

**IN THE MATTER** of the Resource  
Management Act  
1991

**AND**

**IN THE MATTER** of applications by  
**PORT OTAGO**  
**LIMITED** for Project  
Next Generation.

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**EVIDENCE OF PHILIP HUNTER MITCHELL**

**7 April 2011**

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## 1. INTRODUCTION

### Qualifications and Experience

- 1.1 I hold the degrees of Bachelor of Engineering (Hons) and Doctor of Philosophy, both from the University of Canterbury. I am a director of Mitchell Partnerships Limited, an environmental consulting practice with offices in Auckland, Tauranga and Dunedin, which I established in July 1997. Previously I was the Managing Director of Kingett Mitchell & Associates Ltd, a firm that I co-founded in 1987.
- 1.2 I am a past president of the Resource Management Law Association and a Full Member of the New Zealand Planning Institute.
- 1.3 I have practised in the resource management area for the past 27 years. My specialist areas of practice are: providing resource management advice to the private and public sectors, facilitating public consultation processes, undertaking planning analyses, managing resource consent acquisition projects and developing resource consent conditions. I have also acted as a Hearings Commissioner on a number of occasions and am accredited as a Hearing Chair.
- 1.4 I have been involved in a large number of significant resource management projects which I have had a lead planning and management role, including many in the coastal environment.
- 1.5 I have been engaged by Port Otago Limited ("**Port Otago**") to provide environmental and resource management advice in respect of the proposed upgrade of its port facilities ("**Project Next Generation**").
- 1.6 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions I express. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

## Scope of Evidence

1.7 In my evidence I will address the Resource Management Act 1991 (“**RMA**”) framework within which these applications are to be considered. In particular I will:

- Describe the activity status of the applications.
- Describe the statutory tests the applications are to be assessed against.
- Assess the applications against those statutory tests.
- Discuss submissions.
- Discuss matters raised in the section 42A Officers’ Report (“**Officers’ Report**”), in particular the proposed conditions.
- Summarise why, in my opinion, the consents sought can be granted.

1.8 Other witnesses have provided a detailed description of the proposal and assessments of environmental effects. For the purposes of my evidence, I adopt that evidence.

## 2. ACTIVITY STATUS

2.1 Resource consents are required from the Otago Regional Council (“**ORC**”) for the proposed development under the Regional Plan: Coast for Otago (“**Coastal Plan**”).

2.2 The activities for which consents are required under the Coastal Plan can be separated into two general work programmes:

- The dredging and disposal works.
- The extension of the Multipurpose Wharf and the construction of the Fishing Jetty.

- 2.3 The details and activity status of each activity associated with the two work programmes are listed in Tables 1, 2, 3 and 4 attached to my evidence (Attachment 1). By way of summary, all consents required are discretionary activities. With the exception of the Coastal Permit required to deposit rock from dredging at Heyward Point, the dredging and disposal activities are also restricted coastal activities. The Officers' Report reaches the same conclusion and I do not understand that to be subject to any contention.

### 3. SECTION 104

- 3.1 Section 104 sets out the matters that must be considered when making a decision on a resource consent application and states:

#### **Section 104 Consideration of applications**

- (1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to
- (a) any actual and potential effects on the environment of allowing the activity; and
  - (b) any relevant provisions of—
    - (i) a national environmental standard;
    - (ii) other regulations;
    - (iii) a national policy statement;
    - (iv) a New Zealand coastal policy statement;
    - (v) a regional policy statement or proposed regional policy statement;
    - (vi) a plan or proposed plan; and
  - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.
- (2) When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect

- 3.2 I discuss each of these matters below.

#### **SECTION 104(1) ACTUAL AND POTENTIAL EFFECTS**

- 3.3 The actual and potential effects of the proposed works are well summarised in the Project Next Generation Assessment of Environmental Effects submitted in support of its resource consent applications (“**AEE**”) and within evidence presented by other witnesses to this hearing. They are also analysed in detail within the Officers' Report.

- 3.4 In each case there is a large degree of agreement regarding effects.
- 3.5 I do not propose to restate all the conclusions of those assessments, other than to note that I consider all actual and potential effects can be appropriately addressed through the use of consent conditions, and I note the Officers' Report reaches the same conclusion.
- 3.6 In terms of the permitted baseline (section 104(2)) maintenance dredging of the channel and swinging basin is a permitted activity under the Coastal Plan (Rule 9.5.3.2). Dredging to maintain the lower channel is permitted provided that the channel is maintained at a depth of no more than 13 metres and the Port Chalmers berths and swinging areas to 14.5 metres below chart datum. The rule contains no other restrictions on how that maintenance dredging can be undertaken. Rule 10.5.6.1 of the Coastal Plan also permits the discharge of water from the maintenance dredging permitted by Rule 9.5.3.2. In permitting these activities, the Coastal Plan permits their effects on the environment, including the associated sedimentation and turbidity effects.
- 3.7 As also presented by Counsel, I consider the permitted baseline to be a relevant and helpful consideration in this case.
- 3.8 I understand the Incremental Capital Dredging will essentially replicate the way Port Otago currently dredges the channel as a permitted activity and only the depth of excavation triggers the need for consents. The only other material difference between what is permitted and that proposed is that Incremental Capital Dredging will likely occur more intensively by double shifts, which would be permitted in any regard if it was maintenance dredging.
- 3.9 The use of a large contract dredge to carry out Major Capital dredging will be new, and will create effects over and above those that are permitted. However, in considering those effects under section 104, the effects that are permitted are, in my opinion, directly relevant.

## **SECTION 104(1)(B) RELEVANT PROVISIONS OF STATUTORY DOCUMENTS**

3.10 Relevant provisions under section 104(1)(b) are contained within the following statutory documents:

- The New Zealand Coastal Policy Statement (“**NZCPS**”).
- The Otago Regional Policy Statement (“**RPS**”).
- The Coastal Plan.

3.11 I discuss the relevant provisions of each of these documents below.

### **THE NEW ZEALAND COASTAL POLICY STATEMENT**

3.12 I consider the status of the NZCPS is well canvassed in the Officers’ Report. I agree with that analysis, and the Officers’ conclusion that the NZCPS gazetted on 4 November 2010, and which took effect from 3 December 2010, is the version against which the application should be assessed.

3.13 The NZCPS sets out the objectives and policies to achieve the purpose of the RMA in relation to the coastal environment of New Zealand. In that context there are objectives and policies that seek to enable the community to provide for their social, economic and cultural wellbeing and objectives and policies which seek to safeguard environmental quality.

3.14 In the following section I address those provisions I consider relevant to the proposed activities. By way of summary, I consider the works fit comfortably within the NZCPS policy framework, and more specifically, that Project Next Generation is the type of activity anticipated by the NZCPS for the coastal environment and that its effects will be managed in a manner commensurate with its policy direction.

### **Coastal Development Provisions**

- 3.15 Several provisions in the NZCPS explicitly recognise the benefits of coastal development, and in particular the development of New Zealand's ports, and the important role such development plays in sustainable management.
- 3.16 Central to these provisions are Objective 6 and Policy 9 and, to some extent Policy 6.
- 3.17 Objective 6 seeks that people and communities are enabled to provide for their social, economic and cultural wellbeing through use and development of the coastal environment. Objective 6 also recognises the functional need of some activities to locate in the coastal environment (such as a port) and the benefits they provide the community, and that the need to protect the values of the coastal environment does not preclude its use and development in appropriate places and forms, or within appropriate limits.
- 3.18 Policy 9 directly addresses ports and their important role in sustainable management. It recognises "*that a sustainable transport system requires an efficient network of safe ports, servicing national and international shipping, with efficient connections with other transport modes*". Policy 9 states this includes ensuring other coastal development does not adversely affect the efficient operation of these ports, and planning documents needing to consider where, how and when to provide for the efficient and safe operation of ports, and development of their capacity for shipping.
- 3.19 Policy 6 also lists a number of relevant matters in relation to management of activities in the coastal environment. I consider those that are relevant to be generally supportive of the proposed works, and definitely could not be said to discourage the activity.
- 3.20 In my opinion, it is clear the NZCPS anticipates and supports the appropriate development of port facilities and their associated infrastructure in New Zealand's coastal environment such as that which comprises Project Next Generation. I note the Officers' Report reaches the same conclusion.

### **Safeguarding Environmental Values**

3.21 I consider the following provisions provide the direction for managing the effects of the proposed development:

- Objective 1, Policy 11, Policy 12, Policy 22 and Policy 23 which address physical processes and ecosystems;
- Objective 2, Policy 13, Policy 14 and Policy 15 which address natural character and outstanding natural features and landscapes;
- Objective 3 and Policy 2 which address values of significance to tangata whenua;
- Objective 4, Policy 18 and Policy 19 which address public access;
- Objective 5 and Policy 24 which address hazards; and
- Objective 7 (international obligations), Policy 3 (precautionary approach), Policy 5 (land or water managed under other Acts) and Policy 16 (surfing).

3.22 I note the Officers' Report does not identify any additional provisions as being relevant. I address each of these relevant provisions below.

