

BEFORE THE OTAGO REGIONAL COUNCIL

IN THE MATTER of an application for resource
consents for Project Next
Generation pursuant to the
Resource Management Act 1991

BY **PORT OTAGO LIMITED**
Applicant

**STATEMENT OF EVIDENCE OF PAUL JAMES FREELAND
ON BEHALF OF THE DUNEDIN CITY COUNCIL
Date 13 April 2011**

Introduction, Qualifications and Experience

1. My full name is Paul James Freeland. I am a Senior Policy Planner employed by the Dunedin City Council, and have worked for City Planning in a variety of planning roles since 2002.
2. I hold a Master of Regional and Resource Planning degree from Otago University.
3. Prior to my employment with the Dunedin City Council, for approximately 18 years I held a variety of roles administering or managing land for a number of Crown departments including the Ministry of Works and Development, Department of Lands and Department of Survey and Land Information.

Scope of Evidence

4. The Dunedin City Council, in their submission, supported the overall proposal as the Port plays a critical role in the economic success of Dunedin. This project will contribute to the economic well-being of Dunedin and the surrounding region.
5. The original submission limited its scope to concerns about the following cross-boundary effects:
 - Potential increased extent and volume of noise;
 - Potential frequency and level of inundation of Council roads and reserves on the Otago Peninsula; and
 - Impact upon inter-tidal communities.

I will now address those issues individually.

Noise

6. In my role as Senior Policy Planner with the Dunedin City Council, I am partially responsible for the administration and development of the Dunedin City District Plan.

7. I understand that Counsel for Port Otago Limited, Mr Len Anderson, and the Port's acoustic expert witness, Mr Keith Ballagh, explained the current District Plan approach to managing port noise at Port Chalmers. Through a Resource Management Act 1991 plan preparation process, including an Environment Court hearing, a noise management regime was established that has resulted in noise that emanates from within the Coastal Marine Area (under the jurisdiction of the Otago Regional Council) being taken into account in mitigating the effects of noise under the Dunedin City District Plan.
8. Part of the current port noise management regime is a Port Noise Outer Control Boundary (District Plan Maps 22 & 23 – Appendix A) to ensure that any new residential buildings within the Residential or Local Activity zones will be acoustically insulated at the time of construction. The boundary was based on the anticipated, or modelled, extent of Port Noise at the 55dBA Ldn level.
9. Current noise contours for port noise at Port Chalmers, and estimates for the potential noise environment (Fig A8 Predicted Noise Contours for 2009 6000 TEU Vessel at MultiPurpose Bow Out, Keith Ballagh) indicate that additional properties at Port Chalmers and Careys Bay, that are currently outside of the existing Port Noise Outer Control Boundary, are likely to be subject to noise above the 55dBA Ldn noise level.
10. There are rural zoned properties at 31 and 35 Macandrew Road, Careys Bay, which are within the estimated 55dBA Ldn noise contour as determined by Mr Ballagh. Property owners that are within the 55dBA contour should be advised that, pursuant to Rule 8.7.2(xi) of the Residential Section or Rule 9.7.2(ix) (Appendix B) of the Activity Zones section of the Dunedin City District Plan, any new building to be used for residential activities is required to be acoustically insulated to meet an indoor design level of 40 dBA Ldn.
11. In summary, owners and potential owners of sites that can be put to a residential use, including several Rural zoned properties, should be forewarned through an appropriate District Plan provision, and in keeping with the current approach for managing port noise at Port Chalmers. I acknowledge that Port Otago Limited has been diligent in taking responsibility for and managing port noise in accordance with the current District Plan provisions including the Port Noise Mitigation Plan, and note that Mr Lincoln Coe on behalf of the applicant has committed to including any new noise-affected properties within the Plan.

