

26 October 2004



Port Noise Management Plan Port Chalmers

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1. Definitions

- 1.1 **“Acoustic Certificate”** means a certificate signed by an acoustic engineer approved for the purpose by the Port Noise Liaison Committee certifying Acoustic Treatment of a residential property and specifying a Certified Level of Port Noise
- 1.2 **“Acoustic Certificate Register”** means the register kept by Port Otago that contains a list of the addresses of all properties that have an acoustic certificate, the date of the certificate and the Certified Level of Port Noise for that property.
- 1.3 **“Acoustic Treatment”** means acoustical treatment of a residential property that achieves an indoor design level of 40 dBA L_{dn} (5 day) within any kitchen, dining area, living room, study or bedroom either with ventilating windows open or with mechanical ventilation installed when port noise is at or below the Certified Level of port noise and shall include the cost of testing and obtaining an Acoustic Certificate.
- 1.4 **“Certified Level of Port Noise”** is the maximum level of Port Noise that a residential property subject of an Acoustic Certificate for Acoustic Treatment can receive provided that the Certified Level of Port Noise for any property is set 3 dBA L_{dn} above the noise contour level for that property shown on the Port Noise Contour Map at the date the certificate was issued.
- 1.5 **“ L_{dn} ”** means the 5 day “Day Night Average Sound Level” as defined in NZS6801:1999 and is the night-weighted sound exposure level in A-frequency weighted decibels.
- 1.6 **“mechanical ventilation”** means either:
- (i) A mechanical system or mechanical ventilation systems capable of:
 - providing at least 15 air changes of outdoor air per hour in the principal living room of each building and 5 air changes of outdoor air per hour in the other habitable rooms of each building, in each case with all external doors and windows of the building closed with the exception of such windows in non-habitable rooms that need to be ajar to provide air relief paths;
 - enabling the rate of airflow to be controlled across the range, from the maximum airflow capacity down to 0.5 air changes (plus or minus 0.1) of outdoor air per hour in all habitable rooms;
 - limiting internal air pressure to not more than 30 Pascals above the ambient air pressure;
 - being individually switched on and off by the building occupants, in the case of each system; and
 - creating no more than L_{eq} 40dBA in the principal living room, no more than L_{eq} 30 dBA in the other habitable rooms, and no more than L_{eq} 40dBA in any hallway, in each building. Noise levels from the

mechanical system(s) shall be measured at least one metre away from any diffuser

or:

- (ii) Air conditioning plus mechanical outdoor air ventilation capable of:
- providing internal temperatures in habitable rooms not greater than 25 degrees Celsius at 5% ambient design conditions as published by the National Institute of Water & Atmosphere Research (“NIWA”) (NIWA, Design Temperatures for Air Conditioning (degrees Celsius), Data Period 1991-2000), with all external doors and windows of the habitable rooms closed;
 - providing 0.5 air changes (plus or minus 0.1) of outdoor air per hour in all habitable rooms;
 - each of the air conditioning and mechanical ventilation systems shall be capable of being individually switched on and off by the building occupants; and
 - creating no more than L_{eq} 40dBA in the principal living room, no more than L_{eq} 30 dBA in the other habitable rooms, and no more than L_{eq} 40dBA in any hallway, in each building. Noise levels from the mechanical system(s) shall be measured at least one metre away from any diffuser.

and

- a mechanical kitchen extractor fan ducted directly to the outside to serve any cooking hob, if such extractor fan is not already installed and in sound working order.

1.7 “**Noise Affected Property**” (plural is “**Noise Affected Properties**”) means a property used for residential purposes that is situated in the Residential 1 Zone at Port Chalmers (including Careys Bay) and identified on the Port Noise Contour Map as likely to receive levels of Port Noise at or above 55 dBA L_{dn} but excludes properties that have received Acoustic Treatment and are receiving Port Noise at or below the Certified Level of Port Noise.

1.8 “**Noise Mitigation Budget**” is the sum of money allocated by Port Otago for noise mitigation in accordance with paragraph 6.2 hereof.