#### *Physical Processes and Ecosystems*

3.23 Objective 1 sets out the desired outcome for the physical processes and ecosystems of New Zealand's coastal environment. I consider the overall environmental outcome expected for the physical processes and ecosystems of Otago Harbour and Blueskin Bay, during and after undertaking Project Next Generation to be commensurate with this objective. With respect to the first bullet point of the objective, the evidence of Dr James, Dr Single and Dr Bell outlined how they consider the proposed activities, coupled with the proposed approach to managing effects, will maintain the natural biological and physical processes of the Otago Harbour and broader Blueskin Bay area. In

accordance with the second bullet point of the objective, ecosystems containing higher ecological values have been identified, direct disturbance of those areas was avoided when designing the proposed works, and additional management provisions have been proposed to ensure those ecosystems are protected while the dredging works are being undertaken. This includes establishing limits on turbidity at sites of higher ecological value, targeted and regular biological monitoring of effects on these sites and the provision of an adaptive management approach within an Environmental Management Plan (“EMP”) to address any unexpected effects should they occur. With respect to the third bullet point, water quality in the vicinity of dredging and disposal operations will be temporarily affected by increased turbidity, however these effects will be short term and localised, and dredging and disposal will be proactively managed to achieve consent limits on turbidity designed to protect ecological values.

- 3.24 Policy 11 provides direction for managing effects of activities on indigenous biological diversity. Clause (a) directs that adverse effects on species and habitats which meet specified conservation criteria be avoided, and clause (b) directs that for other biological values significant adverse effects be avoided, and other effects be avoided, remedied or mitigated. Clause (a) is of particular importance to bird species and habitat, the effects on which were addressed in the evidence of Mr Sagar. As recommended in the evidence of Mr Sagar, to avoid effects on those birds and their habitat, consent conditions are proposed which restrict the dredging of areas adjacent to Taiaroa Head and the Aramoana Sand Flats during times of the year of particular significance to the lifecycle of important bird species. Consistent with clause (b) significant adverse effects on those values it lists are not expected to occur, and any lesser effects on those values will be avoided, remedied or mitigated.
- 3.25 Policy 12 addresses the spread of harmful aquatic organisms and, where relevant, proposes consent conditions be included on resource consents to assist in managing these risks. I have read the evidence of Dr James on the matter and I do not consider any specific consent conditions are required to manage the issue.

- 3.26 Policy 22 addresses sedimentation. I consider the management of sedimentation proposed by Port Otago, and required by recommended consent conditions is consistent with Policy 22. Sedimentation levels have been modelled and any effects on the environment have been assessed. The works will be monitored and adaptively managed to minimise sedimentation as much as practicable and to meet effects-based consent limits on turbidity. While the dredging and disposal may result in a notable increase in sedimentation in the immediate vicinity of the dredge, these effects will be temporary and localised.
- 3.27 Policy 23 addresses discharges to water. Clause 1 of Policy 23 lists a number of matters to which particular regard be had in managing such discharges. As was noted in the AEE and the evidence of other witnesses, each of these matters was considered during the design of the proposed works, and in assessing its effects. Clause 5 of Policy 23 addresses discharges from ports. Consistent with Clause 5, in designing the dredging project and the framework for managing its effects on the environment, I consider that all practicable steps have been made to avoid more than minor contamination of coastal waters, substrate, ecosystems and habitats. I note consent conditions also require this. Commensurate with Clause 5, the disposal of dredged material will also not result in significant adverse effects on water quality or the seabed, substrate, ecosystems or habitats.

*Natural Character*

- 3.28 With respect to managing effects on natural character, I consider the proposed works to be consistent with the direction provided in Objective 2 and Policies 13 and 14. The dredging is commensurate with the natural character of the commercial shipping channel within which it is to be undertaken and the Wharf Extension and new Fishing Jetty would also be in keeping with the natural character of the commercial port area in which they would be located. The effects of the dredging on natural coastal processes, patterns and ecological elements outside the channel which also contribute to natural character were addressed in the evidence of Drs Single, Bell and James with the main conclusions in each case being that effects will not be significant and, those that do occur, will be temporary.

- 3.29 With respect to Policy 15, addressing Outstanding Natural Features and Landscapes, the Coastal Plan identifies three in the vicinity of the proposed dredging (ONFL 8 – Heyward Point; ONFL 9 – Otago Peninsula; ONFL 15 – Goat Island and Quarantine Island), as shown in my Attachment 2. None of those ONFL will be directly affected by Project Next Generation. Dr Single also does not consider the proposed dredging could indirectly cause any physical effects on the shoreline of those features which would be significantly different to present.

*Tangata Whenua Values and the Treaty of Waitangi*

- 3.30 Objective 3 and Policy 2 contain direction for incorporating the principles of the Treaty of Waitangi, and incorporating tangata whenua involvement and values into the management of the coastal environment. I consider the incorporation of tangata whenua values into the design of this project, the participation and role of tangata whenua in the consent process, and the proposed role of tangata whenua in the ongoing management of the harbour to be consistent with the direction provided in these provisions. Individuals representing tangata whenua interests participated in the Project Consultative Group, and individual consultation with individual iwi groups was undertaken. A Cultural Impact Assessment (“CIA”) has been prepared, and the recommendations of that CIA have been integrated into the AEE. Additional consent conditions proposed by Port Otago also provide for extensive, regular and long-term input of tangata whenua in the management of the proposed works and their effects on tangata whenua values through the proposed establishment of a Manawhenua Consultative Group.

*Coastal Hazards*

- 3.31 Objective 5 and Policy 24 address hazards. As covered in the evidence of Dr Single, the project will not create any additional natural hazards, and will not adversely affect any existing defence or natural defence which protects landuse or natural values from coastal hazards. Overall I consider the works fit comfortably with the policy direction provided in Objective 5 and Policy 24.

*Public Access*

- 3.32 Consistent with Objective 4 and Policies 18 and 19, public access will only be restricted for operational or health and safety reasons, while additional public access to the port area will be provided by the new Fishing Jetty.

*Other Matters*

- 3.33 Policy 16 addresses surf breaks of national significance. It directs that activities in the coastal environment not adversely affect those surf breaks, and that activities avoid adverse effects on access to, and the use and enjoyment of, those surf breaks. Schedule 1 lists two nationally important surf breaks in the vicinity of the proposed works, The Spit and Karitane. Dr Single addressed effects on these two surf breaks in his evidence with the overall conclusion being that there would be no noticeable effect on surfing conditions.
- 3.34 With respect to Objective 7, the only international obligations I am aware of which are relevant to the proposed activities are those contained in the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 ("**London Convention**") and 1996 London Protocol. As Dr James noted, the proposed works were designed in a manner consistent with these. I note the Officers' Report reaches the same conclusion.
- 3.35 With respect to Policy 5, I am not aware of any land or water in the vicinity of the proposed works which are managed under other Acts.
- 3.36 To the extent that a precautionary approach towards the proposed activities is warranted as per Policy 3, I consider the design of the proposed works, the extensive effects assessment which informed that design, the extensive monitoring programme proposed and set out in consent conditions, and the proposed adaptive management approach to managing effects required by the proposed consent conditions and to be undertaken under the EMP, to represent a precautionary approach. I note the Officers' Report expresses similar sentiments.

## **Conclusion**

- 3.37 In summary, I consider Project Next Generation fits comfortably within the framework set out in the NZCPS for managing New Zealand's coastal environment. I consider the NZCPS anticipates the development of port facilities and their associated infrastructure such as that which comprises Project Next Generation, and that the manner in which Project Next Generation would manage effects on the environment is commensurate with the direction provided in its provisions.

## **THE OTAGO REGIONAL POLICY STATEMENT**

- 3.38 The RPS provides an overview of the Otago Region's resource management issues, and contains the objectives, policies and methods to achieve the integrated management of the Region's natural and physical resources. In that context, there are objectives and policies that seek to enable the community to provide for their social, economic and cultural wellbeing and objectives and policies which seek to safeguard environmental quality.
- 3.39 The RPS is a high-level document that is given effect to by the Coastal Plan which I will address in a moment. I do not address the RPS specifically, other than to state that I consider that the application is consistent with its policy direction.
- 3.40 I note the Officers' Report reaches the same conclusion.

## **THE REGIONAL PLAN: COAST FOR OTAGO**

- 3.41 The Coastal Plan contains the policy framework for the management of the Coastal Marine Area ("**CMA**") in the Otago Region.
- 3.42 The Coastal Plan contains 14 chapters.
- 3.43 Chapters 1 to 4 contain an introduction to the Coastal Plan, a description of the legislative framework applying to the coast, and background information on both Otago's CMA and the perspective of Kai Tahu, Otago's Manawhenua. Chapters 15 to 17 identify the main administrative issues that affect the use of

the CMA, specify the information required with any resource consent application, the circumstances where a financial contribution may be required, and the processes to be used to review and monitor the Coastal Plan.

