Port Environment Plan

2018 / 2019

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Document Revision History

Since its development and ratification in 1999, the document has been updated on an annual basis. The revision history included here only includes the past 5 years' history of revisions, documents dated 2014 and earlier contained full revision histories.

Plan Year	Status	Reviewed By	Date
Port Environment Plan 2011	adopted for further 12 months	PENLC	October 2011
Port Environment Plan 2012	adopted for further 12 months including the addition of a new Cruise Ship Section	PENLC	October 2012
Port Environment Plan 2013	adopted for further 12 months	PENLC	September 2013
Port Environment Plan 2014	adopted for further 12 months	PENLC	September 2014
Port Environment Plan 2015	adopted for further 12 months	PENLC	September 2015
Port Environment Plan 2016	adopted for further 12 months	PENLC	October 2016
Port Environment Plan 2018/2019	adopted for further 12 months		

SECTION A: ENVIRONMENTAL MANAGEMENT PLAN OVERVIEW

1. Introduction

This plan was first developed in 1999 by the Port Environment Committee to ensure a long-term commitment by Port Otago Limited to the environment in which the port operates. The plan pre-dates the 2004 environment court decision on noise, which set the noise measurement, noise management plan, noise mitigation plan, and the membership of the Port Environment/Noise Liaison Committee. The plan is to be supported by the following:

a) A clear statement of commitment to the development of an environmental plan which will be included in the port's Statement of Corporate Intent.

b) A Liaison Committee including members of the local community to ensure that the various issues which have been identified can be discussed and worked through.

c) The port using every opportunity to demonstrate good neighbourliness to the Port Chalmers community.

d) The identification of specific items which may be put forward for inclusion in the annual budget, to address environmental issues identified by the plan and the Liaison Committee.

2. Objective of the Plan

a) The objective of this plan is to establish an ongoing framework for Port Otago's management team to work with the community and the city to resolve issues of environmental concern in the Port Chalmers area.

3. Terms of Reference, Mission, Structure, and Membership

a) Terms of Reference - The Port Environment Liaison Committee is made up of representatives of both the community affected by port activities at Port Chalmers and Port Otago Limited.

b) Mission - The committee is set up to work through environmental issues associated with the operation of the port, minimising where practicable the effects of these on the immediate community without impinging on the efficient operation of the port.

c) Structure - The Committee will act in an advisory capacity to Port Otago with individual members reporting to the community groups represented.

The Committee is to annually review the Port Environment Plan, which provides the framework for the activities of the Port Environment Liaison Committee.

The Committee will report to the Port Chalmers community on progress against the Port Environment Plan objectives.

An open meeting of the Port Environment Liaison Committee is to be held annually for the Committee to report on projects.

All activities of the Committee must comply with provisions of existing District Schemes and any Statutory requirements.

The Committee is to meet at least six times per year.

Port Otago Limited is to provide meeting facilities and clerical support and reporting functions to the Committee.

d) Committee Membership - The membership of the committee, including number and spread of representatives will be as follows:

Association	No. of Members
Member of the Board of Directors of Port Otago	1
Members of the Port Otago management (including the Noise Officer)	2
Representatives of port users and cargo owners appointed by Port Otago	3
Representatives of residents who must reside in the Flagstaff Hill/Port Peninsula area appointed by the West Harbour Community Board but not members of the West Harbour Community Board	2
Representatives of the residents from the Careys Bay area appointed by the Careys Bay Association Inc	2
Representative from the central Port Chalmers area appointed by the Chalmers Business Community	1
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)	3
Representative of the West Harbour Community Board.	1
Representative from the Otago Regional Council	1
Representatives from the Dunedin City Council	1

This membership may be altered subsequently by the Committee by way of amendment to Section III of the Port Environment Plan, which states that the committee has the power to vary the constitution of its membership pursuant to a resolution passed by 80% of its members.

4. Implementation

a) It is the intention that the committee will take responsibility for the successful implementation of this plan. This will involve the following tasks, amongst others:

i. Arrange for an annual meeting of the committee which will review the activities of the past year, raise issues of concern and set targets and priorities for the year ahead. This meeting is to be an open meeting which may be attended by residents of the local area and all the committee representatives.

ii. Schedule and hold other meetings during the year as the committee sees fit to deal with specific subjects.

iii. Elect/select a chairman of the committee and determine if and when the chairmanship should be rotated.

iv. Arrange site visits from time to time so that members of the committee and the general public can see and hear about the committee's activities.

v. The time for the meetings is to be in the middle of the day or in the early evening.

b) The committee's inaugural meeting was held in December 1998. Meetings have been held on a regular basis since this time.

5. Physical Area of Concern

a) The areas which this plan covers are:

i. All land being used for port related activities in Port Chalmers.

ii. All land on Flagstaff Hill which is undeveloped and presently owned by Port Otago.

iii. All the residential, commercial and public areas of the Port Chalmers area which are affected by the port's facilities to a greater or lesser extent.

iv. Each of these areas will involve different aspects of the environment plan.

6. Port Otago's activities and position in the community

a) The port is essentially an industrial site and a transportation hub. Port operations include ships at berth and manoeuvring within the coastal marine area, and various activities on wharves and on land. These activities include 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. Transport to and from the area is handled by road and rail.

b) Port Otago is the gateway for approximately 250,000 cruise passenger each year into the Otago region delivering economic value in excess of $45m per annual into the wider economy.

c) Port Otago is also a landlord with property holdings in the Flagstaff Hill area of Port Chalmers, some of which is developed as residential and a large portion of which is maintained in an undeveloped "green area" or buffer area.

d) Port Otago serves as direct employer of approximately 310 people in the greater Dunedin area and is the only commercial port directly serving the Otago region. It provides facilities for the storing, cleaning, washing and repairing of refrigerated containers that are crucial for agricultural exports. Log storage facilities also ensure that the forestry industry is well serviced.

e) The cargo passing through the port is handled by Port Otago as well as other stevedores and cargo handlers, each utilising their own plant and equipment, and controlling their own operations. The hours of operation in the port are dictated by the schedules and requirements of the international shipping lines.

f) Port Otago remains a critical facility to the wellbeing of the region's communities.

