality, or so typical, or beautiful, or unique, that their continued preservation is in the national interest.*

59 Section 3(2) of the Marine Reserves Act 1971 also requires that,

- "(a) They shall be preserved as far as possible in their natural state:*
- (b) The marine life of the reserves shall as far as possible be protected and preserved:*
- (c) The value of the marine reserves as the natural habitat of marine life shall as far as possible be maintained."*

60 Measures used to avoid, remedy and mitigate effects of the Project on the waters of the Motu Manawa Marine Reserve are described in the evidence of Drs De Luca<sup>25</sup> and Fisher.<sup>26</sup> These include the design of a "marine habitat remediation zone" at the toe of the reclamation revetment along the SH16 Causeway and the improved treatment of stormwater from the Causeway that I have already described. These measures also address Policy 22 of the NZCPS 2010, which seeks a reduction in sediment loadings in runoff and stormwater systems, and Policy 23, which is concerned with the management of contaminant discharges.

---

<sup>24</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 42-51.

<sup>25</sup> Refer evidence of Dr Sharon De Luca – Marine Ecology, para 78-83.

<sup>26</sup> Refer evidence of Dr Tim Fisher – Stormwater and Streamworks, para 124-126.

- 61 Policy 10 of the NZCPS 2010 requires that the form and design of reclamation have regard to the potential effect of climate change, including sea level rise, over no less than 100 years and to have particular regard to the extent to which the reclamation and intended purpose would provide for the efficient operation of infrastructure.
- 62 These are matters that have been carefully addressed in the design of the reclamations. Dr Bell<sup>27</sup> has explained how the design of the Causeway has been developed to address climate change. The evidence of Mr Murray<sup>28</sup> and Mr Hind<sup>29</sup> explain how the Causeway design is intended to provide for the future traffic demands on the Western ring Route in general and on SH16 in particular.
- 63 Policy 11 is directed at the protection of biodiversity through avoiding, remedying or mitigating adverse effects on indigenous vegetation, ecosystems and habitats. The measures within the Project that address this Policy are described in Chapters 13 - 23 of the AEE and in the evidence of Dr De Luca<sup>30</sup> and Messrs Don<sup>31</sup> and Slaven.<sup>32</sup>
- Policy Statements and Plans*
- 64 Section 104(1)(b) requires that the consideration of policy statements, plans and proposed plans encompass all relevant provisions of these instruments.
- 65 The Auckland Regional Policy Statement (*ARPS*) is the relevant regional policy statement to be considered with respect to the resource consents for the Project.
- 66 The overarching aim of the ARPS is to balance multiple resource management issues and to guide the management of physical and natural resources of the region to achieve the purposes of the RMA. To this end the ARPS identifies regionally significant infrastructure and provides policy direction as to how regional infrastructure may be provided to achieve the integrated management of the natural and physical resources and the strategic direction of the ARPS.<sup>33</sup>
- 67 The objectives and policies of the ARPS that are directed at the provision of regionally significant infrastructure are assessed in Section 23.5.1.1 of the AEE. The AEE assessments confirm that the Project supports these objectives and policies.

---

<sup>27</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 25-36.

<sup>28</sup> Refer evidence of Mr Andrew Murray - Transport/Traffic, para 63.

<sup>29</sup> Refer evidence of Mr Jon Hind – Causeway Geometrics, para 19-25.

<sup>30</sup> Refer evidence of Dr Sharon De Luca – Marine Ecology, para 39-61.

<sup>31</sup> Refer evidence of Mr Graham Don – Avian Ecology, para 18-34.

<sup>32</sup> Refer evidence of Mr Dave Slaven – Terrestrial Vegetation, para 15.

<sup>33</sup> ARPS, page 9.