- 3.44 Chapters 5 to 14 contain a description of the coastal management issues that face Otago, and objectives, policies, methods and, where appropriate, rules to address those issues, and are most relevant to this assessment.
- 3.45 The provisions of each relevant chapter are discussed below.

### **Chapter 5 – Coastal Management**

- 3.46 Chapter 5 contains one overarching objective for the management of the Otago CMA. It states:

#### **Objective 5.3.1**

To provide for the use and development of Otago's coastal marine area while maintaining or enhancing its natural character, outstanding natural features and landscapes, and its ecosystem, amenity, cultural and historical values.

- 3.47 The supporting explanation for the objective states "*there are a variety of activities undertaken within Otago's coastal marine area that provide substantial benefits for people and communities*" and that "*those activities within the coastal marine area ... should be enabled by the Plan provided their effects on the resources of the coastal marine area are sustainable*".
- 3.48 The overarching framework contained in the Coastal Plan to implement Objective 5.3.1 is based around identifying and scheduling areas of the CMA which contain a specific group of values, be it significant infrastructure such as a port, or natural values such as an ecologically significant estuary, and setting a policy framework to manage the effects of activities on those individual areas and values.
- 3.49 The Coastal Plan identifies four types of area which require specific management. They are:

#### **Coastal Protection Areas**

These areas have been identified on the basis of their significant biological, physical or cultural values.

**Coastal Development Areas**

These areas have been developed to varying degrees. The classification of coastal development areas recognises the important facilities and infrastructure contained in those areas.

**Coastal Recreation Areas**

These areas have been identified because of their accessibility by the public, their frequency of use, and the facilities and infrastructure such as yachting clubs, surf life saving clubs and navigational markers associated with them.

**Coastal Harbourside Areas**

These areas have been developed to varying degrees. While traditionally developed for port activities and some recreational activity, their function is identified as shifting towards increased recreational and public access opportunities that utilise and enhance existing structures. The Coastal Plan proposes that improved public access and recreational opportunities in these areas of the CMA will create a quality waterfront that integrates with, and supports, development and activities on the adjacent land. There is only one such area, Steamer Basin, which is not affected by Project Next Generation.

- 3.50 Coastal Protection Areas (“**CPAs**”), Coastal Development Areas (“**CDAs**”) and Coastal Recreation Areas (“**CRAs**”) are located in the vicinity of the project. These are shown in Attachment 2 of my evidence.
- 3.51 With respect to CDAs the harbour channel is identified in Schedule 2.2 as CDA 4 – Otago Harbour. Policy 5.4.4 notes that regard must be given to the need to provide for the values associated with the Otago Harbour CDA. This includes considering the proposed activities in the context of the existing use of the CDA, the developed nature of the CDA, and the purpose of the channel itself. The project clearly sits comfortably with the management purpose of the Otago Harbour CDA.
- 3.52 With respect to the CPAs, Policy 5.4.1 identifies CPAs 15 (Aramoana) and 17 (Otakou and Taiaroa Head) in the vicinity of the proposed works. Consistent with Policies 5.4.2 and 5.4.9, specific effort was made when designing the project to avoid effects on the values contained within those areas. In particular, the channel was designed to physically avoid the CPAs, while when designing the dredging work, and in particular the dredging method and disposal locations, priority was afforded to avoiding effects on the ecological values of those CPAs.
- 3.53 The proposed consent conditions also place significant focus on protecting the values of these CPAs.

- 3.54 With respect to CRAs, Policy 5.4.5 identifies several areas in the vicinity of the proposed works. The main recreational uses supported by the various surrounding recreational areas are surfing, fishing, boating, diving, walking and swimming. Consistent with Policy 5.4.6 and Policy 5.4.9, yachting, surfing, recreational fishing / boating interests, as well as members of the local community, were involved in the Project Consultative Group and a consideration of their interests contributed to the overall design of the project. In that regard, specific provisions have also been included in conditions to require dredging activities in the area adjacent to Tairaroa Head and construction activities in the vicinity of Boiler Point to cease during the Christmas holiday period. The effects of the project on recreational interests were addressed in the AEE with the overall conclusions in each case being adverse effects on those values will be temporary and the recreation values of the areas will be protected. I note the Officers' Report reaches the same conclusion.
- 3.55 Regarding Policy 5.4.10, potential effects on those values which comprise national character were recognised, considered and provided for, when designing the proposed works and undertaking assessments of effects. In accordance with Policy 5.4.11, amenity values, cultural values, scenic values, ecological values and historical values were also given particular attention in the design process, in the assessment of effects and in the proposed approach to avoiding, remedying or mitigating the effects of the proposed works.
- 3.56 Overall, I consider Project Next Generation is entirely consistent with the policy framework set out in Chapter 5. The project is a fundamentally important part of providing for the values of the Otago Harbour CDA, and the means in which the project manages its effects on adjacent Coastal Management Areas is consistent with direction provided in the relevant policies.

## **Chapter 6 - Cross Boundary Issues**

- 3.57 Chapter 6 contains the objective and policy provisions for managing the effects of CMA based activities on adjacent land areas.

- 3.58 These effects have been considered by other witnesses and consistent with Objective 6.3.1 I consider all adverse effects of Project Next Generation outside the CMA are appropriately avoided, remedied or mitigated.
- 3.59 Consistent with Policy 6.4.3, effects on the movement of marine mammals or birds between the CMA and Marine Mammal and Bird sites on Potato Point and Long Beach, and Otago Peninsula were considered during the design of the proposed works and management measures are proposed to avoid effects, particularly during periods important for the breeding and nesting of birds.
- 3.60 Five Coastal Hazard Areas (“**CHAs**”) identified in Policy 6.4.4 (CHA 2 – Waikouaiti Karitane; CHA 3 – Puketeraki Warrington; CHA 4 Warrington Spit Doctors Point; CHA 5 – The Spit; and CHA 6 Te Rauone Beach) are located in the vicinity of the project. The effects of the project on natural physical coastal processes, and coastal erosion were discussed in the AEE and the evidence of Dr Single. with the primary conclusion being that effects would be minor.
- 3.61 In paragraphs 3.28 and 3.29 of my evidence addressing the NZCPS, I discussed the effects of Project Next Generation on the Outstanding Natural Features and Landscapes which are identified in Policy 6.4.5, and the same comments I made in that paragraph apply equally with respect to Policy 6.4.5.

## **Chapter 7 – Public Access and Occupation of Space**

- 3.62 During the construction phase of the project, public access will be restricted for safety reasons in the immediate vicinity of the dredging and disposal activities and in and around the Wharf Extension and Fishing Jetty.
- 3.63 The objective and policies of Chapter 7 explicitly recognise that public access may be restricted in the areas surrounding the commercial port areas in Otago Harbour for health and safety and navigation reasons. The proposed dredging is explicitly related to port operations and I consider the required restrictions on public access for health and safety reasons are entirely reasonable and consistent with the intentions of this chapter of the Coastal Plan.

## **Chapter 8 - Structures**

- 3.64 Chapter 8 contains objectives and policies of relevance to the extension of the Multipurpose Wharf and construction of the new Fishing Jetty.
- 3.65 The Multipurpose Wharf extension and the new Fishing Jetty are both located within the Otago Harbour CDA and I consider their construction is consistent with the values of that area, as required by Policy 8.4.3. In accordance with Policy 8.4.5 and recommended consent conditions, both structures will be maintained in a structurally sound and tidy state, and their presence will be entirely in accordance with the character of the surrounding commercial port area.

## **Chapter 9 – Alteration of the Foreshore and Seabed**

- 3.66 Chapter 9 addresses the alteration of the foreshore and seabed and contains objectives and policies that are relevant to all aspects of the project. I consider the proposed activities are consistent with these provisions.
- 3.67 In designing the project, areas of conservation significance, conservation value and public amenity were recognised, as directed by Objective 9.3.1, and the design of the works and proposed approach to managing effects provides for those values. With respect to Objective 9.3.2, as noted in the evidence of Mr Coe and Dr Single, the project has been designed to minimise the extent to which it disturbs the seabed, and as much as is practicable avoids, remedies or mitigates effects on those matters which contribute to natural character. As a result Dr Single and Dr James consider effects on those values will be minor.
- 3.68 With respect to Objective 9.3.3, effects on natural physical coastal processes were an important consideration in the design of the proposed works, and as noted in the evidence of Dr Single, they are expected to be minor. It is also beyond question that the proposed disturbance of the foreshore and seabed requires a coastal location as required by Objective 9.3.4.
- 3.69 The extensive consultation Port Otago has undertaken with tangata whenua and Kai Tahu ki Otago Ltd, including the commissioning of a CIA, is consistent

with the direction contained in Policy 9.4.1. With respect to Policy 9.4.2, priority was afforded during the design of the project to avoiding adverse effects on CPAs and CRAs. With respect to Policy 9.4.3, the project is a core component of, and will support the values associated with, the Otago Harbour CDA. Consistent with Policy 9.4.5, and as noted in the evidence of Mr Coe, the area of seabed disturbance was limited as much as practicable during the design of the channel, and through the choice of dredging method. The design of the project also sought to avoid effects on those natural coastal features listed in Policy 9.4.6, and as noted in the evidence of Dr Single and Dr James those values would be maintained following the proposed works.