12. While this approach is consistent, it fails to apply to any Rural-zoned properties, and ensure that new residential construction is appropriately acoustically insulated for the port noise environment.
13. I note that Mr Ballagh in paragraphs 80-83 of his evidence, and Mr Coe in paragraphs 215-225 of his evidence, set out aspects of the port noise regime at Port Chalmers and detail the commitment that Port Otago Limited has made to managing and implementing the Port Noise Management Plan and Port Noise Management Plan.
14. Mr Coe in a letter to the Dunedin City Council dated 8 April 2011 (Appendix C) has reconfirmed Port Otago Limited's commitment to the current port noise regime set out in the Dunedin City District Plan.
15. I agree with this approach, and consider it an appropriate method for managing port noise. As outlined above, despite the commitment of Port Otago Limited to this approach, I believe that there is a need for a consequential change to the District Plan to ensure potentially noise-affected land owners and potential purchasers acoustically insulate their residential properties at the time of construction. Not only does this approach ensure that people will be aware of the noise environment they may be living in, but it also reduces the likelihood of noise complaints and subsequent mitigation measures having to be administered by Port Otago Limited.
16. While no additional consent conditions are sought, I seek a commitment by Port Otago Limited to initiate or proactively participate in the necessary change to the District Plan should the proposed Next Generation project proceed. In my opinion the appropriate time for this Plan Change to take place would be once the current consent applications being considered are beyond appeal.

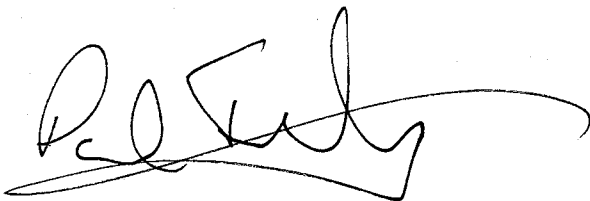
Inundation of Roads and Reserves & Impact Upon Inter-Tidal Communities

17. Mr Coe has also supplied us with a letter dated 24 March 2011 (Appendix D) from Mr Robert Bell of NIWA. This letter addresses the Dunedin City Council's concerns with potential increased frequency and extent of inundation of Council roads and reserves, and the impact upon inter-tidal communities.

18. There is an on-going issue with inundation of part of Pipikaretu Road (photo attached – Appendix E) which Council's Transportation Operations department believe is exacerbated by the wave action of ships. While it is acknowledged that Council will need to manage their coastal infrastructure as sea level rises as a result of climate change, there is still concern that the deepening of the channel and larger ships will exacerbate this inundation.
19. On-going scouring of Te Rauone Beach is also a problem which may be exacerbated by wave action from ships. I understand that Port Otago Limited is in discussions with the local community and Council and may be submitting an application for a Coastal Permit to mitigate this issue in the near future.
20. While I appreciate the response from Port Otago Limited and NIWA, and agree that within the context of anticipated sea level rise associated with climate change that the likely effects are no more than minor, there are still existing issues requiring attention and doubt still exists as to the cumulative effect of increased wave action as a result of the proposed activity and sea level rise associated with climate change. No additional conditions of consent are sought.