7. Other businesses/organisations closely allied to this Plan and its aims/objectives

a) Various businesses and organisations have a very close connection with port operations and these include (an attempt has been made to estimate the number of each category and the approximate numbers are shown in brackets):

Organisation	No.
Shipping lines	8
Cargo owners	100
Stevedores	3

Log marshallers	2
Ship builders / repairers	4
Dunedin City Council departments, Chamber of Commerce and Industry, Otago Regional Council, Service suppliers	50
Retailers / wholesalers	100
Transport contractors	20

8. Local residential communities affected by the Port's activities and their interrelationship with the Port

a) Port Chalmers and the adjacent residential communities have evolved with a strong connection with the harbourside. Most families in the district are involved with the harbour in one way or another. For many, particularly in the past, it has been a source of employment both on the wharves and in the fishing industry. For many more the harbour is a source of recreation and pleasure, encouraged by the easy access and proximity of the harbour. In addition to the area being used by individuals and their families, various clubs and societies have been formed over the years for rowing, sailing and sea cadets. For others their enjoyment has been more passive in nature - fishing, walking, picnicking, swimming or just enjoying the view from their homes.

9. Other individuals affected by the port operations

a) In addition to those living at Port Chalmers, many other people also use the port area as their access to the harbour. Careys Bay provides a mooring and servicing area for inshore fishing and pleasure craft, and for the shipbuilding and repair industries.

b) From Dunedin to Port Chalmers there are few places offering easy access to the water and there are no launching facilities. For a large number of Dunedin boat-owners the Back Beach and Careys Bay ramps are in big demand as are parking and rigging areas.

SECTION C: ENVIRONMENTAL ISSUES

10. Environmental issues identified

a) The following environmental issues have been identified to improve the interface between the port and the local community.

i. Public access to the harbour - Where possible, and where it does not conflict with the operation of the facilities, take the necessary steps to ensure that any members of the public who have reason to enter the port, can do so in selected areas in a safe manner.

ii. Landscaping of port development - Trying to create a softer interface between the industrial nature of the port and the adjoining recreational, residential and commercial areas.

iii. Lighting - Providing lighting in a way that avoids glare and light spill to adjoining areas while providing a secure and safe working area for the port and its personnel.

iv. Water quality - Working with the regulatory authorities to put structures and procedures in place to ensure that the waters of Otago Harbour are not adversely affected by discharges from the port activities.

v. Visual characteristics - Ensuring that the port's buildings, structures, equipment and facilities blend in with the character of the area, avoiding unnecessary clashing of styles, colours, glare etc wherever possible.

vi. Air quality - Limiting the impact from dust and fumes.

vii. Transport links- Ensuring that road and rail links with the port are accommodated in a safe and effective manner.

viii. Noise - Management of noise issues are in accordance with the Port Noise Management Plan and the Port Noise Mitigation Plan.

ix. Buffer zones - Where possible, buffer zones should be established to ensure that the local communities and the port can be suitably separated from each other.

x. Cruise Vessels – Port Otago and the Port Chalmers Community provide the best visitor experience available to visiting cruise ship passengers.

SECTION D: IDENTIFYING PROJECTS & ASSIGNING PRIORITIES

11. Identifying projects

a) The Port Otago management team, in consultation with the Port Environment / Noise Liaison Committee, will consider all the issues named above and will identify matters which require attention, assigning priorities to these projects wherever possible.

b) This will be an ongoing process which will require regular review.

SECTION E: 2018/2019 ENVIRONMENT PRIORITIES

12. Fishing Jetty

a) Completion of the Boiler Point Fishing Jetty

b) New boardwalk along the new road by C Shed

13. Flagstaff Hill

a) Secure a disposal site that minimises disruption on the community balanced against getting the project completed as soon as practical

b) Commencement of the removal of the spoils and benching

14. Asbestos free Port

a) Complete the removal of Asbestos and demolition of the Fryatt Street Sheds

b) Remove Asbestos in Plant Services building

c) Remove Asbestos and demolish Elephant House

d) Remove Asbestos and demolish WIC building

15. Noise Monitor Update

a) Develop reporting from the new real-time monitors

b) Publish real-time data on the Port Otago website

c) Integrate with the new telemetry software to improve the ability to identify training needs for Port Otago team and individuals

16. Te Rauone Beach

a) Complete the final design and specifications for the 3 groyne structure at Te Rauone Beach

b) Apply for resource consent post the receipt of the DCC Reserve redevelopment plan being approved

c) Move to tender and construction once terms agreed

17. Establish a Port Otago Community Infrastructure Fund

a) Develop a criteria for considering projects to recommend to Port Otago to fund from the annual allocation of up to $100k

b) Work with other community bodies to leverage funding and deliver improved infrastructure to the community