- 3.70 With respect to Policy 9.4.8, the reasons for choosing open sea deposition for the dredged material, rather than other methods, including land based disposal, were addressed in the evidence of Mr Coe and in Section 4 of the AEE.
- 3.71 Overall, I consider the proposed alteration of the foreshore and seabed to be consistent with the direction contained in the objectives and policies of Chapter 9.

### **Chapter 10 - Discharges**

- 3.72 Decant water will be discharged from the dredge plant, and a small amount of concrete laden water and sediment will also be discharged during construction of the Wharf Extension and new Fishing Jetty.
- 3.73 The objectives and policies of Chapter 10 generally seek that water quality in the Otago CMA be maintained and in some places enhanced. With respect to managing the effects of individual activities, the policies relevant to the proposed works generally seek: that priority be given to activities avoiding adverse effects on the CPAs, CRAs, Outstanding Natural Features and Landscapes and Marine Mammal and Bird Sites; that after reasonable mixing a water quality suitable for shellfish gathering and contact recreation be achieved; and that only discharges required to be to the coastal area be allowed.
- 3.74 With respect to these provisions, an important reason for choosing the proposed dredging method and plant is the comparatively limited amount of

turbidity it generates. Green valves or similar modern best practice technologies will be required to be installed in any large dredge used to undertake the Capital Works. As was noted in the evidence of Dr Bell the effects of the turbidity generated by the decant water will be localised, and in combination with the turbidity generated by the dredging process itself, will largely be confined to the channel and immediately adjacent flanks. As also noted in the evidence of Dr James, where elevated levels of turbidity are experienced, the associated effects on benthic communities, birds, fish and mammals in the harbour will not be significant and will not persist for any significant length of time.

- 3.75 With respect to the discharge of sediment and concrete laden water discharged during the construction of the Wharf Extension and Fishing Jetty, they cannot be practicably avoided but will be localised and readily assimilated within a short distance.
- 3.76 Overall, I consider the proposed activities and management of discharges are consistent with the objectives and policies of Chapter 10.

### **Chapter 12 – Noise**

- 3.77 Chapter 12 contains one objective and one policy which address the discharge of noise within the CMA. As noted in the evidence of Mr Ballagh, a suite of noise management measures are proposed, and with the implementation of those measures the effects on noise as a result of undertaking the project will be minor. As Mr Ballagh also noted, the dredging will also meet Construction Noise Standard NZS 6803P:1984, subject to several exceptions that result in the same overall outcome. I consider the project is consistent with Chapter 12.

### **Chapter 13 – Exotic Plants**

- 3.78 Chapter 13 contains objectives and policies that seek to manage the effects of exotic plants on the natural values of Otago's CMA.
- 3.79 The project does not involve the introduction of any new exotic species into the harbour. However, as noted in the evidence of Dr James, a number of invasive

species are known to exist in the harbour. Transferring and disturbing sediments by dredging could potentially spread these species, while the disposal of dredge material will inevitably transfer some organisms, including invasive species.

- 3.80 However, given that maintenance dredging has been carried out for a number of years, the potential for further impacts within the harbour is considered to be low, while it is considered highly unlikely any species would become established at the disposal site due to its lack of hard substrate, depth and exposure.

#### **Chapter 14 – Natural Hazards**

- 3.81 Chapter 14 contains one objective and several policies relevant to the proposed works.
- 3.82 The effects of the project on natural hazards have been comprehensively assessed including consideration of those matters contained in Policies 14.4.1 – 14.4.4 with the primary conclusion being effects will be minor.

#### **Overall Conclusion**

- 3.83 In summary, the objectives and policies of the Coastal Plan contain a framework which provides for and anticipates appropriate development in the Otago CMA, and provides direction for how the effects of activities be managed. I consider the proposed works fit comfortably within that framework.

#### **SECTION 104(1)(C) - OTHER MATTERS**

- 3.84 As noted in the ORC Officers' Report, the following are relevant matters under section 104(c):
- Kai Tahu ki Otago Natural Resource Management Plan 2005.
  - The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 ("London Convention") and 1996 London Protocol.

- The New Zealand Guidelines for Sea Disposal of Waste.

3.85 I consider the proposed activities are consistent with the provisions of these documents and note the Officers' Report reaches the same conclusion.

## **PART 2**

3.86 The provisions of section 104 are all "subject to Part 2", which means that the single purpose and principles of the Act are paramount.

## **Section 5**

3.87 The purpose of the RMA (section 5) is to promote the sustainable management of natural and physical resources. The Act defines "sustainable management" as:

"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment."

3.88 Applying section 5 involves an overall judgement of whether a proposal would promote the sustainable management of natural and physical resources, and that judgement allows for the comparison of conflicting considerations and the scale and degree of them and their relative significance or proportion in the final outcome.

3.89 In practice, there are two general elements of "sustainable management" in the context of section 5 that must be considered when assessing the resource consent application. They are:

- Enabling people and communities to provide for their social, economic and cultural wellbeing.

- Safeguarding environmental quality and avoiding, remedying or mitigating adverse effects.

*Enabling Social, Economic and Cultural Wellbeing of People and Communities*

- 3.90 The AEE, the evidence of other witnesses (in particular Mr Butcher) and the Officers' Report have addressed the significant contribution Project Next Generation will make to enabling people and communities to provide for their social, economic and cultural wellbeing and health and safety.
- 3.91 That analysis shows deepening the channel to Port Chalmers will generate substantial net benefits to New Zealand and the Otago Region. Assuming that Lyttelton has already been deepened, then these benefits of Project Next Generation are estimated to have a Net Present Value of \$202 million. If Lyttelton has not been deepened and export cargo has instead to go through Auckland or Tauranga, then the Net Present Value of benefits of deepening the channel to Port Chalmers is \$1,210 million.
- 3.92 If Port Chalmers is not deepened then there will be a substantial reduction in economic activity in port and port-related activities including land transport. The analysis of Mr Butcher estimates that should this occur, by 2028 the Otago Region will lose in excess of 890 full time equivalent jobs and an associated \$107 million per year of Value added, including \$50 million per year of household income.
- 3.93 Industries which rely on the port would face higher transport costs and a lesser quality of service, and this may lead to them shifting away from the Otago/Southland area with a consequential loss of further jobs and income.

*Safeguarding Environmental Quality*

- 3.94 The AEE and the evidence of other witnesses have addressed how the proposed development will sustain the potential of natural and physical resources (noting that the port facilities are a significant physical resource) to meet the reasonably foreseeable needs of future generations, and how the life supporting capacity of the environment will be safeguarded.

3.95 The key conclusions of those analyses are as follows:

- Apart from the physical change to the seabed topography in and along the margins of the channel, and at the disposal site, the effects of the dredging operation on the physical coastal environment are minor. In particular:
  - The effects of the final deepened 15 metre channel on the hydrodynamics of the harbour will be minor or in some cases negligible. This includes changes to the tide range, timing of the tide, tidal currents and the ebb and flood tide flows through the harbour entrance.
  - Changes to patterns of sedimentation within the harbour, the entrance channel and the wider Blueskin Bay area, and the dispersal of fine sediments due to the dredging operation will be mostly negligible, and of magnitudes within the variability of the natural environment.
- Adverse effects on the ecology of the aquatic communities in the lower Otago Harbour and disposal area offshore will not be significant, and will not persist for any significant length of time.
- Adverse effects on birds will not be significant, and will not persist for any significant length of time.
- Effects on fisheries resources and on fishing will be minor and limited to the period of dredging and disposal.
- Effects on recreation values, including surfing, swimming, recreational fishing diving and boating will be minor.
- Noise effects from the small and large dredge plants are likely to be minor, of similar nature to existing noise sources such as shipping and can be managed to achieve recognised noise standards.

3.96 I note the Officers' Report reaches similar conclusions.

### **Requirement to Avoid, Remedy or Mitigate**

3.97 Section 5(2)(c) of the RMA requires that adverse effects of activities on the environment are “avoided, remedied or mitigated”.

3.98 I understand case law has established that it is not required that all effects be avoided, or that there is no net effect on the environment or that all effects need be compensated for in some way. This was summarised by the then Planning Tribunal in *Treble Tree v Marlborough District Council W103/96* which stated that:

“The idea of mitigation is to lessen the rigour or severity of effects. We have concluded that the inclusion of the word “mitigation” in section 5(2)(c) of the Act, contemplates that some adverse effects from developments such as those we have now ascertained may be considered acceptable no matter what attributes the site may have. To what extent the adverse effects are acceptable is however, a question of fact and degree.”

3.99 It is clear that section 5(2)(c) is about doing what is reasonably necessary, given the circumstances of the particular case, to lessen the severity of effects. I also understand that some flexibility is necessary when exploring mitigation measures that can be used to reduce the impact of adverse effects, to ensure that the mitigation itself is sustainable.

3.100 In this context I consider the effects of the proposed development have been comprehensively studied and assessed, and any adverse effects have been identified and can be appropriately avoided, remedied or mitigated through the use of appropriate conditions.