Summary

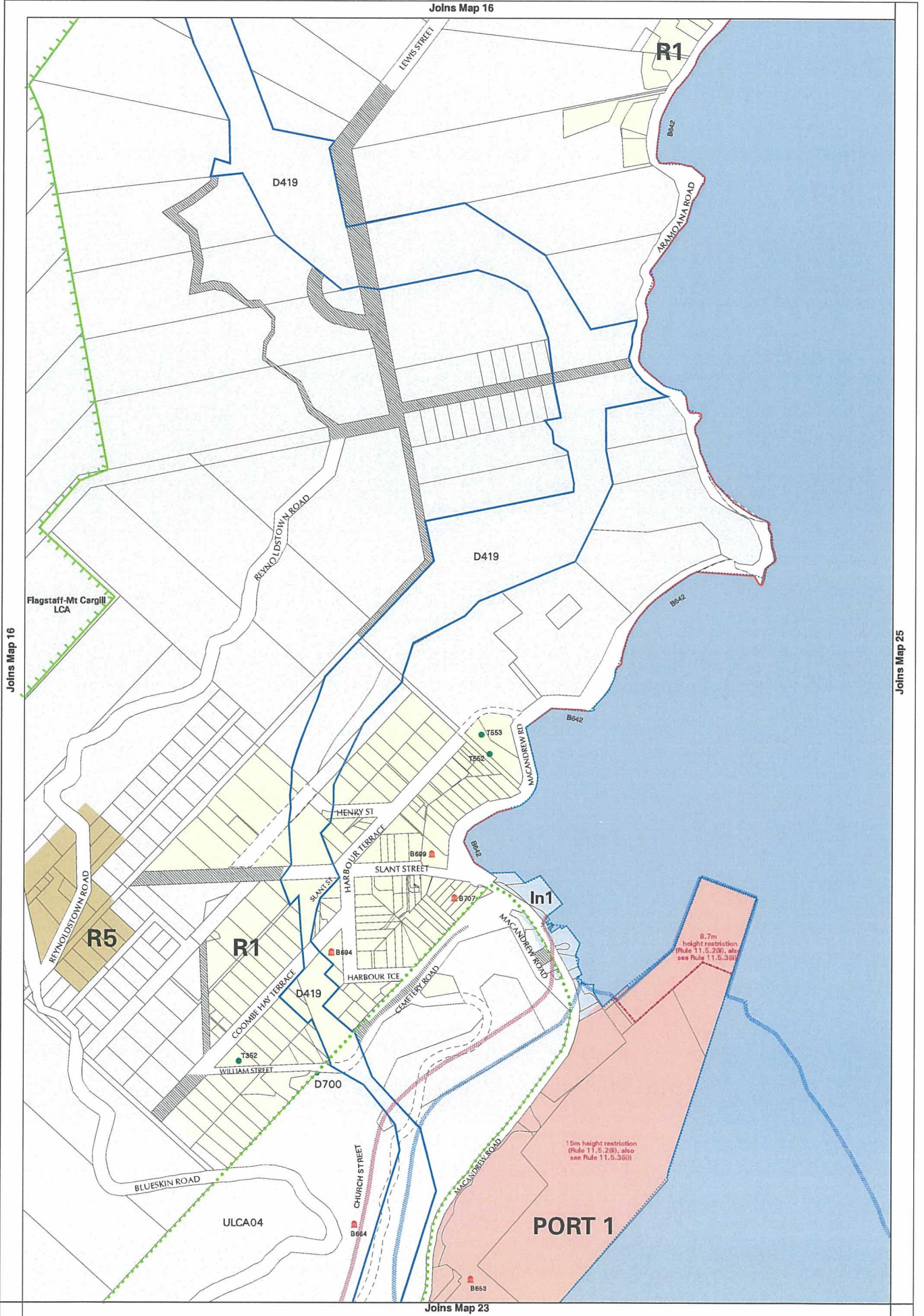
21. The Dunedin City Council strongly supports the Port Otago: Next Generation Project and acknowledges the critical role the Port has in the economic success of Dunedin.
22. While concerns have been raised over three issues, being port noise, inundation of roads and reserves, and impact upon inter-tidal communities, I am satisfied that Port Otago Limited is committed to resolving these issues. Subject to a consequential change to the District Plan to adjust the Port Noise Outer Control Boundary and a change to the definition of "Noise Affected Property" to include affected Rural-zoned properties, and site specific actions for existing inundation issues, I consider that the applicant has supplied sufficient information and appropriately managed the effects of their proposal.
23. So, in conclusion, in my opinion I consider that the consents should be granted subject to the conditions suggested in the recommending report, but request that an advice note be added that "Port Otago Limited initiate or proactively participate in a change to the Dunedin City District Plan to ensure that all additional properties identified in Mr Ballagh's modelled 55dBA Ldn noise contour are managed in a consistent manner with the existing noise regime for managing port noise at Port Chalmers."