1.9 “**Port Noise**” means:

- (a) Noise generated within the Port 1 Zone; and
- (b) Noise emanating from ships at berth in the coastal marine area; and

- (a) Noise associated with the handling of cargo whether in the Port 1 Zone or the coastal marine area

and includes the following noise:

- (d) Noise from trains, trucks, machinery whether in the Port 1 Zone or the coastal marine area; and

- (e) Noise from administrative, repair, storage and maintenance activities;

but excludes

- (f) Noise from ships not at berth;

- (g) Noise associated with construction of permanent port facilities;

- (h) Noise from an emergency situation.

- 1.10 **Port Noise Contour Map**” means a noise contour map produced by Port Otago pursuant to its obligations under clause 7.1 of this Plan until any replacement map has been produced pursuant to 7.5 of this plan in which case the replacement map shall constitute the Port Noise Contour Map
- 1.11 **“Port Noise Mitigation Plan”** means the Port Noise Mitigation Plan of Port Otago created pursuant to Rule 25.1.2 of the Dunedin City Council District Plan.
- 1.12 **“Port Otago”** refers to Port Otago Limited. or its successor in title as owner of the land in the Port 1 Zone that is subject to the obligations of this Plan.

2. Introduction

- 2.1 This plan sets out the long-term commitment of Port Otago to the assessment and management of noise from port related activities. It also seeks to address the conflicts and/or incompatibilities that exist between the operational needs of the port and the amenity values in the area adjoining the port and to provide a framework for the Port Noise Mitigation Plan.
- 2.2 Port Otago's commitment is to take active steps to comply with the duty contained in Section 16 of the Resource Management Act 1991 which provides
- (1) Every occupier of land (including any premises in any coastal marine area), and every person carrying out an activity in, on, or under a water body or the coastal marine area, shall adopt the best practicable option to ensure that the emission of noise from that land or water does not exceed a reasonable level.**
- 2.3 The areas affected by port noise are shown on the Port Noise Contour Map. The noise levels that are experienced by the various properties may be higher than shown on the Port Noise Contour Map because of the effect of activities that are not port related activities or adverse meteorological conditions.
- 2.4 Port Otago uses the L_{dn} parameter as the basis of its management. In recognition of sleep interference from the noise, L_{dn} imposes a 10 dBA penalty for noise at night. L_{dn} is advocated in the port noise standard as an appropriate method to provide for noise management through the development of noise contours. These contours can be used to establish land use controls and this approach is used in the Dunedin City District Plan.
- 2.5 The Port Noise Standard is a critical tool in the implementation of this plan although the demands of operating a competitive business, the proximity of residents at Port Chalmers and the effect of ship noise all result in short term noise limits not being an appropriate method to control port noise.

3. The Objectives of this Plan

- 3.1 The objectives of this plan are:
- (a) To set out Port Otago's commitment to the management, minimisation and mitigation of port noise;
 - (b) To provide a framework for the Port Noise Mitigation Plan
 - (c) To provide a framework for the measurement, monitoring assessment, and management of port noise;
 - (d) To provide a framework for the reporting, and processing and investigation of complaints and feedback to the complainant;
 - (e) To provide a framework for identification of activities which give rise to concerns relating to noise;

- (f) To provide a framework for community input into noise management and noise mitigation at Port Chalmers with the objective of assisting the community to give practical guidance to Port Otago on noise management issues including the identification and implementation of the best practicable option to reduce port noise or to mitigate the effects of port noise;

3.2 This plan is to be supported by the following:

- (a) The appointment by Port Otago of a noise officer (“the noise officer”) who shall have minimum duties of being involved in port training to reduce noise where practicable, reporting to management, liaison, putting in place the decisions of the Port Noise Liaison Committee and maintaining the Acoustic Certificate Register.
- (b) Port Otago’s monitoring and management of noise;
- (c) The Port Noise Mitigation Plan;
- (d) The establishment and funding of the Port Noise Liaison Committee;

