Environmental Implementation Committee 8 February 2024

Meeting will be held in the Council Chamber at Level 2, Philip Laing House
144 Rattray Street, Dunedin
ORC Official YouTube Livestream

Members:
Cr Bryan Scott (Co-Chair)
Cr Kate Wilson (Co-Chair)
Cr Alexa Forbes
Cr Gary Kelliher
Cr Lloyd McCall
Cr Michael Laws
Cr Kevin Malcolm
Cr Tim Mepham
Cr Andrew Noone
Cr Gretchen Robertson
Cr Alan Somerville
Cr Elliot Weir

Senior Officer: Richard Saunders, Chief Executive

Meeting Support: Kylie Darragh, Governance Support Officer

08 February 2024 09:00 AM

Agenda Topic — Page

Agenda 1

1. WELCOME

2. APOLOGIES

No apologies were received prior to publication of the agenda.

3. PUBLIC FORUM

No requests to speak were received prior to the publication of this agenda.

4. CONFIRMATION OF AGENDA

Note: Any additions must be approved by resolution with an explanation

5. DECLARATION OF INTERESTS

Members are reminded of the need to stand aside from decision-making when a conflict arises between their role as an elected representative and any private or other external interest they might have. Councillor Declarations of Interests are published to the ORC website.

6. CONFIRMATION OF MINUTES 3

Confirming the minutes of the 9 August and 8 November 2023 meetings as true and accurate.

6.1 Minutes of the 9 August 2023 Meeting 3

6.2 Minutes of the 8 November 2023 meeting 7

7. MATTERS FOR CONSIDERATION 12

7.1 Site Led Programme Update 12

To provide an update on progress of the Site-Led terrestrial pest management programmes and to seek approval for the allocation of the Site-Led Budget 2023/2024 ($150,000) to a Site-Led Programme grant delivered through a contestable funding process.

7.1.1 Appendix 1. Site Led Action Plan 2023 - 2024 23

7.1.2 Appendix 2. Supporting Documents 30

7.1.3 Appendix 3. Site Led Working Group Agreement 34

7.1.4 Appendix 4. Site Led Stocktake Report 46

7.1.5 Appendix 5. Site Led Values, Threats and Impacts Assessment 58

7.1.6 Appendix 6 Site Led Terms and Conditions 114

7.1.7 Appendix 7 Site Led Funding Application Form 117

7.1.8 Appendix 8 Site Led Assessment Scoring Criteria 131

8. CLOSURE

Otago Regional Council

Environmental Implementation Committee
MINUTES

Minutes of an ordinary meeting of the Environmental Implementation Committee held in the Council Chamber, Level 2 Philip Laing House, 144 Rattray Street, Dunedin on Wednesday 9 August 2023, commencing at 9:00 AM.

PRESENT

Cr Bryan Scott	*(Co-Chairperson)*
Cr Kate Wilson	*(Co-Chairperson)*
Cr Alexa Forbes	
Cr Gary Kelliher (online)	
Cr Michael Laws (online)	
Cr Kevin Malcolm	
Cr Lloyd McCall	
Cr Tim Mepham	
Cr Andrew Noone	
Cr Gretchen Robertson	
Cr Alan Somerville	
Cr Elliot Weir	

1. WELCOME

Chairperson Cr Kate Wilson welcomed Councillors and staff to the meeting at 9:00am and gave a karakia. Staff present included Richard Saunders, (Chief Executive), Nick Donnelly, online, (GM Corporate Services), Gavin Palmer (GM Operations), Amanda Vercoe (GM Governance, Culture and Customer), Tom Dyer (Manager, Science) Jo Gilroy (Acting GM, Regulatory) Libby Caldwell (Manager, Environmental Implementation) Anna Malloy (Principal Advisor, Environmental Implementation) Sophie Fern (Catchment Action Planner) Andrea Howard (Manager, Executive Advice) Murray Boardman, online, (Performance and Delivery Specialist),and Kylie Darragh (Governance Support).

2. APOLOGIES

There were no apologies for this Committee meeting.

3. PUBLIC FORUM

No requests to speak were received.

4. CONFIRMATION OF AGENDA

The agenda was confirmed as published.

5. DECLARATIONS OF INTERESTS

No changes to Councillor Declarations of Interests were noted.

6. CONFIRMATION OF MINUTES

Resolution: Cr Wilson Moved, Cr Scott Seconded

That the minutes of the Environmental Implementation Committee on 5 May 2023 be received and confirmed as a true and accurate record.

MOTION CARRIED

7. OPEN ACTIONS FROM RESOLUTIONS OF THE COMMITTEE

The completed action from resolutions of the Committee was reviewed.

8. MATTERS FOR CONSIDERATION

8.1. Prioritisation of Projects

The purpose of this paper was to seek approval in principle for a process for prioritising waterbodies for water quality and biodiversity improvement. Anna Molloy, Libby Caldwell, and Gavin Palmer presented the report and responded to questions.
There was a wide range of discussions on this paper and Richard Saunders confirmed to Councillors that this was the first of three stages. Iwi and Mana whenua are still to be engaged and any substantial changes through consultation would need to come back to this Committee.

Cr Forbes left the meeting at 9:12 am.
Cr Forbes returned to the meeting at 9:14 am.

A procedural motion was called and Cr McCall Moved, Cr Malcolm Seconded:
That the Environmental Implementation Committee:

1) ***lay** the paper on the table*

For	Cr Kelliher, Cr Malcolm, Cr McCall
Against	Cr Forbes, Cr Laws, Cr Mepham, Cr Noone, Cr Robertson, Cr Scott, Cr Somerville, Cr Weir, Cr Wilson
Abstained	

MOTION FAILED

Resolution: Cr Weir Moved, Cr Forbes Seconded:
That the Environmental Implementation Committee:

1) ***Recommends that Council adopts** the suggested prioritisation criteria in principle.*

For	Cr Forbes, Cr Mepham, Cr Noone, Cr Scott, Cr Somerville
Against	Cr Kelliher, Cr Malcolm, Cr McCall, Cr Wilson, Cr Robertson
Abstained	Cr Weir

The vote was tied, Chair Cr Wilson used a casting vote Against.

MOTION FAILED

Resolution EIC23-108: Cr Weir Moved, Cr Forbes Seconded
That the Environmental Implementation Committee:

2) ***Notes that** the suggested criteria, will be discussed with mana whenua (via Aukaha and Te Ao Marama) and applied to produce a draft list of ranked waterbodies for further development of actions.*

MOTION CARRIED

8.2. Integrated Catchment Management Programme

This paper sought to approve the programme for rollout of Integrated Catchment Management across Otago, through the development of catchment action plans (CAPs). Anna Molloy, Sophie Fern, Libby Caldwell, and Gavin Palmer were present to answer questions.

Resolution EIC23-109: Cr McCall Moved, Cr Mepham Seconded:

That the Environmental Implementation Committee:

*1) **Recommends** that Council approves the proposed Catchment programme, with Option 2.*

MOTION CARRIED

8.3. Biosecurity Operational Plan Annual Report 2022-23

This paper reported on the implementation of the Biosecurity Operational Plan 2022-23 for the period 1 July 2022 to 30 June 2023, as required under Section 100C(2) of the Biosecurity Act 1993. Libby Caldwell, Murray Boardman, and Gavin Palmer were available to answer questions. Libby Caldwell wished to acknowledge the huge amount of work that has gone into this report from staff and contractors with very specialised knowledge. After discussion and an amendment to the motion it was moved that:

Resolution EIC23-110: Cr Robertson Moved, Cr Wilson Seconded:

That the Committee:

***1) Notes** this report and the range of work undertaken to give effect to Otago's Regional Pest Management Plan and the Biosecurity Act (1993).*

*2) **Notes** the lessons learnt from the 2022-23 Biosecurity Operational Plan (BOP) are being applied to the delivery of the 2023-24 BOP.*

*3) **Notes** that this report and the attached Biosecurity Operational Plan 2022-23 Report will be provided to the Minister for Biosecurity s as required under Section 100C(2) of the Biosecurity Act 1993 with congratulations on work on mycoplasma bovis.*

MOTION CARRIED

9. CLOSURE

Chair Cr Wilson said a karakia to close the meeting at 11:12am.

Otago Regional Council

Environmental Implementation Committee
MINUTES

Minutes of an ordinary meeting of the Environmental Implementation Committee held in the Council Chamber, Level 2 Philip Laing House, 144 Rattray Street, Dunedin on Wednesday 8 November 2023, commencing at 9:00 AM.

PRESENT

Cr Kate Wilson	*(Chairperson)*
Cr Alexa Forbes	
Cr Gary Kelliher	
Cr Michael Laws	
Cr Kevin Malcolm	
Cr Lloyd McCall	
Cr Tim Mepham	(*online)*
Cr Andrew Noone	
Cr Gretchen Robertson	
Cr Bryan Scott	
Cr Alan Somerville	
Cr Elliot Weir	

1. WELCOME

Chair Cr Kate Wilson welcomed councillors, members of the public and staff to the meeting at 9:00 a.m. with a karakia. Staff present included Anita Dawe (GM Policy and Science), Gavin Palmer (GM Operations), Richard Saunders (Chief Executive), Amanda Vercoe (GM Governance, Culture and Customer), Joanna Gilroy (Acting General Manager Regulatory), and Kylie Darragh (Governance Support), online: Kane McElrea (Biosecurity Consultant, Boffa Miskell), Murray Boardman (Performance and Delivery Specialist) Sarah Irvine (Team Leader Environmental Implementation).

2. APOLOGIES

Chair Wilson noted Cr Laws apology for lateness, an apology from Cr Robertson for leaving early and Cr Tim Mepham who intermittently left and re-joined the zoom call through the meeting.

3. PUBLIC FORUM

Andrew Innes (Eco Otago) Sally Dicey and Steve Catty spoke on behalf of the Tomahawk Lagoon Catchment Group and their priorities including further planting plans and contaminant water quality testing in the lagoon creek area. There was an opportunity for questions and Chair Wilson thanked the group for attending.

Cr Kelliher joined the meeting at 9:08am
Cr Robertson left the meeting at 10:00AM
Cr Robertson rejoined the meeting 10:10AM

4. CONFIRMATION OF AGENDA

There were no changes noted to the agenda.

5. DECLARATIONS OF INTERESTS

Members were reminded of the need to stand aside from decision-making when a conflict arises.

6. PRESENTATIONS

6.1. Annual Report Presentation: Otago Catchment Community

Sam Dixon and Lloyd McCall presented the Otago Catchment Community Report 2022-2023 to the Committee. The presentation included highlights of the year, their membership has now grown to over 1800 group members and 25 catchment and water care groups in Otago. There was an opportunity for questions after the presentation and Chair Wilson thanked the group for attending.

6.2. Predator Free Dunedin

Rhys Millar, Project Lead for Predator Free Dunedin explained the City Sanctuary Project and some of the impacts on the urban community's pests through the use of thermal drones, dog tracking and resetting digital camera traps. There was an opportunity for questions and Chair Wilson thanked Mr Millar for attending.

6.3 Central Otago Wilding Conifer Control Group Annual Funding Grant Report

Pete Oswald and Phil Murray from Central Otago Wilding Conifer Control Group went through the projects over 2022/23 detailing some of the challenges of clearing seed sources and engagement of landowners. There was an opportunity for questions and Chair Wilson thanked the group for attending.

6.4 Whakatipu Wilding Control Group Annual Funding Grant Report
Dick Hubbard presented and discussed the Whakatipu Wilding Control Group Annual Funding Grant Report. There are a number of fronts of wilding pines in the area. The returns on investments are phenomenal and present a strong case for financial investment. Dick added that with Jobs For Nature funds drying up, a revision of the funding formula is needed and requested Council consider matching half of the amount that the Queenstown Lakes District Council fund, with a long term view to match the amount. There was an opportunity for questions and Chair Wilson thanked Mr Hubbard for his attendance.

Cr Wilson Moved; Cr Noone Seconded that the Committee:
Adjourn for a short break until 11:20AM
MOTION CARRIED

Cr Mepham left the meeting at 11:20AM

7. CONFIRMATION OF MINUTES
Approval of minutes of the 9 August 2023 Committee meeting was removed from consideration and those minutes will be reconsidered at the next Environmental Implementation meeting.

8. OPEN ACTIONS FROM RESOLUTIONS OF THE COMMITTEE
No current open actions for review for this Committee.

9. MATTERS FOR CONSIDERATION
9.1. Regional Wilding Conifer Cost Benefit Analysis and business case
This report presented the 'Benefits and Costs of Additional Investment in Wilding Conifer Control in the Otago Region (cost benefit analysis) prepared by Boffa Miskell on behalf of Otago Regional Council.
Libby Caldwell (Manager Environmental Implementation) and Gavin Palmer (General Manager Operations) were in the room and Matthew Williamson and Kane McElrea (Boffa Miskell) online to respond to any questions on the report.

Resolution EIC23-111: Cr Kelliher Moved, Cr Malcolm Seconded

That the Environmental Implementation Committee:
1. ***Notes*** *this report.*
2. ***Notes*** *the significant value that investment in Wilding Conifer control in Otago would provide.*
3. ***Recommends*** *that the Council endorse Option 1 - ORC directly engaging with central government for an increase in funding required for the Otago region as part of the National Wilding Conifer Control programme.*

MOTION CARRIED

9.2. State of Pests including Rabbit night counts

This report provided the results of the state of pest management in Otago, 2023 and an update on the state of pests in Otago for 2023. Libby Caldwell (Manager Environmental Implementation) and Gavin Palmer (General Manager Operations) were present, Sarah Irvine (Team Leader Environmental Implementation) and Murray Boardman (Performance and Delivery Specialist) were also present online, to respond to questions.

Resolution EIC23-112: Cr Wilson Moved, Cr Forbes Seconded

That the Environmental Implementation Committee*:*

1. ***Notes** this report.*
2. ***Notes** that the Biosecurity State of Pest Management in Otago 2023 report is a baseline document which will be reported on an annual basis to the Environmental Implementation Committee.*

MOTION CARRIED

9.3. Freshwater Restoration and Improvement Update and Opportunities

This report provided an update on the three ORC priority water quality projects Tomahawk Lagoon, Lake Tuakitoto and Lake Hayes. It also provided an update on the Toitū Te Hakapupu project (funded by the Ministry for Environment (MfE).
Melanie White (Project Delivery Specialist, - Jobs for Nature), Soraya Engelken (Project Administrator - Jobs for Nature), online, and Libby Caldwell (Manager Environmental Implementation)and Gavin Palmer (General Manager Operations) spoke to the paper and responded to questions.

Resolution EIC23-113: Cr Forbes Moved, Cr Kelliher Seconded

That the Environmental Implementation Committee:

1. ***Notes** this report;*
2. ***Notes** the implementation activities that are occurring on the water quality projects being delivered by the Environmental Implementation team as detailed in this report.*

MOTION CARRIED

9.4. Large Funding Requests

This report sought endorsement of the criteria for a fund to be set up to support large scale funding requests in 2023/24. Libby Caldwell (Manager Environmental Implementation) Gavin Palmer (General Manager Operations) and Anna Molloy (Principal Advisor Environmental Implementation) (online) were available to respond to questions.

Resolution EIC23-114: Cr Robertson Moved, Cr Somerville Seconded

That the Environmental Implementation Committee:

1. ***Recommends*** *that the Council endorse the approach of having a fund which supports large scale funding requests which sits alongside the ECO Fund and incentives funding schemes currently in place at Otago Regional Council (Option 1).*
2. ***Recommends*** *that the Council endorse the criteria as detailed in the Eligibility and Assessment criteria section of this report (Option 1).*
3. ***Recommends*** *that the Council notes the ECO Fund and incentives funding schemes available for 2024.*
4. ***Recommends*** *that the Council retains the current application and evaluation processes and criteria for the ECO Fund and Incentives funding schemes.*

MOTION CARRIED

Cr Mepham rejoined the meeting at 1:10PM

9.5. Future of the ICM working Group

This report sought a pathway forward for the continued oversight of the Integrated Catchment Management (ICM) Programme now that the work of the Integrated Catchment Management Working Group (ICMWG) is complete, the pilot Catchment Action Plan (CAP) is underway, and the ICM programme is moving into a new area.
Sophie Fern (Catchment Action Planner) Anna Molloy (Principal Advisor Environmental Implementation) Libby Caldwell (Manager Environmental Implementation) and Gavin Palmer (General Manager Operations) were available to respond to questions.

Resolution EIC23-115: Cr McCall Moved, Cr Wilson Seconded

That the Environmental Implementation Committee recommends that Council:

1. ***Notes*** *this report.*
2. ***Adopt Option 1*** *as the preferred option, being the continuation of the Integrated Catchment Management Working Group (ICMWG) to provide oversight of the ICM Programme.*
3. ***Agrees*** *to the Terms of Reference in Attachment 1*
4. ***Notes*** *the proposed timeframe for continued work on the ICM programme during 2023 - 2024.*

MOTION CARRIED

12. CLOSURE

There was no further business and Chairperson Wilson said a karakia and declared the meeting closed at 1:38PM

_____ _____

Chairperson Date

7.1. Site Led Programme Update

Prepared for:	Environmental Implementation Committee
Report No.	GOV2345
Activity:	Governance Report
Author:	Sophie Gibson-Pinn, Community Coordinator Biosecurity; Sarah Irvine, Team Leader Environmental Implementation, Libby Caldwell, Manager Environmental Implementation
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	8 February 2024

PURPOSE

[1] To provide an update on progress of the Site-Led terrestrial pest management programmes and to seek approval for the allocation of the Site-Led Budget 2023/2024 ($150,000) to a Site-Led Programme grant delivered through a contestable funding process.

EXECUTIVE SUMMARY

[2] The Site-Led programme is part of the Otago Regional Pest Management Plan 2019-2029 (RPMP) and seeks to manage additional pests to avoid, mitigate or prevent damage to the indigenous ecosystem values at specific sites.

[3] A Site-Led Working Group has been established in partnership with mana whenua to deliver the Site-Led programme and to support Site-Led RPMP objectives.

[4] The approved budget for the 2023-2024 annual plan year to deliver Site-Led outcomes is $150,000. The Site-Led Working Group recommends to allocate $146,200 of this budget through a contestable fund to support community groups undertaking pest management work within the Site-Led programme areas.

[5] The recommendation covers a proposed process and Terms and Conditions based on the robust methodology currently used to deliver the Otago Regional Council (ORC) ECO Fund.

[6] In support of the mana whenua and ORC partnership, it is proposed that an independent assessment panel is set up including representatives of the Site-Led Working Group and Council to assess the Site-Led programme grant applications and provide recommendations to ORC Council for approval.

[7] This proposed process has been reviewed and is supported by rūnanga representatives.

RECOMMENDATION

That the Environmental Implementation Committee:

a. ***Notes*** *this report and progress made to support the Site-Led terrestrial programmes to date.*

b. ***Recommends to Council to approve*** *the allocation of $146,200 from the existing budget for the Site-Led Programme to be delivered through a contestable funding process to achieve RPMP objectives (Option 2).*

c. ***Recommends to Council that*** *one councillor is nominated and then appointed to the Site-Led Programme assessment panel.*
d. ***Recommends to Council to approve*** *that the assessment panel* consists of a representative from Te Rūnanga o Ōtakōu and Kāti Huirapa Rūnaka ki Puketeraki; a nominated Councillor; and two ORC Environmental Implementation staff*.*
e. ***Recommends to Council to approve*** *the assessment panel to review grant applications and provide recommendations to ORC Council for grant approval.*

BACKGROUND

[8] The Site-Led programme is part of the Otago Regional Pest Management Plan (RPMP) 2019-2029, and seeks to manage additional pests to avoid, mitigate or prevent damage to the indigenous ecosystem values at specified sites.

[9] There are four Site-Led Programmes in Otago. This paper refers to the three Site-Led terrestrial areas including Otago Peninsula, Quarantine and Goat Island, and West Harbour – Mt Cargill (Figure 1). The other Site-Led programme is for Lagarosiphon which is delivered in coordination with LINZ and is not included in this paper. This paper details the proposed method to deliver the Site-Led terrestrial areas.

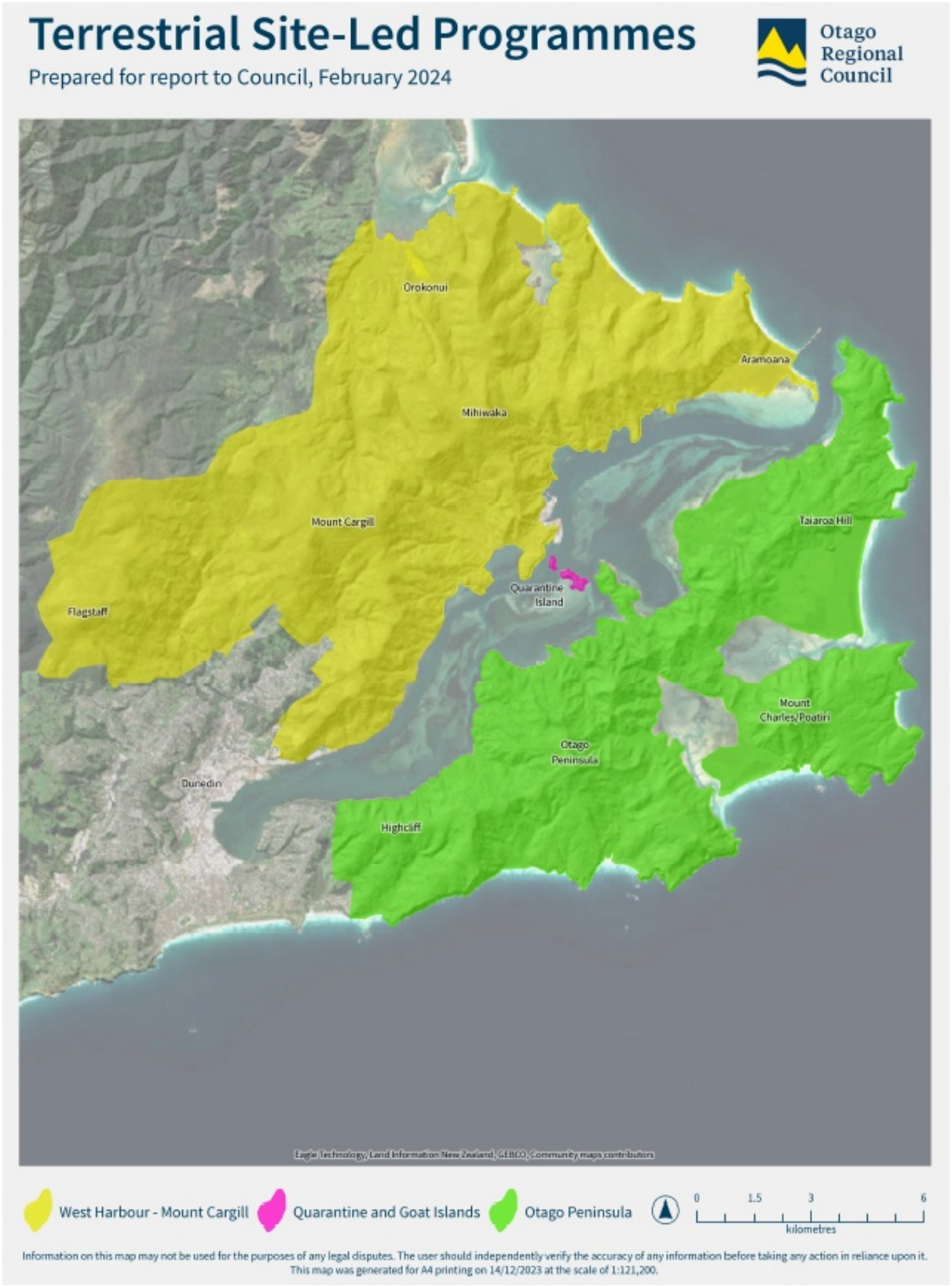


Figure 1. Terrestrial site-led programme areas, RPMP.

[10] The key role of ORC in the Site-Led Programmes is advocacy, education, and collaboration to guide support for community groups and agencies in bringing about the desired level of environmental protection to these sites as outlined in the Site-Led Programme Action Plan 2023-2024 (Appendix 1), in support of the RPMP, the Biosecurity Operational Plan 2023-2024 (Objective 3.5.1), and Biosecurity Strategy 2019 (Action 3.4.1) outlined in Appendix 2.. Actions to date to deliver the terrestrial site led progammes are outlined below.

[11] To facilitate this programme, a Working Group has been established in partnership between mana whenua and ORC with representatives from both Te Rūnanga o Ōtakōu and Kāti Huirapa Rūnaka ki Puketeraki. The purpose of the Working Group is to oversee and provide guidance for the development of priority activities and facilitate support to implement the Site-Led terrestrial programme.

[12] To date, the Working Group has carried out several activities to support this programme, including:

a. A Working Group Agreement to outline how the group will work together (Appendix 3).
b. A Stocktake Assessment (completed internally by staff) to find out which community groups are active in the pest animal and plant management space, and to map community group operational areas (Appendix 4).
c. A Values, Threats and Impacts Assessment to evaluate the biodiversity values of the Site-Led terrestrial area. The assessment used key biodiversity values to identify 12 priority sites that encompass a range of these values (Table 1, Figure 2 which are extracted from Appendix 5).
d. A Community Hui hosted by ORC on 12th September 2023 at Ōtakōu marae for community groups to showcase their group's mahi in a communal forum. ORC hosted a total of 52 attendees with representatives from 15 community groups and organisations in the Site-Led areas (Figure 1). ORC presented on behalf of the Working Group to inform of progress with the Site-Led programme. ORC Chairperson Gretchen Robertson, Deputy Chairperson Lloyd McCall and Councilors Kate Wilson, and Alan Somerville attended this hui.
e. A site prioritisation scoring process is being developed using results from the Values, Threats and Impacts Assessment to identify four sites as a starting point from the 12 priority sites.