PAUL JAMES FREELAND

Annexures

- A District Plan Maps 22 & 23
- B District Plan Rules 8.7.2(xi) & 9.7.2(ix)
- C Letter, Lincoln Coe (Port Otago Ltd.) 8 April 2011
- D Letter, Robert Bell (NIWZ) 24 March 2011
- E Photo, Cnr Harington Point & Pipikaretu Road

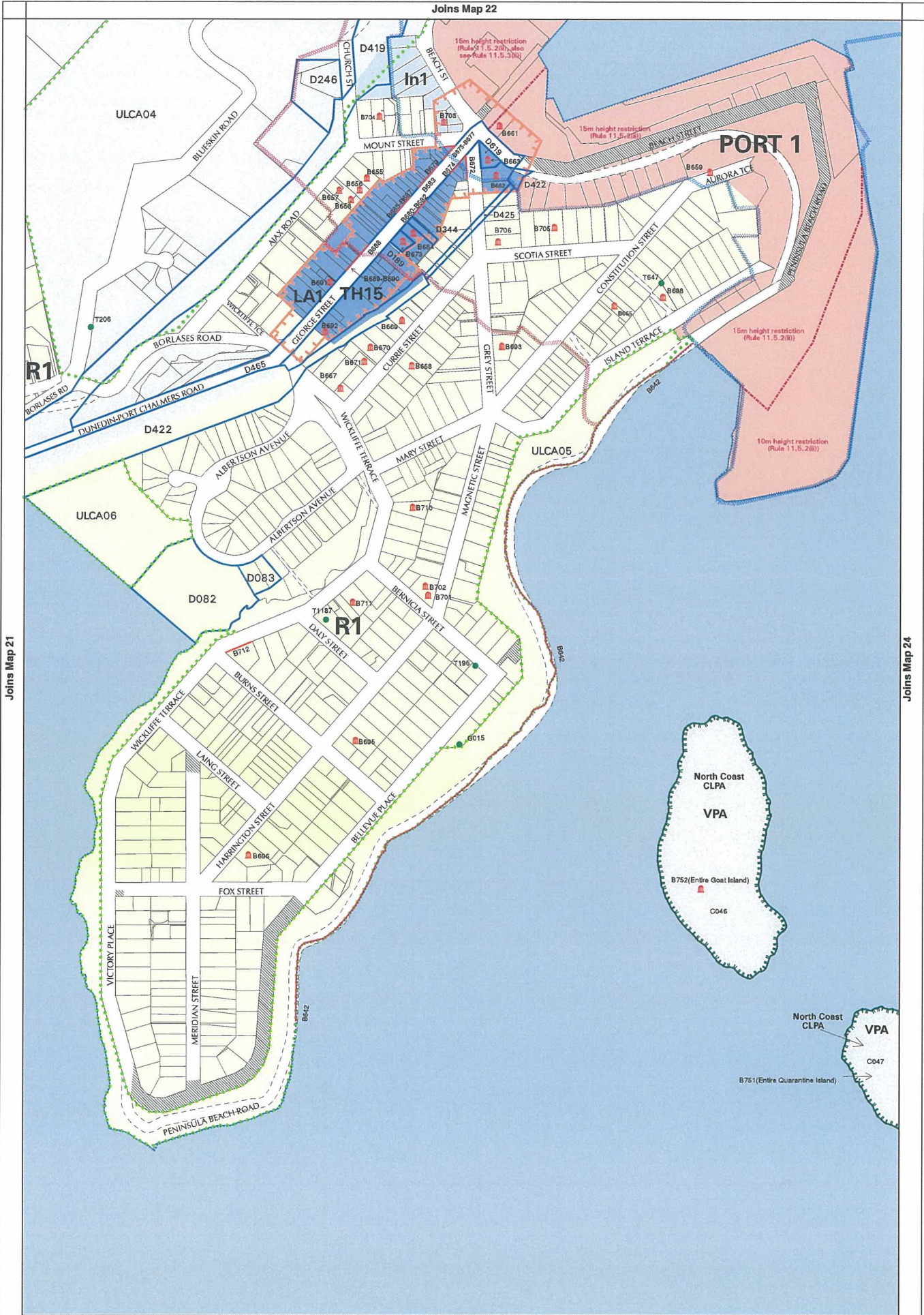


Joins Map 16

Joins Map 25

Joins Map 23





Joins Map 21

Joins Map 24



(vi) Separation Distances

Development containing more than one residential unit that does not share a common wall shall be separated by a distance of no less than 4 m.