4. **Relevant Statutory Documents, Regulations, etc**

4.1 The relevant statutory documents that have a bearing on this plan are:

- The Resource Management Act 1991
- The (Proposed) Dunedin City District Plan
- The Regional Plan: Coast of the Otago Regional Council
- The New Zealand Coastal Policy Statement 1994
- The Port Noise Standard NZS6809:1999
- New Zealand Building Regulations 1992 in First Schedule The Building Code
- The Health and Safety in Employment Act 1992
- The Port Companies Act 1988
- The Health Act 1956

5. **Background and Current Situation**

5.1 **Background**

- 5.1.1 Noise from port related activities creates a significant resource management issue that requires a particular form of management. Some port related activities cannot be managed to avoid adverse effects beyond the boundary of the port.
- 5.1.2 Port Otago owns property in the Flagstaff Hill area of Port Chalmers, some of which is used as residential housing but the majority is held as an undeveloped “green area” or buffer zone.
- 5.1.3 In the past decade there has been considerable public attention and debate with regard to the development and use of the port facilities at Port Chalmers. There has been conflict between the success of Port Otago in attracting trade and the effects of port related activities on the established residential areas located adjacent to and in close proximity of the port.
- 5.1.4 There is a shortage of flat land at Port Chalmers resulting in controversy over developments that have taken place to extend the port’s operations onto reclaimed areas of Back Beach and Boiler Point.
- 5.1.5 This management plan is part of a comprehensive approach to address issues that have been ongoing for years where there has at times been an adversarial situation between Port Otago and other parties in hearings before the Council, Environment Court (formerly Planning Tribunal), High Court and Court of Appeal.
- 5.1.6 The work that has been done to date to quantify and address the issue of noise has included consultative processes but has lacked a formal framework in place to assist the parties in the resolution of their differences – the preparation of the (Proposed) Dunedin City District Plan and the development of the Port Noise Standard resulted in the first drafting of this plan and since that time the aims and objectives of the plan have crystallised with the recognition by Port Otago that the successful operation of this plan is the best available process for management of noise.

5.2 **Physical area of concern**

- 5.2.1 The areas that this plan covers are limited by the attached Port Noise Contour Map and include those residential, commercial and public areas at Port Chalmers not owned by Port Otago which are affected by noise from the Port’s activities.

5.3 **Port Otago’s activities**

- 5.3.1 Port Otago is a critical facility to the well being of the region’s communities as it operates the only commercial port with international trade directly serving the Otago region. Port Otago serves as direct employer of some 210 people in the greater Dunedin area.
- 5.3.2 The port is a transportation hub. Port related activities include ships berthing and at berth, and activities on wharves and on land including berthing, departure and movement of ships, storage areas and cargo handling, handling of goods, and all

activities associated with the movement, storage and handling of cargo within the port area. Land transport to and from the port is by road and rail.

- 5.3.3 The hours of operation of port related activities are dictated by the scheduling requirements of the cargo owners and shipping lines. The viability and competitiveness of the port depends on its ability to provide a service that is able to meet all future requirements of the cargo owners, shipping lines and port operators on a round-the-clock basis.
- 5.3.4 Port Otago provides an integrated service including storing, cleaning, washing and repairing of insulated containers, all of which are crucial for agricultural exports. Extensive log and woodchip storage facilities also ensure that the forestry industry has export facilities. An expanding part of the business is that of warehousing of various dairy and forestry products, and subsequent packing of containers for export.
- 5.3.5 The cargo passing through the port is handled by Port Otago as well as other stevedores and cargo handlers, each utilising its own plant and equipment.

5.4 **Other Businesses/Organisations Participating in the Port's Operations**

- 5.4.1 Various other businesses and organisations participate in port related activities and these include:

- Shipping lines
- Cargo owners
- Stevedores
- Log marshallers
- Woodchip handlers
- Ship builders/repairers
- Service suppliers
- Transport contractors
- Rail Services

- 5.4.2 Each of these port related activities generate port noise which creates difficulties applying the traditional approach of requiring the “user” to be responsible for the effects of their own noise generation.

5.5 **Sources of Noise and the Existing Noise Environment**

The following sources of noise may be present at the port at any time, either of short duration or for extended periods:

5.5.1 **Ships at berth, including their generators**

This is noise which continues for the whole time, day and night, that the vessel is in port and is mainly caused by the generators which provide power to run winches, refrigeration plants, integrated refrigeration units, heating and lighting, etc. This is a fairly constant noise for the full duration of the ship's stay on the berth.