### **Sections 6, 7 and 8**

3.101 Sections 6, 7 and 8 of the RMA set out the principles to be applied in achieving the purpose of the Act. It is important to note that the principles contained in sections 6, 7 and 8 of the RMA are subordinate to the overriding purpose of the Act as set out in section 5. Each plays a part in the overall consideration of whether the purpose of the Act has been achieved in a particular situation. These matters are not an end in themselves, but an accessory to the principal purpose.

3.102 I consider there to be no matters within these sections that would suggest the proposed development undertaken in accordance with the proposed conditions to be inappropriate and I note the Officers' Report is of a similar view.

### **Conclusion**

3.103 In my opinion, the overall broad judgement required by Part 2 and the relevant matters set out in section 104, lead to the conclusion that granting the resource consents as sought would promote the purpose of the Act and would constitute sustainable management of natural and physical resources. The commercial and community economic benefits associated with cost saving, greater activity and improved transport options arising from the Next Generation Project are substantial, while effects on the environment will not be significant, will not persist for any significant length of time, will be appropriately avoided, remedied or mitigated and can be addressed through consent conditions. I note Council Officers are of the same opinion.

## **4. SECTION 105**

4.1 For the proposed discharges, in addition to the matters in section 104(1), section 105 requires the Consent Authority to have regard to:

- (a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
- (b) The applicant's reasons for the proposed choice; and
- (c) Any possible alternative methods of discharge, including discharge into any other receiving environment.

4.2 The AEE and the evidence of other witnesses contain a detailed analysis of the various discharges associated with the Project Next Generation, and the sensitivity of the receiving environment. In each case, it was considered the effects of the discharges on the receiving environment would be localised, would not persist for any significant length of time and can be addressed through consent conditions.

- 4.3 Also, the method of dredging and dredging plant type was selected: to achieve industry best practice for minimising turbidity; to recognise social factors including project duration, effects on fishing and noise; and to recognise economic factors including project cost, interference with shipping operations and the impact on commercial fishing and aquaculture. Disposal Site A0 was chosen after a robust site selection process which was outlined in the evidence of Mr Coe. This included, but was not limited to, identifying and seeking to avoid effects on ecological values and habitat, effects on fishing and aquaculture and shipping routes.
- 4.4 In terms of alternative discharge methods, and in particular discharge into another receiving environment, the AEE, the Officers' Report and the evidence of Mr Coe addressed alternative disposal options. This included alternative onshore and offshore options, including those for reuse, recycling or beneficial use. In each case, it was considered that disposal in open water is the only practical option for disposing of the dredged material.

## **5. SUBMISSIONS**

- 5.1 The number and detail of submissions made on Project Next Generation is summarised within the Officers' Report. This included a substantial number of submissions in support of the project from individuals, industries, port users, tourism operators and recreational users of the harbour. The submissions that expressed concerns about the project raised the following key issues:
- The increase in suspended sediment levels and turbidity in Otago Harbour, the accuracy of the modelling of that increase which informed the AEE, and/or the need for clear acceptable consent limits on allowable turbidity levels.
  - The accuracy of the AEE in describing the ecological values present in Otago Harbour and the effects the dredging would have on those values.

- Potential effects on bird values and the need to restrict dredging during key periods of the birds lifecycle.
- Effects on coastal processes, particularly changes in the bathymetry of the harbour, and its tides and current and the erosion of lower harbour beaches.
- Effects on the shellfisheries of Otago Harbour and the Blueskin Bay coastline.
- The accuracy of the modelling of sedimentation at, and sediment movement from, the disposal site which informed the AEE.
- The accuracy of the AEE in describing the ecological and fisheries values present at Disposal Site A0, and the effects on those values.
- That financial compensation should be paid to commercial fishing interests for adverse effects on their operations.
- Effects on the recreation values of Otago Harbour and Blueskin Bay.
- The noise effects of the dredge plant and the noise effects on residential and commercial properties in Careys Bay due to changes in shipping traffic that Project Next Generation would facilitate.
- Effects on air quality in Careys Bay due to changes in shipping traffic that Project Next Generation would facilitate.
- Potential effects on cultural values.
- The need for more and ongoing public consultation on the project.

5.2 A detailed technical analysis of these submission points has been undertaken in the evidence of other witnesses. I do not propose to repeat that analysis and I agree with the conclusions of those technical witnesses that all matters raised in submissions can be addressed through consent conditions.

5.3 I address those consent conditions in more detail in the following section of my evidence. However, by way of summary the means by which consent conditions address the key submission points summarised above is as follows:

- With respect to the submissions by Department of Conservation (“DoC”), Forest and Bird and others regarding the effects of sedimentation on the ecological values of Otago Harbour, effects-based consent limits on turbidity at sites of known ecological value are included to protect those values,. Also, a robust adaptive management programme for managing effects is proposed, based around a comprehensive EMP and extensive monitoring programme. I also note that changes to the consent conditions proposed by Port Otago, and which I will address in detail in the following section of my evidence, provide the opportunity for input from interested stakeholders (including the concerned submitters) and manawhenua representatives in this adaptive management process.

I also consider these conditions appropriately address the concerns relating to effects on shellfisheries in Otago Harbour, including those of Southern Clams Ltd.

- Re the submissions made by DoC, Forest and Bird and others expressing concerns about the effects on birds and bird habitat, a suite of consent conditions to protect these values have been developed, following consultation with DoC. These restrict dredging in the vicinity of significant habitat areas during key periods of the birds’ lifecycle.
- Regarding the submissions which address the effect of dredging on the bathymetry, tides and currents of the Otago Harbour, these effects are very small, as Dr Bell has explained. Nevertheless, consent conditions have been proposed that require regular and detailed monitoring of these variables during, and following, the completion of works to confirm that effects are as predicted. In respect of concerns over the erosion of lower harbour beaches, I agree with Dr Single that there are no effects-based reasons for including specific conditions on the Project Next Generation Coastal Permits to address this matter. I also agree with Dr

Single that the appropriate means to address the issue is through the work programmes already being undertaken by Port Otago and the ORC in relation to the issue.

- Several submitters, including DoC and commercial fishing interests, have expressed concerns over the effects of the disposal of dredged material at Disposal Site A0. Several consent conditions are included which address these matters. Similar to Otago Harbour based activities, the approach to managing these effects is centred around adaptive management using an EMP and an extensive monitoring programme targeted at confirming that the modelling of sedimentation and sediment movement was conservative and that effects on ecological values are as expected. Should unexpected effects be identified, the disposal operations would be adapted to address those effects. Changes to the consent conditions proposed by Port Otago would also provide the opportunity for input from interested stakeholders in this adaptive management process, as I will explain later.
- With respect to the submissions from commercial fisherman seeking financial compensation for any adverse effects they experience, I noted in paragraphs 3.98-3.99 of my evidence that mitigating effects under the RMA is about doing what is necessary to lessen the severity of the effects on the environment, not about paying compensation. There is no provision within the RMA for providing financial compensation of the like sought by these submitters.
- With respect to concerns over effects on recreational values I note that Condition 7 of Coastal Permit 2010.193 precludes Incremental Capital Works or Major Capital Works in the area adjacent to Taiaroa Head during the Christmas holiday period. Additionally, conditions are included on each Coastal Permit requiring the Consent Holder to take all practicable measures to protect public safety at all times. Conditions are also included on Coastal Permits 2010.199, 2010.200 and 2010.202 which restrict works being carried out within a 20 metre radius of the end of the Boiler Point walkway during Public Holidays, and the Christmas holiday period.

- Regarding noise-related submissions, conditions are proposed that set recognised effects-based consent limits on noise levels at properties which the dredging must be managed to achieve. Re the effects related to shipping traffic at the port facility, I agree with Mr Ballagh that the appropriate means to manage these effects is through Port Otago's obligations under the existing Dunedin City District Plan for the Port Zone, and in particular the Port Noise Management Plan.
- With respect to submissions seeking additional public consultation regarding the proposed works, and/or express concerns regarding effects on mana whenua values, later in my evidence I will present changes to the consent conditions that include the requirement for meaningful and long term involvement of interested stakeholders and mana whenua groups in the ongoing management of Project Next Generation. This includes the establishment of a "Project Consultative Group" and "Manawhenua Group" and the provision for input from these groups in assessing monitoring results and anticipating and resolving potential issues. With respect to the Manawhenua Group, the conditions also provide that it the opportunity to have input into designing the monitoring programme for confirming effects on species of cultural importance, and identifying methods to avoid, remedy or mitigate effects on cultural values. I further note that notwithstanding the extensive opportunities for public consultation that have been provided since the inception of this project, some parties have chosen only to contribute passively (e.g. attending meetings without substantive engagement), while others have chosen not to participate at all.

5.4 One specific matter which has not been addressed by other witnesses is the submissions concerned about changes to air quality in Careys Bay as a result of changes to shipping traffic facilitated by Project Next Generation. I understand the discharges to air from ships visiting the Port Chalmers facility are allowed by section 15 of the Resource Management (Marine Pollution) Regulations 1998 and section 15B(1)(a) of the RMA, and therefore I do not consider those effects need be considered as part of this assessment process.