(vii) Minimum Car Parking

On-site car parking shall comply with the performance standards in Section 20 (Transportation) and shall be provided on the following basis:

(a) Residential Activity

- (i) 1 car park per residential unit up to and including 150 m² gross floor area (excluding garaging areas).
- (ii) 2 car parks per residential unit greater than 150 m² gross floor area (excluding garaging areas).
- (iii) 1 visitor car park per 5 residential units.
- (iv) 2 additional car parks for a residential unit where staff provide for between 13 and 18 residents inclusive. *[Amended by Variation 6, 18/10/00]*

(b) Recreational Activity

- (i) 1 car park per 750 m² of site area.

(viii) Loading and Access

No requirements for loading. Access requirements shall comply with the performance standards in Section 20 (Transportation).

(ix) Signs

Refer to the Signs Section.

(x) Noise, Glare, Lighting and Electrical Interference

Refer to the performance standards of the Environmental Issues Section.

(xi) Port Noise - Buildings used for Residential Purposes within the Port Outer Control Boundary (Port Chalmers)

On any site located between the Port Noise Boundary and the Port Outer Control Boundary at Port Chalmers, as shown on District Plan Maps 65 and 70, any new building to be used for residential activities shall be acoustically insulated from external noise so as to meet an indoor design level of 40 dBA Ldn within any kitchen, dining area, living room, study or bedroom.

(xii) Minimum Site**(a) Minimum Area**

- (i) Front Site 500 m²
- (ii) Rear Site 500 m² excluding the access leg *[Amended by Plan Change 10, 18/1/11]*

(b) Minimum Frontage

- (i) Front Site 3.5 m
- (ii) Rear Site where access serves up to 3 residential units 3.5 m
- (iii) Rear Site where access serves 4 or more household units 6.0 m

(vii) Loading and Access

- (a) For the following activities, except Residential Activities, that involve construction of a new building on a site which fronts a State highway, Rule 20.5.6(ii) applies. In all other cases for the following activities there are no loading requirements. Access requirements for the following activities shall comply with the performance standards in Section 20 (Transportation): *[Amended by Consent Order 20/12/01 and by Plan Change 10, 18/1/11]*
- (i) Permitted activities in Rule 9.7.1(iii), (vi) and (vii).
 - (ii) Recreational Activity.
 - (iii) Residential Activity.
 - (iv) Community Support Activity.
- (b) For the following activities loading and access shall comply with the performance standards in Section 20 (Transportation):
- (i) Large Scale Retail Activity.
Loading shall be provided for on the following basis:
Minimum Size: 20 m long x 3.5 m wide x 4.4 m high.
Manoeuvre Area: To accommodate a B Train truck as shown in Appendix 20E.

(viii) Verandahs

On sites identified on the District Plan Maps as requiring a verandah, such verandahs shall be provided and shall be:

- (a) Not less than 3 m in width, or shall be not less than the width of the adjacent footpath if that footpath is less than 3 m in width.
 - (b) Continuous with adjacent verandahs.
 - (c) Of solid construction.
 - (d) Of an appropriate height above the footpath to provide pedestrians with shelter from rain.
 - (e) Constructed with a fascia no deeper than 500 mm.
 - (f) Provided with under-verandah lighting.
- (ix) **Port Noise – Buildings used for residential purposes within the Port Outer Control Boundary (Port Chalmers)**

On any site located between the Port Noise Boundary and the Port Outer Control Boundary at Port Chalmers, as shown on District Plan Maps 65 and 70, any new building shall be acoustically insulated from external noise so as to meet an indoor design level of 40 dBA Ldn within any kitchen, dining area, living room, study or bedroom.