5.5.2 **Road and rail vehicles within the port area**

Road deliveries of logs are normally during daylight hours but woodchip deliveries often continue into the night. The vehicles delivering containers to or removing containers from the port are generally concentrated during the daylight hours but can continue throughout the night on occasions. Rail traffic is brought in by diesel locomotive and although the bulk of movements are in daylight hours, there is some nighttime activity.

5.5.3 **Machinery and equipment working within the port area on port activities**

This includes the activities of straddle carriers, forklift trucks of various sizes, empty container handlers, log loaders, butting tractors, bulldozers (for stockpiling chips), the woodchip conveyor gantry system, etc. This work can continue for the whole period that the ship is in port, although it is at times less intensive at night, where operational requirements and those of the shipping line allow.

5.5.4 **Machinery, vehicles, plant and equipment engaged in repair or maintenance activities within the port area**

This generally involves only small numbers of items such as welding machines, compressors, light vehicles, etc but it may also include large numbers of heavy plant during large projects. This work is sporadic, depending on the nature of breakdowns and the urgency of the work that is required.

5.5.5 **Cooling units on refrigerated containers**

This covers both the “tower” type of units that are fixed on site, as well as the “integrals” which are built into the containers. This noise is very constant in nature and the numbers of units is very dependant on the seasonal throughput of refrigerated containers.

5.5.6 **Noise associated with loading and unloading of vessels, vehicles and trains**

This includes the engines on the tugs, ship and shore-based cranes, lifting of hatches, sliding containers into the guides on the vessel, connecting and disconnecting the container lifting gear butting of logs, lifting of logs and placing them into the cradles prior to lifting, etc. This is often sporadic in nature and can give rise to “bangs” and “knocks”.

6. Port Otago's Obligations

- 6.1 Port Otago has a continuing obligation to investigate and adopt the best practicable option to minimise the emission of port noise.
- 6.2 Port Otago shall allocate a Noise Mitigation Budget to be used in accordance with the Port Noise Mitigation Plan as follows:
- (a) The chief executive of Port Otago will each year seek Board approval for a Noise Mitigation Budget for the next financial year after consultation with the Port Noise Liaison Committee;
 - (b) The Board of Port Otago shall allocate a Noise Mitigation Budget for each year commencing in the 2004/2005 financial year, being a budget that the Board can reasonably provide for the Port Noise Liaison Committee to progress over time its mitigation responsibilities under the Port Noise Mitigation Plan, and to investigate and recommend noise reduction measures at Port Chalmers;
 - (c) The Board of Port Otago will advise the Port Noise Liaison Committee of the amount of the Noise Mitigation Budget as soon as it is approved.
- 6.3 Port Otago shall take all practical steps to implement the recommendations of the Port Liaison Committee that are for Acoustic Treatment for noise affected properties identified on the Port Noise Contour Map as being predicted to receive Port Noise at levels in excess of 55 dBA L_{dn} and shall take all practical steps to implement other recommendations that are cost-effective and do not compromise the efficiency safety and effectiveness of its port operations provided that Port Otago's financial obligations in any financial year shall be limited to the amount specified in the Noise Mitigation Budget.
- 6.4. Port Otago's obligations also include:
- (a) Port Otago shall appoint a Noise Officer (who may also have other duties) and the Noise Officer's duties shall include:
 - (i) Advising the management of Port Otago of recommendations of the Port Noise Liaison Committee and reporting to the Port Noise Liaison Committee on implementation of decisions; and
 - (ii) Investigation of options and implementation of procedures for noise reduction through port operational procedures and staff and contractor training.
 - (b) Port Otago shall actively consider at all times options for reducing noise including, but not limited to, recommendations from the Port Noise Liaison Committee;
 - (c) Port Otago shall monitor noise and report as set out in section 7 of this Plan;