Table 1: The 12 sites identified in the Values, Threats and Impacts Assessment as key locations that encompass a range of biodiversity values within the Site-Led terrestrial area. 'x' denotes presence of the particular biodiversity value for a given location. WHMC: West Harbour – Mt. Cargill; QGI: Quarantine and Goat Islands, OP: Otago Peninsula EMU: Ecosystem Management Unit, SMU: Species Management Unit, ASBV: Area of Significant Biodiversity Value.

	WHMC				QGI		OP					
Biodiversity Values	1. Aramoana - Heyward Point	2. Leith Saddle - Mihiwaka	3. Flagstaff - Swampy	4, Orokonui Ecosanctuary	5. Quarantine Island	6. Goat Island	7. Peninsula tip	8. Okia - Papanui - Taiaroa Hill	9. Harbour Cone - Dicksons - Varleys Hill	10. Hoopers - Allans Beach - Papanui Beach	11. Sandfly Bay/Sandymount	12. Boulder Beach
Naturally Uncommon Ecosystems	x	x	x	x	x	x	x	x	x	x	x	x
DOC EMU/SMU	x						x	x		x	x	x
ASBVs	x	x	x	x	x	x	x	x	x	x	x	x
Notable Threatened/At Risk Spp	x			x			x	x	x	x	x	x
Extensive intact native habitat	x	x	x	x				x	x		x	x
Protected Land	x	x	x	x	x	x	x	x	x	x	x	x
ORC Significant Habitats	x	x	x	x	x	x	x	x	x	x	x	x
Areas undergoing revegetation efforts	x	x		x	x		x	x	x	x		

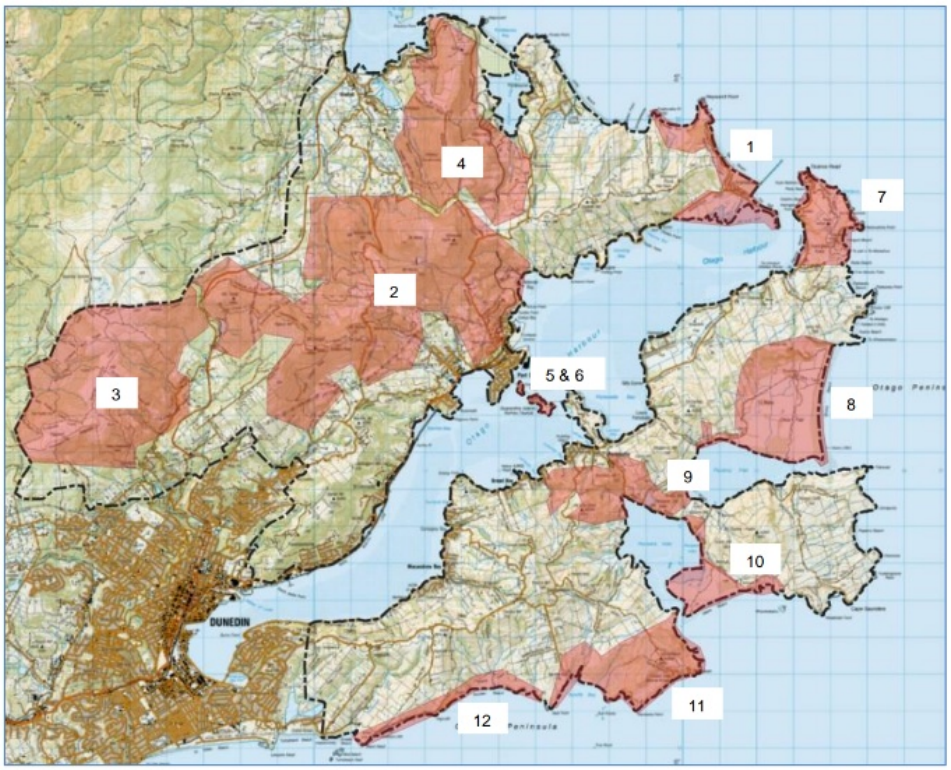


Figure 2: The 12 sites identified in the Values, Threats and Impacts Assessment as key locations that encompass a range of biodiversity values within the Site-Led terrestrial area.

DISCUSSION

[13] The Stocktake Report (Appendix 4) revealed 42 community groups and organisations working in the biosecurity and restoration space within the Site-Led terrestrial areas (Figure 3). The report also revealed the complexities that community groups and organisations are working with, geographical gaps in management, and the disparity between the scale of projects for pest animal management (Figure 4), compared to pest plant management (Figure 5). For additional maps, see Appendix 4.

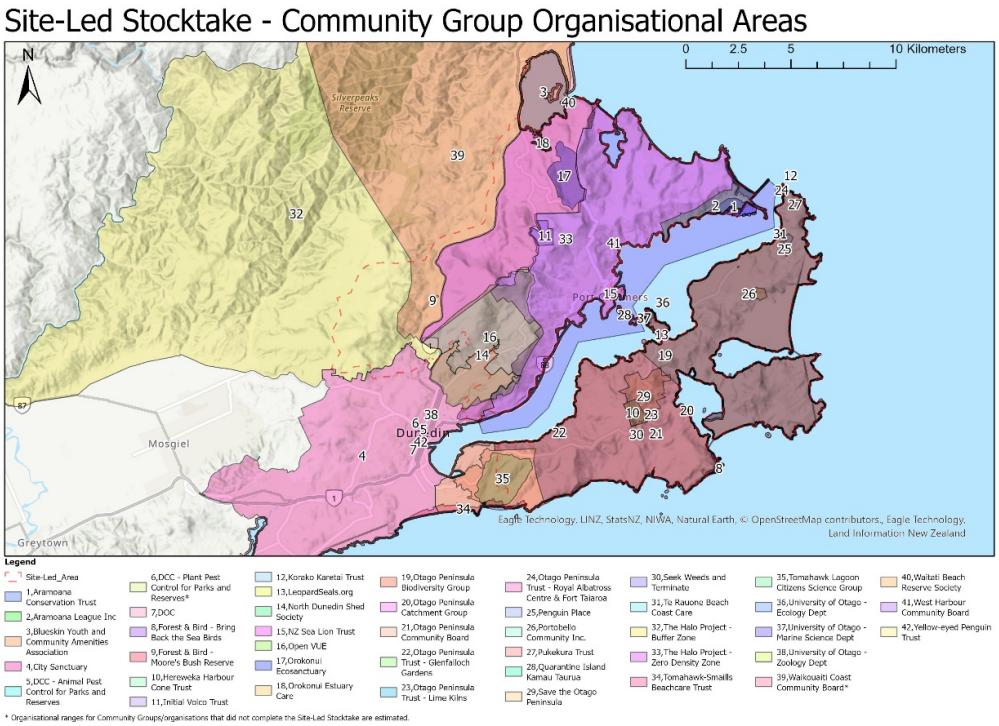


Figure 3: Stocktake of all the community groups and organisations involved in biosecurity and restoration in the Site-Led terrestrial areas (N=42).

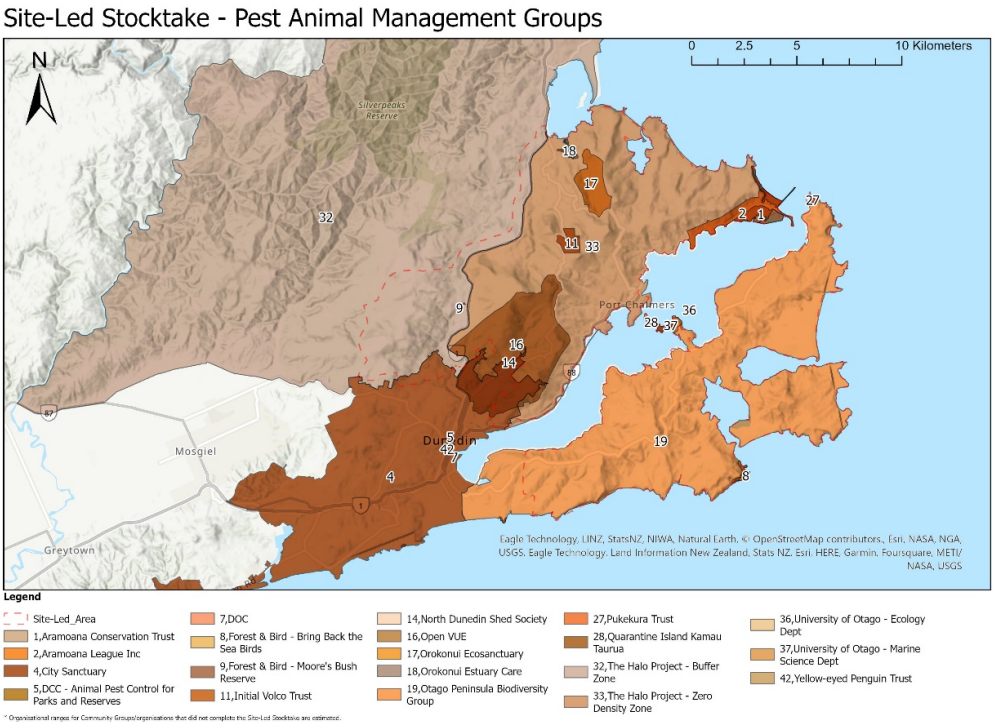


Figure 4: Stocktake of the community groups and organisations involved in pest animal management in the Site-Led terrestrial areas (N=20).

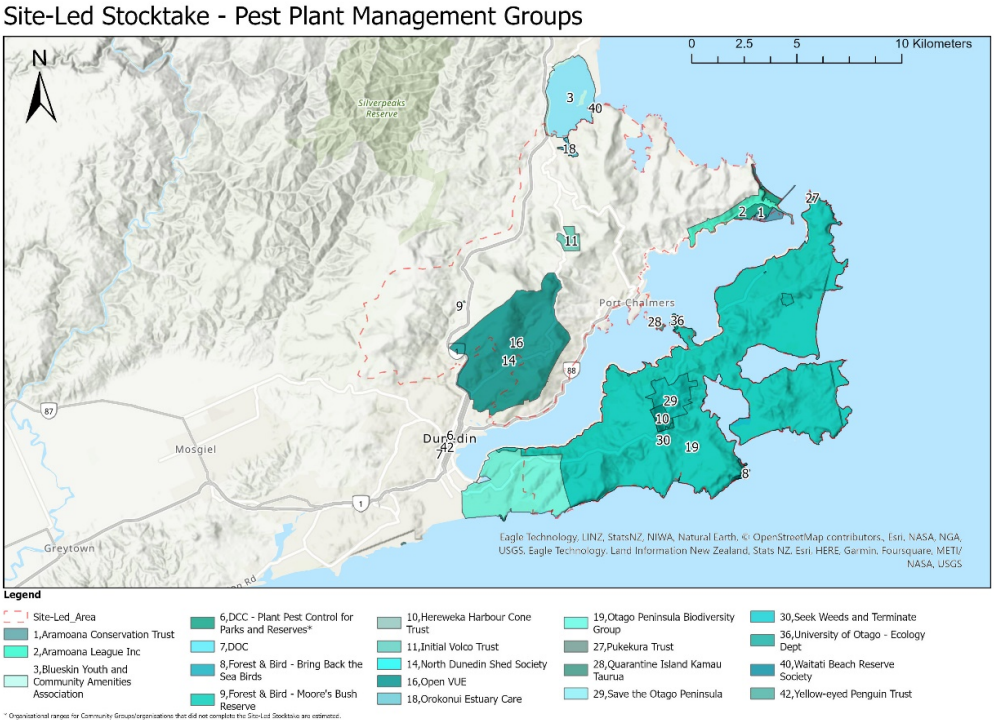


Figure 5: Stocktake of the community groups and organisations involved in pest plant management in the Site-Led terrestrial areas (N=20).

[14] Following activities to date, verbal feedback at the community hui, and additional engagement with community groups identified that funding is the main barrier for these groups to achieve the Site-Led programme objectives.

[15] This paper provides a potential solution to assist these groups to mitigate this barrier through the establishment of a contestable fund using budget which has been allocated to the Site-Led programme through the 2023-2024 annual plan.

Site-Led programme funding available for 2023-2024 financial year

[16] The approved budget in the 2023-2024 annual plan for the delivery of the Site-Led Programme for 2023-2024 is $150,000. Of this budget, $3,800 was allocated to the Community Hui in September 2023.

[17] This paper recommends the remaining $146,200 of the Site-Led Programme budget is allocated to a contestable fund known as the Site-Led programme grant, to achieve RPMP objectives. This fund will be available to groups undertaking work within the Site-Led terrestrial programme areas – Otago Peninsula, Quarantine and Goat Island, and West Harbour – Mt Cargill (Figure 1).

[18] The contestable fund will use a similar funding process and scoring criteria system to ECO Fund as ECO Fund is an established and robust ORC contestable funding process. However, the Site-Led programme grant will be delivered independently from ECO Fund as it is targeted to a specific geographical area for a specific purpose under the RPMP.

[19] As the Site-Led programme has a holistic, whole-site approach, the most efficient use of the budget available to achieve positive outcomes and meet RPMP objectives is to focus

on fewer, high priority areas. The site prioritisation process will support investment decisions across the site led programme areas. Providing a contestable fund for community groups active in the site led programme areas will enable all groups to provide information about projects they would like to deliver to support meeting the programme objectives. Once applications are received assessment will occur and recommendations made around the level of funding that each group should receive (or not) and the site prioritisation work will inform these recommendations.

Site-Led funding terms and conditions

[20] Details of the proposed process are outlined below. Terms and Conditions are outlined in Appendix 6. The Terms and Conditions are consistent with ECO Fund and have been adapted to apply to the Site-Led programme grant.

Application timeframes and funding process

[21] The proposed timeframes for the Site-led programme contestable fund are:

Action	Date
Invite for applications sent via email from ORC	22nd February 2024
Application submission period	1st – 24th March 2024
Applications reviewed by Assessment Panel	25th March – 7th April 2024
Assessment Panel present recommendations to ORC Council	22nd May 2024
Funds allocated before end of financial year	30th June 2024

[22] This timing has been selected to allow applicants to submit an application to the Site-Led programme funding round and ECO Fund funding round. The applicants will only be awarded a maximum of one grant per year. This will be monitored through alignment with the ECO Fund assessment panel.

[23] Invites for applications will be sent directly to all community groups/organisations identified though the Site-Led Stocktake Report (Appendix 4). These groups are actively involved in pest management within the Site-Led areas and aligned with the Site-Led programme values and RPMP objectives. As funding eligibility is limited to the Site-Led programme terrestrial areas, funding will not be openly advertised on the ORC website or social media.

[24] To apply for the funding, applicants will complete the Site-Led Funding Application Form (Appendix 7) and will be given clear guidelines around terms and conditions (Appendix 6), eligibility, and assessment criteria (Appendix 8).

[25] As this budget is approved in the 2023/2024 Annual Plan, it will be required to be allocated within the 2023/2024 financial year.

Site-Led assessment panel

[26] As this funding is targeted to a specific geographical area and purpose, it is proposed that the assessment panel consists of a representative of each mana whenua partner, Te Rūnanga o Ōtakōu and Kāti Huirapa Rūnaka ki Puketeraki; a nominated Councillor; and two ORC Environmental Implementation staff who are familiar with the Site-Led programmes, the community groups, active projects in the areas, and the ECO Fund process.

[27] The assessment panel will follow the Site-Led Assessment Criteria Scoring (Appendix 8). The scoring criteria are consistent with ECO Fund and have been adapted to apply to the Site-Led programme grant.

[28] The assessment panel will assess and provide a recommendation to ORC Council for the approval of funding applications.

Options for consideration regarding Site-Led programme budget allocation

[29] **OPTION 1:** Don't allocate Site-Led programme budget to the Site-Led programme grant and absorb this allocated budget as savings for the 2023-2024 financial year.

[30] **OPTION 2 (recommended): Approve** the allocation of the Site-Led budget through the contestable funding process outlined in this paper.

[31] **OPTION 3: Approve** the allocation of the Site-Led programme budget through a direct funding process for specific projects identified and recommended by the Working Group, up to a total value of $146,200. This option would be based on site prioritisation outlined in the Values, Threats and Impacts Assessment (Appendix 5).

[32] **OPTION 4: Approve Option 2 with changes,** the allocation of the Site-Led budget through the contestable funding process outlined in this paper.

Benefits and risks of options for consideration

Benefits	Risks
Option 1	
• Financial saving	• Not investing in the Site-Led programme and decreased trust of ORC as expectations wouldn't be met – annual plan allowed for budget in this area • Not delivering the Site-Led objectives of the Regional Pest Management Plan • Not investing in communities within the Site-Led programme areas
Option 2	
• Contestable funding allows any groups to submit an application • The process is fair and transparent • A previously unknown project may be identified through the process	• ORC and our mana whenua partners need to invest more time in the process by assessing unsuccessful applications
Option 3	
• Investment of time is reduced as process is quicker • Community groups do not have to submit applications	• Process is not fair and equitable • The Site-Led Working Group might miss the opportunity to receive an application about an unknown project • Not having a process potentially undermines other ORC contestable funds
Option 4	
Benefits and risks would be dependent on suggested changes	

CONSIDERATIONS

Strategic Framework and Policy Considerations

[33] This paper does not trigger Strategic Framework or Policy Considerations.

Financial Considerations

[34] This paper recommends $146,200 of the $150,000 allocated to the 2023/2024 Site-Led budget is allocated to groups undertaking work within the Site-Led terrestrial programme area through a contestable fund known as the Site-Led programme grant. This level of funding is as anticipated through the 2023-2024 annual plan.

Significance and Engagement Considerations

[35] This paper does not trigger ORC's policy on Significance and Engagement.

Legislative and Risk Considerations

[36] This plan is being implemented to fulfil the objectives of the Otago Regional Councils Regional Pest Management Plan 2019-2029, Biosecurity Operational Plan 2023-2024, and the Biosecurity Act 1993.

Climate Change Considerations

[37] This paper does not trigger any Climate Change considerations.

Communications Considerations

[38] Communications will be direct with community groups identified in the Site-Led Stocktake report (Appendix 4).

NEXT STEPS

[39] If approved, the Site-Led programme contestable fund will open on 1st March 2024 and close on 24th March 2024. Staff will work to co-ordinate this contestable fund and will then communicate to eligible groups that this is available.

ATTACHMENTS

1. Appendix 1. Site- Led Action Plan 2023-2024 [**7.1.1** - 7 pages]
2. Appendix 2. Supporting Documents [**7.1.2** - 4 pages]
3. Appendix 3. Site- Led Working Group Agreement [**7.1.3** - 12 pages]
4. Appendix 4. Site- Led Stocktake Report [**7.1.4** - 12 pages]
5. Appendix 5. Site- Led Values, Threats and Impacts Assessment [**7.1.5** - 56 pages]
6. Appendix 6 Site Led Terms and Conditions [**7.1.6** - 3 pages]
7. Appendix 7 Site Led Funding Application Form [**7.1.7** - 14 pages]
8. Appendix 8 Site Led Assessment Scoring Criteria [**7.1.8** - 3 pages]

ORC Site-Led Programme 2023-2024

Objective:

Support community groups and other agencies to protect the ecological integrity of the three terrestrial Site-Led areas in Dunedin.

Background:

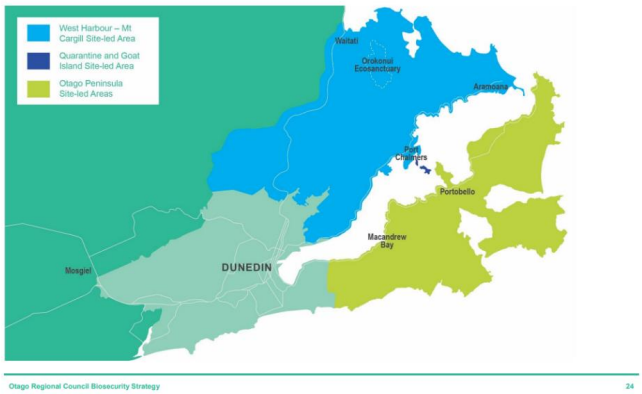
Site-Led programmes seek to manage additional pests to avoid, mitigate or prevent damage to the indigenous ecosystem values at particular sites. **The key role of ORC in these programmes is advocacy, education, and collaboration to guide support for community groups and agencies in bringing about the desired level of environmental protection to these sites.** The three Site-Led terrestrial areas include the Otago Peninsula, Quarantine and Goat Island, and West Harbour – Mt Cargill. The aims and means of achievement for Site-Led programme areas are outlined in *Appendix 1*.

The Otago Peninsula is 9,000ha in area and stretches parallel to the Dunedin mainland along the southeast of the Otago Harbour. It joins to the mainland at its southwest end by a narrow isthmus of approximately 1.5km. The Otago Peninsula is home to a number of rare and threatened indigenous species including the yellow-eyed penguin, the New Zealand Sealion, the northern Royal Albatross, and is home to many other indigenous bird, reptile and invertebrate species. Its forest remnants are important habitats.

Quarantine and Goat Islands are located in the Otago Harbour (Figure 1). These islands provide stepping-stones for bird species, but also for rat species and mustelids to move from one side of the harbour to the other by either swimming or on-board small boats/kayaks. The Norway rat and the house mouse are present on Quarantine Island. The key community outcome for the island is to eradicate rats, and to ensure that the island remains free from other pest animals.

The West Harbour – Mt. Cargill area is an approximately 12,500ha area north of Dunedin City following the western side of the Otago Harbour, extending from Mt Cargill and Ravensbourne to Blueskin Bay, Long Beach and Aramoana. This area is home to 11 different ecosystem types containing diverse indigenous flora and fauna. This includes threatened and at-risk plant species, including nationally critical, endangered and at-risk bryophytes. The area is home to rare and threatened indigenous species including the yellow-eyed penguin, the New Zealand sea lion, and many other at-risk and threatened shore birds. It is also home to many other indigenous bird, reptile, and invertebrate species, including the South Island kākā, South Island robin, and South Island fern bird.

The Otago Peninsula, West Harbour – Mt Cargill and Quarantine and Goat Island site-led areas



Otago Regional Council Biosecurity Strategy 24

Figure 1. Location of the Otago Peninsula Site-Led programme relative to the West Harbour-Mt Cargill and Quarantine/ Goat Island site-led programmes *(Otago Regional Council Biosecurity Strategy, 2019)*

Who will deliver the Site-Led programmes:

Overseen by – Team Leader Environmental Implementation
Led by - Community Coordinator Biosecurity – Coastal
Supported by

- Biosecurity Officer – Dunedin & Coast
- Catchment Advisor – Dunedin & Coast

Partnerships: Te Runaka Ōtākou, Kāti Huirapa Runaka ki Puketeraki

Key stakeholders involved in the programme (*to be confirmed and added to*):

- Aramoana Conservation Trust
- Aramoana League Inc
- Blueskin Bay Watch
- Blueskin Youth and Community Amenities Association
- City Sanctuary
- Department of Conservation
- Dunedin City Council
- Forest and Bird
- Friends of Burns Reserve
- Halo Project
- Hereweka Harbour Cone Trust (HHCT)
- Initial Volco Trust
- Korako Karetai Trust
- Landscapes Connection Trust
- North Dunedin Shed Society
- NZ Sea Lion Trust
- Open VUE (Valley Project)
- Orokonui Ecosanctury
- Orokonui Estuary Care (Operates under the Blueskin Youth & Community Amenities Association)
- Otago Peninsula Biodiversity Trust (OPBG)
- Otago Peninsula Catchment Group
- Otago Peninsula Community Board
- Otago Peninsula Trust (incl. Royal Albatross Centre, Glenfalloch and Fletcher House)
- Portobello Community Incorporated
- Predator Free Dunedin
- Quarantine Island Kamau Taurua
- Save the Otago Peninsula (STOP)
- Seek Weeds and Terminate (SWAT)
- Te Poari o Pukekura
- Te Rauone Beach Coast Care

- The Pukekura Trust
- Tomahawk Lagoon Citizens Science Group (ECOTAGO)
- Tomahawk-Smaills Beach Care Trust
- University of Otago (Zoology, Ecology Departments)
- Waitati Beach Reserve Society
- West Harbour Community Board
- Yellow-eyed Penguin Trust (YEPT)
- Community Catchment Group (formation in progress)

Support to be provided by ORC:

Action 3.4.1 Provide regional leadership and support for the site-led programmes in the Pest Management Plan to protect indigenous biodiversity

- **Provide regional leadership and advocacy, and support community leaders** for the Otago Peninsula, West Harbour – Mt Cargill, and Quarantine Island and Goat Island site-led programmes.
- **Support the development of 'whole of site' management plans** for the Otago Peninsula, West Harbour – Mt Cargill, and Quarantine Island and Goat Island.
- Within each 'whole of site' management plan, **support the identification of smaller sites for specific objectives and activities** to protect the significant values of that place and encourage landowner participation in these initiatives.
- **Support the delivery of site-led objectives** by assisting and facilitating groups to undertake control works, undertaking monitoring of key species, leading some of these activities where needed, and undertaking control works where there are barriers to landowner participation.

Otago Regional Council Biosecurity Strategy, 2019

To achieve Action 3.4.1 of the ORC Biosecurity Strategy, we will complete actions outlined in *Table 1*.