- 68 Further objectives and policies relating to the coastal environment, water quality, air quality and soil conservation are also addressed in the AEE. In my view, an appropriate balance has been achieved by the Project in addressing these policies such that the granting of the resource consents will not be inconsistent with the objectives and policies of the ARPS.
- 69 The ARP:ALW and the ARP:C sit below the ARPS in the hierarchy of planning instruments and give effect to the policy direction in the ARPS.
- 70 There are several consents for discharges required under the ARP:ALW. As I have already explained, the proposed treatment of these discharges is such that they will meet or exceed the minimum requirements of the relevant standards or guidelines in the ARP:ALW. I consider that the Project meets the relevant objectives and policies of this plan and that no further assessment of the applications is required in this regard
- 71 The provisions of the ARP:C are also relevant to consideration of the resource consents. The majority of the proposed reclamations and other coastal works will be within Coastal Protection Areas (CPA) 1 or 2.<sup>34</sup> The purpose of these areas is described in clause 2.9 of the ARP:C as giving effect to the requirements of sections 6(a), (b) and (c) of the RMA.
- 72 CPA1 is described<sup>35</sup> as including areas, which due to their physical form, scale or inherent values are considered to be most vulnerable to any adverse effects of inappropriate subdivision, use and development. It is also noted that these areas contain regionally or nationally rare habitat types and examples of saltmarshes and mangroves as well as breeding and roosting areas for a range of migratory and coastal birds.
- 73 Clause 13.5.6 of the ARP:C prohibits reclamation or drainage in CPA1, except where it is required for the safe and efficient operation of SH1 or SH16 in recognition of the national strategic importance of these routes. Reclamation for this purpose within CPA1 is a non-complying activity and is required to be assessed against policies in section 13.4 of the ARP:C.
- 74 The reclamation is required for the enlargement of the existing SH16 Causeway. Section 23.6.1.11 of the AEE contains an assessment of the reclamation in terms of the policies in section B of the ARP:C. I endorse this assessment. Mr Hind's evidence<sup>36</sup> has explained why further reclamation is necessary for the Project. Mr Hind's evidence also explains that a land based (ie viaduct) option is

---

<sup>34</sup> As illustrated on sheet 26 of planning map Series 1.

<sup>35</sup> At clause 2.9.2 of the ARP:C.

<sup>36</sup> Refer evidence of Mr Jon Hind – Causeway Geometrics, para 56.

not practicable. This option is required to be considered by Policy 13.4.1(b).

- 75 Technical reports<sup>37</sup> in Part G of the AEE also explain the requirement for the physical extent of the reclamation. As Mr Hind has explained in his evidence<sup>38</sup> the extent of the reclamation is primarily established by the geometric requirements of the new roading to be established, together with the cycle/pedestrian way and the stormwater treatment methodology. Dr Bell<sup>39</sup> also explains how the design accommodates future sea level rise and on-going settlement.
- 76 The particular geotechnical and engineering issues that prevail in the Waterview Estuary and the manner in which they have been addressed in the engineering design and construction methodology, are outlined by Dr Hsi in his evidence.<sup>40</sup> As Dr Hsi has explained, these elements of the Causeway design are also determinants of the extent of the footprint of the reclamation and are thus relevant to a consideration of Policy 13.4.1(c).
- 77 The technical reports and evidence of Dr Bell, Dr De Luca, Mr Slaven and Mr Don have carefully assessed the ecological and habitat values of those parts of the CMA that will be affected by the reclamation and other works within the CMA. Their reports describe the existing environmental values of these areas and also describe the effects of the reclamation on natural character, ecological values and coastal processes, and the methods used to avoid, remedy or mitigate these effects to meet Policy 13.4.1(d).
- 78 Mr Brown<sup>41</sup> has assessed the visual effects of the finished reclamation and the planting proposed and has concluded that the Causeway is compatible with the environment within which it is located in accordance with Policy 13.4.1(e).
- 79 Cumulative effects such as those resulting from contaminants contained in stormwater runoff from the reclamation will be avoided by the methods used for construction described in the coastal engineering report and Dr Hsi's evidence,<sup>42</sup> and through the design of the stormwater treatment devices as described in Dr Fisher's<sup>43</sup>

---

<sup>37</sup> See AEE Part G Technical Report G.23 (Coastal Works Report).

<sup>38</sup> Refer evidence of Mr Jon Hind – Causeway Geometrics, para 56.

<sup>39</sup> Refer evidence of Dr Rob Bell – Coastal Processes, para 25-36.

<sup>40</sup> Refer evidence of Dr Jeff Hsi – Coastal Works, para 52-75.

<sup>41</sup> See AEE Part G Technical Report G.20 (Assessment of Visual and Landscape Effects) and evidence of Mr Stephen Brown – Visual and Landscape, para 71.

<sup>42</sup> Refer evidence of Dr Jeff Hsi – Coastal Works, para 53-62.

<sup>43</sup> Refer evidence of Dr Tim Fisher – Stormwater and Streamworks, para 30.

and Dr De Luca's<sup>44</sup> evidence. This will ensure the Project is consistent with Policy 13.4.1(f).