- (b) Port Otago shall provide sufficient secretarial and administrative support to the Port Noise Liaison Committee to enable it to discharge the functions set out in Section 9 of this Plan;
- (c) Port Otago shall implement the Port Noise Mitigation Plan;
- (f) Port Otago shall deal with noise complaints in accordance with Section 10 of this Plan;
- (g) Port Otago shall make available to the Port Noise Liaison Committee, the Dunedin City Council or the Otago Regional Council on request all information Port Otago has as to port noise and meteorological conditions;
- (h) Port Otago shall maintain the Acoustic Certificate Register for inspection by any member of the public on request during normal office hours and provide the Dunedin City Council and Port Noise Liaison Committee with a copy of the Acoustic Certificate for each property that has received Acoustic Treatment and send particulars of the register to the Dunedin City Council;
- (i) Port Otago shall advise the Port Noise Liaison Committee of the addresses of all residential properties owned by Port Otago;
- (j) Port Otago shall supply a free copy of this plan and the Port Noise Mitigation Plan to any member of the public on request.
- (k) Port Otago shall advise the Port Noise Liaison Committee forthwith if any recommendation is not to be implemented together with an explanation of the reason for reasons for non-implementation.

7. Noise monitoring and contours

- 7.1 The Port Noise Contour Map annexed hereto and marked “A” shows predicted Port Noise levels based on a current busy five day operating scenario calculated as L_{dn} at one dBA contours to provide for the identification of Noise Affected Properties and shall also identify as far as possible those Noise Affected Properties estimated to be receiving levels of 65 dBA L_{dn} or greater.
- 7.2 Port Otago shall maintain and operate a permanent noise monitoring station at the location 4B on the map annexed hereto and marked “B”.
- 7.3 Port Otago shall carry out monitoring as necessary at locations 1 to 7 on the map annexed hereto and marked “B” to calibrate and ensure that the Port Noise Contour Map provides an accurate modelling of Port Noise using a busy five day operating scenario.
- 7.4 Port Otago shall provide the latest results of the monitoring to each meeting of the Port Noise Liaison Committee in a summary form showing L_{dn} levels.
- 7.5 Whenever the Port Noise Contour Map no longer provides an accurate model of the effects of Port Noise on a busy five day operating scenario then Port Otago shall prepare a replacement Port Noise Contour Map and forthwith deliver a copy to the Dunedin City Council and Port Noise Liaison Committee.
- 7.6 The copy of the Port Noise Contour Map attached to this plan shall be replaced with the new Port Noise Contour Map every time a replacement Port Noise Contour Map is prepared.

8. **The Port Noise Liaison Committee: Establishment and Meetings**

- 8.1 The Port Noise Liaison Committee is established by altering the membership of the Port Environment Liaison Committee (ie April 2004). The Port Environment Liaison Committee will therefore undertake the functions of the Port Noise Liaison Committee.
- 8.2 The Port Noise Liaison Committee has a membership that ensures the following parties are all represented on the committee – Port Otago’s Board of Directors management; port users and cargo owners; Dunedin City and Otago Regional Council; residents of the communities adjacent to the port and users of recreational facilities.
- 8.3 The membership shall be 16 and shall comprise:
- 1 Member of the Board of Directors of Port Otago
 - 2 Members of the Port Otago management (including the Noise Officer)
 - 3 Representatives of port users and cargo owners appointed by Port Otago
 - 1 Dunedin City Council officer
 - 1 Otago Regional Council officer
 - 2 Representatives of residents who must reside in the Flagstaff Hill/Port Peninsula area appointed by the Chalmers Community Board but such representatives shall not be members of the Chalmers Community Board
 - 1 Representative of the residents from the Careys Bay area appointed by the Careys Bay Association Inc
 - 1 Representative from the central Port Chalmers area appointed by the Chalmers Business Community
 - 3 Representatives of users of recreational facilities at Port Chalmers (one appointed by the Port Chalmers Yacht Club, one by the Port Chalmers Recreational Sports Fishing Club and one by the Port Chalmers Rowing Club)
 - 1 Representative of the Port Chalmers Community Board.
- 8.4 At its first meeting the Port Noise Liaison Committee shall adopt a set of standing orders to regulate its procedure.
- 8.5 In undertaking the business of the Port Noise Liaison Committee, each member shall in good faith endeavour to achieve consensus on all issues before the Committee.
- 8.6 The Port Noise Liaison Committee shall have power to vary the constitution of its membership pursuant to a resolution passed by 80% of its members.
- 8.7 The meetings of the Port Noise Liaison Committee shall not be open to the public or media but members shall be free to disclose all matters discussed at a meeting unless that member has agreed that a particular matter will be discussed in confidence.
- 8.8 Port Otago will provide secretarial and logistic support for the Port Noise Liaison Committee.