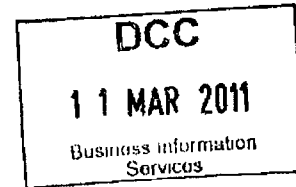
Rule 9.7.3 Discretionary Activities (Restricted)

The following activities are discretionary activities (restricted):

- (i) Any permitted activity which does not comply with the conditions of Rule 9.7.2. The Council's discretion is restricted to the condition or conditions with which the activity fails to comply.



C



Mr Paul Freeland
Dunedin City Council
PO Box 5045
DUNEDIN

8 April 2011

Dear Paul,

RE Port Otago, Next Generation Consent Applications

As per our telephone discussion of this morning, I write to you in regards the submission that the Dunedin City Council lodged in regards our Consent Application for Next Generation.

I will deal with the matters you raise in 2 separate parts.

Noise

In regards to the increase of noise levels and appropriate mitigation, I will answer in overview as follows:-

- (a) The District Plan has comprehensive provisions that mitigate the effects of port noise including identifying changes in the effects of port noise on residential properties and mitigating those changes.
- (b) Port Otago Ltd will continue to manage and mitigate port noise in accordance with the provisions in the District Plan and the reference to the insulation programme in section 6.8 of the application is a reference to the application of the existing provisions of the Plan.
- (c) The protection afforded to Harbour Terrace residents is that they will each be entitled to the benefits provided for in the plan if port noise received by their property exceeds the specified limits in the plan.
- (d) There is no need to amend the definition of "noise affected property" as it protects all properties in the residential zone in Port Chalmers (including Careys Bay).
- (e) Any increase in the port noise received by properties in Careys Bay does not require those properties to be within the Port Outer Control Boundary as being between the boundaries does not give any entitlement to mitigation or place any obligations on Port Otago but means that property owners face acoustic treatment obligations when building new homes.
- (f) The main means by which Port Otago Ltd complies with its duty under s16 RMA are through compliance with the Port Noise Management Plan and the Port Noise Mitigation plan.

We do note that there Rural and Residential 5 zones bordering the residential 1 zone in Port Chalmers and Careys Bay. A decision was made by the Environment Court that mitigation measures would be limited to the Residential 1 zone at Port Chalmers (including Careys Bay). The implications of any decision to extend the protection to give additional properties the right to mitigation is something that would need to be carefully considered. The starting point for any such consideration is the Port Noise Liaison Committee which is charged with setting priorities for mitigation.

As requested, I have included copies of 3 separate pieces of evidence presented at this weeks hearing in regards the operational noise aspects and point you to the following pertinent sections.

- 1 Opening Submissions - Len Andersen
a. paragraphs 79 -83 being relevant.
- 2 Evidence of Lincoln Coe
a. paragraphs 215 -225
b. particularly relevant is paragraph 224
"224 Port Otago is committed to continuing to implement the requirements of the District Plan as well as the Port Noise Management Plan and the Port Noise Mitigation Plan."
- 3 Evidence of Keith Ballagh
a. particularly paragraphs 42, 72 and 96.

Within all of this evidence and in response to answers to questions from commissioners during the course of this weeks hearing, we have consistently stated we are committed to implementing the requirements of the plan.

Tidal Inundation

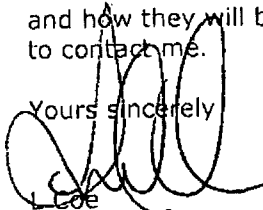
In regards to the matters you raise in relation to tidal inundation and the harbour ecosystems. I attach and refer you to a letter that has been provided to me by Rob Bell from NIWA who undertook the harbour modeling work associated with the project.

A copy of the NIWA report that Rob refers to in his letter is able to be downloaded from the project website at www.portotago.co.nz > Project Next Generation > Consent Documentation > Hydrodynamic Modelling (pdf file).

In summary I would comment that a thorough and robust assessment has been made of the potential effects which indicated that there will be a very minor effect only of increasing coastal inundation hazards along the coastal margins of the harbour, particularly in the context of a changing climate I am happy to discuss these matters if you wish.