## 6. OFFICERS' REPORT AND CONDITIONS

6.1 The NZCPS, RPS and Coastal Plan all recognise and anticipate the efficient development and operation of the Otago Harbour Port Facilities and Channel, however, they require that the development and operation of those physical resources appropriately manage its effects on the environment. To this end Port Otago has worked collaboratively with Council Officers, and stakeholders to develop consent conditions to manage the effects of Project Next Generation in a thorough manner. They have now reached a point where there would appear to be a large measure of agreement. I note the process has been aided by the large number of dredging developments (both within New Zealand and internationally) which provide valuable experience as to the type of conditions that are most effective in managing the effects of such dredging and disposal activities.

6.2 Central to these conditions are:

- The requirement for dredging and disposal activities to be undertaken in accordance with a detailed EMP which incorporates industry best practice and which adaptively manages effects;
- A set of bottom line effects-based consent conditions which the proposed works must meet; and
- The requirement for comprehensive monitoring programme to identify and confirm environmental effects, and to inform the adaptive management approach.

### **Environmental Management Plan**

6.3 The EMP requires Port Otago to implement industry best practice to manage effects on a case-by-case basis. It is also a "living document" in that it will be amended and updated to respond to any changing circumstances or unexpected effects as the development proceeds.

- 6.4 The consent conditions are explicit in specifying the detail required of the EMP, and it is required to be prepared in consultation with, and submitted to, the Consent Authority prior to works commencing. Any changes to the EMP must also follow this same process. I consider this process to be appropriate to ensure when implemented it is a robust document and of appropriate quality to fulfil its purpose.

#### **Specific Operational Restrictions and Effects Based Consent Limits**

- 6.5 Underpinning the EMP are consent conditions which specify a series of effects-based operational restrictions as to when, where and how the dredging can be undertaken.

- 6.6 The specific operational restrictions include such things as:

- Maximum depth and width specifications for the dredged channel.
- Maximum quantities and restrictions on the type of dredged material that can be deposited at each disposal site.
- Limits on the maximum turbidity levels dredging can cause at certain locations in the Otago Harbour in order to protect the high ecological values that exist at those locations.
- No dredging adjacent to Taiaroa Head between 1 October to 30 November and 1 January and 14 February of each year to avoid effects on birds during important stages of their lifecycle, except with the approval of the Consent Authority in consultation with the DoC.
- In the vicinity of the Aramoana sand flats, only undertaking dredging when the tidal height is above half-tide (>1.0 metre above Chart Datum), during the period 1 February to 31 March of each year if migratory godwits are present and feeding in the immediate area, except with the approval of the Consent Authority in consultation with the DoC.

- Maximum noise limits for dredging operations and restrictions on when blasting can be undertaken.
- To avoid effects on recreational activity, no dredging works in the vicinity of Tairaroa Head, or construction work in the vicinity of Boiler Point are permitted over the Christmas break.

### **Monitoring**

6.7 The robust monitoring programme designed to confirm effects assessments and inform the EMP and its adaptive management approach is addressed in detail in the evidence of other witnesses. However, by way of summary it includes:

- Within Otago Harbour the requirement to:
  - Record the volume and GPS location of each dredging episode.
  - Undertake detailed and one off monitoring of the turbidity plume from the dredge plant used during both Incremental Capital Works and Major Capital Works, to confirm the sediment plume modelling used to predict effects for each dredge is accurate or conservative.
  - Monitoring turbidity at selected sites known to contain Otago Harbour's more important ecological values, in order to confirm effects based consent limits for those sites are being achieved, and/or to guide the appropriate adaptive management of the dredging to ensure the limits are achieved.
  - Biological monitoring of the foreshore, seabed and intertidal flats to confirm effects on aquatic ecology values, and the recovery of affected biota and habitats, is as expected. This includes comprehensive annual and, in some cases quarterly, monitoring of specific sites known to contain Otago Harbour's more important ecological values, and three yearly broad scale surveys of the lower harbour.

- Regular bathymetric surveys prior to, during and following the dredging to identify any changes to the seafloor or intertidal flats caused by the dredging.
- Monitoring tide heights and currents to identify changes in tidal height and phasing, and changes in currents as a result of the new channel dimensions.
- At Disposal Site A0, the requirement to:
  - Record the volume of each disposal event, the location and cumulative total.
  - Undertake monitoring of the disposal plume from both the Incremental and Major Capital dredge plant, to confirm the sediment plume modelling used to predict effects from each is accurate or conservative.
  - Undertake three yearly broad scale biological surveys of benthic habitats in the wider Blueskin Bay area (including assessments of species diversity and community composition and species abundance) to confirm effects on aquatic ecology, and the recovery of affected biota and habitats, is as expected.
  - Undertake regular bathymetric surveys of Disposal Site A0 during dredging to enable an assessment of changes in disposal mound profile, volumes and direction of bed load.

## **PROPOSED CHANGES TO CONDITIONS**

6.8 Overall, I consider the suite of conditions recommended by the Council Officers to be comprehensive, robust and appropriate in addressing all relevant matters. While the conditions are restrictive in several respects, with the inclusion of a few minor changes Port Otago accepts the consent conditions as proposed. Those changes are discussed below. A strikethrough version of the Officers' recommended conditions incorporating these changes, and, more importantly,

any other relevant matters which arise during this hearing, will be circulated during Port Otago's right of reply at the conclusion of the hearing.

- 6.9 The first change is to include more detailed consultation requirements. Other than requiring the EMP to contain a description of how stakeholders will be kept informed and involved during the project and how complaints will be managed, the proposed consent conditions do not require any particular level of ongoing stakeholder involvement. I consider, and I note the Port Company agrees, that the long term involvement of key stakeholders, including those who have been involved in the Project Consultative Group prior to this hearing, and manawhenua groups, is a fundamental part of the environmental management of the dredging project.
- 6.10 I note that care needs to be taken when drafting consultation related conditions to the extent that a condition cannot require third parties to consult with the Consent Holder. But it is lawful to require the Consent Holder to make those opportunities available to those third parties.
- 6.11 As such, I consider minimum consultation requirements should be contained in consent conditions. This could be achieved by including the following conditions on Coastal Permits 2010.193, 2010.195 and 2010.198:

### **Consultation**

# Within three months of the commencement of this consent, the consent holder shall invite a cross section of the lower harbour and Otago coastal communities and organisations, generally as described in Section 8.2 of the Assessment of Environmental Effects lodged in support of this consent, to form the "Project Consultative Group" ("PCG").

(a) The purpose of the PCG is to facilitate consultation between the wider users of Otago Harbour and its surrounds and Port Otago Ltd during the Incremental Capital and Major Capital Works.

(b) The Consent Holder shall invite members of the PCG to meetings as follows:

(i) Annually to discuss and review the monitoring reports produced under the relevant sections of condition(s) of this consent for the Incremental Capital Works;

- (ii) At monthly intervals during the undertaking of the Major Capital Works.
- (c) The PCG meetings shall be conducted in accordance with the consultation section of the Environmental Management Plan.
- (d) The Consent Holder shall invite representatives of the Consent Authority to all meetings of the PCG.
- (e) The Consent Holder shall keep minutes of the meetings held in accordance with clause (c) and shall forward them to all attendees.
- (f) The Consent Holder shall provide final copies of the reports prepared in accordance with these conditions to the PCG at the meetings held in accordance with clause (c).

### **Kai Tahu Engagement**

#. Within three months of the commencement of this consent, the Consent Holder shall invite representatives of the local hapu, iwi and the East Otago Taiapure Committee to join a “Manawhenua Consultation Group” (“MCG”).

- (a) The purpose of the MCG, the meetings that will be held with the MCG, and the Consent Holder’s obligations to the MCG shall be described in the consultation section of the Environmental Management Plan but shall be designed to:

  - (i) Facilitate consultation between the MCG and Port Otago Ltd during the Incremental and Major Capital Works.
  - (ii) Consult the MCG on the design of the monitoring programmes, including the development of cultural health indicators for key species of importance to Kāi Tahu.
  - (iii) Review monitoring reports during and after completion of the Incremental and Major Capital Works. If necessary technical expertise will be made available by the Consent Holder to interpret the monitoring data.
  - (iv) Identify methods to avoid, remedy or mitigate any adverse effects of Project Next Generation on the cultural values, interests, and associations of the MCG with the Otago Harbour and Te Tai o Arai Te Uru (Otago Coastal Marine Area).