- 8.9 The Noise Officer shall arrange for the committee to meet every six weeks at a time convenient to members and shall call an emergency meeting of the committee within 3 days of receiving a written request for an emergency meeting signed by at least four members of the Committee.
- 8.10 All members shall report to the body that appointed them following each meeting of the Port Noise Liaison Committee.

9. **Port Noise Liaison Committee: Functions**

- 9.1 The Port Noise Liaison Committee shall prepare draft objectives for the management of noise over time recognising the operational needs of the port balanced by consideration of the needs of the port's neighbours for approval by the Board of Port Otago.
- 9.2 The Port Noise Liaison Committee shall carry out the functions given to it by the Port Noise Mitigation Plan.
- 9.3 The Port Noise Liaison Committee shall consider all complaints of port noise received and record it on the register of noise complaints and those received by the Dunedin City Council. The Committee shall be briefed on the response to the complaints via the Port Otago or where appropriate the Dunedin City Council and, where necessary, the Committee will recommend further investigations into issues raised by complaints, or actions to prevent a recurrence of the complaint.
- 9.4 The Port Noise Liaison Committee shall consider all noise issues arising from port related activities considering:
- (a) Any objectives set by Port Otago;
 - (b) Port Otago's acceptance of the obligation to manage noise emanating from port operations;
 - (c) The Port Noise Mitigation Budget;
 - (d) The obligation on all port users to adopt the best practicable option to ensure the emission of noise does not exceed a reasonable level.
- 9.5 The Port Noise Liaison Committee shall monitor Port Otago's performance of its obligations under this plan and the Port Noise Mitigation Plan and provide recommendations to assist Port Otago in the continued fulfilment of such obligations.
- 9.6 The Port Noise Liaison Committee shall produce an annual report to the board of Port Otago with a copy sent to all parties with a power of appointment under Clause 8.3 hereof.

10. **Complaints**

Port Otago shall maintain a register of noise complaints so that whenever a noise complaint is received, Port Otago will advise Dunedin City Council (if the complaint is not received through Dunedin City Council) and will:

- (a) Record the details of the name and address of the complainant and the time of the complaint;
- (b) Record a description of the noise, the estimated time the noise occurred and identify, if possible, the source of the noise;
- (c) Take steps to investigate the noise complaint as soon as practicable;
- (d) Report to the complainant and to the Dunedin City Council;
- (e) Record the steps taken to investigate the noise complaint and to resolve or mitigate the noise issue in the noise register;
- (f) Report the details of the complaint and action taken to the next meeting of the Port Noise Liaison Committee.