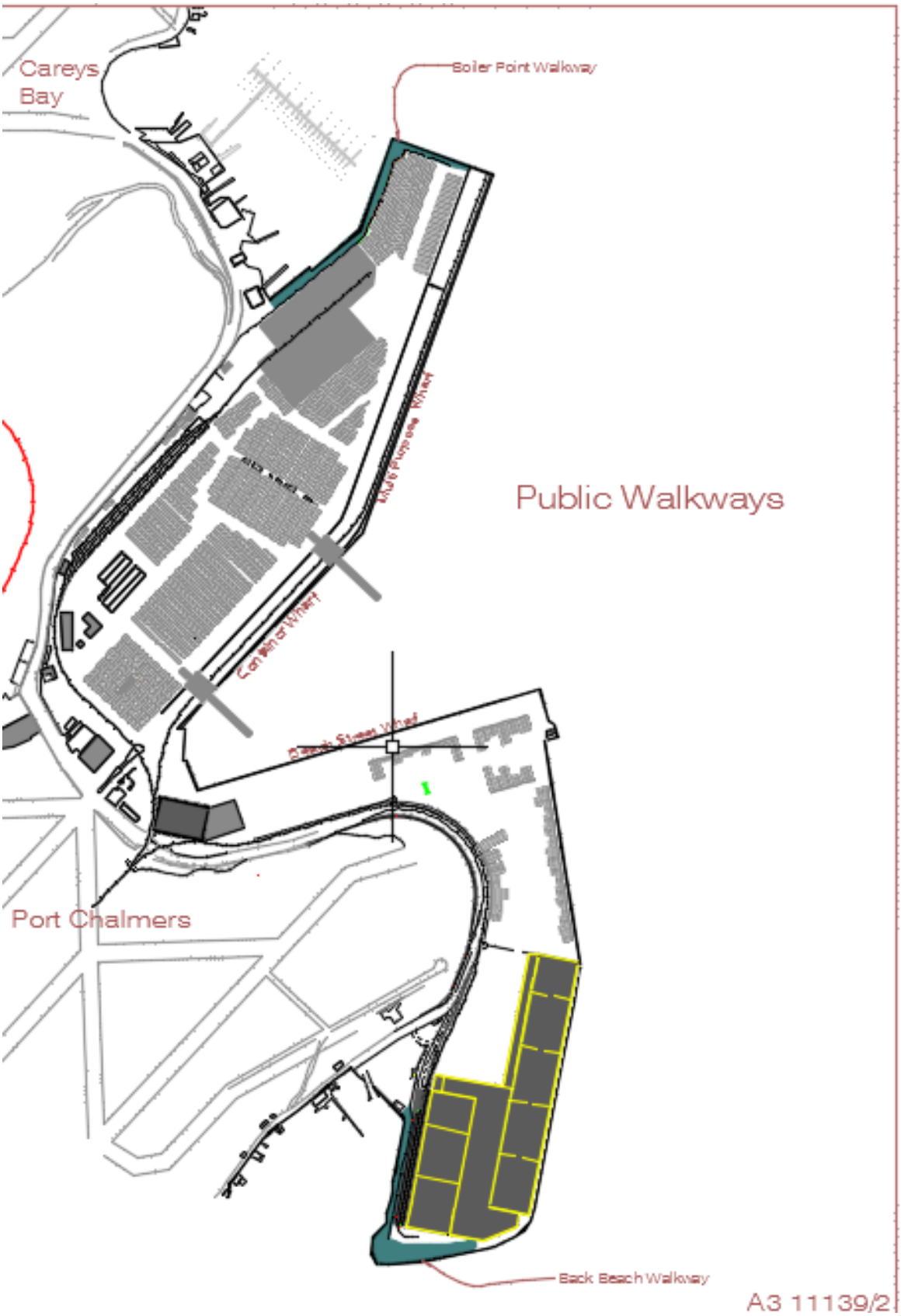
c) Suggested projects:

   i. Landscaping of the Boiler Point Walkway

   ii. Another Mural on A Shed

   iii. Toilets at Boiler Point carpark

APPENDIX A Current Port Layout and Community Location



APPENDIX B: Details of the Issues

Public Access to the Harbour

In order to comply with the Maritime Transport Act and the International Port Security Code, Port Otago is unable to provide public access to port areas. Limited access is available in Dunedin, around shipping and wharf operational requirements.

To offset, as much as possible, this loss of direct port access Port Otago has created and extended the public walkways around the Battery Point and Boiler Point reclamations.

1. Identification of issues

   Activities requiring consideration

   - Fishing
   - Sightseeing
   - Walking

2. Consideration of the various options which are available
   - Ongoing review of various options, none available at this point in time.

3. Achievements to date

Achievement
• Notice to anglers (updated at regular intervals, giving details of do's and don'ts, etc).
• Demarcation of permissible fishing area.
• Erection of public viewpoints near Scott Memorial and the Flagstaff Hill.
• Press notices.
• Extending walkway access and fishing areas at Battery and Boiler Points.
• Final access policy confirmed.
• Plans drawn showing the exact areas which may be used by the public.
• Demarcation of the areas where access is permitted.
• Educated the community on reasons for access restrictions and where safe access can be gained.
• Vantage points established outside the port for use by sightseers.
• Placement of sand on the beach at Careys Bay
• Extension of Boiler Point walkway to provide fishing access. The development included seating and placement of ship's anchor. (Note: in high winds access may be restricted for public safety reasons).
• Financial contribution towards the development of the walking track from the Boat Harbour to Ravensbourne in conjunction with the Otago Regional Council.
• Preliminary design work complete and consent obtained for construction of fishing platform at end of Boiler Point reclamation.
• 2017 Heritage Festival open day. A Shed and Tug Otago tour

4. Monitoring methods
   - Progress reports through Port Environment Noise Liaison Committee.

Landscaping of Port Development

The port is an industrial activity which over the years has impacted on the natural character of the area. Recent expansion has further modified the natural landforms and harbour area to an extent that efforts should be made to soften the visual impact by appropriate landscaping.

1. Identification of the issues

- Critical areas – edge of Back Beach reclamation, the Back Beach car park area.
- Flagstaff Hill including the cliff face, main entrance, along Beach Street.
- Macandrew Road, edge of Boiler Point reclamation.

2. Consideration of the various options which are available

- Maintain the status quo. (ie. complete the construction/development work in a neat and tidy manner but take no additional steps to beautify the finished product beyond those which have already been taken to date.)
- Attempt to create a pleasant landscaped form along the edge of the development which interfaces with the general public.