- 80 While the existing public access to the CMA from the southern side of the Causeway will be maintained, for the reasons I explain below it is not considered practicable to provide access to the CMA from the northern shores of the reclamations. Accordingly the Project does not contemplate the creation of esplanade reserves or strip on the new areas of reclamation. It is considered however that the access provided is an appropriate response to Policy 13.4.4.
- 81 As the reclamation will take place within a part of the Waterview Estuary that has been found to contain contaminated marine muds<sup>45</sup> the construction methodology has been developed to ensure these contaminated muds are not mobilized and distributed to other parts of the CMA during the construction process and thus meets Policy 13.4.7.
- 82 Clause 36.2.1 of the ARP:C requires that information on alternatives be provided where applications are made for reclamation. This requirement reflects the direction of Policy 7.4.10.2.4 of the ARPS and Policy 4.1.6 of the NZCPS 1994. As Mr Hind has explained in his evidence, a rigorous process of option evaluation was undertaken as part of the Causeway design process. This evaluation process included early consideration of non-reclamation alternatives, such as a viaduct to be founded on the existing reclamation and options involving the creation of sea walls or "dyke" structures on either side of the road. These alternatives were rejected for the reasons set out in Mr Hind's report.
- 83 Alternative methods of forming a reclamation were also considered, including the use of vertical sheet-piling to reduce the footprint of the reclamation. Mr Hind<sup>46</sup> has explained the engineering rationale for the final selection of a reclamation form having sloping revetments. Mr Hind has also explained<sup>47</sup> why it was determined to be more appropriate to undertake a symmetrical widening of the causeway with reclamation on both sides of the existing Causeway.
- 84 Mr Graham Don has also, in his evidence as a response to a submission<sup>48</sup>, explained how asymmetrical widening of the Causeway would result in the removal of a significant area of preferred feeding habitat for a threatened species of bird (the wrybill).

---

<sup>44</sup> Refer evidence of Dr Sharon De Luca – Marine Ecology, para 55 and 59.

<sup>45</sup> See AEE Technical Report G.11 (page 11).

<sup>46</sup> Refer evidence of Mr Jon Hind – Causeway Geometrics, para 42.

<sup>47</sup> Refer evidence of Mr Jon Hind – Causeway Geometrics, para 42.

<sup>48</sup> Refer evidence of Mr Graham Don – Avian Ecology para 41.

*Conclusion – section 104(1)(b) RMA*

- 85 In summary I conclude that the consents required for the Project are consistent with the provisions of the relevant planning instruments

**Part 2 RMA**

*Section 5 - Purpose*

- 86 Section 5 of the RMA explains that the purpose of the Act is to promote the sustainable management of natural and physical resources.
- 87 With respect to sustainable management, Mr Parker<sup>49</sup> has explained the importance of the State highway network as a critical element of the physical infrastructure of Auckland. He has further explained the rationale of the Western Ring Route concept, the contribution that the Project will make to the completion of the WRR and the benefits it will deliver to the wider road transport infrastructure of the region.<sup>50</sup>
- 88 Mr Copeland<sup>51</sup> has explained how the Project meets accepted economic criteria for the economic evaluation of roading projects and how the Project will deliver economic benefits to both the region and the country.
- 89 I consider that the evidence of these experts clearly demonstrate the national and regional economic benefits that the Project will deliver. Ms Linzey has assessed the social effects of the Project and I note that in her evidence she considers that it will enable people and communities to provide for their social and economic well-being and provide resilience to the community through the transport network. Other expert evidence has shown how these benefits will be delivered while avoiding, remedying or mitigating adverse effects on the environment.
- 90 The limitations expressed in sections 5(2)(a), 5(2)(b) and 5(2)(b) of the RMA also provide constraints to the use and development of resources. These constraints are explicitly expressed in sections 6, 7 and 8 and I assess these as follows.

*Section 6 – Matters of national importance*

- 91 Section 6 lists matters of national importance and the RMA imposes a duty to provide for these. These are:

*6(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and*

---

<sup>49</sup> Refer evidence of Mr Tommy Parker – NZTA Statutory and Strategic Objectives, Project History and Process, para 7-10.

<sup>50</sup> Refer evidence of Mr Tommy Parker – NZTA Statutory and Strategic Objectives, Project History and Process, para 8.

<sup>51</sup> Refer evidence of Mr Mike Copeland – Economics, para 11 and 12.

*lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*

- 6(b) *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- 6(c) *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- 6(d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- 6(e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*
- 6(f) *the protection of historic heritage from inappropriate subdivision, use, and development:*
- 6(g) *the protection of recognised customary activities.*

- 92 I have noted that the part of the works required for the Project are within a part of the CMA identified by the ARPC (CPA 1) which has the purpose of giving effect to the requirements of sections 6(a), (b) and (c) of the RMA. The Project will further reduce the extent of this part of the CMA as a consequence of the reclamation. The additional piers and structures proposed for connecting ramps and the additional bridging structures required for the Project will also have an effect on the CPA 1.
- 93 The environmental assessments that have been undertaken conclude however that the parts of the CPA 1 that are directly affected by these works do not have significant habitat values. Additionally, where the Project work may affect areas of significant indigenous coastal vegetation the effects of these can be mitigated by re-establishing this vegetation elsewhere in the Project footprint.
- 94 The evidence of Mr Slaven,<sup>52</sup> Mr Don,<sup>53</sup> Mr Chapman<sup>54</sup> and Dr De Luca<sup>55</sup> demonstrate the manner in which section 6(c) matters are to be addressed.
- 95 With respect to Section 6(d) I have explained how the Project maintains access to the CMA.
- 96 With regard to section 6(e) the Project team has consulted with iwi through the life of the Project. I note that both Ngati Whatua and Te Kawerau a Maki have submitted on the Project. Ngati Whatua has also provided the cultural assessment reports in Part E.6 of the AEE. I understand that both of these iwi will be providing evidence that will address this section of the RMA.

---

<sup>52</sup> Refer evidence of Mr Dave Slaven – Terrestrial Vegetation, para 15.

<sup>53</sup> Refer evidence of Mr Graham Don – Avian Ecology, para 9.

<sup>54</sup> Refer evidence of Mr Simon Chapman – Herpetofauna, para 10 and 11.

<sup>55</sup> Refer evidence of Dr Sharon De Luca – Marine Ecology, para 17-19.

97 In conclusion, given that the reclamation proposed is required in order to maintain the operational viability of SH16 I consider that these effects are acceptable in the context of the Project and section 6 of the RMA. These conclusions are based upon assessments of the existing qualities of the affected parts of the coastal environment and also on the suite of measures incorporated in the Project to avoid, remedy and mitigate the effects of the Project.

*Section 7 – Other matters*

98 Of the “Other Matters” stated in section 7, I consider that the following are relevant:

*7(b) Efficient use and development of natural and physical resources:*

*7(c) The maintenance and enhancement of amenity values:*

*7(d) Intrinsic values of ecosystems:*

*7(f) Maintenance and enhancement of the quality of the environment:*

*7(g) Any finite characteristics of natural and physical resources:*

*7(i) The effects of climate change”*

99 I consider that the Project is consistent with these matters. As Mr Tommy Parker has explained in his evidence<sup>56</sup> the completion of the Western Ring Route, as contemplated by the Project, will increase the capability of the State highway network within Auckland and will result in the efficient use and development of this network as a nationally important physical resource and thus addresses section 7(b).

100 Further, the structures that are the subject of resource consents, including the bridges, reclamations and water quality devices, have been carefully designed so that they do not compromise existing amenity values. These values include the continued provision of access for cycling and walking, as well as elements of the Project that address aesthetic matters such as landscaping and urban design in accordance with section 7(c).

101 The Project has also includes consideration of the maintenance of ecosystems and includes measures which are designed to repair existing degraded ecosystems and thus has regard to section 7(d).

102 The effects of climate change have been specifically addressed in the design of the SH16 reclamations as required by section 7(i)

*Section 8 – Treaty of Waitangi*

103 I do not consider that the consents for the Project raise any issues of relevance to the Treaty of Waitangi. In addition, as far as I am

---

<sup>56</sup> Refer evidence of Mr Tommy Parker – NZTA Statutory and Strategic Objectives, Project History and Process, para 7-10.

aware, iwi have not raised these matters in the consultation process.

*Conclusion – Part 2 RMA*

- 104 In summary, I believe that on balance the Project will contribute to the promotion of the sustainable management of the natural and physical resources of the region.