- (d) The Consent Holder shall, not less than three months before, and at least once every three months when Major Capital works are being undertaken in accordance with this resource consent and Consent No 2010.### invite the MCG to a meeting to discuss any matter relating to the exercise and monitoring of the consents.
- (e) The Consent Holder shall, in complying with the notification requirements of this consent to the Consent Authority, or when monitoring or research activities are being planned, or when results are to be submitted in accordance with this resource consent, invite the MCG to a meeting to discuss any matter and share this information prior to submitting the information to the Consent Authority. The information shall be provided to the MCG sufficiently in advance of the meeting so that the MCG has time to review and consider it.
- (f) Notwithstanding clause (d) and clause (e) the Consent Holder shall, at least once per calendar year, invite representatives of the Consent Authority and the MCG to a meeting to discuss any matter relating to the exercise and monitoring of this consent. At this time the Consent Holder shall, in addition to any matters relating to the exercise and monitoring of this consent, use its best endeavours to inform the MCG of the likely dredging to be undertaken in the following year.
- (g) The Consent Holder shall keep minutes of the meetings held in accordance with clause (d), (e) and (f) and shall forward them to all attendees.
- (h) The meetings required by clause (d), (e) and (f) need not occur if the MCG notify the Consent Holder (for clause (d), (e) and (f)) and the Consent Authority (for clause (f)) that the meeting is not required.
- (i) The Consent Holder shall provide final copies of the reports prepared in accordance with these conditions to the MCG concurrently with them being submitted to the Consent Authority.

6.12 The proposed consent conditions include definitions of “Incremental Capital Works”, “Major Capital Works” and “Maintenance” as advice notes at the end of consents. I consider these definitions would be more appropriately included as conditions of consent, as the classification of the activities each work programme encompasses is a key part of the consent conditions. This would ensure that their status is clear and binding - that is not the case with advice notes which are advisory only. I also consider minor amendments should be

made to these three definitions to make it clear that consent conditions do not limit the movement of the dredge plant in the harbour (including any travel to and from the disposal site) while not carrying out dredging operations. These changes could be achieved by:

- Including an additional Condition 1A on Coastal Permits 2010.193, 2010.195, and 2010.198 as follows (my changes to the wording of the definitions contained in the Officers' recommended conditions are coloured in yellow highlight):

1A For the purposes of these conditions the following definitions apply:

(a) "Incremental Capital Works" means dredging and ancillary works using trailing suction dredges each with a capacity of no more than 1000 cubic metres and/or a grab dredge or back hoe with capacities each of no more than 10 cubic metres, and includes maintenance dredging that is otherwise not permitted by the Regional Plan: Coast and a resource consent for disposal of maintenance dredging material, provided that the total annual quantity of dredge material from Incremental Capital Works is no more than 1.45 million cubic metres.

(b) "Major Capital Works" means dredging and ancillary works that are not Incremental Capital Works or part of the Maintenance Programme.

(c) The definitions of Incremental Capital Works and Major Capital Works above do not include vessels navigating the shipping channel to or from dredging or disposal areas.

- Including an additional Condition 1A on Coastal Permits 2010.194 and 2010.196 as follows (my changes to the wording contained in the Officers' recommended conditions are coloured in yellow highlight):

1A For the purposes of these conditions "Maintenance Dredging" is defined as existing maintenance dredging and future maintenance dredging works required to maintain any deeper

and wider Harbour channels and excludes vessels navigating the shipping channel to or from dredging or disposal areas.

6.13 Conditions are included in Coastal Permits 2010.194 – 2010.203 which require the Consent Holder to “*take all practicable precautions to protect public safety at all times*” and to “*ensure that the effects of the maintenance works on marine biota are minimised to the extent practicable*”. However, Conditions 25 and 26 of Coastal Permit 2010.193 (disturb and remove dredge material from the foreshore and seabed) has excluded the term “practicable” from these conditions. I do not consider there is any resource management reason why they should be excluded. As such, I consider reference to “practicable” should be included in Conditions 25 and 26 of Coastal Permit 2010.193 so they are consistent with the associated conditions on the other Coastal Permits.

6.14 Coastal Permit RM10.193.01 to occupy the coastal marine area by the Fishing Jetty for public use, and in particular Condition 3, provides the public with unrestricted access to the jetty. However, as noted in the evidence of Mr Coe from time to time there may be a need to exclude the public from the Fishing Jetty for operational or safety reasons. To achieve this, and allow efficient operation of the port and protection of public safety, I consider there should be recognition in the consent for the Fishing Jetty that the public can be excluded when that is necessary. This could be achieved by including a condition in the Fishing Jetty consent that makes this ability clear and mirrors the existing occupation consent held by Port Otago. Proposed wording is as follows:

# The fishing jetty shall be available to the public at all times except where Port Otago Ltd needs to exclude the public pursuant to its rights under its existing Coastal Permit over the same area [consent number 2010.011] (such exclusion being only permitted for operational or safety reasons).

6.15 For reasons outlined in the evidence of Dr James , Condition 5 of Coastal Permit 2010.195 should be changed such that clause (b) requires a further six months monitoring, rather than 12 months as proposed in the Officers’ Report. As outlined in the evidence of Dr James, clause (c) should also be changed so it achieves the intent of the condition by requiring the initial monitoring capture the effect of the Incremental Dredge plant, but does so in a manner which does not negate the intent of clauses (a) and (b) and Condition 11 (which provides

for this monitoring to be discontinued after six months for Incremental Capital Dredging if effects are as expected), by inadvertently requiring continuous monitoring whenever Incremental Capital Work is being undertaken. In this regard I also note Condition 5 cross references Condition 12, when I understand Condition 11 is the relevant condition. These matters could be addressed by making the following changes to Condition 5 of Coastal Permit 2010.195:

5. The consent holder shall undertake fixed turbidity monitoring at the locations specified in condition 4 and any additional monitoring locations specified in the Environmental Management Plan in the following manner:
  - (a) a minimum of the first six months from commencement of any Incremental Capital works authorised by Coastal Permit 2010.193; and
  - (b) if the report from condition ~~4211~~ of this Coastal Permit indicates further monitoring is required, this must be undertaken for a minimum of 12 months commencing upon submission of the report from condition ~~4211~~ to the consent authority; and
  - (c) ~~at any time when Incremental Capital works are being undertaken within a 2 kilometre distance down tide of any of the turbidity monitoring areas identified in condition 4 of this consent.~~ so as to obtain monitoring results that are representative of any effects resulting from the works, when the monitoring specified in (a) and (b) above is undertaken the consent holder shall ensure that Incremental Capital Works are periodically undertaken within the vicinity of the monitoring areas identified in Condition 4 of this consent.

6.16 For reasons provided in the evidence of Dr Bell, an alternative location for the “control” turbidity monitor is proposed. This does not require a change to the any consent condition. However, a new figure is required in Appendix 1 to reflect this new location. I note Condition 10 of Coastal Permit 2010.198 also cross references Appendix 3, when it should refer to Appendix 2.

6.17 Condition 7 of Coastal Permit 2010.193, and Condition 7 of Coastal Permits 2010.199 and 2010.202 restrict works between 20 December and 10 January in the vicinity of Taiaroa Head and Boiler Point respectively. I agree with the intent of these conditions, in that they seek to avoid effects on recreational

values during the Christmas holiday period, however I consider that period should not start until 25 December.

- 6.18 Condition 7 of 2010.193 refers to Incremental Capital Works or Major Capital Works not being undertaken in the area adjacent to Taiaroa Head, as shown in Appendix 5 of that consent, between 20 December and 10 January in the following year. I note Appendix 5 of the Council Officers' proposed conditions does not show the exclusion area adjacent to Taiaroa Head, rather it contains the Lower Harbour Bathymetry Survey Plan. This requires the cross reference to Appendix 5 in Condition 7 be amended to cross reference Appendix 6.
- 6.19 The consent conditions are inconsistent in terms of when they require the three EMPs to be submitted. Coastal Permit 2010.193 requires the EMP for the Capital Dredging to be submitted "*one month prior to any works commencing*", Coastal Permit 2010.194 requires the EMP for the Maintenance Dredging to be submitted "*within three months of the issue of ... consent*" and Coastal Permit 2010.200 requires the EMP for the construction of the Wharf Extension and Fishing Jetty to be submitted "*a minimum of three months prior to the commencement of works*". I do not foresee any effects-based reason for the different wording and consider that all three Coastal Permits should be standardised to require their respective EMPs to be submitted at least "*one month prior to any works commencing*" as per Coastal Permit 2010.193.
- 6.20 It has also been brought to my attention that the coordinates on the Coastal Permits need to be changed. In that regard a revised set of correct coordinates is provided in Attachment 3 of my evidence.
- 6.21 Overall, with the inclusion of the changes I have proposed in this section, I consider that the consent conditions recommended by the Council Officers to be robust and comprehensive, and in the context of the RMA to ensure the adverse effects of the proposed development will be appropriately avoided, remedied or mitigated, and that the concerns of all submitters will be addressed.

## **7. CONCLUSION**

7.1 The granting of the consents sought by Port Otago (with the inclusion of appropriate consent conditions) would, in my opinion, promote the sustainable management of natural and physical resources, as contemplated by the RMA.

In that regard:

- (a) The proposed works will have significant and demonstrable positive effects in terms of sustaining the social and economic wellbeing of the community; and
- (b) Adverse effects are appropriately avoided, remedied or mitigated and can be appropriately managed through consent conditions.