3. Achievements to date

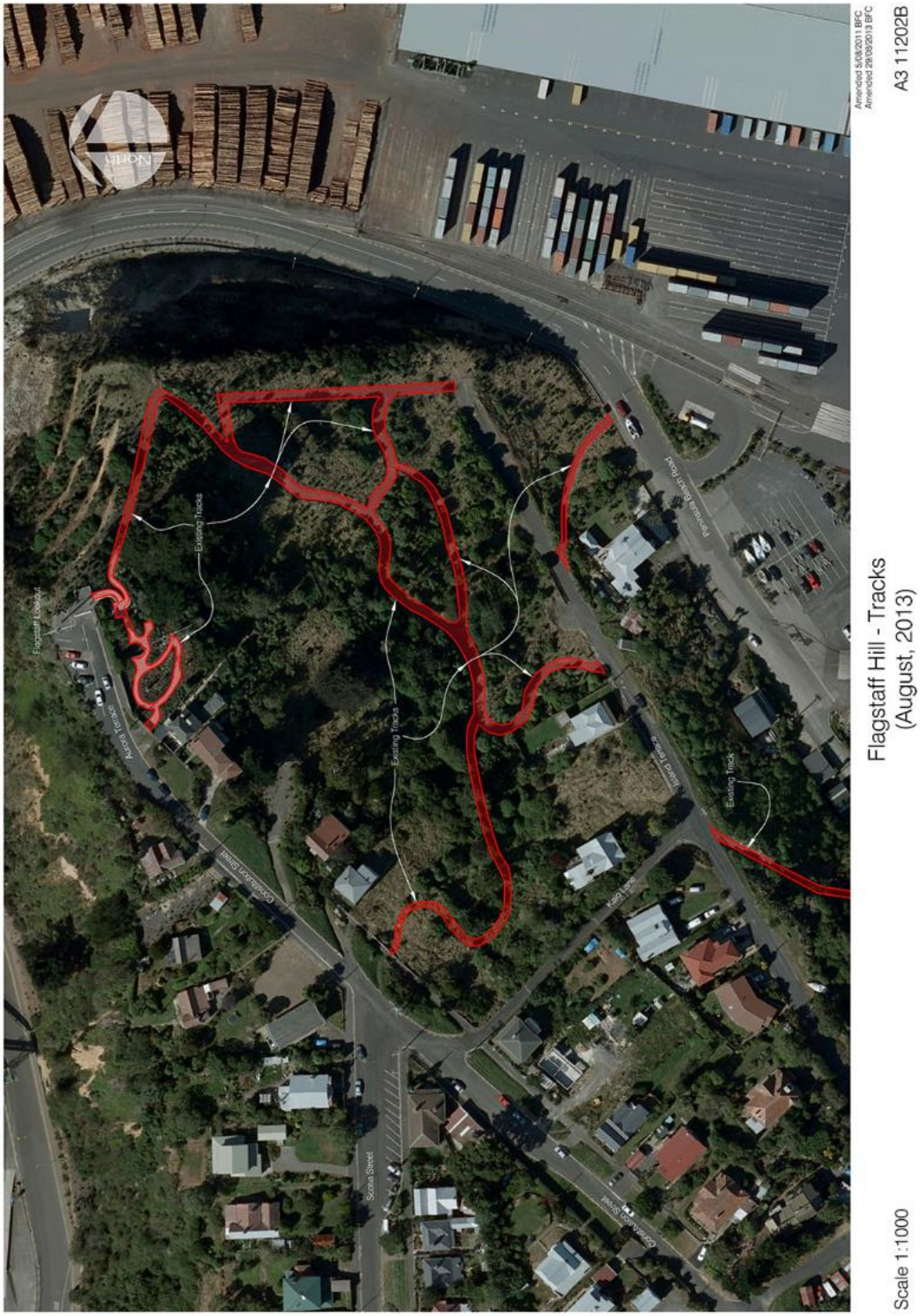
Year	Achievement
	• Landscaping of Flagstaff Hill, including walkways, plantings, a site for various artworks and an observation deck.
	• Landscaping of the Battery Point (Back Beach) reclamation, including extensive planting and the construction of a walkway and raised promontory at the end of the reclamation. Recently (2002) extension of landscaping and walkway along southern edge of reclamation.
	• Landscaping and planting on both north and south faces of Roseneath cutting.
	• Landscaping and planting of the Boiler Point reclamation works, including a walkway and public viewpoint.
	• Completed planting of shrubs Flagstaff Hill areas.
	• Completed planting of shrubs on vacant sections in Constitution Street and Island Terrace.
	• Planted rhododendrons along Beach Street and by Back Beach picnic area.
	• Hydroseeding of Flagstaff Hill lower slopes.
	• Extension of Boiler Point Walkway with fence / fishing areas, plus seating and placing of ship's anchor, garden borders and kiosk.
	• Landscaping completed in Dunedin around Harbourcold.
	• The landscaping of 4 Aurora Terrace and the display of Ralph Hotere's artworks.
	• Protection of existing areas and replacement of plants affected by construction of the Environmental Canopy over rail at D Shed, Back Beach.
2008/2009 year	• Major clean-up to landscape borders of Flagstaff Hill lookout to improve views and general tidiness. • Clearing and tidy up of Wiseman's Point. • Removal of fast-growing exotics from Back Beach landscape area and replacement with native trees. • Removal of large beech trees in front of office building and replaced with

	mature native lancewoods and ground cover plants • Major tidy up of Flagstaff Hill areas, with continued replenishment of plantings in the areas.
2009/2010 year	• Continued tidy up of areas on Flagstaff Hill, with removal of unwanted exotics and replenishment with native plantings. • Continued maintenance of all landscaped areas in Port Chalmers and Dunedin. • Possum control on Flagstaff Hill area. • Major tidy up and landscaping at Wiseman's Point.
2010/2011 year	• Completion of additional gravelled walking track from Island Tce to Constitution St. • Major tidy-up of water-tables and drainage, as well as addition of additional gravel surface on existing tracks. • Installation of "direction signs" for Flagstaff Hill tracks. • General and ongoing tidy up of flagstaff hill and lookout areas including removing some exotics and broom, clearing overhanging vegetation from paths and some replanting with preferred native species. • Continued maintenance of all other landscaped areas:- Boiler Point, Back Beach and Careys Bay.
2011/2012 year	• Planting of low growing plants behind container terminal tyre store where previous trees had been removed to allow for roof maintenance. • High shrubs at Flagstaff lookout thinned and trimmed to allow viewing of the lower Portobello Bay/Harwood area. The area around the microwave bunker was cleared and low growing plants added. • Water tables and box drains were installed at specific wet points on the Flagstaff hill tracks. There was also clearance work and planting immediately to the sides the newest track. • Extra plants were placed in various gaps in various areas over Flagstaff Hill. • The area identified as having fruit trees was cleared and some new fruit trees have been planted. • New planter boxes with shrubs and trees installed adjacent to the walkway behind A Shed where cruise ship passengers walk from the wharf to the main street.
2012/13 year	• Protection of some existing established planting as well as new landscaping of the site perimeter at the old Sawyers Bay tannery site development. • Planting of Kowhai trees along Beach St to complement the planter boxes from the previous year. • Continuation of the annual maintenance to walkways and garden areas:- Back Beach, Flagstaff Hill, Beach Street and Boiler Point.
2013/14 year	• Ongoing and general maintenance associated with tracks, paths and gardens, in accordance with the annual maintenance plan.
2014/15 year – main works in addition to normal maintenance plan	• Major tidy of overgrown and overhanging flaxes around Beach St and the foot of the hill with natives re-planted. • Removal of flaxes and careful trimming back of native vegetation at Flagstaff lookout which was obstructing views. • Felling and removal of old and large pine tree from Flagstaff Hill area which was potentially dangerous given its state and location.
2015/16 year	• Major tidy of Flagstaff Hill track down to Back Beach in front of no's 24 and 26 Island Terrace. • Planting of mature screening plants (native) on the southern creek boundary at Sawyers Bay warehouse site as visual and noise mitigation for residents in Noyna Road • Ongoing and general maintenance associated with tracks, paths and gardens,