Table 1. Key Actions in development and implementation of the terrestrial Site-Led programmes for the Dunedin area for 2023-2024.

Action	Deliverable Date
Key stakeholders will be identified and contacted	July 2022
A communications spreadsheet will be set up and maintained with all communications between ORC and agencies	August 2022
A Site-Led Working Group will be formed in partnership with mana whenua	February 2023
Hold a community training initiative for community group members	May 2023
Finalise the Site-Led Working Group Agreement by October 2023	October 2023
Complete the Site-Led Stocktake Assessment by August 2023	August 2023
Hold a Site-Led Community Hui by end of September 2023	September 2023
Finalisation of site prioritisation from Threats, Values and Impacts assessment by January 2024	January 2024
Hold Site-Led Working Group meetings once every 2-3 months	Ongoing
Facilitate group meetings and activities	Ongoing
Support will be provided to ensure there is collaboration between agencies undertaking pest plant and animal management in the Site-Led areas	Ongoing
ORC will continue to educate and empower landowners, communities and volunteer groups around the benefits of participating in the programme and actively controlling harmful organisms on their land. This will occur through the provision of education, information, facilitation, support and training where required.	Ongoing
ORC will ensure compliance with the Regional Pest Management Plan within this area and as necessary, take enforcement action and issue formal notices to obtain compliance	Ongoing
Monitoring and surveillance will be undertaken by ORC. Other agencies/ groups may also contribute monitoring data from their individual programmes to support 'whole of site' monitoring.	Ongoing
Data collected is shared between agencies to affirm progress towards desired environmental outcomes and to inform the dynamic 'whole of site' management plan to ensure it remains current	Ongoing

Completed

Appendix 1 – Otago Regional Council Pest Management Plan (2019-2029)

6.5.4 Site-led programmes on the Otago Peninsula

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme for the Otago Peninsula are set out in Table 26 below.

Table 26: Aims and means of achievement for site-led programmes on the Otago Peninsula

Objective, principal measures and rules	
Plan Objective 6.5.4.a Over the duration of the Plan: a) preclude establishment of feral deer, feral goats, feral pigs and Bennett's wallaby; and b) eradicate possums; and c) implement sustained control of feral cats, rats; hedgehogs and; d) progressively contain mustelids on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.4.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.4.a and 6.5.4.b. It is not proposed to introduce occupier control rules at this stage. However, this may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.4.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on the Otago Peninsula (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or h) possum.	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from the Otago Peninsula.
For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

6.5.5 Site-led programmes at West Harbour – Mt. Cargill area

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme at West Harbour – Mt. Cargill are set out in Table 27 below.

Table 27: Aims and means of achievement for site-led programmes at West Harbour – Mt. Cargill

Objective, principal measures and rules	
Plan Objective 6.5.5.a Over the duration of the Plan: a) preclude establishment of feral deer and Bennett's wallaby; and b) implement sustained control of feral cats, feral goats, feral pigs, rats, hedgehogs; and c) progressively contain mustelids; and d) progressively contain possums to achieve a 2% RTC at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.5.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) sycamore; d) gunnera; e) Darwin's barberry; and f) tradescantia at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.5.a and 6.5.5.b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.5.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) any a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or h) possum. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from West Harbour – Mt. Cargill.
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

6.5.6 Site-led programmes on Quarantine and Goat Islands

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under site-led programmes at Quarantine and Goat Islands are set out in Table 28 below.

Table 28: Aims and means of achievement for site-led programmes on Quarantine and Goat Islands

Objective, principal measures and rules	
Plan Objective 6.5.6a Over the duration of the Plan: a) preclude establishment of Bennett's wallaby, feral cats, feral deer, feral goats, feral pigs, mustelids, hedgehogs[5] and possums; and b) eradicate rats on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.6b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on Quarantine and Goat Islands (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.6a and 6.5.6b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy. There are no alternative measures that provide for satisfactory inspection, education or advocacy measures.
Plan Rule 6.5.6.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral cat; c) feral deer; d) feral goat; e) feral pig; f) mustelid; g) hedgehog; h) possum; or i) rat. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	**Explanation of rule** The reason for this rule is to help achieve the exclusion or eradication of these pests from Quarantine and Goat Islands.
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

[5] Existing information suggests that hedgehogs are not present on Goat Island, however if further research demonstrates that they are, then the objective for hedgehogs on Goat Island will be eradication.

Appendix 2.

Otago Regional Council Pest Management Plan (2019-2029)

6.5.4 Site-led programmes on the Otago Peninsula

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme for the Otago Peninsula are set out in Table 26 below.

Table 26: Aims and means of achievement for site-led programmes on the Otago Peninsula

Objective, principal measures and rules	
Plan Objective 6.5.4.a Over the duration of the Plan: a) preclude establishment of feral deer, feral goats, feral pigs and Bennett's wallaby; and b) eradicate possums; and c) implement sustained control of feral cats, rats; hedgehogs and; d) progressively contain mustelids on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.4.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.4.a and 6.5.4.b. It is not proposed to introduce occupier control rules at this stage. However, this may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.4.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on the Otago Peninsula (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or h) possum.	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from the Otago Peninsula.
For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

6.5.5 Site-led programmes at West Harbour – Mt. Cargill area

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme at West Harbour – Mt. Cargill are set out in Table 27 below.

Table 27: Aims and means of achievement for site-led programmes at West Harbour – Mt. Cargill

Objective, principal measures and rules	
Plan Objective 6.5.5.a Over the duration of the Plan: a) preclude establishment of feral deer and Bennett's wallaby; and b) implement sustained control of feral cats, feral goats, feral pigs, rats, hedgehogs; and c) progressively contain mustelids; and d) progressively contain possums to achieve a 2% RTC at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.5.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) sycamore; d) gunnera; e) Darwin's barberry; and f) tradescantia at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.5.a and 6.5.5.b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.5.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) any a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or h) possum. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from West Harbour – Mt. Cargill.
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

6.5.6 Site-led programmes on Quarantine and Goat Islands

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under site-led programmes at Quarantine and Goat Islands are set out in Table 28 below.

Table 28: Aims and means of achievement for site-led programmes on Quarantine and Goat Islands

Objective, principal measures and rules	
Plan Objective 6.5.6a Over the duration of the Plan: a) preclude establishment of Bennett's wallaby, feral cats, feral deer, feral goats, feral pigs, mustelids, hedgehogs[5] and possums; and b) eradicate rats on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.6a and 6.5.6b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy. There are no alternative measures that provide for satisfactory inspection, education or advocacy measures.
Plan Objective 6.5.6b Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on Quarantine and Goat Islands (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	
Plan Rule 6.5.6.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral cat; c) feral deer; d) feral goat; e) feral pig; f) mustelid; g) hedgehog; h) possum; or i) rat. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	**Explanation of rule** The reason for this rule is to help achieve the exclusion or eradication of these pests from Quarantine and Goat Islands.
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

[5] Existing information suggests that hedgehogs are not present on Goat Island, however if further research demonstrates that they are, then the objective for hedgehogs on Goat Island will be eradication.

Otago Regional Council Biosecurity Operational Plan 2023-2024 (Objective 3.5.1)

3.5.1 Otago Peninsula, West Harbour – Mount Cargill and Quarantine and Goat Islands

Objective

Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to these sites [Otago Peninsula (9,000 ha), West Harbour-Mt Cargill (12,500 ha) and Quarantine and Goat Islands].[13]

Deliverable	KPI	Target
Confirm site-led programmes around Otago Harbour	Site-led programme plan (including each site-led location) reconfirmed by 31 July 2023	3
Site-led programme plan implemented	% of actions implemented within defined timeframes for 2023-2024	100%

Note: Any compliance actions are covered under 3.6 Integrated Programmes and 4.1 Compliance and Enforcement Actions.

Otago Regional Council Biosecurity Strategy 2019 (Action 3.4.1)

Action 3.4.1 Provide regional leadership and support for the site-led programmes in the Pest Management Plan to protect indigenous biodiversity

- **Provide regional leadership and advocacy, and support community leaders** for the Otago Peninsula, West Harbour – Mt Cargill, and Quarantine Island and Goat Island site-led programmes.
- **Support the development of 'whole of site' management plans** for the Otago Peninsula, West Harbour – Mt Cargill, and Quarantine Island and Goat Island.
- Within each 'whole of site' management plan, **support the identification of smaller sites for specific objectives and activities** to protect the significant values of that place and encourage landowner participation in these initiatives.
- **Support the delivery of site-led objectives** by assisting and facilitating groups to undertake control works, undertaking monitoring of key species, leading some of these activities where needed, and undertaking control works where there are barriers to landowner participation.

SITE-LED WORKING GROUP

AGREEMENT

6th September 2023

Otago Regional Council

1. SITE-LED WORKING GROUP VISION

The overall vision for the Site-Led Working Group is:

- To deliver the Site-Led Programme in partnership with mana whenua and in collaboration with community, and other stakeholders
- To manage pest plants and animals whose presence, at or nearby, threaten the values that are special to particular sites outlined in the Otago Regional Pest Management Plan (RPMP) under the Site-Led Programme, therefore protecting the value of the sites.

2. SCOPE OF THE SITE-LED WORKING GROUP

The Site-Led Programme comes from the RPMP which is a regulatory document. The Site-Led areas included in the RPMP were selected as they support and build on the significant momentum and collaboration being achieved by a number of occupiers and wider community interest groups. The three Site-Led Programmes in Dunedin are interrelated projects to reduce the impact of harmful organisms on indigenous biodiversity. Not-for-profit groups have worked on the Peninsula for more than 10 years to protect the indigenous flora and fauna that call the Peninsula home. In collaboration with local and central Government agencies, many residents are now part of coordinated efforts to manage predator pests and plant pests. The Site-Led terrestrial areas are:

- Otago Peninsula
- West Harbour – Mt Cargill
- Quarantine and Goat Island

The Site-Led Working Group will focus on, but not be limited to, activities to address the pest species specified in the RPMP for the three terrestrial sites above.

3. PURPOSE OF THE SITE-LED WORKING GROUP

On 23rd February 2023 a Site-Led Hui was hosted by Otago Regional Council (ORC) to discuss a partnership with mana whenua with representatives from both Te Rūnanga o Ōtakōu and Kāti Huirapa Rūnaka ki Puketeraki attending. During the Hui, it was agreed that there was a need to formalise the working relationship between ORC and Rūnaka/Rūnanga partners.

The Site-Led Working Group's purpose is to oversee and provide guidance for the development of priority activities within the Site-Led Programme terrestrial areas to enhance biodiversity values.

The Otago Regional Council will rely on mana whenua representatives to guide the tasks of the working group to meet mana whenua aspirations that align with the purpose of the Site-led working group.

The Site-Led Programme objectives are outlined in the Appendix.

4. TASKS OF THE SITE-LED WORKING GROUP

The key tasks for the Working Group involve (but may not be limited to) overseeing the development of:

- A Stocktake of community and group activity, collated from PFD as starting point, to determine:
    - What community groups are active in the Site-Led areas?
    - What geographical area do these groups cover?
    - What are these groups focusing on?
    - What agreements do these groups have in place?
    - If the group values relate to biosecurity and biodiversity values outlined in the RPMP?
- A Values, Threats, and Impacts Assessment of the biodiversity values within the Site-Led areas
- Priority activities under the Site-Led Programme based on results from the Values, Threats, and Impacts Assessment and Stocktake
- An implementation framework (resource and funding structure)
- Implementation of priority activities.

5. RESPONSIBILITIES OF WORKING GROUP MEMBERS

Individual Working Group members will:

- Review and analyse any documents or material provided for working group meetings
- Actively participate in meetings through attendance, discussion, bringing ideas and working with other members
- Communicate the objectives and progress of the working group to their networks internally and externally (where appropriate)
- Provide input relevant to their area of expertise or experience to support the tasks of the working group
- Provide an alternate representative to attend meetings if required or appropriate

- Advise if any risks arise that are likely to affect delivery of the tasks above.

6. WORKING GROUP FACILITATION

The Working Group will be facilitated by the ORC Community Coordinators - Biosecurity. ORC Staff will:

- Coordinate and support the activities of the Working Group
- Develop draft proposals, plans or deliverables for Working Group review and input
- Draft the agenda and purpose for each Working Group meeting based on input from the Working Group
- Report on progress of the Working Group to the appropriate Council Committee (if needed)
- End each meeting with a summary of decisions and actions and confirm responsibility.

7. FUNDING

The funding available for the 2022/2023 financial year is available until June 2023.

Funding for this programme has not been confirmed for the next financial year.

8. GENERAL

8.1 Membership

The table below lists the membership of the Site-Led Working Group.

Organisation	Role	Name
Kāti Huirapa Rūnaka ki Puketeraki	Rūnaka representative	Korako Edwards
Kāti Huirapa Rūnaka ki Puketeraki	Rūnaka representative	TBC
Te Rūnanga o Ōtakōu	Rūnanga representative	Hoani Langsbury
Te Rūnanga o Ōtakōu	Rūnanga representative	Tumai Cassidy
Otago Regional Council	ORC Representative	Libby Caldwell
Otago Regional Council	ORC Representative	Sophie Gibson-Pinn
Otago Regional Council	ORC Representative	Anna Molloy
Otago Regional Council	ORC Representative	Sarah Irvine

8.2 FREQUENCY AND LOCATION OF MEETINGS

The Working Group will meet as required. Meetings will aim to be held in person, with an online option available.

8.3 AGENDA, MINUTES, AND SUPPORTING PAPERS

Where possible, a package will be sent to members at least three business days in advance of a Working Group meeting. This package will include the following:

- Agenda for upcoming meeting
- Minutes of previous meeting
- Any other documents/information to be considered at the meeting.

8.4 ALTERNATES

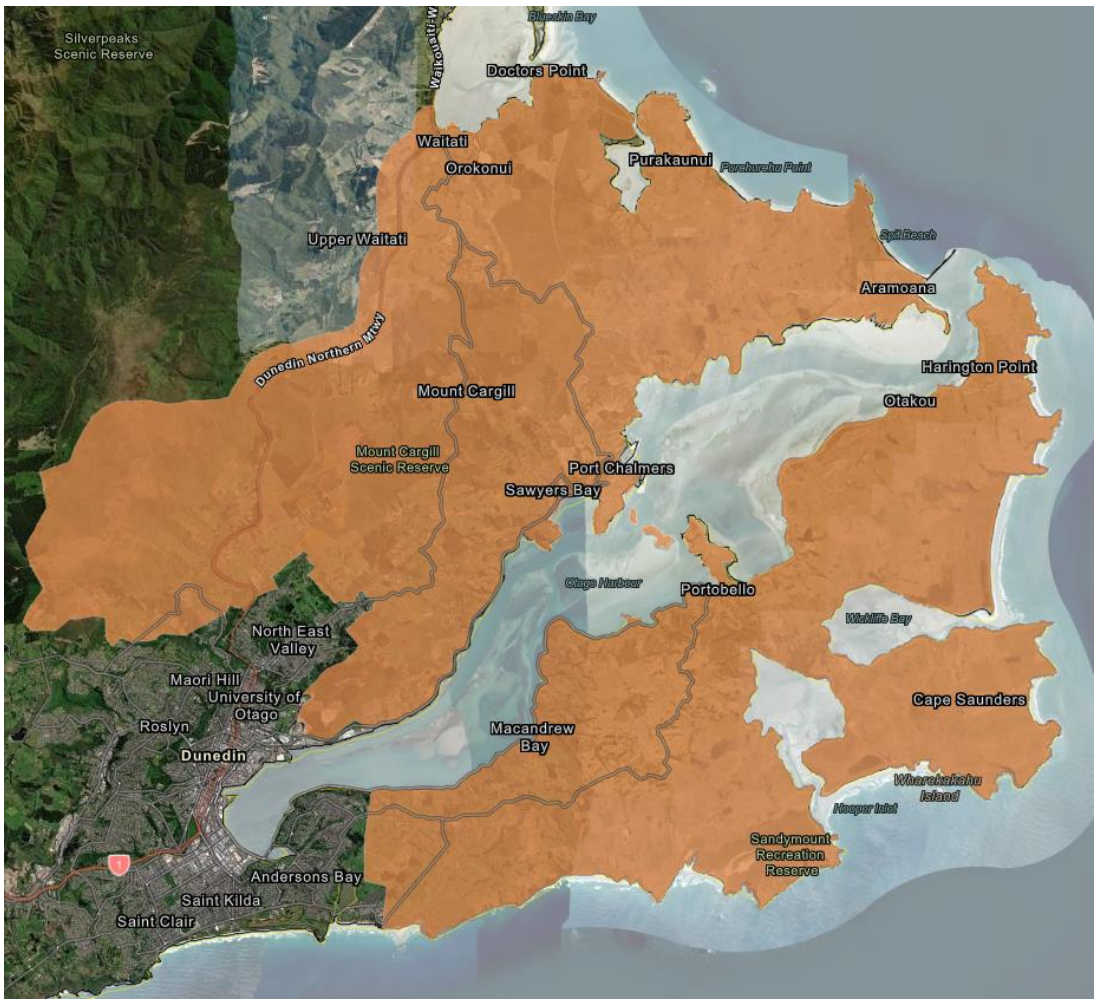
Members of the Working Group can send alternates to meetings. Alternates are entitled to participate in discussion and provide expert advice. Working Group members will inform the Working Group Facilitators (ORC) as soon as possible if they intend to send an alternate to a meeting.

8.5 TERM OF THE WORKING GROUP

The term for the Working Group is from the first meeting (TBC) until such time that tasks of the Working Group have been completed to a point where the work of the wider community including mana whenua and community groups can continue the Site-Led Programme.

8.6 SITE-LED MANAGEMENT AREAS TAKIWĀ

Each Rūnaka / Rūnanga will take primary responsibility for their respective takiwās. These are shown in the map below.



9. APPENDIX

6.5.4 Site-led programmes on the Otago Peninsula

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme for the Otago Peninsula are set out in Table 26 below.

Table 26: Aims and means of achievement for site-led programmes on the Otago Peninsula

Objective, principal measures and rules	
Plan Objective 6.5.4.a Over the duration of the Plan: a) preclude establishment of feral deer, feral goats, feral pigs and Bennett's wallaby; and b) eradicate possums; and c) implement sustained control of feral cats, rats; hedgehogs and; d) progressively contain mustelids on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.4.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on the Otago Peninsula (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.4.a and 6.5.4.b. It is not proposed to introduce occupier control rules at this stage. However, this may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.4.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on the Otago Peninsula (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or h) possum.	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from the Otago Peninsula.

For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.

6.5.5 Site-led programmes at West Harbour – Mt. Cargill area

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under the site-led programme at West Harbour – Mt. Cargill are set out in Table 27 below.

Table 27: Aims and means of achievement for site-led programmes at West Harbour – Mt. Cargill

Objective, principal measures and rules	
Plan Objective 6.5.5.a Over the duration of the Plan: a) preclude establishment of feral deer and Bennett's wallaby; and b) implement sustained control of feral cats, feral goats, feral pigs, rats, hedgehogs; and c) progressively contain mustelids; and d) progressively contain possums to achieve a 2% RTC at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.5.b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) sycamore; d) gunnera; e) Darwin's barberry; and f) tradescantia at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.5.a and 6.5.5.b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the Objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy.
Plan Rule 6.5.5.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present at West Harbour – Mt. Cargill (identified on Map 3 in Appendix 3) any a) Bennett's wallaby; b) feral deer; c) feral goat; d) feral pig; e) mustelid; f) feral cat; g) hedgehog; or	**Explanation of rule** The reason for this rule is to help achieve the exclusion, eradication or control of these pests from West Harbour – Mt. Cargill.

h) possum. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

6.5.6 Site-led programmes on Quarantine and Goat Islands

The management aims and the range of methods to be used to accomplish the aims for the pest to be managed under site-led programmes at Quarantine and Goat Islands are set out in Table 28 below.

Table 28: Aims and means of achievement for site-led programmes on Quarantine and Goat Islands

Objective, principal measures and rules	
Plan Objective 6.5.6a Over the duration of the Plan: a) preclude establishment of Bennett's wallaby, feral cats, feral deer, feral goats, feral pigs, mustelids, hedgehogs[5] and possums; and b) eradicate rats on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site. **Plan Objective 6.5.6b** Over the duration of the Plan, progressively contain: a) banana passionfruit; b) Chilean flame creeper; c) Darwin's barberry; d) Sycamore e) Gunnera; and f) tradescantia on Quarantine and Goat Islands (identified on Map 3, Appendix 3) to avoid, mitigate or prevent damage to the indigenous ecosystem values at this site.	**Principal measures to be used** Otago Regional Council will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to this site. Appropriate measures drawn from the suite of activities listed under **collaboration, requirement to act, council inspection, service delivery, advocacy and education** described in section 5.3 of the Plan will be used by Otago Regional Council to achieve Objectives 6.5.6a and 6.5.6b. It is not proposed to introduce occupier control rules at this stage. However, it may become necessary in the future to maintain public investment of actions or funding or where lack of cooperation could jeopardise achieving the objectives. How the Otago Regional Council intends to deliver these objectives with the community is described more fully in the Biosecurity Strategy. There are no alternative measures that provide for satisfactory inspection, education or advocacy measures.
Plan Rule 6.5.6.1 No person shall keep, hold, enclose or otherwise harbour in any place, either in transit to or present on Quarantine and Goat Islands (identified on Map 3 in Appendix 3) any: a) Bennett's wallaby; b) feral cat; c) feral deer; d) feral goat; e) feral pig; f) mustelid; g) hedgehog;	**Explanation of rule** The reason for this rule is to help achieve the exclusion or eradication of these pests from Quarantine and Goat Islands.

[5] Existing information suggests that hedgehogs are not present on Goat Island, however if further research demonstrates that they are, then the objective for hedgehogs on Goat Island will be eradication.

h) possum; or i) rat. For the purpose of this rule place includes any building, conveyance, craft, land, or structure. A breach of this rule creates an offence under section 154N(19) of the Act.	
Advice note Sections 52 and 53 of the Biosecurity Act 1993, which prevent the communication, release, spread, sale and propagation of pests, must be complied with. These sections should be referred to in full in the Biosecurity Act 1993.	

Site-Led Programmes – Stocktake Assessment

Data collected and reported by Sophie Gibson-Pinn

Contents

Background 2
Methods 2
Data collection 2
Mapping 3
Results 3
Challenges and limitations 4
Appendix 1. Site-Led Stocktake Eligability Criteria 11
Appendix 2. Primary Questions for the groups/organisations: 11
Appendix 3. Community Groups - Excluded 12
Appendix 4. Community Groups – Incomplete 12
Appendix 5. Stocktake responses 12

Background

The Site-Led Programme comes from the Regional Pest Management Plan (RPMP). The Site-Led areas included in the RPMP were selected as they support and build on the significant momentum and collaboration being achieved by a number of occupiers and wider community interest groups.

The three Site-Led programmes in Dunedin are interrelated projects to reduce the impact of harmful organisms on indigenous biodiversity.

The Site-Led terrestrial areas are:

- Otago Peninsula
- West Harbour – Mt Cargill
- Quarantine and Goat Island

Part of the Site-Led Programme involves collecting data for a stocktake so an action plan can be developed. The aim of this is to facilitate community activities in a coordinated way, and to help allocate ORC support.

Methods

Data collection

A set of criteria were developed to set the scope of the stocktake. The stocktake aimed to capture all the community groups, organisations, and collective groups/collaboration between landowners/occupiers involved in hands-on biosecurity initiatives to benefit biodiversity. For profit organisations and individual landowner/occupier initiatives were not included in the stocktake.

Interviews were either conducted over the phone or via email. When available, shape files were provided by the group. Site-visits were carried out as required.

Previous work on this Programme, had the three Site-Led areas as separate organisational areas, however, through the establishment of a partnerships with Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtakōu, it was decided to treat these area as one for this project. As a result, the existing shapefiles were merged into one area.

Mapping

In Arc GIS the NZGD 2000 New Zealand Transverse Mercator coordinate system with NZ Topographic Relief (Vector) basemap was used. I used several layers to identify significant areas and property boundaries: DOC Public Conservation Land, LINZ NZ Coastline – Mean High Water, LINZ NZ Property Titles, and NZ Suburbs and Localities Pilot.

A total of 38 community groups were interviewed for this Stocktake, while some of these groups have been broken down into several organisational areas for mapping purposes (N=42). For example, the Otago Peninsula Trust has been divided into the Otago Peninsula Trust – Royal Albatross Centre & Fort Taiaroa, Otago Peninsula Trust - Lime Kilns, and Otago Peninsula Trust Glenfalloch Gardens. It should also be noted, that while Waikouaiti Coast Community Board chosen not to take part in this stocktake, and DCC Pest Control (Plants) for Parks and Reserves did not complete the stocktake, that as location data was available these groups have been included in the maps. Shape files were provided by 8 of the 38 groups in the stocktake. Other groups either provided PDF files which were converted to JPEG files then georeferenced, or by using property boundaries in the LINZ NZ Property Titles layer which were traced. For mapping sections of land adjacent to the coast, I used the Mean High-Water layer with a 40-meter buffer, and then this was converted into a polygon.

For the map representing all community groups the primary symbology was unique values, where each of the 42 organisational areas of these groups were represented by different colours and assigned a number for mapping purposes. The select by attribute function was used to separate the community group data into five broad categories: 1. Restoration, 2. Animal Pest Management, 3. Plant Pest Management, 4. Education and Advocacy, and 5. Research. Each of the five categories were mapped separately using single symbol symbology, with layer blend and feature blend effects set to multiply. Labels were adjusted to allow labels outside the polygon boundaries (for small polygons) to ensure all labels were visible and to avoid label stacking.