**COMMENTS ON SUBMISSIONS**

- 105 I have considered the issues raised by submitters with respect to the statutory matters in this brief of evidence and comment on them as follows:

**Cumulative Adverse Effects**

- 106 Submitters<sup>57</sup> were concerned that sufficient consideration had not been given to cumulative adverse effects, particularly those occurring within the CMA.
- 107 Chapter 23 of the AEE and the Technical Reports included in Appendix G, address the effects of the Project on the coastal environment and these are further discussed in expert evidence. I have addressed the instance of cumulative effects that can be identified in relation to the consents for the Project – that being the effects arising from contaminated stormwater entering the CMA as it will have a cumulative adverse effect when considered in combination with other effects of runoff into the estuary. As I have explained in para. 29 the treatment devices that are to be incorporated into the reclamation will ensure that the levels of contaminant that enter the CMA from the Causeway are less than the levels required by the relevant standards and guidelines and will result in a reduced rate of contamination. It is my view, therefore, that any cumulative effects must be assessed as being no more than minor.

**Part 2 RMA Assessment**

- 108 A number of submitters<sup>58</sup> express the view that there is inadequate consideration of the matters that require assessment in terms of Part 2 of the RMA. I have assessed these in the preceding parts of my evidence. In summary, I consider that the assessment undertaken for the Project has taken into account the purpose and principles contained in Part 2 of the RMA.

---

<sup>57</sup> Cumulative adverse effects have been raised by Submitter Nos. 43, 129, 179, 185, 209 and 211.

<sup>58</sup> Assessment against Part 2 RMA matters have been raised by numerous submitters including, for example, Submitter Nos. 15, 43, 121, 126, 129, 153, 155, 185, 213 and 225.

## CONCLUSIONS

- 109 I have assessed the applications for resource consents required for the Project collectively against the statutory tests of the RMA for non-complying activities.
- 110 Given the very large number of consents required I have grouped them according to the types of consents that are required and the parts of the Project that generate the need for different types of consents. In doing so I have had regard to the effects that particular activities will have on the environment. When assessing the effects of the activities proposed I have also compared them with the effects of permitted activities and with the existing state of the environment that is affected by the project, where I consider this is appropriate. I have also assessed the activities subject of resource consents against the particular provisions of the statutory instruments that are relevant.
- 111 In undertaking this assessment I have, as required by the RMA, informed my assessment with a careful consideration of the purpose and principles set out in Part 2 of the RMA.
- 112 While the aerial extent of the Project creates an effect that may be considered to be more than minor with respect to loss of part of the CMA as a result of reclamation, I consider that this effect is tempered by the extensive range of measures that propose to avoid, remedy and mitigated the effects of the Project. In some instances the Project creates positive environmental outcomes through the enhancement of elements of the natural environment that have been suffering from degradation over time.
- 113 For the reasons I have explained I consider that the Project has benefits and characteristics, which ensure that it is consistent with the planning instruments (including objectives and policies) that apply to its consideration.
- 114 In making an overall judgment in terms of Part 2, I consider that the realization of the broader social and economic benefits that the completion of the Project will achieve outweigh its residual effects such that it will serve the purpose of the RMA.



- 115 I therefore consider that the resource consents required for the Project should be granted subject to the imposition of the conditions appended to Ms Linzey's evidence.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

---

**Owen Burn**  
**November 2010**

**ANNEXURE A – RELEVANT PROVISIONS OF NEW ZEALAND  
COASTAL POLICY STATEMENT 2010**

Objective 1	<p>To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by:</p> <ul style="list-style-type: none"> <li>● maintaining or enhancing natural biological and physical processes in the coastal environment and recognising their dynamic, complex and interdependent nature;</li> <li>● protecting representative or significant natural ecosystems and sites of biological importance and maintaining the diversity of New Zealand's indigenous coastal flora and fauna; and</li> <li>● maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity.</li> </ul>
Objective 6	<p>To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:</p> <ul style="list-style-type: none"> <li>● the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;</li> <li>● some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;</li> <li>● functionally some uses and developments can only be located on the coast or in the coastal marine area;</li> <li>● the coastal environment contains renewable energy resources of significant value;</li> <li>● the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities;</li> <li>● the potential to protect, use, and develop natural and physical resources in the coastal marine area should not be compromised by activities on land;</li> <li>● the proportion of the coastal marine area under any</li> </ul>