I trust this information assists you in better understanding the effects of the project and how they will be managed, if you wish to discuss further please do not hesitate to contact me.

Yours sincerely



L. Coe
GM Infrastructure

D



24 March 2011

Mr Lincoln Coe
Technical Services Manager
Port Otago Ltd
PO Box 8
Port Chalmers 9023

Dear Lincoln

Project Next Generation: Dunedin City Council Submission (Submitter No. 148)

I confirm I have received a copy of the Dunedin City Council's (DCC) submission on the coastal permits the Port is seeking under project Next Generation.

In response to your request to comment on the coastal inundation aspects of DCC's submission, I offer the following points:

- a) Deepening the channel will only have a minor effect on the tidal volume flowing in and out of Otago Harbour, as most of the volume change will occur below the low water mark, slowly increasing the residual volume of the Harbour that is left below low tide as the dredging proceeds.
- b) A deeper channel will have a slight effect on the tidal range because there will be slightly reduced friction exerted by the deeper seabed along the main navigation channel in the Lower Harbour. This is explained in Section 2.1 of the NIWA report *Port of Otago Dredging Project: Harbour and Offshore Modelling*, that was lodged as part of the resource consent application to Otago Regional Council. The NIWA report quantifies the change in high-water tide height for an average tide as being no more than 4 mm in the Lower Harbour and Portobello Bay (see Figure 5.1 on p. 59 of the NIWA report). This would be about 5 mm for a larger spring tide. The average high tide would be slightly higher by up to 5 mm along the Harwood area, or 6 mm on a spring tide. These changes would be barely discernible, being within the accuracy range of most modern tide gauges.
- c) The largest waves within the Harbour are generated by either south-west or north-east winds that blow down the longest wind fetch of the Harbour. The maximum height of waves in Otago Harbour is limited by the fetch distance across or along the Harbour (which is governed also by the tide state) and are depth-limited by the shallow intertidal areas in the middle of both the Lower and Upper Harbour. Consequently, the channel deepening will have no effect on the magnitude of waves and resultant wave overtopping along the coastline of the Harbour, as the fetch lengths at the critical high tide periods remain unchanged and the extensive shallow intertidal areas will still be present, limiting the wave heights.

NIWA – experts in environmental science
www.niwa.co.nz

- d) Besides wave overtopping, the other main threat for inundation of low-lying roads and reserves on the Peninsula is the occurrence of high spring tides with storm surge resulting in elevated storm-tide levels. The key component of storm surges is the effect of inverted barometer, where low pressure weather systems "pull up" the water level. This aspect of storm surges will not be affected much by the channel deepening as the increased storm-tide levels in the Harbour will be driven by the regional set-up in inverted-barometer sea level in the ocean outside the Entrance. The other aspect of storm-tides is the wind set-up component from offshore winds and within-harbour winds. Modelling was undertaken early in the project using strong south-west and north-east winds of 20 knots in the harbour, finding that the differences between the deepened and present channels were similar to those using calm conditions i.e., the main difference is from the tide, which dominates the hydrodynamics of the Harbour.
- e) In the broader context, the effects of ongoing climate change will continue to increase sea levels. The Ministry for the Environment guidance manual for local government *Coastal Hazards and Climate Change*¹ recommends a risk-based approach to accommodating sea-level rise, starting with a baseline sea-level rise of 0.5 m by the 2090s and also considering at least 0.8 m by the 2090s. The slight increase in high tide of 4–6 mm that will result from the completed channel deepening project is a very small proportion of the expected rise in sea level that council will need to adapt to in managing coastal roads and adjacent reserves on the Peninsula.

I hope these comments help explain that the channel deepening will have a very minor effect on coastal inundation hazards of the coastal margins of Otago Harbour, especially in the context of a changing climate. Feel free to pass these comments onto Dunedin City Council.

Yours sincerely



Robert Bell
Project Manager

¹ See MfE website: <http://www.mfe.govt.nz/publications/climate/#local>
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171

Contship Australis, 3rd March 2003, Cnr Harington Point & Pipikaretu Road