Results

Of the 53 community groups identified, 38 groups were successfully interviewed for this Stocktake (Appendix 5); 12 groups were excluded (Appendix 3); and the remaining 3 either did not respond (N=1) or did not want to take part (N=2; Appendix 4).

For the 12 excluded groups, the reasons for groups to be excluded included: group formation was still underway (N=3), group was a for-profit company/organisation (N=2), or group did not operate in the Site-Led area (N=7).

Figure 1 depicts all the 38 community groups organisational areas in the Dunedin area. To classify data, biosecurity was defined into 5 broad categories for mapping purposes: Restoration (Figure 2; N=36), Pest Animal Management (Figure 3; N=20), Pest Plant Management (Figure 4; N=20), Education and Advocacy (Figure 5; n=30), and Research (Figure 6; N=13).

Challenges and limitations

There were several challenges I encountered when dealing with this dataset. The main one was around mapping the organisational area for each of the community groups, where some areas were very small (DCC – 0.0013 km^2) compared to large areas (Waikouaiti Coast Community Board – 505.01 km^2). It was evident that I needed clear labelling to ensure all community groups and organisations were represented equally. To do this, I used a numeric labelling system from 1:24,000 – 1:1,000,000 and a full name labelling system from 1:1,000 – 1:24,000. It was also evident that there were issues with labels on-top of each other. This was fixed by adjusting the settings to allow labels outside the polygon boundaries.

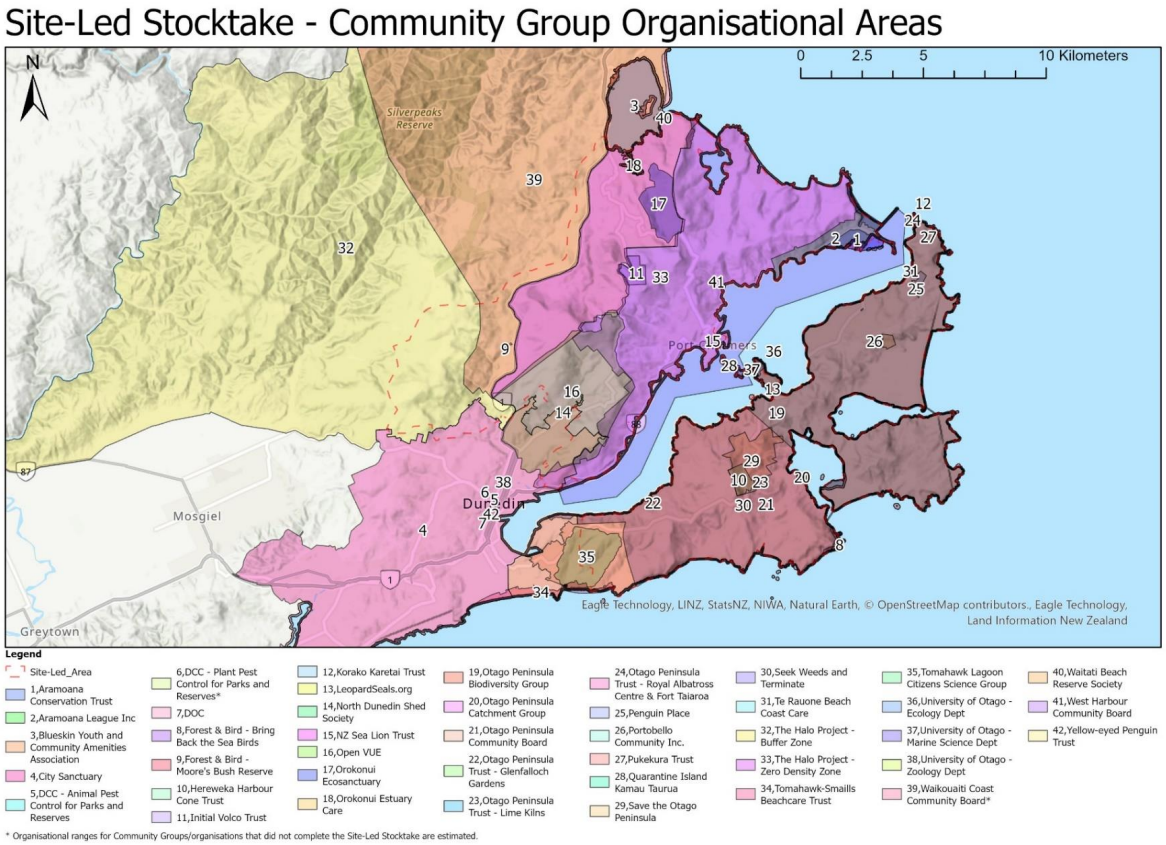


Figure 1. Site-Led Stocktake of all the Community Groups and Organisations involved in biosecurity initiatives (N=42).

Site-Led Stocktake - Restoration Groups

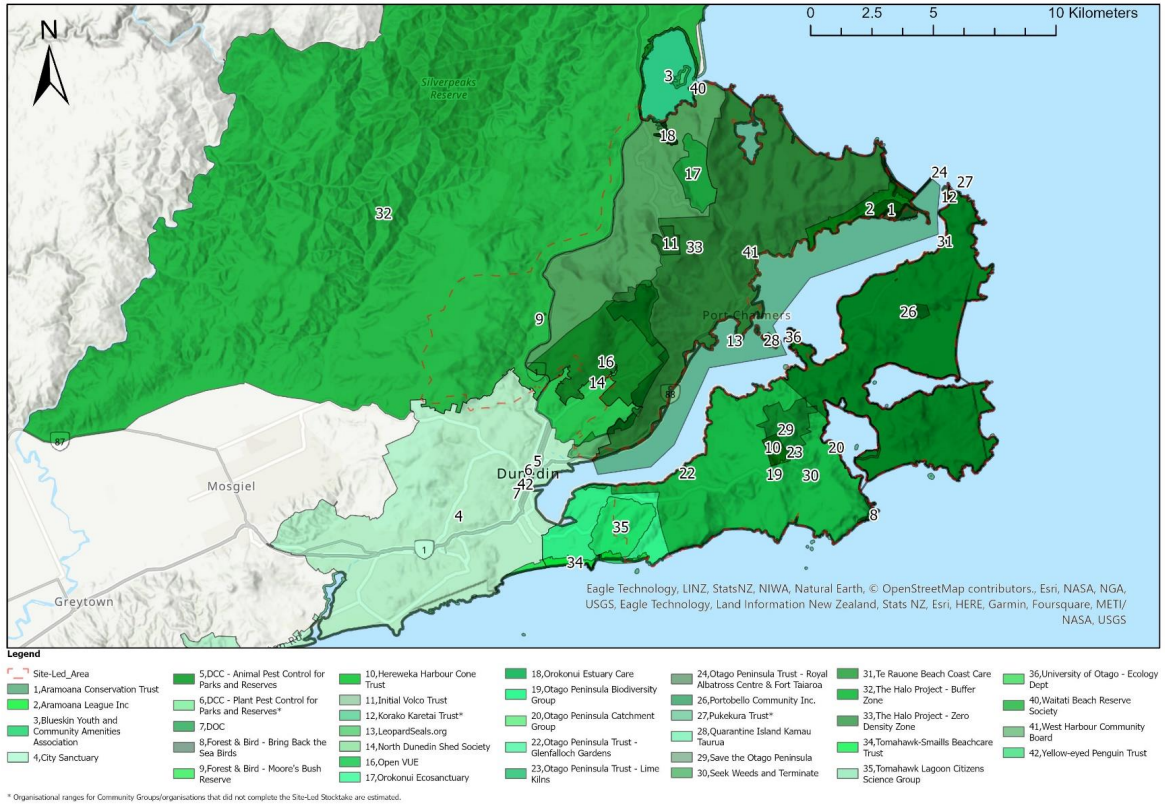


Figure 2. Site-Led Stocktake of all the Community Groups and Organisations involved in habitat restoration (N=36).

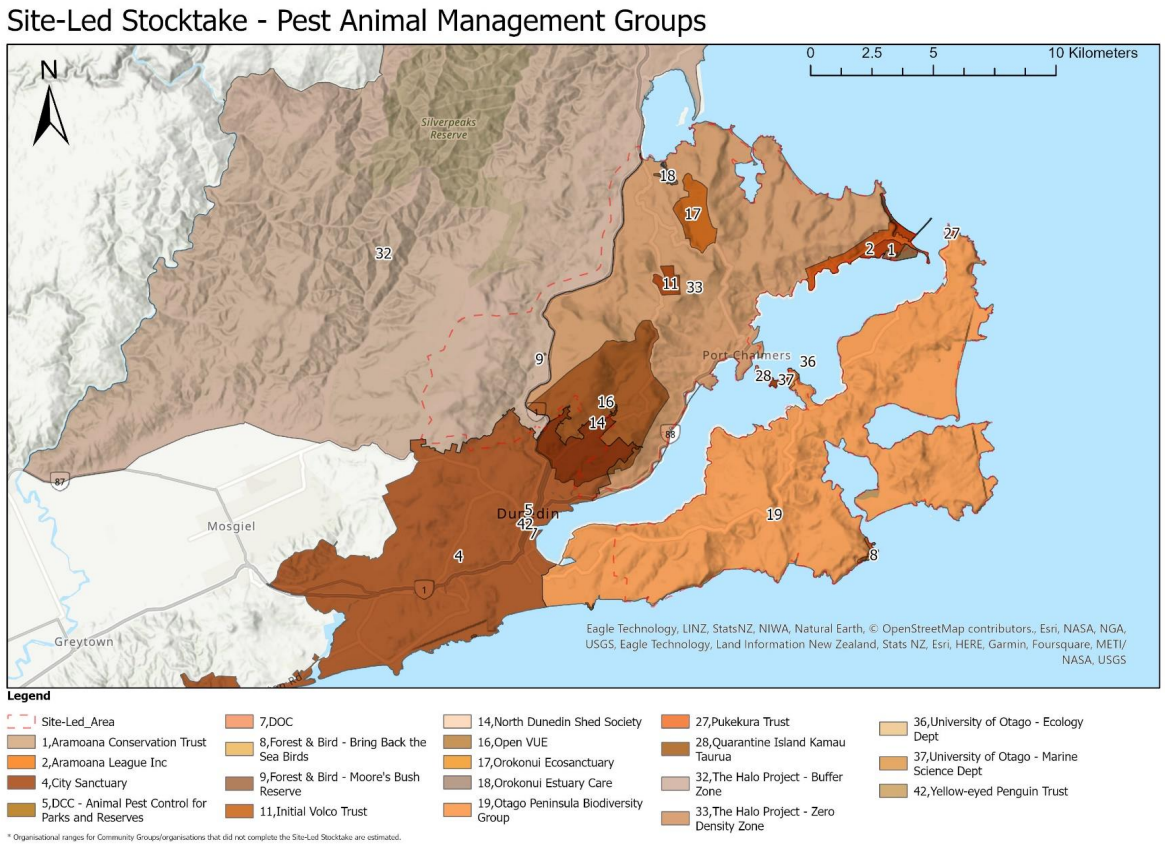


Figure 3. Site-Led Stocktake of all the Community Groups and Organisations involved in pest animal management (N=20).

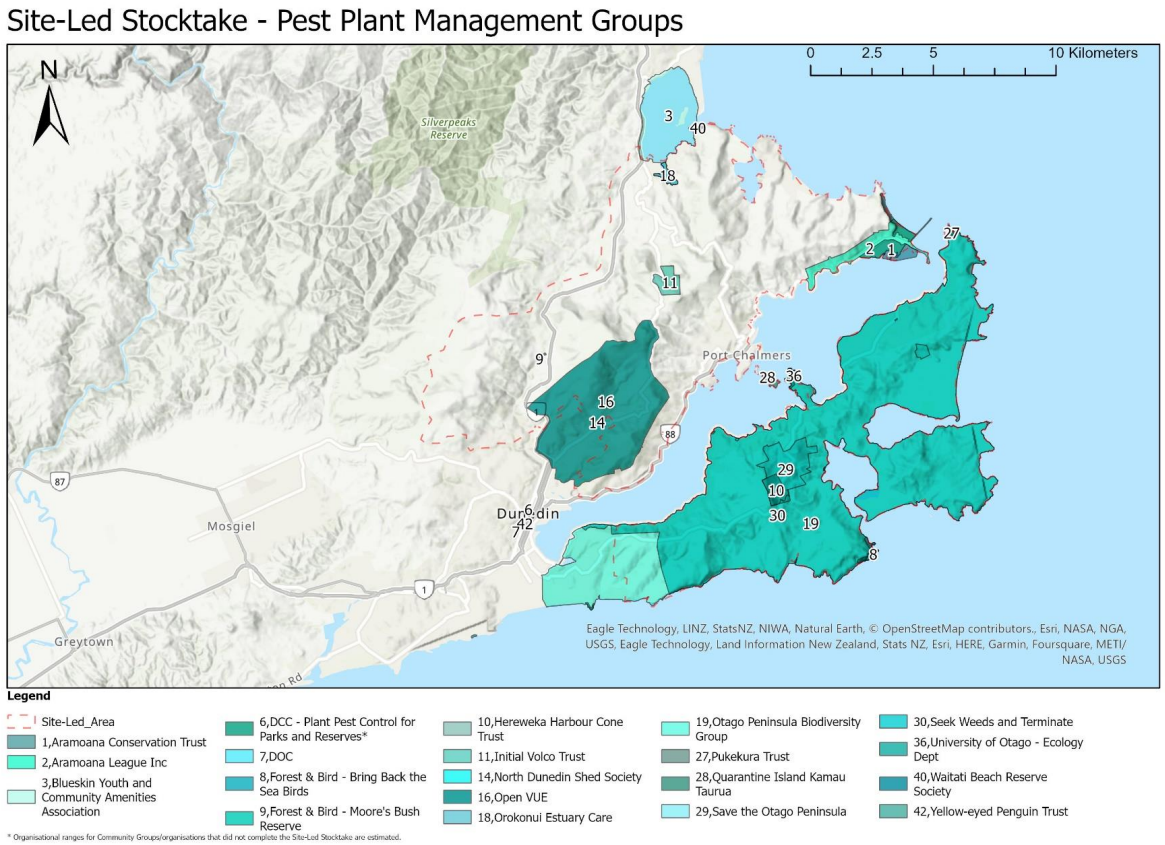


Figure 4. Site-Led Stocktake of all the Community Groups and Organisations involved in pest plant management (N=20).

Site-Led Stocktake - Education and Advocacy Groups

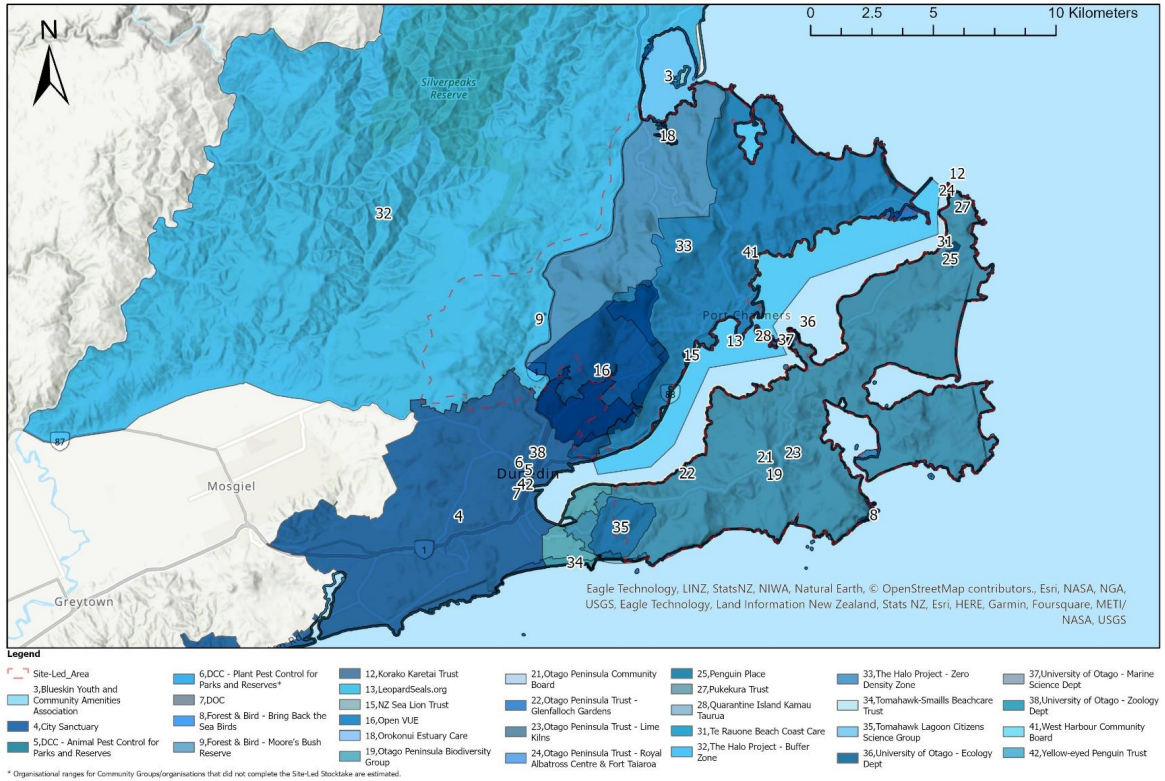


Figure 5. Site-Led Stocktake of all the Community Groups and Organisations involved in education and advocacy (N=30).

Site-Led Stocktake - Research Groups

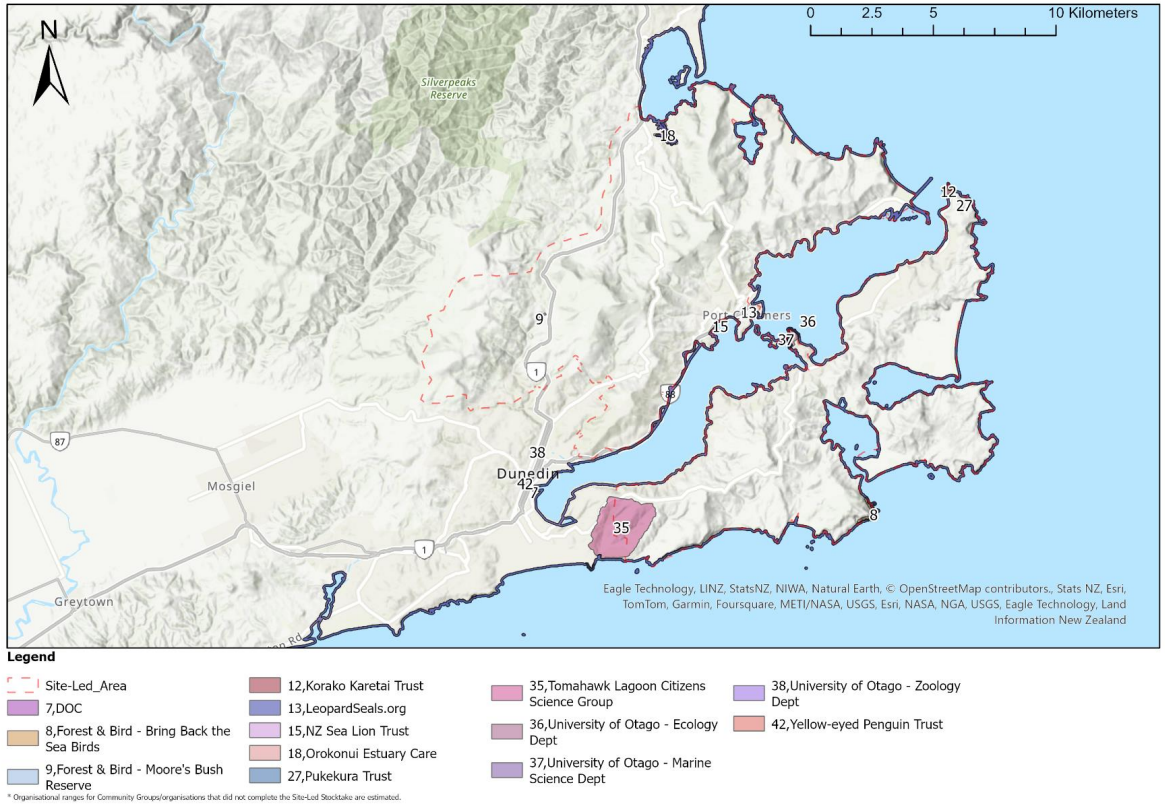


Figure 5. Site-Led Stocktake of all the Community Groups and Organisations involved in research (N=13).

Appendix 1. Site-Led Stocktake Eligability Criteria

To be eligible to be included in the Site-Led Stocktake, the organisation/community group must:

- Be a not-for-profit group
- Be an active group of more than 3 members
- Be within the defined Site-Led area
- Have a focus on biosecurity for pest plants and pest animals outlined in the RPMP as Site-Led species
- Have a focus on biodiversity outcomes

Appendix 2. Primary Questions for the groups/organisations:

1. What geographical area does the group/organisation cover?
2. What is the group's/organisation's core focus?
    a. Enhancing native flora and fauna
    b. Control of pest flora and fauna
    c. Critical habitat or areas of ecological significance
    d. Other?
3. Contact details
    a. Do we have the right persons contact details for the group?
    b. Are you happy to have your details shared?
    c. Or do you have alternative details you can provide?
4. Do you have any existing agreements and/or partnerships in place (for example with DOC, DCC, PFD, OPBG etc.)?
5. Do you have existing mapped project areas
    a. If so, what format are theses in? JPEG/Apps/Software/Shapefile/Google Maps
6. How long has the group/organisation been operating?
7. How long does the group plan to operate?
8. How is the group or projects funded?
    a. For example, is it a Jobs for Nature project with a 3-year lifespan?
    b. Or self-funded?
9. What is the groups workplan/work programme?
10. What do the groups outputs look like i.e., what are you measuring?
    a. How are you monitoring your project?
    b. What does success look like?
11. What additional apps/software do you use?
    a. For example, trapNZ, ArcGIS, MyMaps, iNaturalist, Find a Pest
12. Do you have any key documents for the group projects?
    a. For example, operational plans, group strategies?
13. Are you aware of other groups undertaking biodiversity/biosecurity work in your project area?

Appendix 3. Community Groups - Excluded

Community Group	Active Group?	In Site-Led area?	Group type	Status
Monarch Tours	Yes	Yes	Commercial	Excluded
Natures Wonders	Yes	Yes	Commercial	Excluded
Community Catchment Group (Group formation in progress)	No	Yes	Community Group	Excluded
Friends of Burns Reserve Proposal	No	Yes	Community Group	Excluded
Kellas Street Reserve Group	No	Yes	Community Group	Excluded
Wild Dalmore Reserve	Yes	No	Community Group	Excluded
Town Belt Kaitiaki	Yes	No	Community Group	Excluded
Whakahekerau - Second Beach Ecology Action	Yes	No	Community Group	Excluded
Sinclair Wetlands	Yes	No	Community Group	Excluded
Brighton Trapping Project	Yes	No	Community Group	Excluded
Dunedin Environment Centre	Yes	No	Community Group	Excluded
Our Seas Our Future	Yes	No	Community Group	Excluded

Appendix 4. Community Groups – Incomplete

Community Group	Active Group?	Group type	Status
DCC - Pest Control (Plants) for Parks and Reserves	YES	City Council	No response
Rotary Club - Dunedin	YES	Community Group	Do not wish to take part
Waikouaiti Coast Community Board	YES	Board	Do no wish to take part

Appendix 5. Stocktake responses

See attached Excel Document.

Solutions for sustainable futures

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Site-Led Programmes – Values, Threats and Impacts Assessment

On behalf of the Otago Regional Council

Date: 26 July 2023

COMMUNITY & CLIMATE

BIODIVERSITY & RESTORATION

FRESHWATER, FOOD, FARMS & FOREST

ENERGY, CARBON & WASTE

Report prepared for client by Craig Wilson and Keiko Hashiba
Report reviewed by Hilary Lennox

Report identifier: 230726-03024_ORC Site-Led Programmes Values, Threats And Impacts Assessment

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Ahikā Consulting Ltd guarantees its work as free of political bias and as grounded in sound ecological principles based on quality knowledge.