	in accordance with the annual maintenance plan.
2016/17 year	• Ongoing and general maintenance associated with tracks, paths and gardens, in accordance with the annual maintenance plan.

4. Monitoring methods

Progress reports at Environment Committee meetings.



Lighting

Lighting structures and systems are necessary for the safe operation of the port. These systems can sometimes result in glare and light spill on surrounding areas outside the port.

a) Identification of the issues

- The following issues have been identified:
- The possible effect on road traffic.
- A potential loss of amenity (darkness and views).
- Sleep disturbance.

b) Consideration of the various options which are available

- Maintain the status quo. (ie. keep all the lighting structures and systems as they are now.)
- Identify possible areas where the lighting structures and/or systems can be modified or improved so that they become less of a nuisance to the general public, without compromising the safety of the workers in the port.
- In assessment and design of lighting alterations or additions, low energy use options and alternatives to be preferred where possible.

c) Achievements to date

Improvements have been made generally centering around the orientation of lights which were a nuisance to residents and/or road users.

Year	Achievement
2006/07	• New lights placed on three existing light towers at Beach Street wharf to improve lighting for 24 hour log loading and reduce light spill.
2007/08	• New light tower constructed adjacent to the log yard to improve lighting for 24 hour log loading.
Ongoing	• Staged replacement program for new energy efficient/low spill lights for the entire container terminal determined.
	• Implement first stage of energy efficient/low spill light replacement program (C-Block).
October 2010	• Completed second stage energy efficient/low spill light replacement programme (A-Block and Maintenance area light tower 11)
March 2011	• Presentation to the committee on lighting strategies and proactive management and energy efficiency initiatives
May 2011	• Review of Code of Practice undertaken
August 2011	• Completed third stage energy efficient/low spill light replacement programme (K/G blocks)
	• Adjustments and improvements to shed lights at Back Beach warehouses to reduce glare.
	• Installation of an 8.65m light tower in the northern end of the Boiler Point area, oriented to provide improved lighting in the roadway / aisle between container stacks for improved operational safety.
	• Automated control installed for all towers except for Beach Street and Back Beach, centralised at the Shift Managers' office which allows improved control for switching on/off.
2012	• Completed fourth stage energy efficient/low spill light replacement programme (central container terminal area).
	• Consenting and construction of Back Beach light tower at dairy warehouse completed. This improves operational safety for container and log loading operations.

October 2013	• Fifth and final stage energy efficient/low spill light replacement programme completed (single tower - southern terminal area).
	• A new light tower erected at Leith Wharf Dunedin to improve lighting during vessel loading.
	• Consenting and construction of new light tower at PCCT entrance using contemporary LED fittings and controls to reduce energy consumption and restrict light spill.
2015/16	• Progressive replacement of existing light fittings to LED as they fail to reduce energy consumption and minimise light spill, areas completed in 2015/16: • Macandrew Road PTI lights on boundary • Washpad lighting (33% complete to date) • Yard lighting tower 17 LED fittings (4 out of 6) • Crane walkway lighting • Office lighting (Yard control, Planning) • Staff carpark (Scott Base) • Floodlight on A shed South
	• New buildings (Sheds at Back Beach, Sawyers Bay and A Shed extension) are fitted with LED highbay lights with integrated lighting controls for occupancy and light level.
2016/2017	• Two new light towers LT17&18) with LED technology • Automated light system on light towers 15 & 16

d) Monitoring methods

- Annual reviews and reports from members of the public.

Water Quality

Stormwater runoffs result in discharges into the harbour from the hardstanding surfaces in the port area. These discharges can potentially include debris and pollutants. Resource consents from the Otago Regional Council control these discharges.

In addition, discharges in the Coastal Marine Area may include ballast water, bilgewater and sewage from small craft in the Carey's Bay fisherman's jetty area of the port. (Discharges from the large commercial vessels are controlled by national legislation which is administered by the Ministry of Fisheries.)

a) Identification of the issues

- Control of stormwater from all paved areas.
- Sewage from the fishing boats and yachts moored at the Careys Bay fishing wharf area.

b) Consideration of the various options which are available

- Ensure that all stormwater discharges are controlled by the ORC's Coastal Plan and permits.
- As sewage collection facilities are required for all new marinas, the possibility and/or practicality of providing such services to existing facilities (eg Carey's Bay fishing wharf) needs to be investigated.

c) Achievements thus far

Achievement
• All new stormwater connections since 1996 have been fitted with discharge controls

	• Information is being gathered about the details of all the older facilities to determine how they can be upgraded.
	• Survey of existing discharge points completed.
	• Alteration to survey and discharge points plan as a result of completing J Block pavement works.
	• Completion of upgrade of stormwater treatment and control as part of the straddle maintenance garage project.

d) Monitoring methods

- Compliance with statutes and consent conditions.
- Regular surveys of network / discharge points to assess condition, compliance and upgrade works necessary.
- Regular review of spill response policies and procedures.