	<p>formal protection is small and therefore management under the Act is an important means by which the natural resources of the coastal marine area can be protected; and</p> <ul style="list-style-type: none"> <li>• historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivision, use, and development.</li> </ul>
Objective 7	To ensure that management of the coastal environment recognises and provides for New Zealand's international obligations regarding the coastal environment, including the coastal marine area.
Policy 1	<p>Extent and characteristics of the coastal environment</p> <p>(1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.</p> <p>(2) Recognise that the coastal environment includes:</p> <ul style="list-style-type: none"> <li>(a) the coastal marine area;</li> <li>(b) islands within the coastal marine area;</li> <li>(c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;</li> <li>(d) areas at risk from coastal hazards;</li> <li>(e) coastal vegetation and the habitat of indigenous coastal species including migratory birds;</li> <li>(f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values;</li> <li>(g) items of cultural and historic heritage in the coastal marine area or on the coast;</li> <li>(h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and</li> <li>(i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.</li> </ul>

Policy 3	<p>Precautionary approach</p> <p>(1) Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.</p> <p>(2) In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:</p> <p>(a) avoidable social and economic loss and harm to communities does not occur;</p> <p>(b) natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and</p> <p>(c) the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.</p>
Policy 5	<p>Land or waters managed or held under other Acts</p> <p>(1) Consider effects on land or waters in the coastal environment held or managed under:</p> <p>(a) the Conservation Act 1987 and any Act listed in the 1st Schedule to that Act; or</p> <p>(b) other Acts for conservation or protection purposes; and, having regard to the purposes for which the land or waters are held or managed:</p> <p>(c) avoid adverse effects of activities that are significant in relation to those purposes; and</p> <p>(d) otherwise avoid, remedy or mitigate adverse effects of activities in relation to those purposes.</p> <p>(2) Have regard to publicly notified proposals for statutory protection of land or waters in the coastal environment and the adverse effects of activities on the purposes of that proposed statutory protection.</p>
Policy 10	<p>Reclamation and de-reclamation</p> <p>(1) Avoid reclamation of land in the coastal marine area, unless:</p> <p>(a) land outside the coastal marine area is not available</p>

	<p>for the proposed activity;</p> <p>(b) the activity which requires reclamation can only occur in or adjacent to the coastal marine area;</p> <p>(c) there are no practicable alternative methods of providing the activity; and</p> <p>(d) the reclamation will provide significant regional or national benefit.</p> <p>(2) Where a reclamation is considered to be a suitable use of the coastal marine area, in considering its form and design have particular regard to:</p> <p>(a) the potential effects on the site of climate change, including sea level rise, over no less than 100 years;</p> <p>(b) the shape of the reclamation and, where appropriate, whether the materials used are visually and aesthetically compatible with the adjoining coast;</p> <p>(c) the use of materials in the reclamation, including avoiding the use of contaminated materials that could significantly adversely affect water quality, aquatic ecosystems and indigenous biodiversity in the coastal marine area;</p> <p>(d) providing public access, including providing access to and along the coastal marine area at high tide where practicable, unless a restriction on public access is appropriate as provided for in Policy 19;</p> <p>(e) the ability to remedy or mitigate adverse effects on the coastal environment;</p> <p>(f) whether the proposed activity will affect cultural landscapes and sites of significance to tangata whenua; and</p> <p>(g) the ability to avoid consequential erosion and accretion, and other natural hazards.</p> <p>(3) In considering proposed reclamations, have particular regard to the extent to which the reclamation and intended purpose would provide for the efficient operation of infrastructure, including ports, airports, coastal roads, pipelines, electricity transmission, railways and ferry terminals, and of marinas and electricity generation.</p> <p>(4) De-reclamation of redundant reclaimed land is</p>
--	--

	<p>encouraged where it would:</p> <ul style="list-style-type: none"> <li>(a) restore the natural character and resources of the coastal marine area; and</li> <li>(b) provide for more public open space.</li> </ul>
Policy 11	<p>Indigenous biological diversity (biodiversity)</p> <p>To protect indigenous biological diversity in the coastal environment:</p> <p>(a) avoid adverse effects of activities on:</p> <ul style="list-style-type: none"> <li>(i) indigenous taxa<sup>4</sup> that are listed as threatened<sup>5</sup> or at risk in the New Zealand Threat Classification System lists;</li> <li>(ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;</li> <li>(iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare<sup>6</sup>;</li> <li>(iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;</li> <li>(v) areas containing nationally significant examples of indigenous community types; and</li> <li>(vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and</li> </ul> <p>(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:</p> <ul style="list-style-type: none"> <li>(i) areas of predominantly indigenous vegetation in the coastal environment;</li> <li>(ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;</li> <li>(iii) indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef</li> </ul>