Document Version History

Version	Date	Author	Reviewer
1 (partially complete)	19/5/23	Keiko Hashiba & Craig Wilson	Hilary Lennox
2 (partially complete)	2/6/23	Keiko Hashiba & Craig Wilson	Hilary Lennox
Final Draft	23/6/23	Keiko Hashiba & Craig Wilson	Working Group
FINAL	26/7/23	Keiko Hashiba & Craig Wilson	Hilary Lennox

Contents

1 Introduction 1
2 Ecological Values of the Programme Areas 3
2.1 Vegetation Types 3
2.1.1 Otago Peninsula 5
2.1.2 West Harbour – Mt. Cargill 6
2.1.3 Quarantine and Goat Islands 7
2.2 Significant Habitats of Indigenous Fauna 7
2.3 Naturally Uncommon Ecosystems 9
2.4 Legally Protected Areas 10
2.5 DOC Ecosystem/Species Management Units 11
2.6 Areas of Significant Biodiversity Value 12
2.7 Land Environments of New Zealand (LENZ) 12
2.8 Areas Undergoing Revegetation Efforts 13
2.9 Threatened or At Risk Species 14
2.10 Taonga Species 15
2.11 Identification of Key Locations 16
3 Biosecurity Threats 19
3.1 Pest Animal Distribution and Preferred Habitat 19
3.1.1 Wallaby 19
3.1.2 Feral Cat 19
3.1.3 Feral Deer 20
3.1.4 Feral Goat 20
3.1.5 Feral Pig 20
3.1.6 Hedgehog 21
3.1.7 Mustelids 21
3.1.8 Possum 21
3.1.9 Rat (Norway, Ship and Kiore) 22
3.2 Pest Plant Distribution 22
3.2.1 Banana Passionfruit 23

3.2.2 Chilean Flame Creeper 24
3.2.3 Darwin's Barberry 25
3.2.4 Sycamore 26
3.2.5 Gunnera 27
3.2.6 Tradescantia 28
3.3 Other Pests Identified in the RPMP 29
4 Impact of Target Pests on Values 31
4.1 Ways to Manage or Minimise Impacts 34
4.1.1 Direct Control of Animal Pests 34
4.1.2 Pest Plant Control 37
4.2 Indirect Methods of Reducing Impacts 37
4.3 Estimate of Recovery Potential if Target Pests are Controlled 38
4.3.1 Can the target pests be successfully controlled? 38
4.3.2 Will the values recover; is the control worthwhile? 40
4.4 Unintended Consequences 41
5 Suggested Criteria for Priority Projects 42
5.1 Alignment with RPMP Objectives 42
5.2 Existing Initiatives 44
5.3 Available Tools 45
5.4 Long-term Sustainability 46
5.5 Other Benefits 46
5.6 Key Locations 46
5.7 Priority Pests 47
5.8 Summary of Prioritisation Criteria 48
Appendix 1. Threatened and At Risk species recorded within the Programme Areas 52

1 Introduction

The Otago Regional Pest Management Plan 2019 - 2029 (RPMP) includes four Site-Led Programmes, three of which are located in Dunedin. They were included in the RPMP to collectively build on the progress made, and momentum created, by several Dunedin-based groups and initiatives that are supported by individuals, community groups, and local and central government agencies.

The three Site-Led Programmes (Sites) are:

- Otago Peninsula (9,784 ha);
- West Harbour – Mt Cargill (12,242 ha); and
- Quarantine and Goat Island (16 ha and 4.5 ha respectively).

The objectives of these programmes are to protect environmental values via appropriate pest management regimes. Pests that are the subject of the Site-Led Programmes and the desired control levels defined for each Site are summarised in Table 6 later in this report.

The Otago Regional Council (ORC) and representatives from Te Rūnanga o Ōtakōu and Kāti Huirapa Rūnaka ki Puketeraki have formed a Working Group to oversee how ORC provides support to activities within the Sites. This Values, Threats and Impacts Assessment report has been prepared to help inform decisions made the Working Group.

This report describes known locations of primarily terrestrial biodiversity values and threats to those values within each Site based on information that was available at the time of writing. It must be emphasised, however, that the absence of a record does not confirm absence of a particular species at any particular location, and that species of conservation concern are often located outside of areas where they are most commonly found. Depending on the management approach adopted, providing protection of biodiversity values at any of the twelve key locations identified in this report does not, therefore, guarantee protection of significant biodiversity values across the wider Site.

It is also emphasised that long-term, sustained management of pests often requires a landscape-scale approach to be adopted over many years, and that control work focussed on discrete locations is sometimes only effective for a relatively short period of time (particularly in the absence of a defensible barrier).

It also worth noting that what this report describes is a snapshot in time, and that the distribution and abundance of most species may change in response to both natural and anthropogenically induced threats and opportunities.

The assessment matrices provided in Tables 3, 4 and 5 are populated based on individual interpretation and might be adjusted following discussion with a broader audience. Nonetheless, in their current form they still provide a reasonable indication of the likely situation, prompt the reader to consider some very important factors, and demonstrate an effective way for assessing relative impacts of threats on different ecosystems and for predicting the relative ability of controlling pests to levels specified in the RPMP.

The ORC Biosecurity Strategy 2019 states that the ORC will support the development of 'whole of site' management plans for the three Sites, and will also support the identification of smaller sites for specific objectives and activities to protect the significant values of that place and encourage landowner participation in these initiatives. This report has not been written as a 'whole of site' management plan for any of the Sites, but could help with the identification of smaller sites for specific objectives and activities.

With all this in mind, whilst this report can assist the Working Group with prioritising activities, it is important to note that it should not be used in isolation of broader considerations and updated or more site-specific information.

2 Ecological Values of the Programme Areas

2.1 Vegetation Types

The three Sites are dominated by exotic grassland (i.e. pasture). Over 70% of the Otago Peninsula is under pasture, while ca. 30% of the Quarantine & Goat Islands and West Harbour -Mt Cargill Sites are under pasture (mapped in orange in Figure 1). Discussion of the native vegetation and habitat types follows according to Site.

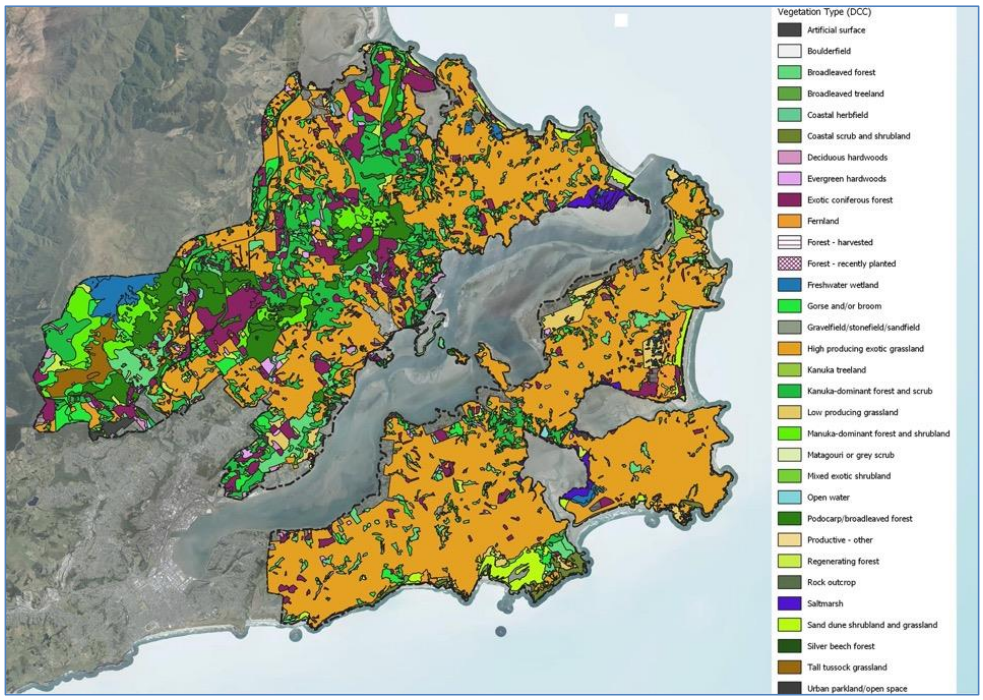

Figure 1: Vegetation cover (data source: Dunedin City Council Vegetation Map 2020).

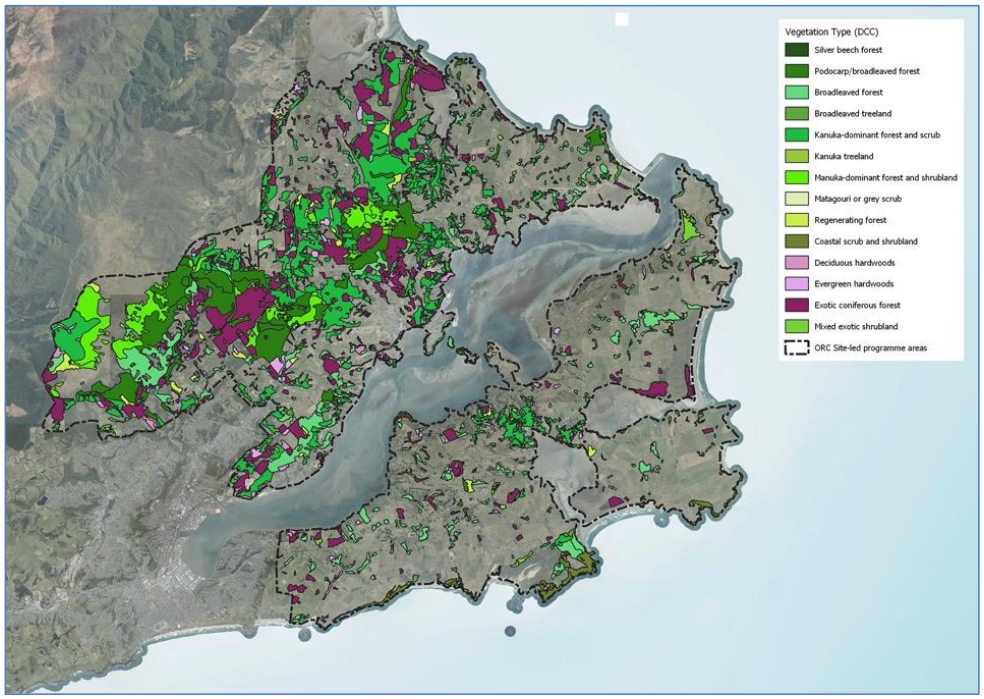

Figure 2: Indigenous woody vegetation communities shown in shades of green; exotic forest types shown in shades of purple.

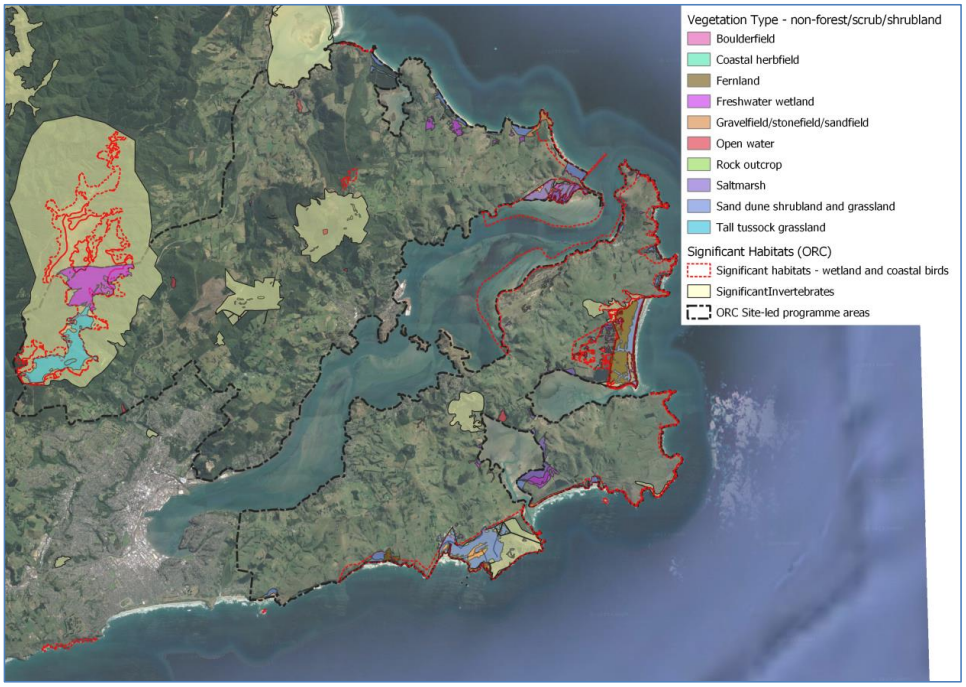

Figure 3: Non-woody ecosystems and significant habitats for wetland (bittern and fernbird) and seabirds, and significant invertebrates (see Section 2.2) within the Sites. Note that species of conservation concern have also been recorded outside of the 'significant habitats' shown on this map.

2.1.1 Otago Peninsula

Nine percent of Otago Peninsula is in native forest, scrub or shrubland (Figure 2). This is scattered across a number of small pockets of kānuka or other broadleaved forest, the largest of which are in the Harbour Cone – Dicksons Hill – Varleys Hill area, the rocky slopes behind Okia, and the northern slope of Sandymount. Further areas are in coastal scrub (with Boulder Beach, Sandymount and Cape Saunders being the largest examples) and sand dune shrubland, notably Sandfly Bay and Victory Beach/Okia.

These communities are home to a range of Threatened or At Risk plants such as *Olearia fragrantissima, Psuedopanax ferox, Neomyrtus pedunculata, Metrosideros diffusa* and the mistletoe *Korthalsella salicornioides*. They also host the At Risk lizards jewelled gecko *Naultinus gemmeus* and kōrero gecko *Woodworthia "*Otago/Southland large" as well as a host of invertebrates (see Section 2.2 below), the known distribution of which is likely more related to survey effort than habitat availability (hence they may be more widespread than currently known).

Non-woody communities (Figure 3) include sand-dunes, which although generally dominated by the introduced marram grass *Ammophila arenaria*, contain some pīkao *Ficinia spiralis* (some of which has been planted), areas of freshwater wetland (notably in a mosaic of vegetation types at Okia and inland from Harwood and Allans Beach), and salt marsh (particularly on the fringes of Papanui and Hoopers Inlets). Small areas of coastal herb field add further diversity.

The non-woody communities add Threatened and At Risk species such as coastal *Lepidium* species*, Senecio biserratus, Lachnagrostis tenuis*, and multiple species of *Carex* and *Acaena* as well as other herbs.

2.1.2 West Harbour – Mt. Cargill

Thirty-five percent of this Site is in native forest, scrub or shrubland (Figure 2). It has the largest and most coastal area of montane coniferous-broadleaved forest, the best example of montane scrub, and one of the few remaining stands of primary silver beech *Lophozonia menziesii* forest in the Dunedin Ecological District (Dunedin City Council, 2007). Additional areas of exotic forestry such as pine plantations improve connectivity between native forest remnants and provide additional habitat to at least some native species (Lloyd & Smith, 2016) though they also create a source of wilding conifers. Collectively these vegetation types form a contiguous belt from Doctors Point to Signal Hill, with further large areas towards Leith Saddle and many scattered areas on the slopes west of the Harbour. Within this area the Mt Cargill and Bethunes Gully Scenic Reserves contain important vegetation sequences extending from the low valley to sub alpine (Dunedin City Council, 2007).

These communities support many of the same Threatened and At Risk plant and reptile species as the Peninsula and likely many of the same invertebrates. The presence of the 307-ha Orokonui Ecosanctuary adds significantly to the presence of Threatened and At Risk species within but also outside the Ecosanctuary; South Island kākā *Nestor meridionalis meridionalis* and South Island robin *Petroica australis australis* have been commonly recorded in the surrounding landscape after dispersing from the ecosanctuary into which they were introduced.

Non-woody communities (Figure 3) include saltmarshes at the Aramoana Ecological Area and Pūrākaunui, coastal freshwater wetlands and active sand dunes at Long Beach, volcanic rock outcrops on the peaks from Mt Cargill north and tall-tussock grassland and wetlands from Flagstaff to Swampy. These more open communities add plant species such as *Carex purpurata, Linum monogynum* and *Carmichaelia petriei*, and birds such as mātātā/South Island fernbird *Bowdleria punctata punctata* and matuku/Australasian bittern *Botaurus poiciloptilus* (which may be present in a more transitory manner) to the Threatened and At Risk species present.

2.1.3 Quarantine and Goat Islands

Goat Island is close to completely covered in native woody vegetation, most of which is diverse broadleaved forest or scrub (Figure 2). Species recorded on the community science platform iNaturalist include a range of species found in the other two Sites, including the At Risk *Psuedopanax ferox* and *Brachyglottis sciadophila*.

Quarantine Island has just over half cover of native vegetation being a mixture of natural and planted coastal forest and scrub, with areas of flax and some of coastal herbs.

2.2 Significant Habitats of Indigenous Fauna

The Otago Regional Council commissioned work to identify significant habitats of indigenous fauna (Lloyd et.al. 2020)[1]. Significant habitats for bittern, fernbird, coastal seabirds, and significant invertebrates are shown in Figure 3 (the assumptions and limitations provided in the source report apply).

This shows significant areas for invertebrates in West Harbour – Mt Cargill around the volcanic cones, tussock grassland/wetland area, and Aramoana. On the Otago Peninsula, the Harbour Cone – Dicksons Hill – Varleys Hill area, Sandymount, Okia and Cape Saunders are identified. Not all areas have received detailed invertebrate surveys, therefore further, as yet unidentified areas of significance may exist.

The Okia area on the Peninsula is identified as significant habitat for bittern and fernbird, with further significant fernbird habitat in West Harbour – Mt Cargill at Aramoana, the head of Orokonui, and extensive areas from Flagstaff to Swampy.

Significant seabird habitat covers most of the Peninsula beaches with considerable inland extensions at Taiaroa Head, Okia, Pipikaretu Beach and Sandymount. Several areas of coastal cliff are included in this layer. Collectively these identify the key breeding sites for hoiho *Megadyptes antipodes*, kororā *Eudyptula minor*, toroa *Diomedea epomophora* and a range of both burrow (e.g. tītī *Puffinus griseus*) and cliff (e.g. Otago shag *Leucocarbo chalconotus*) nesting seabirds. Intertidal flats from Te Rauone to Lower Portobello on the Peninsula are also identified as significant, and the Aramoana saltmarsh and beach, and coastal cliffs from Aramoana to Heyward Point are significant in West-Harbour – Mt Cargill. Colony breeders of

[1] Significant habitat of bittern was mapped by assembling distribution data, then delineating polygons around sites with a high density of bittern records, a long-time sequence of bittern record, and/or contained known wetland habitats of bittern. Significant habitats of bittern are widespread in Otago, comprising wetland habitats in both coastal and inland areas. A similar approach was used for fernbird (Lloyd et al., 2020).

these species create Naturally Uncommon Ecosystems (seabird burrowed soils and seabird guano deposits, see Section 2.3).

Most areas of native forest within all three Sites are identified as significant for forest birds (but are not shown in Figure 3).

While records of some Threatened or At Risk species may be absent such as in the case of Okia Flat (Figure 4), it does not mean that the area does not support these species. Wetlands of varying sizes and degrees of modifications, including freshwater or estuarine, inland, or coastal including river mouths and mudflats, are potential habitats for endangered bird species. In a modified landscape such as in the Otago Peninsula, small streams, drains, farm ponds and other waterbodies with thick wetland vegetation which offer adequate food sources may also function as habitats, steppingstones, and corridors for endangered birds such as matuku.

Figure 4: Records of matuku/Australasian bittern (data source: eBird) (eBird, 2021). Note the absence of records in eBird from Okia Flat, but this does not mean the area does not support bittern, which is a highly mobile and cryptic species for which little survey work has been undertaken in Otago.

2.3 Naturally Uncommon Ecosystems

Naturally Uncommon Ecosystems are ecosystem types that generally occupy areas subject to unusual environmental conditions and develop a distinctive suite of species that make a disproportionately high contribution to the biodiversity of an area (Williams et al., 2007). Relevant ecosystems in the three Sites are mostly caused or defined by proximity to the coast, with the exceptions of volcanic boulder fields, cloud forest and basic cliffs, scarps and tors. The distribution of three of these ecosystems has been mapped. Figure 5 shows the available information as it relates to the Sites. Table 1, however, provides an indication of which Naturally Uncommon Ecosystems are, or are likely to be, present in each Site.

These Naturally Uncommon Ecosystems also tend to support Threatened or At Risk plant species that are specialised to the ecosystem such as *Carex cirrhosa, Acaena micropylla* var. *pauciglochidiata, Chenopodium allanii, Senecio glaycophyllus basinudus*, *Senecio biserratus,* and *Olearia fragrantissima*[2].

Table 1: Naturally Uncommon Ecosystems in the three Sites ranked by Threat Classification (Holdaway RJ, 2012)

	Otago Peninsula	West Harbour – Mt Cargill	Quarantine and Goat Islands
Critically Endangered			
Coastal turfs	Present	Present	
Seabird burrowed soils	Present		
Seabird guano deposits	Likely present	Likely present	
Marine mammal haulouts	Present	Likely present	
Endangered			
Active sand-dunes	Present	Present	
Dune slacks	Present	Present	
Volcanic boulder fields	Present	Present	
Vulnerable			
Basic coastal cliffs	Present	Present	
Basic cliffs, scarps, and tors	Present	Present	Present
Undefined			
Cloud forest		Likely present	

[2] Endangered species database (Ahikā, unpublished) was overlaid with the Naturally Uncommon Ecosystem layer, then cross-checked by Ahikā ecologists.

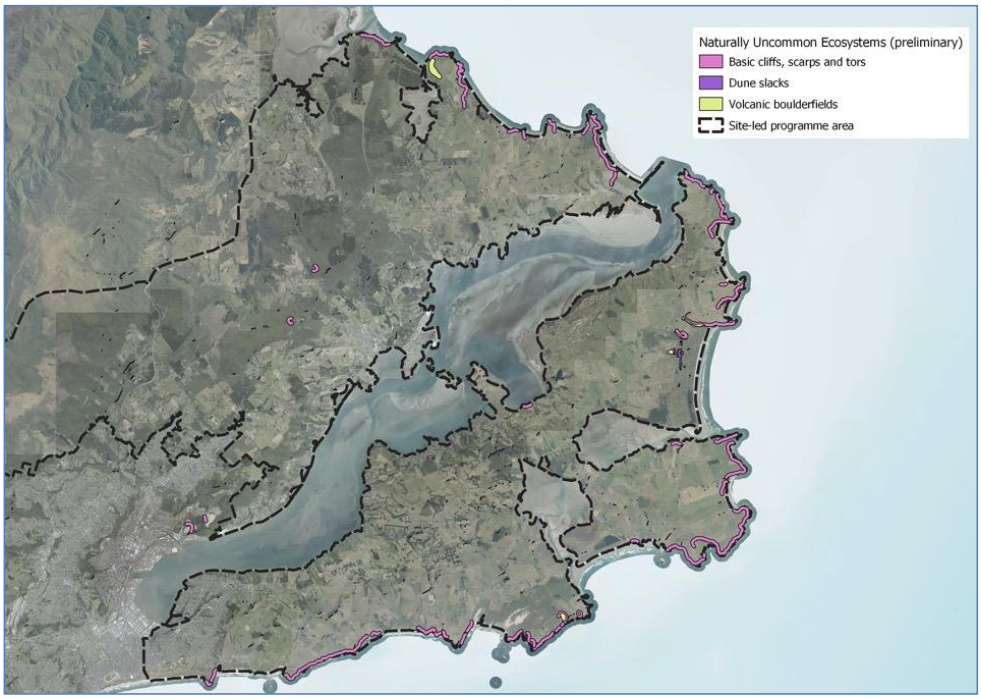

Figure 5: Distribution of Naturally Uncommon Ecosystems within the Sites, based on mapping undertaken by Landcare Research. The Naturally Uncommon Ecosystems which have not been mapped do not appear in this figure, though a further seven are likely to be present in the Sites.

2.4 Legally Protected Areas

Legally protected areas comprise of covenants (both QEII and DOC) that have been voluntarily protected for the benefit of specified values, public conservation land managed by DOC, and areas of reserve managed by Dunedin City Council (DCC) (though some areas of DOC and DCC reserve may be held for a range of reasons - some relating to parent organisations - and natural values may not be high in all of them). These are shown in Figure 6. As well as generally reflecting areas of conservation value, access is often allowed or negotiable for pest control to take place, and the legal protection means that gains in biodiversity (including pest reduction) are less likely to be lost due to land development.

Figure 6 shows much of the forest in West Harbour – Mt Cargill to be protected as well as the tussockland and wetlands of Flagstaff – Swampy, and the extensive area of saltmarsh, coastal shrubland, dunes and headlands from Aramoana to Heyward Point. On the Peninsula, key protected areas include the Boulder Beach – Sandfly Bay – Sandymount area, and areas of forest around Harbour Cone, Dicksons Hill and Varleys Hill. The entirety of Quarantine and Goat Islands are protected as public conservation land.

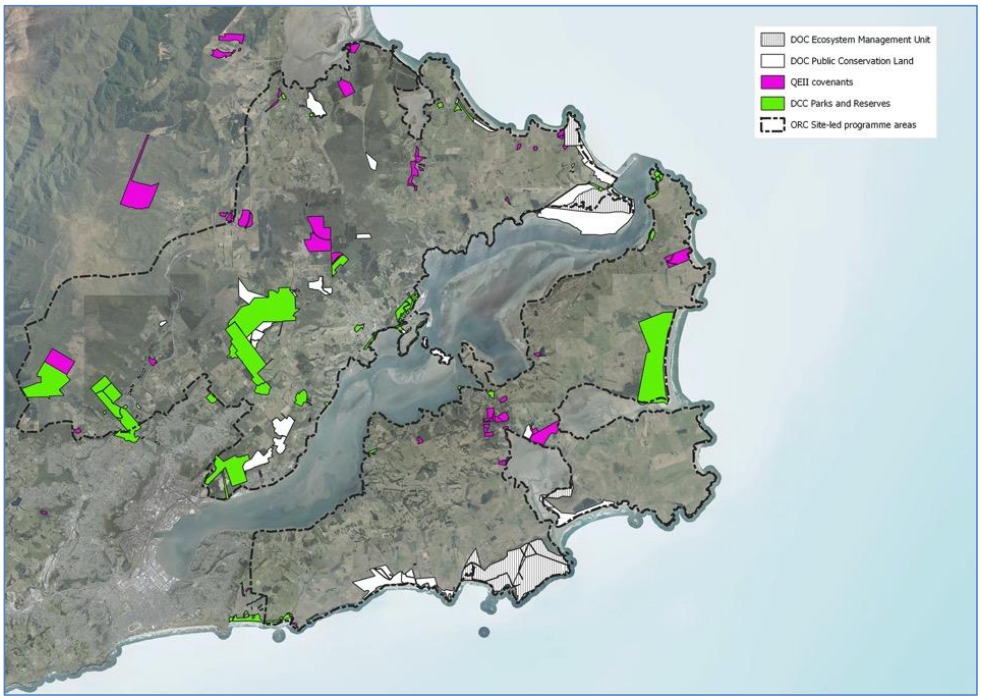

Figure 6: Public Conservation Land and Ecosystem Management Units (both administered by the Department of Conservation), Dunedin City Council parks and reserves, and Queen Elizabeth II National Trust covenanted areas.