Visual Characteristics / Aesthetics

Port Chalmers has a distinctive townscape with a theme of retained historical buildings. It is desirable that new industrial and commercial buildings and structures should be designed in sympathy with this character. Existing historical buildings should be retained where practically possible.

a) Identification of the issues

- All building developments in the port area must be cognisant of the historical nature of the Port Chalmers townscape.
- Any demolitions/alterations of older buildings should be handled as sympathetically as possible in an effort to retain the original character of the buildings wherever practical.

b) Consideration of the various options which are available

- Retain and maintain buildings of historical importance.
- Use landscaping and plantings to soften industrial buildings and structures eg fences.
- Use appropriate colour schemes.

c) Achievements thus far

Year	Activity
	• Some of the historical stone buildings have been retained (eg. the pumphouse).
	• Bluestone blocks from the port area have been re-used in landscaping works around the port and Carey's Bay.
	• Attention to species in planting on the new reclamations and Flagstaff Hill to promote native plants.
2004/05	• Completion of raising the forklift maintenance building, keeping in style and colour with existing buildings.
2005/06	• Completion of extension to spares shed building adjacent to Macandrew Road. Deliberately in keeping style, shape and colour with existing buildings and retaining existing trees and shrubs.
	• Completed construction of environmental canopy over Back Beach warehouse rail sidings with cladding colour for roof and west facing wall constructed in Forest Green to blend with surroundings.
	• Completed construction of the straddle maintenance building, keeping it in the style and colour with existing buildings.
	• Completed construction of Back Beach warehouse expansion. This construction infilled between D and E sheds and created a new

	marshalling area to minimise the amount of marshalling works completed in the open.
	• Completed construction of the second warehouse at the Sawyers Bay site.
	• Construction of the A Shed extension, this extension is to be utilised by cruise passengers during the season. This development included: • Relocation of C3 workshop • Removal of Beach Street substation (relocated transformer) • Progressing removal of woodchip gantry.
May 2015	• Demolition of engineering workshop at 16 Beach Street following substantial damage from a slip in May 2015. This included the removal of a large area of asbestos roofing.
October 2017	• Street Art on the A Shed

d) Monitoring methods

- Discussions with the committee for input

Air Quality

Operations at the port can result in dust. Sources include wind-blown dust and fertilizer (Ravensbourne). These can create a nuisance in some weather conditions.

a) Identification of the issues

- Dust from log berth

b) Consideration of the various options which are available

- Suppression of dust and fumes eg water to control dust in the log storage area.
- Proper management of the facility eg development of operations management plans by/for operators.

c) Achievements to date

Achievement
• Development of an environment plan by the log handling operator, C3 (to cover both noise and pollution issues)
• Removal of woodchip operation from the Port Chalmers footprint.
• Removal of wood chip gantry from site
• Replacement of concrete panel perimeter fence from around the old woodchip area

d) Monitoring methods

- Progress reports through Port Environment Noise Liaison Committee if required.

Transport Links

Transport of goods to and from the port can result in adverse effects on the adjacent land and road uses. Whilst Port Otago cannot materially affect what happens beyond its boundaries, it needs to ensure that road and rail traffic is efficiently and safely accommodated when it reaches the port.

a) Identification of the issues

- Issues which may arise include noise, debris on roadways and congestion (a safety issue particularly in the Port Chalmers shopping precinct.) Debris falling from empty trucks when they leave the port is a particular problem.

b) Consideration of the various options which are available

- Encourage use of the rail link – less congestion, safer, less noise, no debris on roads, fuel saving, less emissions to atmosphere.
- Use the Victoria Channel where practicable –but limitations recognised.
- Support proposed roading improvements – eg tunnel bypass to Port Chalmers main street.
- Encourage cleaning of logging trucks at forests.
- Education and communication with transport operators.

c) Achievements to date

Year	Achievement
	• Provision of additional rail sidings to encourage use of rail network.
	• Assist Dunedin City's Traffic Engineers with investigations into improved road access to and through Port Chalmers.
	• Completion of additional rail siding at Back Beach to support increase in dairy products transported by rail.
	• Completed construction of environmental canopy over Back Beach warehouse rail sidings.
	• Input into Dunedin City Council transport strategy with the proposed realignment of SH88 cyclist/pedestrian separation being included within that strategy.
	• Contribution towards the development of the walking track from the Boat Harbour to Ravensbourne in conjunction with the Otago Regional Council.
2007/08	• Cleanup and additional slip management works at the base of Flagstaff Hill slip following further events. Commencement of initial design work and options for medium / long term strategy
2007/08	• Report commissioned by Port Otago Ltd from Traffic Design Group Ltd to ascertain existing capacity, level of service and transport related community amenity and safety aspects of SH88. Copies of the report provided to Chalmers Community Board, DCC, ORC and NZTA.
2010/11	• Design works and engineering specification completed for the remedial works to remove the remaining rock material from Flagstaff Hill.
	• Completion of construction works for the right-turn slip-lane on SH88 at the Sawyers Bay warehouse site, resulting in significantly improved safety for all road users.
2016	• Received consent for the construction works associated with rock removal from Flagstaff Hill.

d) Monitoring methods

- Maintain records of balance between road and rail deliveries.

Noise

The port is an industrial activity which generates noise. Adjacent areas are subjected to noise, especially those in close proximity to the port and this has led to conflict between the adjoining land uses in some instances.

a) Identification of the issues

- This is probably the single most important and high profile issue affecting the port and its relationship with the local community.
- It has been the subject of very detailed representations by Port Otago Ltd to the Dunedin City Proposed District Plan.
- This section is brief in terms of detail, with attention being drawn to the specific responsibilities of the Port Noise Liaison Committee, and the documents, the Port Noise Management Plan and the Port Noise Mitigation Plan.

b) Consideration of the various options which are available

- Carry out the minimum work necessary to meet the statutory requirements of the Dunedin City District Plan.
- Maintain and continuously develop the Port Noise Management Plan in association with the Port Noise Liaison Committee, the DCC and the community.
- Set in place practices and procedures to reduce noise output from port operations at all times, especially at night.