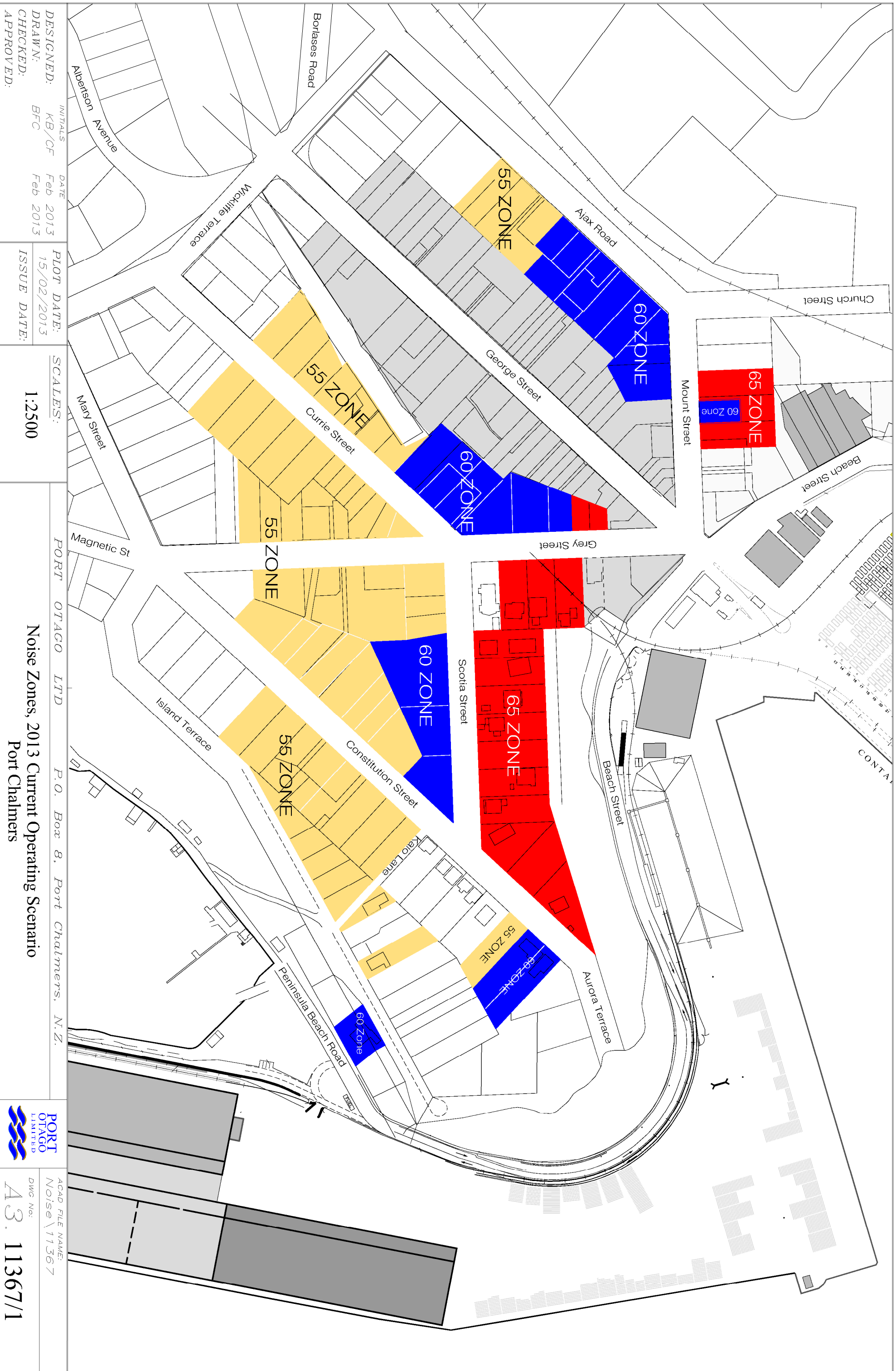
11 **Alterations to this Plan**

11.1 This Plan may be altered by resolution of the Board of Port Otago.

11.2 Any amendments to this Plan will not take effect unless and until consented to by both the Dunedin City Council and the Otago Regional Council.

Dated 26 October 2004

J G Gilks
Chairman of Directors
Port Otago Ltd



DESIGNED: KB/CF DATE: Feb 2013
 DRAWN: BFC DATE: Feb 2013
 CHECKED: DATE:
 APPROVED: DATE:

INITIALS: KB/CF DATE: Feb 2013
 BFC DATE: Feb 2013

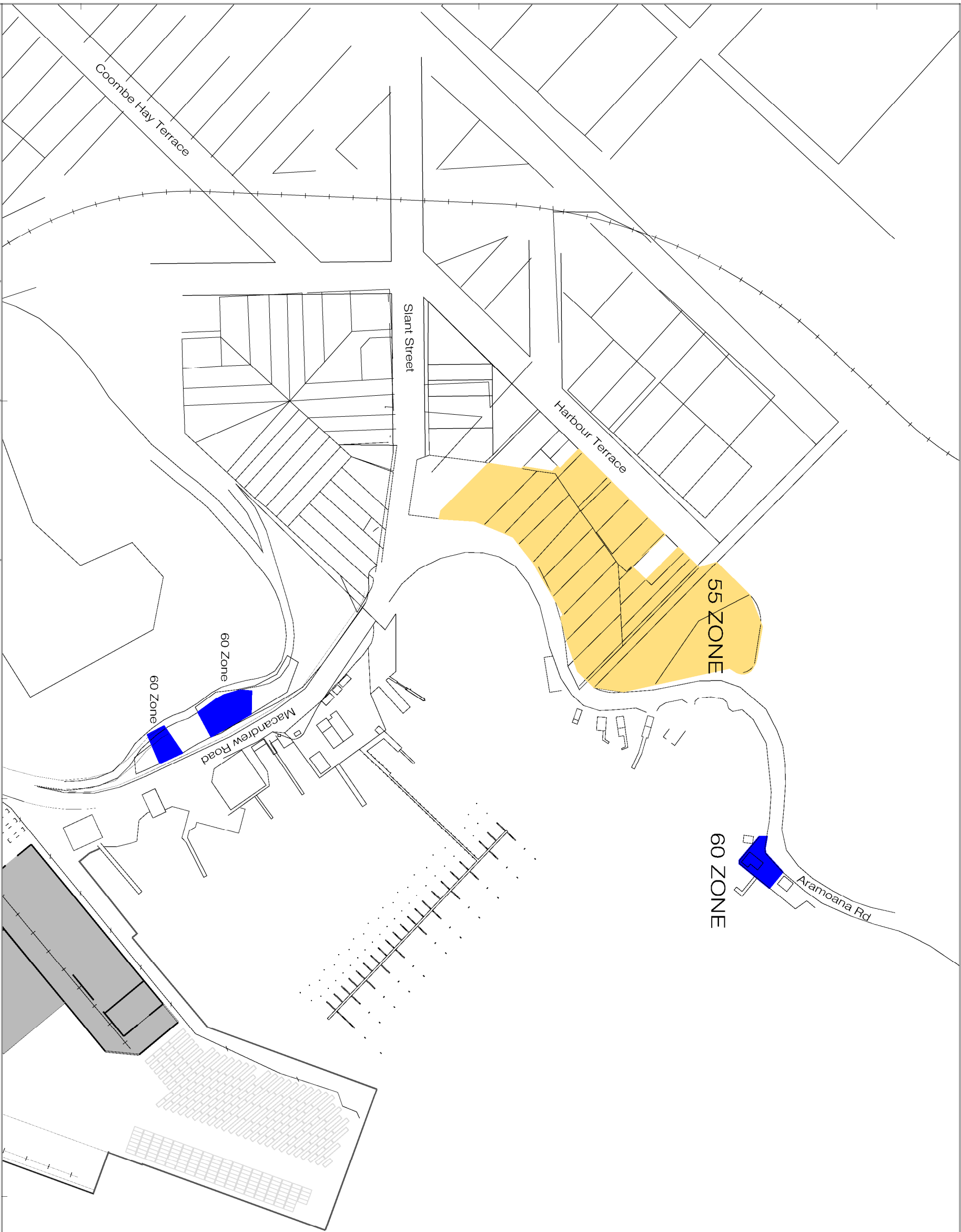
PILOT DATE: 15/02/2013
 ISSUE DATE:

SCALES: 1:2500

PORT OTAGO LTD P.O. Box 8, Port Chalmers, N.Z.
 Noise Zones, 2013 Current Operating Scenario
 Port Chalmers

ACAD FILE NAME: Noise\11367
 DWG No: A3. 11367/1





DESIGNED: *INITIALS* KB/CF DATE Feb 2013
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PLOT DATE: 15/02/2013
 ISSUE DATE:

SCALES: 1:2500

PORT OTAGO LTD P.O. Box 8, Port Chalmers, N.Z.
Noise Zones, 2013 Current Operating Scenario
 Careys Bay



ACAD FILE NAME: Noise \11367
 DWG No: A3, 11367/2