2.5 DOC Ecosystem/Species Management Units

DOC Ecosystem/Species Management Units have been identified as areas where appropriate management will make a nationally important contribution to ecosystem and species persistence. They generally represent either the best examples nationally of their type of ecosystem, or a site of an ecosystem or species of such management concern that all relevant examples are considered priority. These management units present within the Sites are summarised in Figure 6 above.

For example, on the Peninsula, Coastal *Lepidium* populations at Taiaroa Head, hoiho breeding sites at a number of beaches, and the saltmarsh at Hoopers Inlet. At West Harbour – Mt Cargill, the saltmarsh ecosystem within Aramoana Ecological Area, coastal *Lepidium* populations, a hoiho breeding area, and the coastal forest at Heyward Point. Quarantine and Goat Islands do not contain any DOC Ecosystem/Species Management Units.

2.6 Areas of Significant Biodiversity Value

These have been identified as areas of particular biodiversity significance by the Dunedin City Council (DCC) as part of its obligations under the Resource Management Act 1991. They can be viewed on the DCC's 2GP Planning Map viewer available online[3]. A screenshot is provided below for ease of reference.

There are numerous ASBVs in the Peninsula Site, many of the larger ones are coastal wetlands of different types or areas of coastal scrub, some of which provide habitat for seabird breeding colonies. Many of the other ASBVs on the Peninsula are patches of scrub or forest on the slopes.

The largest ASBVs in West Harbour - Mt Cargill Site are forested - the Orokonui Ecosanctuary and a similarly sized area of forest around Mt Cargill. Other relatively large ones include the Aramoana saltmarsh and the nearby dunes and coastal cliffs leading to Heyward Point, and several areas of forest in close proximity to each other around Signal Hill and in the Mihiwaka area.

Quarantine and Goat Islands are ASBVs in their entirety.

2.7 Land Environments of New Zealand (LENZ)

The LENZ system categorises land according to its geophysical properties and calculates what percentage of each category is in indigenous cover, and what percentage is legally protected (MFE, 2007). Viewing this information in GIS in conjunction with layers showing current landcover allows areas that are relatively intact examples of generally modified, poorly protected ecosystems to be identified. These are generally considered a priority for protection and enhancement.

[3] https://www.dunedin.govt.nz/council/district-plan/2nd-generation-district-plan/view-the-2gp-maps

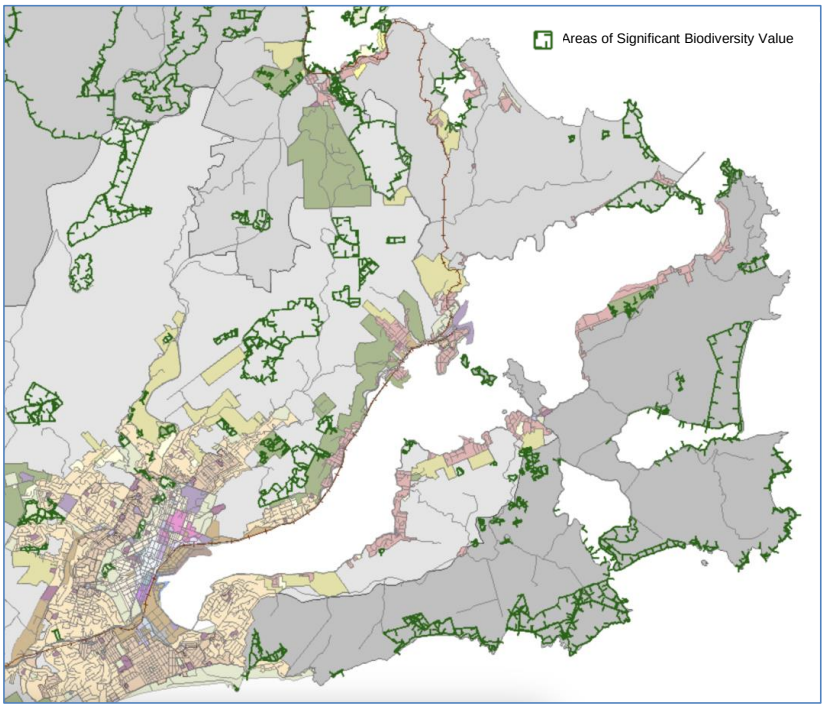

Figure 7: Screenshot from DCC's 2GP maps showing mapped ABVS (source: dunedin.maps.arcgis.com)

2.8 Areas Undergoing Revegetation Efforts

Many sites within the programme areas are subject to revegetation work. As examples, in West Harbour – Mt Cargill much of this is coordinated by the Halo Project[4] with the aim of expanding the benefits of Orokonui Ecosanctuary (perhaps the most complete example of restoration in Otago) to the surrounding area. One of the key activities undertaken by the Halo Project is native planting to restore forest habitats. These plantings are often into relatively bare areas and as a condition of funding must contain Threatened or At Risk species. This means that although the sites would not be considered high value initially, as the plants mature these will become pockets of high biodiversity value with an important role in spreading seed across the wider area.

A large proportion of Quarantine Island has been planted (Goat Island has an existing complete vegetation cover and has not received additional plants). Harbour Cone on the Peninsula is a

[4] https://www.haloproject.org.nz/

focus of planting and many other areas across the Sites are being or have been planted; the potential scope for expanding existing sites or developing new ones is huge.

A consistent and spatially defined dataset showing such efforts was not available at the time of this report, however, this would add value to the identification of values, particularly where these are likely to increase as a result of the revegetation being undertaken.

2.9 Threatened or At Risk Species

Some threatened species present within the different vegetation types of the three Sites are mentioned in Sections 2.1 - 2.3 above. There are, however, over 180 Threatened or At Risk species recorded from the programme areas, including over 50 species of birds and 80 species of plants.

Orange – yellow areas on Figure 8 show where the records of Threatened or At Risk species are concentrated.

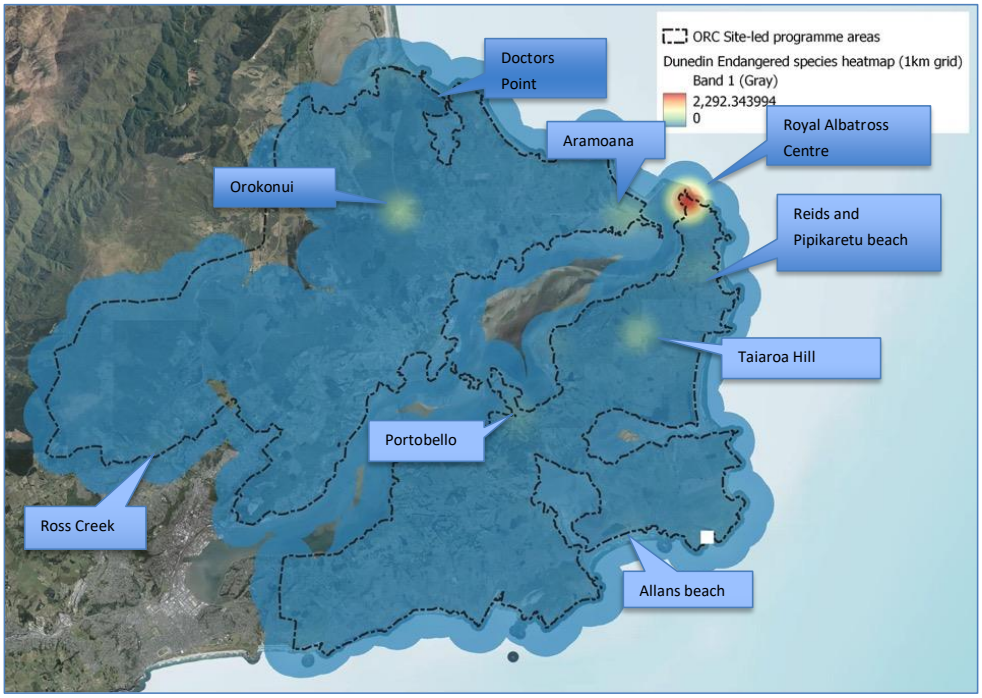

Figure 8: Some of the hotspots of Threatened or At Risk species within the Sites. Warmer colours indicate more records.

Appendix 1 lists Threatened and At Risk species recorded from the Sites. These records need to be interpreted with some caution. The records are taken from a range of sources, including

community science platforms, which tend to generate a lot of data from frequently visited places such as Taiaroa Head and Orokonui. Even if this means that areas identified on Figure 8 are not the 'absolute' hotspots, they are clearly areas where the public view and get value from these species.

Birds are the most observed taxonomic group within the programme areas, perhaps influenced by the Orokonui Ecoanctuary and the Royal Albatross Centre. Most of the beaches, sand dunes and wetlands along the coast of the programme areas are, however, also regularly used by a range of Threatened or At Risk bird species.

Of more than 80 Threatened or At Risk plant species, many (e.g. pikao *Ficinia spiralis,* sand bidibidi *Acaena pallida,* and Buchanan's orache *Atriplex buchananii* have been recorded from coastal areas such as sand dunes, bluffs and rocky outcrops, and wetlands (freshwater and estuarine). These coastal areas are a large component of Naturally Uncommon Ecosystems (see Section 2.1 above). Others, such as Hector's tree daisy *Olearia hectorii,* are not necessarily coastal specialists but due to the history of land conversion and browsing pressures, are now confined to steep and hard-to-access areas within the Sites; these are often on coastal cliffs.

Kānuka and/or mānuka dominant forests, scrub and shrubland are widespread and common within the programme areas. They provide habitat for Threatened or At Risk species such as South Island rifleman and are required for the persistence of the rare mistletoe *Korthalsella salicornioides.*

The Peninsula is a particular stronghold for lizards, with records of species including jewelled gecko, korero gecko, and Otago green skink *Oligosoma* aff.*chloronoton* "eastern Otago".

2.10 Taonga Species

The Ngāi Tahu Claims Settlement Act 1998 defines taonga species in Schedule 97[5]. This list was derived during a negotiated outcome and does not, therefore, necessarily include all species of importance or taonga status to Ngāi Tahu. However, it includes most of the native bird species likely to be present in the Sites and enough widespread plant species that all areas of semi-intact forest or scrub are likely to represent several taonga species.

Wetland habitats are likely to include plant and animal taonga; sand dunes less-so unless pīkau and certain seabirds are present.

[5] https://www.legislation.govt.nz/act/public/1998/0097/latest/DLM431337.html

2.11 Identification of Key Locations

To select key locations we viewed GIS layers of the above values; many of these were found to be highly correlated to each other, as many species-based layers are driven by the underlying habitat type (e.g. the presence of native forest accurately predicts the distribution of ORC's Significant Habitat for native forest birds). We therefore sought to focus on a selection of layers that collectively represented the range of values present.

From this we undertook an 'eyeballing' exercise to identify areas which each contained a range of values in close proximity, and collectively covered the range of values present across the Sites. This was done in recognition of the fact that to be effective, pest control often has to happen over a larger space than that occupied by the value the control is intended to benefit. Where a range of values are located in close proximity to each other, they each benefit from the pest control, maximising its benefit.

We combined this biodiversity-based approach with layers that showed a range of human-defined attributes as discussed in the preceding sections. We then drew polygons around areas that contained a range of biodiversity values and also featured some of the key human-defined attributes. This resulted in the creation of proposed key locations. Drawing the polygons inevitably required judgement; we followed an approach of using aerial imagery and the DCC's vegetation classification map to include areas near the edge of key locations that had reasonable components of native vegetation (even if they included some productive land) and exclude areas of productive land with only minor components of native vegetation.

Additionally, we sought to give effect to national priorities for biodiversity protection (MFE, 2007). To do this we enlarged the boundaries of the polygons where needed to include adjacent native-dominated LENZ environments with <20% indigenous cover, sand dunes and wetlands, Naturally Uncommon Ecosystems, and areas important for threatened species.

Table 2 and Figure 9: Map showing the key locations listed in Table 2 that encompass a range of biodiversity values as per Table 2. present the results of this (note that on Figure 9: Map showing the key locations listed in Table 2 that encompass a range of biodiversity values as per Table 2. boundaries have been truncated as appropriate to allow adjacent key locations to be distinguished from each other). GIS files provided with this report can be interrogated to further explore the presence of values within these key locations and across the Sites.

Note that these key locations have not been ranked for importance; the locations are designed to collectively cover the range of values across the Sites and should, therefore, be seen as complimentary rather than competing. Also, advances in our understanding of the values that drove this assessment, such as updated mapping of Naturally Uncommon Ecosystems, could change the relative importance of these locations but would be unlikely to render a location unimportant.

Table 2: Key locations that encompass a range of biodiversity values within the Sites. 'x' denotes presence of the particular biodiversity value for a given location. WHMC: West Harbour – Mt. Cargill; QGI: Quarantine and Goat islands, OP: Otago Peninsula, EMU: Ecosystem Management Unit, SMU: Species Management Unit, ASBV: Area of Significant Biodiversity Value.

	WHMC				QGI		OP					
Biodiversity Values	1. Aramoana - Heyward Point	2. Leith Saddle - Mihiwaka	3. Flagstaff - Swampy	4, Orokonui Ecosanctuary	5. Quarantine Island	6. Goat Island	7. Peninsula tip	8. Okia - Papanui - Taiaroa Hill	9. Harbour Cone - Dicksons - Varleys Hill	10. Hoopers - Allans Beach - Papanui Beach	11. Sandfly Bay/Sandymount	12. Boulder Beach
Naturally Uncommon Ecosystems	x	x	x	x	x	x	x	x	x	x	x	x
DOC EMU/SMU	x						x	x		x	x	x
ASBVs	x	x	x	x	x	x	x	x	x	x	x	x
Notable Threatened/At Risk Spp	x			x			x	x	x	x	x	x
Extensive intact native habitat	x	x	x	x				x	x		x	x
Protected Land	x	x	x	x	x	x	x	x	x	x	x	x
ORC Significant Habitats	x	x	x	x	x	x	x	x	x	x	x	x
Areas undergoing revegetation efforts	x	x		x	x		x	x	x	x		

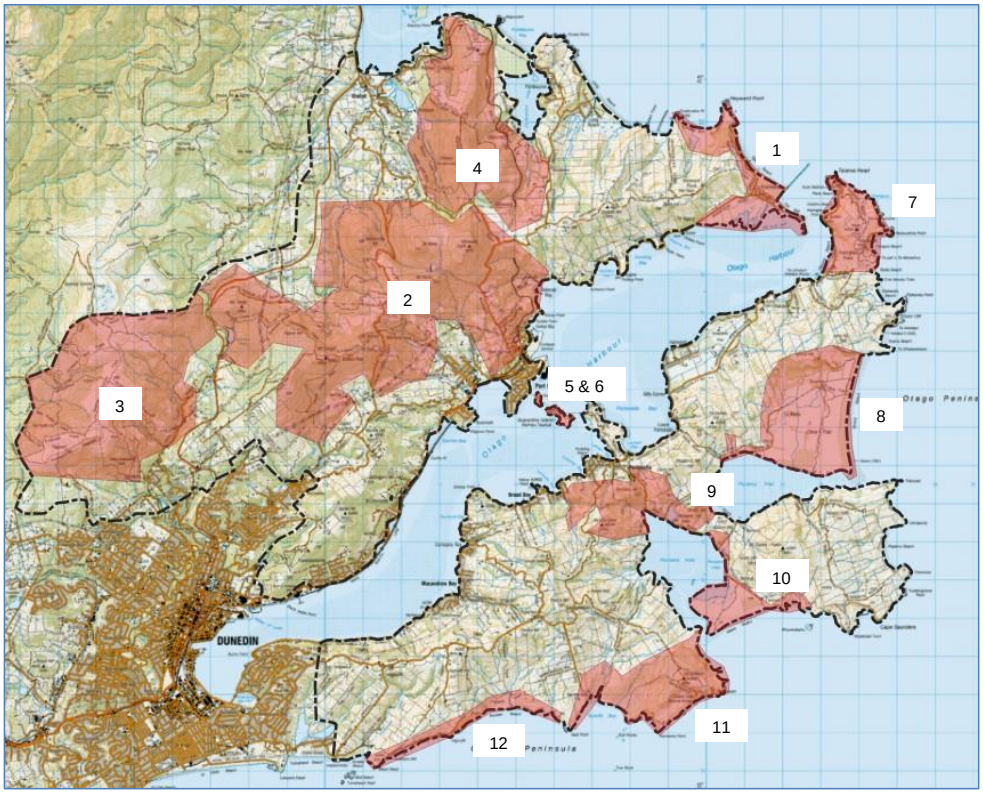

Figure 9: Map showing the key locations listed in Table 2 that encompass a range of biodiversity values as per Table 2.

3 Biosecurity Threats

3.1 Pest Animal Distribution and Preferred Habitat

The following sections describe the target pest animal species identified for control under the three Site-led Programmes in the RPMP, describe the values they affect directly, and mention some indirect effects. This is done at a reasonably broad level, as opposed to precisely stating the magnitude of the actual impact of each pest in each key location or habitat within that location. To do so on the basis of current information does not seem possible due to a lack of information on the distribution of the pests, and limited information on the distribution of some values (especially invertebrates and lizards but also uncertainty over exactly which areas would be mapped as Naturally Uncommon Ecosystems). Furthermore, some values in a given location may respond differently to the same pest, and some indirect effects may be unknown or unpredictable. Finally, some values which are currently supressed by pests may only become apparent once pests are controlled.

At a more general level, Table 3 below predicts the impact of the target pests on a range of relevant habitat types. The resulting alignment to key locations is presented later in the report.

3.1.1 Wallaby

Wallabies are a severe agricultural pest, damaging crops and fences and competing with stock. In more natural habitats they cause damage by selectively feeding on certain species such as *Celmisia spectabilis* but also a range of other palatable grasses, herbs, and young shrubs and trees for which they can cause regeneration failure.

The values that wallabies primarily threaten are vegetative ones, however, this inevitably leads to impacts on species that use the vegetation as habitat, and this ultimately leads to impacts on ecosystems as a whole.

Wallabies are not known from the Sites, but anecdotal information suggests they may be present in West Harbour – Mt Cargill at low densities (this is based on an assumption they are more common than reported in areas just outside the programme area).

3.1.2 Feral Cat

Cats prey on a range of fauna from invertebrates to birds. They can be especially damaging to lizard populations. They are highly mobile and live in a range of habitats.

Cats are not present on the Islands, but widespread on the Peninsula and West Harbour – Mt Cargill. They are likely to be having a significant impact on lizard and bird populations; their impact on invertebrates is less-well known but may be large for certain species.

3.1.3 Feral Deer

Deer feed more selectively than goats (see Section 3.1.4 below) which means that although they may not remove an understorey as completely as goats do, they can remove favoured species across a very large area causing species-specific regeneration failure, and depauperate forests. They are highly mobile and will cross all but deer-specific fencing.

The values they affect are predominantly those of palatable forest and shrubland species such as broadleaf *Griselinia littoralis*, seven-finger *Schefflera digitata* and hen and chicken fern *Asplenium bulbiferum*, as well as the species that feed on these. Deer browse also increases soil erosion, which in turn affects adverse impacts on streams, rivers, wetlands and estuaries.

Deer are not known from the Peninsula or Quarantine or Goat Islands, but both fallow and red deer are widespread in West Harbour – Mt Cargill and are reported to be causing significant damage to forest understorey and regeneration in these areas. Fallow deer are known from around Sullivans Dam to Mt Cargill, with red deer more widespread. A mob of about 20 are reported to currently be in the vicinity of Heyward Point, and more generally they are present through the rest of the forest within this Site and all through the contiguous habitat into the Silverpeaks and Taieri Gorge, which hold large populations.

3.1.4 Feral Goat

Feral goats can be found in a wide range of habitats and will browse on a very wide range of plants, including those not favoured by deer. They are agile, able to access vegetation beyond the reach of other terrestrial browsers, and can move large distances, easily crossing most stock-fences. Their ability to eat a wide range of plants mean they can destroy entire understoreys, leading to regeneration failure.

The values that feral goats can, therefore, affect are vegetation and all those dependant on forest or shrubland habitat.

Feral goats have been previously known from the Peninsula – farm escapees lived in Boulder Beach and Sandymount Conservation Areas until they were eradicated some time ago. They are not present on Quarantine or Goat Islands.

Reports from West Harbour – Mt Cargill suggest that feral goats are widespread through forest and scrub, causing significant damage to the understorey and stopping regeneration in places.

3.1.5 Feral Pig

Feral pigs cause extensive damage to ground-level values in forest, shrubland and tussock grassland. As well as browsing on plants, they dig up species such as speargrass to eat their roots and will overturn large areas searching for soil-dwelling invertebrates. This creates bare

areas that are often colonised by weeds. They are highly mobile and can easily pass through standard stock fences.

Feral pigs affect all ecosystem values. Unlike deer and goats, they have a direct effect on fauna by eating invertebrates, reptiles, bird eggs, and ground-nesting seabirds.

Feral pigs are not present on the Peninsula or Quarantine or Goat Islands but are present in West Harbour – Mt Cargill, primarily in areas of forest/scrub/shrubland and tussock grassland which have contiguous habitat to the Silverpeaks and Taieri Gorge which hold large populations.

Feral pigs are causing significant damage through rooting with a notable impact around Mihiwaka where they are causing significant damage to the understorey.

3.1.6 Hedgehog

Hedgehogs generally feed on invertebrates but are also predators of lizards, ground-nesting birds and their eggs, and eat some plant material. They favour grassland and drier forest/shrublands. They will primarily be affecting ground-level values such as invertebrates, lizards, and ground nesting birds such as pihoihoi / New Zealand pipit *Anthus novaeseelandiae novaeseelandiae* and many species of seabird.

Hedgehogs are widespread on the Peninsula and West Harbour – Mt Cargill, within which they are likely to favour more modified areas and the more open, north-facing areas that are less-modified. They are not known from the Islands.

3.1.7 Mustelids

Stoats live in a wide range of habitats, and voraciously prey on animals larger than themselves including birds of up to 2 – 3kg in weight. Ferrets generally prefer more open habitat and feed primarily on rabbits and hares but will also take ground-dwelling or -nesting birds as well as lizards and insects. Weasels can be found at low densities in most habitats and feed on invertebrates, lizards, and birds.

Collectively, mustelids threaten nearly all faunal values in the programme areas (some invertebrates are assumedly too small to be of interest).

Mustelids are widespread on the Peninsula and West Harbour – Mt Cargill, but are not known from the Islands.

3.1.8 Possum

Possums live in forest, shrubland and relatively open habitat, as long as sufficient cover is present. They are omnivorous, eating invertebrates and bird eggs as well as plant matter such

as buds, flowers, fruit and leaves. They feed preferentially on certain species such as *Psuedopanax* and *Fuchsia*.

Possums have been subject to extensive control efforts over the last several years, coordinated by the multi-stakeholder Predator Free Dunedin. Despite this they remain in relatively high numbers in places.

On the Peninsula their numbers are highest from the city's edge to Portobello, with particular concentrations in areas of rugged coastal scrub.

They are present throughout West Harbour – Mt Cargill, at generally low numbers due to ongoing control efforts.

They are not known to be present on the Islands, though Goat Island which is well-vegetated and not subject to regular trapping may harbour them.

3.1.9 Rat (Norway, Ship and Kiore)

Rats are omnivores and cause significant damage by feeding on birds, invertebrates, reptiles, fruit and seeds across a wide range of habitats. They would, therefore, affect most of the values within the programme areas.

Kiore are not found around Dunedin. Norway and ship rats are collectively widespread on the Peninsula and West-Harbour – Mt Cargill, and are also present on the Islands. Norway rats are more commonly associated with areas of human activity.

Two high-density trapping grids have shown the difficulty in achieving large-scale control of rats by this method in this landscape. This suggests that a very targeted approach to protect significant impacted values in limited places is the only feasible strategy currently available.

3.2 Pest Plant Distribution

The following sections describe the target pest plant species identified for control under the three Site-led Programmes in the RPMP.

There is limited information on the current distribution of pest plant species that are subject to the RPMP. Observations from iNaturalist and locations of pest plant control between July 2019 and March 2023 provided by the ORC (for Chilean flame creeper, Darwin's barberry and Gunnera) have been used to identify a minimum range for these species. It must be emphasised that the lack of observation or control efforts do not mean the absence of the pest plants over wider areas.

3.2.1 Banana Passionfruit

Banana passionfruit is an evergreen vine that can smother the vegetation it climbs and is tolerant of a wide range of conditions. It spreads via mammalian eaters of its fruit, and through stems that can take root where they touch the ground.

Banana passionfruit threatens all the values associated with native forest and shrubland across the Sites.

On the Peninsula, banana passionfruit is widespread, often found along roadsides, but it has also spread some distance into adjacent forests. In West Harbour – Mt Cargill it is mostly present on roadsides, with some spread into adjacent areas (Figure 10 shows recorded locations; this is certainly an underestimate of its distribution). Banana passionfruit has been recorded from both of the islands[6].