c) Achievements to date

Year	Achievement
April 2004	• Final Environment Court Decision in regards the rules for the Dunedin City District Plan.
2004	• Commencement of Port Noise Liaison Committee (PNLC) whose functions are undertake by the Port Noise Environment Committee
October 2004	• PNLC Ratification of Port Noise Management Plan and Port Noise Mitigation Plan
	• Noise contour profile developed which clearly identifies the affected properties. (red, blue and yellow zones)
2004/05	• Purchase 9 Scotia St($278,866) for use as trial acoustic treatment property to enable POL to refine and perfect treatment techniques. Acoustic treatment cost $81,380
2005/06	• Noise Contours & Monitoring ▪ Contours remain unchanged • Acoustic treatment - $ 39,779 ▪ Progress on 9 Scotia St • Property purchase – $451,114 ▪ Purchase of 3 Port Chalmers properties (in 9 Scotia St). ▪ 2 houses demolished. • Equipment - $40,000 ▪ Purchase 2 new hush straddles (fleet to 7/14)
2006/07	• Noise Contours & Monitoring ▪ Noise contours reviewed and updated November 2006 and signed off by Port Environment Liaison Committee in February 2007. ▪ Continuous and spot check monitoring undertaken resulted in no exceedances of the “predicted” levels. • Acoustic Treatment - $113,538 ▪ 2 Scotia Street completed (blue) ▪ work commenced - 1 property ▪ design and assessment underway - 17 properties • Property Purchase – $115,198 ▪ Purchase of 1 Port Chalmers property subsequently demolished

2007/08	• Noise Contours & Monitoring ▪ Continuous and spot check monitoring undertaken resulted in no exceedances of the "predicted" levels. ▪ Noise contours remain unchanged since 06/07 • Acoustic Treatment - $ 119,665 ▪ completed and certified -2 properties. ▪ completed awaiting certification - 3 properties. ▪ work nearing completion - 1 properties ▪ design and assessment underway - 17 properties ▪ initial contact made, registering interest – 10 properties • Property purchase – 215,000 ▪ Purchase of 1 Port Chalmers properties, subsequently demolished. ▪ A number of redevelopment options were investigated and considered for the port side of Constitution Street, but were not advanced as the project could not be completed at a break-even point. ▪ Completed sale process of 9 Scotia St and one section. • Equipment - $40,000 ▪ Purchase 2 new hush straddles (fleet to 9/14) - $40,000
2008/09	• Noise Contours & Monitoring ▪ Continuous and spot check monitoring undertaken resulted in no exceedances of the "predicted" levels. ▪ Noise contours reviewed. ▪ Very slight reduction in predicted level for Port Chalmers affecting 19 properties. 2008 Line and zones to remain unchanged so as not to disadvantage owners, some of whom Port Otago are actively working with. ▪ Very slight increase for Carey's Bay. 1 residence changed from Yellow zone to blue, and 2 residences included into the Yellow zone. • Acoustic Treatment - $ 402,085 ▪ Awaiting Certification from 07/08 – 3 properties ▪ Completed, awaiting certification - 3 properties ▪ Work nearing completion - 1 property ▪ Design and assessment underway - 26 properties ▪ Initial contact made, registered interest - 6 properties • No properties purchased or sold
2009/2010	• Noise Contours & Monitoring ▪ Continuous and spot check monitoring undertaken resulted in no exceedances of the "predicted" levels ▪ Installed Careys Bay Noise Monitor - $ 43,000 ▪ Noise contours reviewed. ▪ No change from the 2008/2009 contours. Refer i) above noting that the lines were not moved in towards the port in the 2008/2009 update even though a slight reduction in noise was predicted. ▪ Independent Peer Review of noise contours completed and adopted by committee. • Acoustic treatment - $ 218,637 ▪ Completed and Certified – 1 property ▪ Awaiting Certification (previous years) – 5 properties ▪ Completed, awaiting certification - 4 properties ▪ Work nearing completion - 2 property ▪ Design and assessment underway - 23 properties ▪ Initial contact made, registered interest - 6 properties • Property purchase - $ N/A ▪ No properties purchased.

	▪ Completed sale process of 2 existing Port Otago sections on the Port side of Constitution Street and Scotia Street. • Equipment - $47,000 ▪ Purchase 2 new hush straddles (fleet to 11/15) - $40,000 ▪ Purchase 2 new hush sideloaders (fleet to 3/5) - $7,000
2010/11	• Noise Contours & Monitoring ▪ Continuous and spot check monitoring undertaken and resulted in one exceedance of "predicted" levels. This followed exceptional circumstances of vessel accident and subsequent extended long stay in port for repairs. ▪ Continuous monitoring from 2 locations at Scotia St and Careys Bay cemetery. ▪ Upgrades and development of software and hardware replacements for 2 monitoring sites $9,700. ▪ No change in contours from the 2009/2010 year based on monitoring. Refer i) above noting that the lines were not moved in towards the port in the 2008/2009 update even though a slight reduction in noise was predicted. • Acoustic treatment - $ 101,978 ▪ Completed and Certified – 10 properties ▪ Awaiting Certification (previous years) – 1 property ▪ Completed, awaiting certification - 1 property ▪ Work approved or underway - 4 properties ▪ Design and assessment underway - 21 properties ▪ Initial contact made, registered interest - 10 properties • Property purchase - $ N/A ▪ No properties purchased. • Equipment - $N/A ▪ No new equipment purchased.
2011/12	• Noise Contours & Monitoring ▪ Continuous and spot check monitoring undertaken resulted in no exceedances of the "predicted" levels ▪ Continuous monitoring from 2 locations at Scotia St and Careys Bay cemetery. ▪ Field monitoring exercise completed confirming the noise model for the Port Chalmers sector of the port, and identifying further field monitoring and noise modelling work for the Careys Bay sector. ▪ Contour update work being advanced with finalisation of field monitoring work. ▪ Ongoing maintenance of software and hardware for the 2 monitoring sites $4,537. • Acoustic treatment - $ 103,065. ▪ Completed and Certified – 14 properties ▪ Completed, awaiting certification - 6 properties ▪ Work approved or underway – 2 properties ▪ Design and assessment underway - 13 properties ▪ Initial contact made, registered interest - 10 properties • Property purchase - $ N/A ▪ No properties purchased. • Equipment - $ minimal ▪ No new equipment purchased. ▪ Modifications to reversing alarms (beepers) on Straddles 11 and 12 to be consistent with the rest of the fleet. Cost <$1,000.