7.2 I consider there to be no planning related reason why the consents sought by Port Otago cannot be granted.

# **ATTACHMENT 1**

## **Tables of Consent Activity Status**

**Table 1: Activity status for resource consents required to deepen and widen the Channel.**

<b>Activity</b>	<b>Activity Status</b>	<b>Rule Number</b>
<b>Coastal Permit</b> – To authorise the disturbance and removal of material from the foreshore and seabed associated with the deepening and widening of the lower harbour channel.	Discretionary & Restricted Coastal	9.5.2.2 9.5.3.3
<b>Coastal Permit</b> – To authorise the discharge of decant water and all associated contaminants from the dredging operation associated with deepening and widening the lower harbour channel.	Discretionary	10.5.6.2

**Table 2: Activity status for resource consents required for maintenance dredging.**

<b>Activity</b>	<b>Activity Status</b>	<b>Rule Number</b>
<b>Coastal Permit</b> – To authorise the disturbance and removal of material from the foreshore and seabed associated with maintenance dredging of the lower harbour channel.	Discretionary & Restricted Coastal	9.5.2.2 9.5.3.3
<b>Coastal Permit</b> – To authorise the discharge of decant water and all associated contaminants from the dredging operation associated with maintenance dredging of the lower harbour channel.	Discretionary	10.5.6.2

**Table 3: Activity status for resource consents required to dispose of dredged material**

<b>Activity</b>	<b>Activity Status</b>	<b>Rule Number</b>
<b>Coastal Permit</b> – To authorise the disposal of dredged material sourced from the deepening and widening, and maintenance dredging of the lower harbour channel.	Discretionary & Restricted Coastal	9.5.4.2
<b>Variation to Coastal Permit 2000.172</b> - To authorise the disposal of some material dredged as part of the deepening and widening of the lower harbour channel at Port Otago's existing Heywards Point, Spit Beach and South Spit Beach disposal sites.	Discretionary	

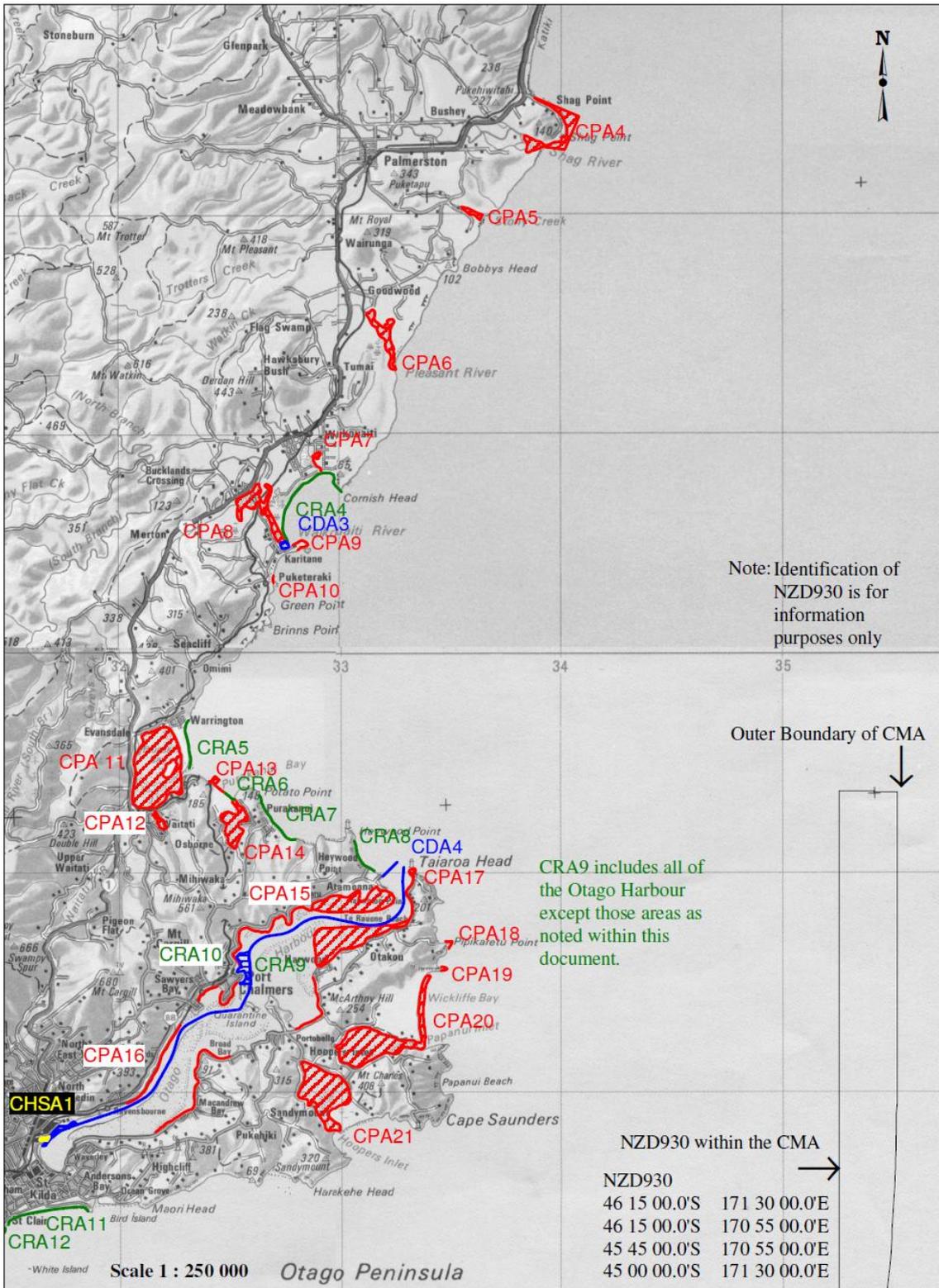
**Table 4: Activity status for resource consents required for the extension of the Multipurpose Wharf and the construction of the Fishing Jetty.**

<b>Activity</b>	<b>Activity Status</b>	<b>Rule Number</b>
<b>Coastal Permit</b> – To authorise the disturbance of the bed and deposition of rock riprap to form a buttress under the container and multipurpose wharfs and associated wharfs.	Discretionary	9.5.3.6 9.5.4.3
<b>Coastal Permit</b> – To authorise the erection of the new fishing jetty.	Discretionary	8.5.1.9
<b>Coastal Permit</b> - To authorise the extension of the multipurpose wharf.	Discretionary	8.5.1.9
<b>Coastal Permit</b> – To authorise the disturbance of the foreshore and seabed while erecting the fishing jetty and extending the multipurpose wharf.	Discretionary	9.5.3.6
<b>Coastal Permit</b> – To authorise the discharge of contaminants to the Coastal Marine Area while depositing the rock riprap, constructing the fishing jetty and extending the multipurpose wharf.	Discretionary	10.5.6.2

## **ATTACHMENT 2**

**Maps showing Coastal Management Areas and Coastal Boundary Areas in the vicinity of the project**

# Coastal Management Areas in the Vicinity of the Project



# Coastal Boundary Areas in the Vicinity of the Project



## **ATTACHMENT 3**

### **Revised Coordinates for Coastal Permits**

<b>Consent Number</b>	<b>Co-ordinate System</b>	<b>Northing</b>	<b>Easting</b>
2010.193	NZTM 2000	4931086N	1423206E
		4923932N	1415958E
	WGS84 (Chart)	45°45'04" S	170°43'37" E
		45°48'49" S	170°37'52" E
2010.194	NZTM 2000	4931086N	1423206E
		4923932N	1415958E
	WGS84 (Chart)	45°45'04" S	170°43'37" E
		45°48'49" S	170°37'52" E
2010.195	NZTM 2000	4931086N	1423206E
		4923932N	1415958E
	WGS84 (Chart)	45°45'04" S	170°43'37" E
		45°48'49" S	170°37'52" E
2010.196	NZTM 2000	4931086N	1423206E
		4923932N	1415958E
	WGS84 (Chart)	45°45'04" S	170°43'37" E
		45°48'49" S	170°37'52" E
2010.197	NZTM 2000	4924419N	1415706E
	WGS84 (Chart)	45°48'33" S	170°37'41" E
2010.198	NZTM 2000	4932950N	1428763E
	WGS84 (Chart)	45°44'8" S	170°47'56" E
2010.199	NZTM 2000	4924506N	1415734E
	WGS84 (Chart)	45°48'30" S	170°37'42" E
2010.200	NZTM 2000	4924419N	1415706E
	WGS84 (Chart)	45°48'33" S	170°37'41" E
2010.202	NZTM 2000	4924419N	1415706E
M/P	WGS84 (Chart)	45°48'33" S	170°37'41" E
2010.202	NZTM 2000	4924506N	1415734E
Fishing	WGS84 (Chart)	45°48'30" S	170°37'42" E
2010.203	NZTM 2000	4924419N	1415706E
M/P	WGS84 (Chart)	45°48'33" S	170°37'41" E
2010.203	NZTM 2000	4924506N	1415734E
Fishing	WGS84 (Chart)	45°48'30" S	170°37'42" E