Figure 10. Known locations of banana passionfruit based on iNaturalist observations.

[6] Based on iNaturalist observations in 2014 and 2018.

3.2.2 Chilean Flame Creeper

Chilean flame creeper is a bird-dispersed climber tolerant of a range of conditions. It favours disturbed forest and shrubland, and like other climbers, it can smother the host plants.

Chilean flame creeper threatens forest and shrubland values, theoretically across the three Sites, but primarily closer to its current, limited, locations.

Sightings on the Peninsula are mostly around Portobello – Larnach's Castle, and in West Harbour – Mt Cargill it is scattered from Dunedin to Port Chalmers and in Waitati (Figure 11). It has not been recorded on the Islands.

Figure 11. Known locations of Chilean flame creeper based on plant pest control site by ORC and iNaturalist observations.

3.2.3 Darwin's Barberry

Darwin's barberry is a bird-dispersed shrub which is tolerant of a range of conditions and light levels, and is not browsed due to its spines.

Darwin's barberry threatens scrub, shrubland and disturbed forest values across the Sites.

On the Peninsula it is moderately widespread, often on roadsides but also into shrubland/forest. In West Harbour – Mt Cargill it follows a similar pattern, and has been recorded from Quarantine, but not Goat, Island (Figure 12).

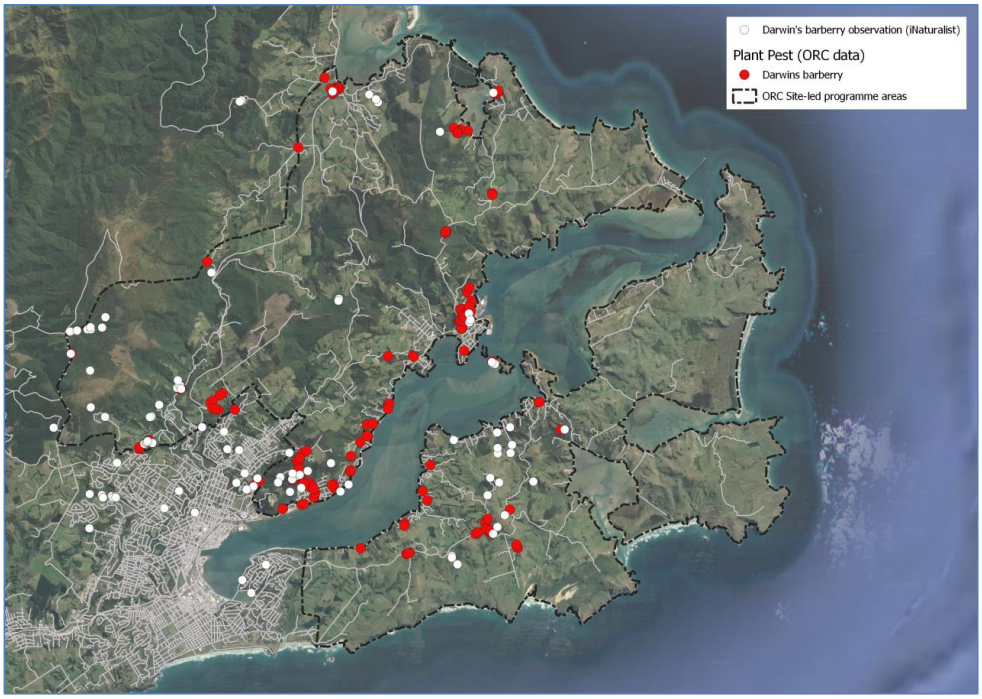

Figure 12. Known locations of Darwin's barberry based on ORC pest plant control and iNaturalist observations.

3.2.4 Sycamore

Sycamore is a wind-dispersed deciduous tree, which is tolerant of a range of conditions and able to germinate in the shade. It can form long-lived, dense and monospecific stands.

Given its ability to germinate in a range of conditions, sycamore threatens open to forested habitats in all three Sites.

On the Peninsula it appears to be moderately widespread, mostly around settlements (Figure 13). In West harbour – Mt Cargill it is also moderately widespread but especially dominant on the slopes above the Harbour along to Port Chalmers. It is not present on the Islands.

Figure 13. Known locations of sycamore based on iNaturalist observations.

3.2.5 Gunnera

Gunnera is a summer-green herb of up to 2 m in height. It requires damp habitats with a reasonable amount of sun such as stream-sides, drains and wetlands and can shade other species out. It produces many seeds which are spread by water and birds and also grows from rhizomes.

Gunnera threatens the values of suitable damp habitat across all three Sites.

Known locations of Gunnera are concentrated along the roads (especially the coastal roads such as State Highway 88 and Portobello Road), but also along the stream network around Ross Creek Reservoir (Figure 14). It is not present on the Islands.

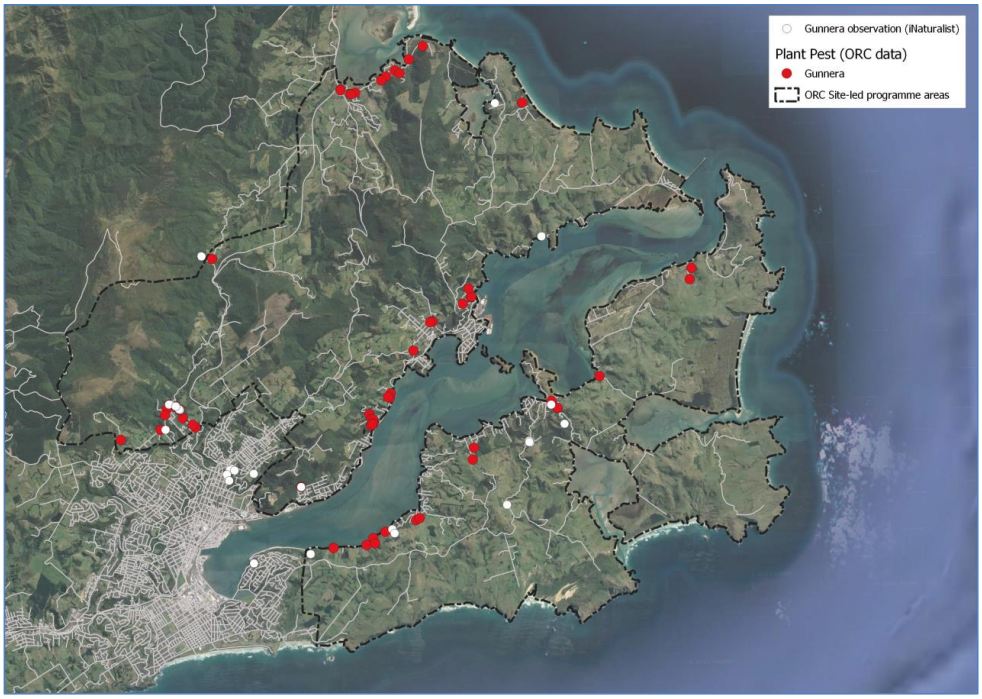

Figure 14. Known locations of Gunnera based on ORC pest plant control and iNaturalist observations.

3.2.6 Tradescantia

Tradescantia does not produce fruit or seed in New Zealand, but spreads from vegetative fragments and the growth of these after they take root. It is a trailing groundcover that does best in shaded and damp habitats. It can invade established forest where it outcompetes other species and smothers the ground.

Tradescantia threatens all the values associated with native forest on medium to damp locations across the Sites.

On the Peninsula and in West Harbour – Mt Cargill it appears limited to areas near older settlements, mostly on private land (Figure 15). It is not known from the Islands.

Figure 15. Known locations of Tradescantia based on iNaturalist observations.

3.3 Other Pests Identified in the RPMP

The RPMP provides objectives (and rules in most cases) for species that have been classified as pests. This report has so far focused on the target species that are to be managed under the three Dunedin-based Site-led Programmes, however, management programmes for the other pests listed in the RPMP also apply to the Sites. Relevant pests and information are listed below. ORC undertakes monitoring and enforcement for some of these species across the Sites.

The species identified in the RPMP that are not included in the Site-led Programmes, but which are relevant in terms of managing biosecurity threats within the Sites, are listed below along with an explanation as to why they are relevant.

- **Spiny Broom.** This species is managed under the Eradication Programme, with ORC taking responsibility for undertaking the eradication work. Whilst not known to be currently present in the Dunedin area, there are areas of interest in nearby Chain Hills and Brighton and the risk of spread should be considered.
- **Bennet's wallaby.** Whilst not known to be currently present in the Dunedin area, this is the only species that features in both the region-wide Eradication Programme and the three Dunedin-based Site-led Programmes. Control will be a shared responsibility between ORC and land occupiers.
- **Bomarea.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner. It is known to be present, or has been present, across 650 properties in Dunedin City, Otago Peninsula, and West Harbour areas.
- **Boneseed.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner. It is established in several sites in and around Dunedin including Portsmouth Drive, Forbury, Port Chalmers, and Aramoana.
- **Cape Ivy.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner. It is found mainly in the Dunedin City and Otago Peninsula areas at 65 active sites.
- **Old man's beard.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner. It is found on ~2,600 urban properties across the region, many of which are in the Dunedin area.
- **White-edged nightshade.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner. It is known to have existed on Quarantine and Goat Islands.

- **Wilding conifers.** This species is managed under the Progressive Containment Programme, with the control work to be undertaken by the landowner (sometimes with support from the national programme). Whilst the Dunedin area is generally not considered to be as susceptible to invasion as some other parts of the region, the Flagstaff – Swamy Summit area is a highly valued, open habitat susceptible to pine invasion. Furthermore, the Mt Cargill – Mihiwaka Track area presents the opportunity of a quick-win and reduction in seed source.

- **Wild Russell lupin.** This species is managed under the Sustained Control programme, with the control work to be undertaken by the landowner. Whilst there is relatively little riverine habitat in the Dunedin-based Site-led Programmes area that could be affected, this species also has the potential to impact dune ecosystems.

- **Feral rabbits.** This species is managed under the Sustained Control programme, with the control work to be undertaken by the landowner. Rabbits are particularly prevalent on the Otago Peninsula, but are also present in the West Harbour – Mt Cargill area. Rabbits graze on native vegetation, impacting ecological values. Rabbit grazing can also cause soil erosion and stream bank erosion, which can in turn affect water quality. Rabbits may affect native invertebrates and birds by causing changes to habitat and altering predator-prey relationships, with an increased presence of feral cats and mustelids often reported in areas where rabbit numbers are high.

The RPMP also lists ‘Organisms of Interest’ (OOIs) that are intended to be controlled but not accorded pest status. These are organisms that pose a sufficient future risk to warrant being watch-listed for ongoing surveillance or future control opportunities which could arise, for example through site-led programmes. Species of particular relevant to the Sites might include mouse, blackberry, boxthorn, burdock, convolvulus, horehound, hawthorne, periwinkle, rowan, Spanish heath, saltmarsh rush, tree lupin, and willow.

4 Impact of Target Pests on Values

The impact of pests on a given value can be direct, e.g. predation of a bellbird by a stoat, or indirect, e.g. reduced pollination of a plant due to predation on the bellbird. In turn this can lead to negative effects on plant or animal species reliant on the now-disadvantaged plant. For this reason, the effect of the target pests is treated holistically in this report, with the impact of a given pest considered at a habitat or ecosystem level.

Most of the habitats and ecosystems in question contain a wide range of plants (e.g. trees, shrubs, climbers and understory species) and animals (e.g. invertebrate, reptile and bird species) and so are considered to be impacted by a wide range of pests. Some, however, particularly the Naturally Uncommon Ecosystems, are characterised by a narrow range of environmental variables that preclude some taxa; these are subsequently considered to be impacted by a narrower range of pests. As an example, marine mammal haulouts are by definition highly disturbed, open and coastal sites. This excludes some of the weed species (rendering them non-impactful), and it also renders the habitat less suitable for all but turf-forming plant communities. As a consequence, deer and other grazers are considered less harmful here compared to habitats that support a wider range of palatable species.

This rationale is harder to apply to predators as it would require ‘natural’ factors to limit either the presence of prey, or the ability of predators to access or hunt in a habitat type, which would be the case in only a few isolated and small examples.

Table 3 estimates the level of potential impact (i.e. assuming all pests have access to all locations, and no control is undertaken) on the Naturally Uncommon Ecosystems and a broad categorisation of ecosystem types found across the Sites, with green being low, orange medium, and red high impact.

Low impact is defined as plant pests that would be unable to tolerate the conditions of a site, or animal pests that would either not be able to access the site, or would not find suitable prey or browse species at that site (assuming the expected full complement of native species were present).

Medium impact is defined as plant pests that would likely be able to colonise the site but be unable to become dominant within it due to limited suitable habitat, or animal pests that could access a site and cause slight to moderate impacts on a limited suite of the biodiversity there.

High impact is defined as plant pests that could become dominant across the site, or animal pests that could suppress the numbers of multiple prey or browse species they feed on.

Table 3: Predicted impact of threats (red = high, orange = medium, green = low) on specified habitats.

		Banana passionfruit	Chilean flame creeper	Darwin's barberry	Sycamore	Gunnera	Tradescantia	Bennetts wallaby	Feral cat	Feral deer	Feral goat	Feral pig	Hedgehog	Mustelids	Possum	Rats
Naturally Uncommon Ecosystem	Coastal turfs															
	Seabird burrowed soils															
	Seabird guano deposits															
	Marine mammal haulouts															
	Active sand-dunes															
	Dune slacks															
	Volcanic boulder fields															
	Basic coastal cliffs															
	Basic cliffs, scarps, and tors															
	Cloud forest															
Ecosystem types	Native forest															
	Native shrubland/scrub															
	Native herbfield															
	Freshwater wetland															
	Coastal wetlands															
	Saltmarsh															

Some native species exist within the Sites in predominantly exotic habitats that may not be covered by Table 3. Examples range from Northern royal albatross nesting in predominantly exotic grassland at Pukekura/Taiaroa Head to lizards occupying rock outcrops in predominantly exotic farmland. The impact of pests on single native species within an exotic landscape could be viewed as less severe than on a suite of native species in a predominantly native ecosystem, but this is not to discount the importance of the impact if the native species in question is highly threatened or of particular cultural or social significance.

Table 4 uses the key locations identified in Table 2 and, based on the assessment of Table 3, estimates the impact of each of the pests on that key location. Note that this considers geographic limitations on pest distribution and potential impact e.g. it is assumed that wallabies, goats, deer and pigs will not invade the Orokonui Ecosanctuary, Peninsula or Island locations.

Table 4: Predicted impact (taking into account likelihood of pest occurrence) of the Site-Led Programme target pests on the key locations (red = high, orange = medium, green = low).

	WHMC				QGI		OP					
Biodiversity Values	1. Aramoana - Heyward Point	2. Leith Saddle - Mihiwaka	3. Flagstaff - Swampy	4. Orokonui Ecosanctuary	5. Quarantine Island	6. Goat Island	7. Peninsula tip	8. Okia - Papanui - Taiaroa Hill	9. Harbour Cone - Dicksons - Varleys Hill	10. Hoopers - Allans Beach - Papanui Beach	11. Sandfly Bay/Sandymount	12. Boulder Beach
Banana passionfruit												
Chilean flame creeper												
Darwin's barberry												
Sycamore												
Gunnera												
Tradescantia												
Bennetts wallaby												
Feral cat												
Feral deer												
Feral goat												
Feral pig												
Hedgehog												
Mustelids												
Possum												
Rats												

4.1 Ways to Manage or Minimise Impacts

4.1.1 Direct Control of Animal Pests

The success of the Predator Free Dunedin movement (based on and expanding the prior efforts of its contributing parties) has delivered animal pest control over large areas in and around Dunedin. This section provides an overview of this using data from Trap NZ and making assumptions on target pests based on trap type.

4.1.1.1 Possum

Possums are one of the Predator Free NZ target pests and are arguably the easiest to effectively control over large areas. Figure 16 shows the location of possum traps around Dunedin; the Sites are well-covered in traps except for Goat Island and inaccessible areas of coastal cliff on the Peninsula.

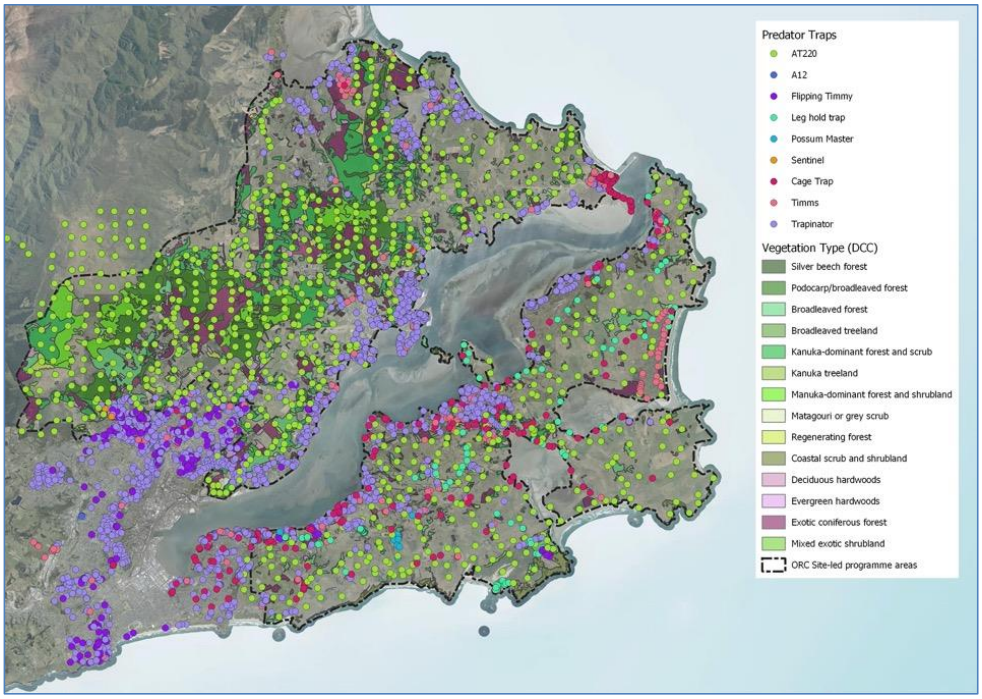

Figure 16: Trap locations targeting **possums** administered by various commnity groups affiliated with Predator Free Dunedin (data extracted from Trap.nz). Trap locations are overlaid with forest/scrub/shrubland habitats.

4.1.1.2 Mustelids

Figure 17 shows the extensive mustelid trapping network in West Harbour – Mt Cargill, and the much smaller area on the Peninsula that is trapped largely for the benefit of tītī and hoiho. Quarantine Island is well-covered in traps, however, Goat Island is not trapped.

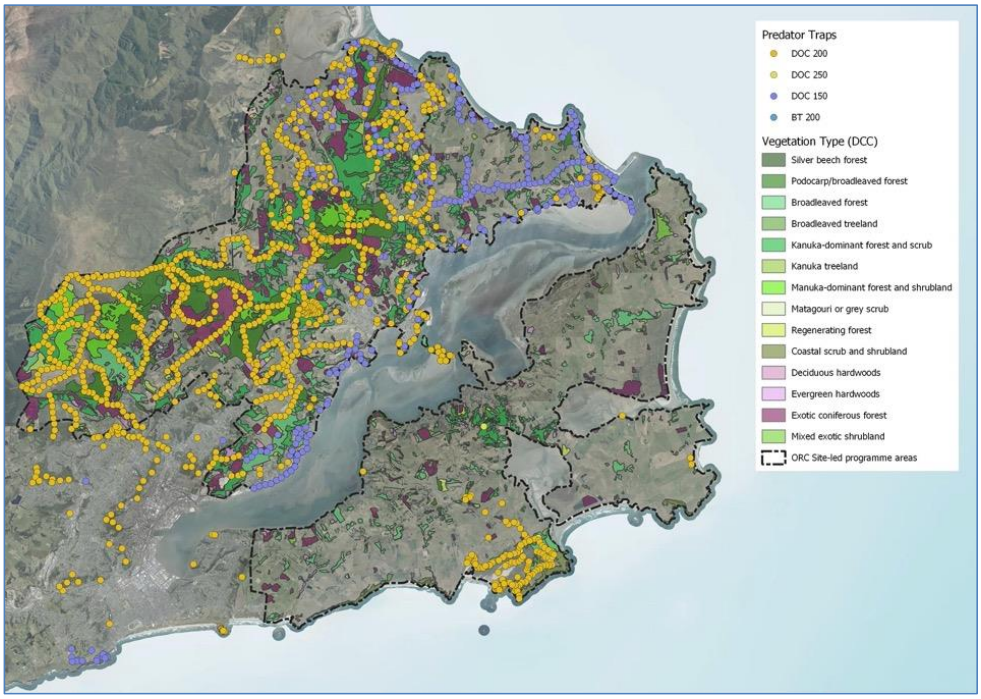

Figure 17: Trap locations targeting **mustelids** administered by various community groups affiliated with Predator Free Dunedin. Trap location is overlaid with forest/scrub/shrubland habitats.

4.1.1.3 Rodents

To be effective rat control needs to be intensive, with trap spacing of no greater than a 100 x 50 metre grid. Within the Sites best-practice rodent control is limited to an area near Mopanui and another near Flagstaff in West Harbour – Mt Cargill (Figure 18).

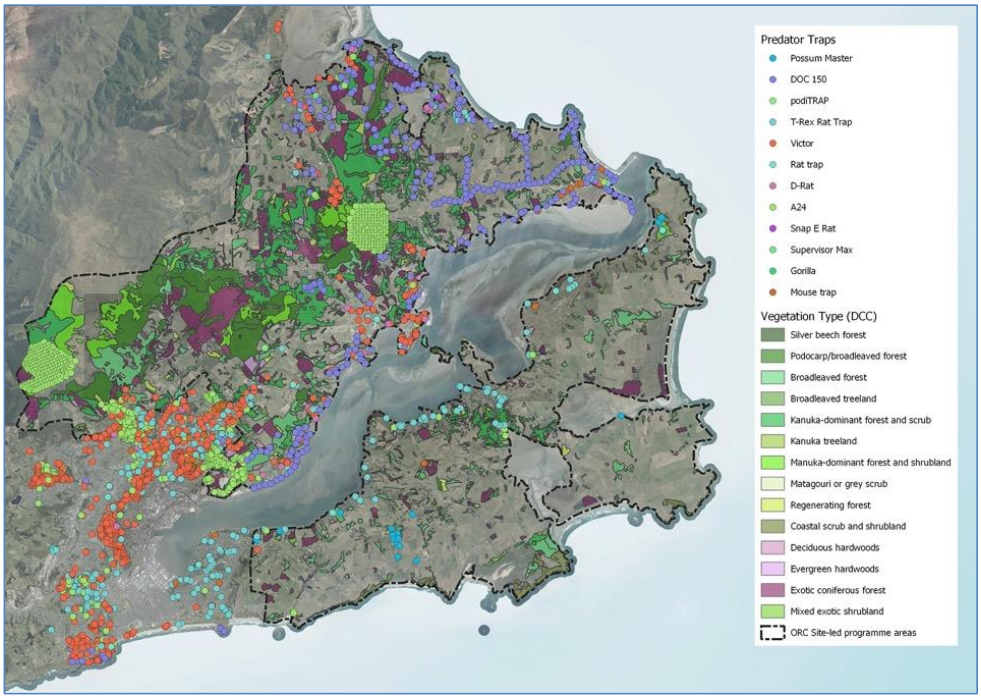

Figure 18: Trap locations targeting **rodents** (rats and mice) administered by various commnity groups affiliated with Predator Free Dunedin. Trap location is overlaid with forest/scrub/shrubland habitat.

4.1.1.4 Ungulate Control

Control of deer, pigs and goats is less-well documented than for the above species due to the lack of a unifying entity such as Predator Free Dunedin. Control is likely to be a combination of landowner-based control and recreational hunting, but this will be limited by the lack of DOC-managed open hunting areas.

4.1.1.5 Wallaby Control

As wallabies are not known from the Sites no control will be taking place, however, surveillance in the hills to the north-west is ongoing.

4.1.2 Pest Plant Control

Pest plants cause impacts primarily by outcompeting and, therefore, displacing native plants in areas of value. The short-term way to minimise these impacts is, therefore, by removing pest plants from areas of value; the longer-term way is by removing them from a larger area to slow their reestablishment within areas of value. The size that this larger area needs to be is a function of the dispersal ability of the pest plant. Most of the target pest plants produce fruit that can be dispersed by birds; these can disperse a long way hence landscape-scape control is desirable to reduce reinvasion into priority areas. Sycamore, being wind-dispersed, has a more limited dispersal ability, and Tradescantia only spreads vegetatively in New Zealand. Therefore sycamore control requires less of a buffer and Tradescantia control could be limited to areas of high value, provided that there is no movement of vegetative material taking place.

However, because values are not currently limited to the key locations we have identified, and to ensure that there is suitable habitat into which values can spread over time, opportunities to control pests over a larger area should generally be taken.

Many landowners and community groups are undertaking pest plant control across the three Sites. The DCC and DOC undertake control on land they manage, and the ORC administers the provisions of the RPMP, which includes undertaking or encouraging control as described in section 3.2. As with ungulate control, the lack of a single entity to coordinate or capture the extent of this control makes it hard to know how extensive it is.

4.2 Indirect Methods of Reducing Impacts

The impact of pests on some species can be ameliorated by decreasing the impact of the pest as well as reducing their numbers. An example is the creation of refuges (e.g. large boulder piles) for lizards in which they can shelter and feed in locations inaccessible to feral cats and, therefore, be less susceptible to predation.