	<p>systems, eelgrass and saltmarsh;</p> <p>(iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;</p> <p>(v) habitats, including areas and routes, important to migratory species; and</p> <p>(vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy.</p>
Policy 21	<p>Enhancement of water quality</p> <p>Where the quality of water in the coastal environment has deteriorated so that it is having a significant adverse effect on ecosystems, natural habitats, or water-based recreational activities, or is restricting existing uses, such as aquaculture, shellfish gathering, and cultural activities, give priority to improving that quality by:</p> <p>(a) identifying such areas of coastal water and water bodies and including them in plans;</p> <p>(b) including provisions in plans to address improving water quality in the areas identified above;</p> <p>(c) where practicable, restoring water quality to at least a state that can support such activities and ecosystems and natural habitats;</p> <p>(d) requiring that stock are excluded from the coastal marine area, adjoining intertidal areas and other water bodies and riparian margins in the coastal environment, within a prescribed time frame; and</p> <p>(e) engaging with tangata whenua to identify areas of coastal waters where they have particular interest, for example in cultural sites, wāhi tapu, other taonga, and values such as mauri, and remedying, or, where remediation is not practicable, mitigating adverse effects on these areas and values.</p>
Policy 22	<p>Sedimentation</p> <p>(1) Assess and monitor sedimentation levels and impacts on the coastal environment.</p> <p>(2) Require that subdivision, use, or development will not result in a significant increase in sedimentation in the</p>



	<p>coastal marine area, or other coastal water.</p> <p>(3) Control the impacts of vegetation removal on sedimentation including the impacts of harvesting plantation forestry.</p> <p>(4) Reduce sediment loadings in runoff and in stormwater systems through controls on land use activities.</p>
Policy 23	<p>Discharge of contaminants</p> <p>(1) In managing discharges to water in the coastal environment, have particular regard to:</p> <ul style="list-style-type: none"> <li>(a) the sensitivity of the receiving environment;</li> <li>(b) the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and</li> <li>(c) the capacity of the receiving environment to assimilate the contaminants; and:</li> <li>(d) avoid significant adverse effects on ecosystems and habitats after reasonable mixing;</li> <li>(e) use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and</li> <li>(f) minimise adverse effects on the life-supporting capacity of water within a mixing zone.</li> </ul> <p>(2) In managing discharge of human sewage, do not allow:</p> <ul style="list-style-type: none"> <li>(a) discharge of human sewage directly to water in the coastal environment without treatment; and</li> <li>(b) the discharge of treated human sewage to water in the coastal environment, unless: <ul style="list-style-type: none"> <li>(i) there has been adequate consideration of alternative methods, sites and routes for undertaking the discharge; and</li> <li>(ii) informed by an understanding of tangata whenua values and the effects on them.</li> </ul> </li> </ul> <p>(3) Objectives, policies and rules in plans which provide for the discharge of treated human sewage into waters of the</p>

	<p>coastal environment must have been subject to early and meaningful consultation with tangata whenua.</p> <p>(4) In managing discharges of stormwater take steps to avoid adverse effects of stormwater discharge to water in the coastal environment, on a catchment by catchment basis, by:</p> <ul style="list-style-type: none"><li>(a) avoiding where practicable and otherwise remedying cross contamination of sewage and stormwater systems;</li><li>(b) reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities;</li><li>(c) promoting integrated management of catchments and stormwater networks; and</li><li>(d) promoting design options that reduce flows to stormwater reticulation systems at source.</li></ul> <p>(5) In managing discharges from ports and other marine facilities:</p> <ul style="list-style-type: none"><li>(a) require operators of ports and other marine facilities to take all practicable steps to avoid contamination of coastal waters, substrate, ecosystems and habitats that is more than minor;</li><li>(b) require that the disturbance or relocation of contaminated seabed material, other than by the movement of vessels, and the dumping or storage of dredged material does not result in significant adverse effects on water quality or the seabed, substrate, ecosystems or habitats;</li><li>(c) require operators of ports, marinas and other relevant marine facilities to provide for the collection of sewage and waste from vessels, and for residues from vessel maintenance to be safely contained and disposed of; and</li><li>(d) consider the need for facilities for the collection of sewage and other wastes for recreational and commercial boating.</li></ul>
--	---