2012/13	• Noise Contours & Monitoring – Total from below $48,481 ▪ Continuous monitoring showed no exceedance of the “predicted” levels. ▪ Field monitoring completed in the Careys Bay sector confirmed the noise model is over-predicting for that sector. - $18,537 ▪ Review and update of the noise model by Marshall Day Ltd and Port Otago Ltd, resulting in the 2013 Noise Contours and the Noise Zones. ▪ 2013 Noise Contours adopted by Committee at February meeting. ▪ Upgrade of Scotia St permanent monitor - $21,799. ▪ Ongoing maintenance of software and hardware for the 2 monitoring sites $8,145. • Acoustic treatment - $42,091
2013/14	• Noise Contours & Monitoring ▪ Continuous monitoring showed no exceedance of the “predicted” levels. ▪ Monitoring shows noise levels measuring the same or less, no change to noise contours. ▪ Software maintenance and support and modem upgrade for Careys Bay site $8,796. • Acoustic treatment - $6,997 • Equipment - $40,000 ▪ Purchase of two modern technology “diesel electric” straddles with factory hush-kits. $40,000
2014/15	• Noise Contours and Monitoring ▪ According to the readings the “predicted” five-day maximum levels have not been exceeded. ▪ Monitoring shows noise levels measuring the same or less, no change to noise contours. ▪ Software maintenance and technical support all sites $5,681. • Acoustic treatment - $26,653
2015/16	• Noise Contours and Monitoring ▪ Continuous monitoring showed no exceedances of the "Predicted" five-day maximum levels. ▪ Software maintenance and technical support all sites - $9,961 • Acoustic Treatment - $22,856
2016/17	• Noise Contours and Monitoring ▪ Noise contours updated • Upgrade of Scotia Street and Careys Bay noise monitors, including a camera on the Scotia St monitor • Two new noise monitors, Henry St and Light Tower 4, including a camera on Light Tower 4 monitor

d) Summary of Progress & Current Status

The following graph highlights the long term trend in continuously measured noise at Port Chalmers as well as the container volume throughput. The success of the noise mitigation measures are reflected in the fact that although the container throughput at Port Chalmers has risen from approximately 125,000 TEU per annum in the 2004 year to the highest levels of approximately 220,000 TEU per annum there has been no appreciable change in the monitored 5 day Ldn noise measurement over that period.

Port Otago’s investment in Mitigation in the 12 years since mid-2004 can be categorised into 4 distinct areas:

- Acoustic treatment
- Purchase of property
- Investment in hush-equipment
- Monitoring

The total amounts spent since 2004 in each of these categories is as follows:-

Year	Acoustic Treatment	Property Purchase	Hush Equipment	Monitoring	Total	Cum. Total
04/05	81,380				81,380	81,380
05/06	39,779	451,114	40,000		530,893	612,273
06/07	113,538	115,198			228,736	841,009
07/08	119,665	215,000	40,000		374,665	1,215,674
08/09	402,058				402,058	1,617,732
09/10	218,637		47,000	43,000	308,637	1,926,369
10/11	101,978			9,700	111,678	2,038,047
11/12	103,065			4,537	107,602	2,145,649
12/13	42,091			48,481	90,572	2,236,221
13/14	6,997		40,000	8,796	55,793	2,292,014
14/15	26,653			5,618	32,271	2,324,285
15/16	22,856	226,182	20,000	9,961	278,999	2,603,284
16/17	6,313		20,000	**19,852**	**46,165**	2,649,449
17/18			80,000	133,754	213,754	2,863,203
	1,285,010	**1,007,494**	**287,000**	**283,699**	**2,863,203**	

e) Monitoring methods

-
- Reporting from the new real time noise monitoring system via the website and to the Port Environment Noise Liaison Committee

Continue to investigate all complaints received

Acoustic Treatment

The current status of the acoustic treatment process as at 1 June 2018 is outlined in the following table. In the Red Zone, the acoustic treatment process (or purchase) has been completed with 23 of the 24 properties, the exception being the one property where the owner is yet to make contact. The Red Zone is therefore for all intents and purposes complete. The work focus is now focussed on the properties in the Blue Zone, in which steady progress is being made with10 complete and 4 in differing stages of the process.

STAGE OF PROCESS	Red	Blue	Yellow
Property Purchased	6	-	-
Acoustic Process Complete (No Action)	3	10	8
Acoustic Certificate Issued (Complete)	14	10	-
Acoustic Certificate Pending	0		-
Approved For Construction/Underway	0	2	-

Assessment Underway	-	4	3
Initial Contact Made (Blue & Yellow Only)	-	3	5
Awaiting Contact (Red Only)	1	-	-

Monitoring methods

- Compliance with the Dunedin City District Plan.
- Reporting requirements to the Port Environment Noise Liaison Committee

Buffer Zones

The proximity of the port to the residential and commercial activities in the neighbouring community is not an ideal situation. These activities should be separated where possible.

a) Identification of the issues

Issues which need to be considered if the concept of buffer zones is to be promoted include:

- How big/wide the buffer zones could or should be.
- How much residential and commercial areas would be lost.
- Could physical barriers be used
- Possible use of vegetation, etc to control glare.
- Permissible uses within the buffer zones – recreational and/or residential and/or commercial?
- Effect on adjacent property use and values.
- Methods for establishment of the buffer zone.

b) Consideration of the various options which are available

- Maintain the status quo ie no further buffer areas.
- Removal of some of the residential zone to create buffer zones in certain areas – property purchase, demolition.
- Restrictions on residential zone use or modifications to facilities eg provision of acoustic insulation.
- Investigation into effectiveness of buffer zones.
- Compensation for loss for residents, recreational users, community.
- Acoustic treatment (at appropriately designed levels) for properties being built within the buffer zone.

c) Achievements to date

Achievement
• Buffer zone has been partially created on the southern side of Flagstaff Hill by the Port Company's purchase and demolition of a number of dwellings, followed by the re-vegetation of the area