Another example is reducing the density of the rabbit population in an area so that there is less sustenance for mustelids and feral cats (not forgetting the possible short-term impact of prey-switching).

A further method is to reduce the impact of habitat fragmentation by better-protecting remaining habitats, and ideally reverse the trend of fragmentation through restoration efforts.

It should be noted that pests that negatively affect one native value may benefit another native value, and the same management activity may have different effects on a given native value in different habitats (Knox, 2012). Understanding the intricacies of this for all threats and values is beyond the scope of this report.

4.3 Estimate of Recovery Potential if Target Pests are Controlled

The target pests are not the only factors threatening the values of the Sites. It is, therefore, possible that even if the target pests were controlled to the levels defined in the RPMP, the values would not recover fully due to these other factors (which may be biotic, such as other pests or a lack of ecosystem function e.g. pollination, or abiotic such as climate). This would reduce the value of the pest control. One view is that given the scale of the pest problem and the values at stake, pest control needs to be limited to places where recovery potential is high and not limited by other factors. Another view is that these other factors may not eventuate to the degree currently predicted or may be able to be controlled in the future by yet-to-be developed techniques (such as biocontrol agents or new toxins). This latter view leads to more caution in discounting areas for control due to currently envisioned limitations on recovery potential. This is discussed further in section 4.3.2.

4.3.1 Can the target pests be successfully controlled?

In identifying the recovery potential, the first question is, can the target pests can be controlled to the levels defined in the RPMP at a scale that improves the values?

There is already some control of the target pests across the Sites. In some cases this is at a scale and level of effectiveness to largely be delivering the objectives of the RPMP (accepting some room for interpretation or varying levels of implementation for Progressive Containment and Sustained Control e.g. in the size of the area contained to, and the level of reduction achieved), and in other cases not. This is shown in Table 5 along with a prediction as to whether, based on the success and issues faced by the current control operations, they could easily be scaled up to meet the RPMP objectives.

Issues that stand out are the difficulty in achieving landscape-scale weed control in West Harbour – Mt Cargill and landscape-scale predator control on the Peninsula. Delivering these might require a mixture of landowner and community liaison, resourcing control operations, coordination of groups or entities, and potentially some novel approaches to pest control delivery such as the control of exotic prey species to facilitate the control of exotic predators (e.g. controlling rabbits to enable mustelid control).

Rat control is currently not undertaken at the level required to deliver Sustained Control across any but the smallest areas of importance, and the intensity of trapping required to do so suggests that landscape scale aerial-toxin application may be required to deliver this. There may be considerable public opposition, and there would definitely be considerable cost involved with delivering this. The gap between what is currently being delivered and what is required for achieving the Objectives of the RPMP is, therefore, reasonably large and would require an injection of resource to increase the collective capacity to deliver the required education/advocacy, community engagement, mobilisation and coordination, and potentially the delivery of large-scale toxin operations.

It should also be noted that there is considerable cost associated with delivering the existing control of the target pests. Much of this comes from Predator Free 2050 through the hard work and dedication of the entities which make up Predator Free Dunedin. Another example is the weed control delivered by Save The Otago Peninsula, supported by the ORC. The loss or reduction in existing financial commitment or community enthusiasm is a major risk to the continuation of the work that is currently delivering many Objectives of the RPMP.

Table 5: Prediction of the ability (based on expected impacts of pests and experience of current pest control projects) to control the specified pests to levels specified in the RPMP across the key locations (green = likely to succeed; orange = additional input required but control feasible; red = current significant barrier to successful control).

	WHMC				QGI		OP					
	1. Aramoana - Heyward Point	2. Leith Saddle - Mihiwaka	3. Flagstaff - Swampy	4. Orokonui Ecosanctuary	5. Quarantine Island	6. Goat Island	7. Peninsula tip	8. Okia - Papanui - Taiaroa Hill	9. Harbour Cone - Dicksons - Varleys Hill	10. Hoopers - Allans Beach - Papanui Beach	11. Sandfly Bay/Sandymount	12. Boulder Beach
Banana passionfruit												
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Tradescantia												
Bennetts wallaby												
Feral cat												
Feral deer												
Feral goat												
Feral pig												
Hedgehog												
Mustelids												
Possum												
Rats												

4.3.2 Will the values recover; is the control worthwhile?

As noted above, assuming that the target pests are controlled to the standard defined in the RPMP, some ecosystem or habitat types may have their recovery limited by other pressures.

Some ecosystem-specific weeds that are not identified as pests in the RPMP, such as marram in active sand dunes and *Plantago coronopus* in coastal turfs, could cause a loss of values in these ecosystems even if the objectives in the RPMP are successfully implemented. Such ecosystem-specific issues are often complex and poorly understood hence require elements of research informing a long-term programme. Providing specific recommendations on this is beyond the scope of this report.

Sea level rise will reduce the area available for coastal wetlands and saltmarshes. In some areas they may be able to extend inland in response to this, but in many other cases inland barriers such as hills and roads will result in 'coastal squeeze' and a reduction in the extent of these values.

Reductions in seabird or marine mammal populations (for example due to changes in oceanic conditions) may reduce the amount of Naturally Uncommon Ecosystem habitat these species create.

In the longer term, weeds that are not currently identified as posing problems may pose a threat to the values. The extent and level of this is impossible to predict. Likewise the impacts of climate change on the range of values across the Sites will be complex and interrelated (e.g. a change which negatively impacts one value or set of values may benefit other values). Accurately predicting this at a scale as fine as the Sites would be challenging based on current information.

The approach outlined in this report recognises the difficulty in accurately predicting the impacts of these pressures and considers that although there will an impact on the recovery potential of some values, none of these limitations to recovery make controlling the target pests inadvisable at any of the key locations because:

- Sea level rise and the reduction of the amount of current habitat which remains suitable seems the only 'definite' barrier to recovery at the whole-of-ecosystem scale, and the overall impact of this is site-specific, being governed by landward topography and land use.
- The different habitat types and values within each key location means that whatever the (reasonably foreseeable) impact of future pressures, there will be native values there that will be benefit from the pest control.
- Pest control technologies and techniques, and the public's appetite to deploy them, are constantly evolving, meaning that some currently intractable pressures may become manageable in the future.

- Pest control delivered in an area that may be impacted by future pressures will nevertheless deliver benefits to adjacent values within key locations.

- There is public value and social capital in continuing to protect biodiversity values – it would take a compelling reason to 'walk away' from sites such are identified in this report, and we do not consider there is a good reason to do.

4.4 Unintended Consequences

There is also the potential for unintended consequences of control, such as a reduction in mustelids and cats allowing mice to proliferate, a topic which has become increasingly relevant in light of Predator Free 2050 initiatives to control stoats, rats and possums. The high density and fecundity of mouse populations makes mouse control particularly difficult, with anti-coagulant toxin currently the only practical way of delivering control over large areas. As mentioned above for rats, this may face public and regulatory opposition especially in semi-urban areas. Alternate methods of large-scale mouse control are unlikely to be available in the near future (Campbell, 2015). This suggests that values at risk of mouse-predation (such as lizards, invertebrates, and the seeds of native plants) may be at increased risk when the target pests are controlled. In a study of the impacts of controlling introduced predators including and not including mice, a 'substantial biodiversity gain' was achieved by eradicating predators other than mice, despite a decrease in ground-dwelling invertebrates due to the subsequent increase in mice (Watts, 2022).

Opportunities to control the target pests at the key locations (and other locations of high biodiversity value) should be taken as and when they occur. Where this is considered likely to create risk to specific high values from mice, targeted mouse control should be delivered as possible. Current thinking appears to be that the harm at an ecosystem level from increased mouse numbers is outweighed by the benefit of effective control of cats, rats and mustelids, and an unfortunate but interim situation until large-scale mouse control becomes feasible.

5 Suggested Criteria for Priority Projects

The RPMP states that the Site Led Programmes seek to manage pests whose presence, at or nearby, threaten the values that are special to particular sites, thereby protecting the values at the place. Any criteria, therefore, needs to focus on the effective protection of those values.

The RPMP also states that the ORC will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to the three Site-Led Programme Sites.

The wide range of habitat and ecosystem types, mobile and sometimes cryptic nature of some of the Threatened / At Risk or other indigenous species of value, widespread and evolving presence of pests, and local nuances (including the potential for unintended consequences) mean that any prioritisation system will require considered implementation and may give uncertain outcomes. The following sections will, however, support the Working Group in its role in guiding the allocation of funding to support community groups and agencies in the delivery of the RPMP Objectives.

5.1 Alignment with RPMP Objectives

The RPMP management Objectives for the Site-Led Programme target pests are summarised in Table 6.

Table 6: Site-Led Programme target pests and RPMP management Objectives for each Site.

	Site		
Target Pest	**Otago Peninsula**	**West Harbour/Mt Cargill**	**Quarantine & Goat Islands**
Banana passionfruit	Progressively Contain	Progressively Contain	Progressively Contain
Chilean flame creeper	Progressively Contain	Progressively Contain	Progressively Contain
Darwin's barberry	Progressively Contain	Progressively Contain	Progressively Contain
Sycamore	Progressively Contain	Progressively Contain	Progressively Contain
Gunnera	Progressively Contain	Progressively Contain	Progressively Contain
Tradescantia	Progressively Contain	Progressively Contain	Progressively Contain
Bennet's wallaby	Preclude Establishment (Control will be shared responsibility between ORC & land occupiers)	Preclude Establishment (Control will be shared responsibility between ORC & land occupiers)	Preclude Establishment (Control will be shared responsibility between ORC & land occupiers)
Feral cat	Sustained Control	Sustained Control	Preclude Establishment
Feral deer	Preclude Establishment	Preclude Establishment	Preclude Establishment
Feral goat	Preclude Establishment	Sustained Control	Preclude Establishment

	Site		
Target Pest	**Otago Peninsula**	**West Harbour/Mt Cargill**	**Quarantine & Goat Islands**
Feral pig	Preclude Establishment	Sustained Control	Preclude Establishment
Hedgehog	Sustained Control	Sustained Control	Preclude Establishment
Mustelids (ferret, stoat, weasel)	Progressively Contain	Progressively Contain	Preclude Establishment
Possum	Eradicate	Progressively Contain	Preclude Establishment
Rats (Norway, ship and Kiore)	Sustained Control	Sustained Control	Eradicate

As noted in Section 3.3, management programmes for the other pests listed in the RPMP also apply to the Site-led Programme areas. The Objectives for species that are relevant in terms of managing biosecurity threats within the Site-led Programme areas are summarised in Table 7.

Table 7: Other RPMP target pests and management objectives.

Target Pest	Management Objective	Rules
Spiny Broom	Eradicate (ORC take responsibility for control work)	N/A
Bomarea	Progressive Containment Programme	6.3.2.1
Boneseed	Progressive Containment Programme	6.3.2.2
Cape Ivy	Progressive Containment Programme	6.3.2.4
Old Man's Beard	Progressive Containment Programme	6.3.2.6 & 6.3.2.7
White-edged nightshade	Progressive Containment Programme	6.3.2.10
Wilding conifers	Progressive Containment Programme	6.3.4.1 – 6.3.4.4
Wild Russell lupin	Sustained Control	6.4.5.1 – 6.4.5.3
Feral Rabbits	Sustained Control	6.4.6.1 – 6.4.6.3

As well as taking a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection, the RPMP also states that ORC will draw from the suite of activities listed under *collaboration, requirement to act, council inspection, service delivery, advocacy* and *education* to achieve the objectives.

In terms of 'requirement to act', under Rules 6.5.4.1, 6.5.5.1 and 6.5.6.1, no person shall keep, hold, enclose or otherwise harbour in place, either in transit to or present on/at of the three Sites, any of the target animal pests identified in Table 6 (rat rules apply to Quarantine and Goat Islands only). There are no rules that apply to the Site-Led Programme pest plants. Table 7 describes the RPMP rules that apply to the other relevant pests.

ORC has been enforcing these rules to varying degrees across the Sites. More intensive and widespread compliance monitoring is often assumed to result in a higher level of compliance (and, therefore, reduced number of these pests). There are, however, numerous challenges faced in doing this, and in some situations the degree of resource required may not be commensurate to the overall biodiversity gains.

This is a complex topic that is beyond the scope of this report, but opportunities to improve the efficacy of compliance monitoring and enforcement should be pursued. Compliance solutions will need to be weighed up against other actions that ORC could be undertaking (e.g. service delivery), and the most efficient way of sustainably reducing pest numbers pursued.

Where the feasibility of a project could be bolstered through support from the ORC in the form of monitoring and compliance, however, then this may be a reason for prioritising that project.

5.2 Existing Initiatives

As noted above, the RPMP states that ORC will take a lead role in supporting community groups and agencies in bringing about the desired levels of environmental protection to the Sites. This recognises that achieving the RPMP Objectives will be more realistic through a coordinated approach rather than ORC operating in isolation. Building on or linking existing efforts can increase the scale of control and, therefore, maximise potential biodiversity benefits. When supporting other groups/agencies, ORC could also play a role in providing previously absent functions e.g. coordination or integration of control operations.

ORC recently undertook a stock take of 53 community groups and agencies operating in the Dunedin area with an interest in protecting and enhancing biodiversity values. It is worth noting that there may be groups/agencies operating outside of the Site-Led Programme Sites but who collectively can contribute to biodiversity gains within the Sites themselves by providing buffers around the Sites.

Each group/agency will be providing different benefits in terms of biodiversity gains, with some focusing on control of pests and others focusing on protection and enhancement of ecological values. Some groups/agencies focus on both. Some groups/agencies focus on single species while others focus on a range of species. Some focus on discrete areas or specific habitat/ecosystem types, while others operate at a landscape scale. Either way, it is important to consider the activities and impact of these groups/agencies when determining how achievable any initiatives are likely to be.

It is also important to consider potential negative impacts that different projects could have on each other. For example, activities that disturb target pest species can make them more skittish, bait shy, and/or more elusive and harder to track. Any well considered pest control operation will, therefore, take into consideration potential impacts on other operations occurring in the area.

It should be noted that the potential benefit to ecological values delivered by a given application for funding is dependent on the competing applications – for example a proposal to control ungulates will give greater benefit if the area subject to the control has fewer other pest pressures, compared to if weeds and possums will remain at levels that reduce values. Likewise if the application is from a group with an interest in a limited area, it becomes potentially less beneficial if a competing proposal arrives with the potential to apply the same benefits to a wider area. A project is likely to provide greater long-term benefits if the work aligns with the developing strategic priorities of other agencies.

It may also be desirable to prioritise group/agencies operating under a robust governance structure with a good track record of leading successful, strategic, large-scale projects across multiple properties in alignment with other funders/agencies over groups/agencies operating in isolation with a limited track record.

Finally, the delivery model of funding others relies on recipients with the desire to deliver the work required to meet the Objectives. Recognising that a disproportionate amount of energy is needed to establish a new group or change the priorities of an existing group (especially one with an interest currently limited to a particular geography, species or output) there is a significant benefit to be had in funding existing entities over multiple years (rather than one year at a time) to continue or expand existing operations that are aligned to the Objectives. Where an entity with a proven track record of operating successfully at scale is open to it, funding their expansion into a wider range of pest control operations over a longer period of time is likely to be beneficial.

Ultimately, however, when supporting community groups and agencies in bringing about the desired levels of environmental protection to the Sites, the question needs to be asked how ORC can add most value in any given situation. This can only be determined through consultation with the relevant groups/agencies and other stakeholders, and through consideration of ORC's statutory functions and sphere of influence.

5.3 Available Tools

Sections 5.1 explains that the RPMP contains rules for most of the Site-Led Programme target pest animals and other region-wide rules for applicable pest animals and pest plants. The RPMP states that *compliance inspection* and *requirement to act* are two of the actions that ORC will draw upon to achieve the RPMP objectives. Whilst compliance is often preferred as a last resort, experience has shown that it is a very important tool in the box, particularly when seeking to motivate reluctant land occupiers. The availability of such tools could, therefore, be a factor to consider when prioritising projects as compliance and monitoring support from ORC could be a defining factor in terms of the success of a project.

5.4 Long-term Sustainability

Much of the area covered by the Sites is subject to community-led pest control efforts. For the Objectives of the RPMP to be met, these efforts would likely have to increase further. The continuation of this control and the ecological benefits it brings is reliant on a huge volunteer effort supported by considerable central and local government funding as well as private sector and charitable inputs. This creates multiple points at which control efforts could be hampered, e.g. a reduction in funding due to changes of government priority, or a reduction in volunteer workforce due to changing demographics or social pressures.

A key part of the ORC's prioritisation in determining how it supports the delivery of the RPMP Objectives should, therefore, be in understanding potential pressures and supporting projects that address them, such as ones which aid the development or deployment of more efficient pest control techniques or build pest control into sustainable land-management approaches.

5.5 Other Benefits

The dependency of cultural, economic and social wellbeing on environmental wellbeing means that any initiative that benefits the environment will provide multiple other benefits. Thus the outputs being sought by the RPMP (such as the eradication of possums from the Peninsula) will result in positive outcomes not just for biodiversity but also for cultural (e.g. increased populations of taonga species), economic (e.g. reduced agricultural impacts) and social (e.g. increased social cohesion developed through community-led pest control) outcomes.

Some of these are tangible and able to have an economic value attributed to them, some are of less-obvious economic value but enormous societal value.

As discussed above, a significant increase in pest control output over and above the current level will be required to deliver the Objectives. This suggests that these other benefits should be acknowledged, but not given undue influence in prioritisation in order to not 'distract' from the primary aim of the work.

5.6 Key Locations

Table 2 and Figure 9 above identify 12 key locations within the Sites that each contain a range of biodiversity values. As shown in Table 2, all of these locations contain Naturally Uncommon Ecosystems, Areas of Significant Biodiversity Value, protected land, and Significant Habitats as identified by ORC. Many of these locations contain extensive intact native habitat, notable Threatened / At Risk species, and are subject existing revegetation efforts. Half of these locations also contain DOC Ecosystem/Species Management Units (identified as areas where appropriate management will make a nationally important contribution to ecosystem and species persistence). GIS files provided with this report can be interrogated to explore this further.

As noted above, these key locations have not been ranked as being more or less important than others; the locations are designed to collectively cover the range of values across the Sites and should, therefore, be seen as complimentary rather than competing. Further information, such as updated mapping of Naturally Uncommon Ecosystems or the development of new layers based on existing information, could change the relative importance of these locations but would be unlikely to render a location unimportant.

As noted previously, the RPMP states that the Site Led Programmes seek to manage pests whose presence, at or nearby, threaten the values that are special to particular sites, thereby protecting the values at the place. Given the range of biodiversity values present, this may be a good reason to prioritise pest control and habitat enhancement projects at or around these 12 key locations as opposed elsewhere within the Sites. This needs to recognise that for many pests, long-term sustained control requires a landscape-based approach to be adopted. Establishing effective landscape-scale control is often a long-term goal, and so short-medium term goals might focus on efforts in or around these high value hotspots to ensure that values are not lost while longer-term ambitions are pursued.

5.7 Priority Pests

It has not been possible to rank target pests as being more or less worthy of control than each other, or identify the control of certain target pests as key to the maintenance of values at specific key locations. This is because firstly, there is not sufficiently good information on the distribution of the target pests, and secondly the locations were chosen to contain a wide range of values, meaning a wide range of target pests will be having significant impacts at each. Instead, the approach has been taken that any control of target pests is beneficial at an ecosystem level.

We bear in mind that the purpose of this report is to inform the prioritisation of pest control projects for the ORC to support. By definition, pests are having an impact wherever they occur. If they are a weed they are outcompeting other species, if they are a predator or browser they are eating other species (and in both cases they are creating indirect effects that alter the ecosystem in potentially unknown or unpredictable ways). As our key locations are chosen on the basis of having high natural value and are native-dominated, the species being impacted directly or indirectly would likely be native. If the ecosystem were in a state in which a selected pest would not be having an impact, the pest would not be there (as the lack of an impact would indicate a lack of resources being exploited, which would indicate the absence or at most fleeting presence of the pest).

Controlling a single or group of target pests across a whole Site gives economies of scale and (if controlled to low enough density) reduces reinvasion; controlling the full suite of pests at a given location releases the values at that location from the widest range of threats thereby allowing fuller recovery. Which of these approaches is preferred depends on the outcome being sought; the RPMP does not provide direction on this, and in the absence of a defined outcome

being sought there is no definitive 'right' answer. It should be noted however that Predator Free Dunedin projects are demonstrating that effective landscape control of possums and mustelids is feasible and that the geography of the Peninsula and Island sites lend them to avoiding invasion from new pests or eradicating (or at least maintaining very low levels) of most of the target pests.

Recognising that the purpose of this report is to contribute to decisions made on how the ORC supports others to deliver the Programmes, and that the RPMP identifies all the target pests as requiring control, the priority pests for the ORC to support the control of could be considered to be those for which this support would lead to the biggest reductions. From this it follows that the ORC should support those entities who will be most effective in using the ORC's support to control the target pests.

The above paragraphs suggest that criteria relating to the entities being supported become at least as important as those relating to the pests.

5.8 Summary of Prioritisation Criteria

Table 8 below provides a summary and quick reference guide regarding matters for consideration when prioritising projects for funding. Because of the importance of the wider context at the time of assessment, the criteria should not be seen as a 'pass/fail' or a cumulative scoring system which will give a definitive 'best' outcome; instead they are designed to help focus consideration on key attributes that would generally maximise the value of funding allocations.

Table 8: Quick Reference Guide - Criteria to Consider

	More Desirable →		Less Desirable
Alignment with RPMP	The project's objectives clearly align with several of the RPMP's objectives	The project's objectives clearly align with one of the RPMP's objectives	The project's objectives do not align with any of the RPMP's objectives
Interaction with other groups/agencies	The project is a cohesive, landscape-scale project delivered by more than one group/agency working in collaboration either in the same area or across the wider, with no adverse impacts on other projects underway in the area.	Project is delivered by one group/agency, with no adverse impacts on other projects underway in the area.	Project is delivered by one group/agency and could adversely affect the ability of other projects to be delivered effectively.
Applicant Criteria	Applicant is an established group or agency (preferably a legal entity) with appropriate structure and proven effective governance.	Applicant is an established group or agency with unknown/unproven governance or structure.	Applicant is an individual or new group.
Location/Scale	Project delivers control across a whole Site or Sites (i.e. landscape-scale control).	Project delivers control across part of a Site but will lead to outcomes that benefit multiple key locations (or other sites of high value).	Project delivers control across part of a Site but will lead to outcomes that benefit one key location (or another site of high value).
Strategic Approach	Project has been developed using a clearly defined strategic approach aimed at sustainable, long-term control.	Project has been designed with a strategic approach in mind, but long-term sustainability looks uncertain.	Project is based on a reactive approach with a short-term outlook.

Duration of Benefit	Project is multi-year with ongoing benefits that can be maintained (e.g. eradication on an island or within fenced area; eradication at a scale that will take some time to be reinvaded).	Project is one-off with ongoing benefits that can be maintained (e.g. eradication on an island or within fenced area).	Project is one-off with limited ongoing benefits.
Other Biodiversity Benefits	Project (alone or in combination with other projects) delivers control of all target pests and/or other biodiversity benefits on top of pest control (e.g. habitat enhancement, reintroduction of native species).	Project (alone or in combination with other projects) delivers control of multiple target pests and/or one other biodiversity benefit on top of pest control (e.g. habitat enhancement, reintroduction of native species).	Project is focussed on control of a single pest.
Control Methods	Project uses accepted best practice methods or applies a novel technique with the potential to advance pest control techniques with broadly applicable benefits.	Project mostly follows best practice or applies a novel technique with potential for site-specific benefits.	Project delivers some benefit but does not follow best practice.
Additional Support from ORC	Opportunity exists for ORC to improve the likelihood of success by providing an active support role through compliance action (as required), monitoring, collaboration, advocacy and education.	Some opportunity exists for ORC to improve the likelihood of success by providing an active support role through compliance action (as required), monitoring, collaboration, advocacy and education.	Little opportunity exists for ORC to improve the likelihood of success.

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Appendix 1. Threatened and At Risk species recorded within the Programme Areas

Provided as separate file.

Site-Led Terms and Conditions – March 2024

General

- Projects must align with the Site-Led Programme values and Otago Regional Council (ORC) Regional Pest Management Plan 2019-2029 (RPMP) objectives to be eligible.
- The project must occur within the terrestrial Site-Led area of Otago Peninsula, West Harbour – Mt. Cargill, and Quarantine and Goat Island (see Appendix 1).
- The Site-Led grant does not provide funding for:
    - Individuals or government organisations.
    - Commercial or private gain.
    - Projects created to comply with Resource Consent conditions.
    - Responses to any actual or potential enforcement action.
    - The purpose of seed capital.
    - Retrospective costs.
- Projects must have a defined start and finish date, and be completed within 12 months of receiving funding.
- Applicants must have completed accountability (final) reports for any previous ORC grants received to be eligible for funding.
- All funding is GST exclusive. All financial information provided in an application must be exclusive of GST.
- Successful applicants must agree to ORC promoting their project.
- If work funded is not completed within the specified time frame or funds are not spent as agreed, ORC reserves the right to demand the return of funds.

Applications

- Applicants can submit an application to the Site-Led Programme grant and other ORC grants but will only be awarded a maximum of one grant per year.
- Applicants must disclose any other funding they have applied for or received for their project.
- Funding is capped per project and applicant at $50,000.
- If funding is requested for salary costs, only 50% will be funded. Applicants need to demonstrate that requested salary funding is not more than 50% of total cost, and detail where the additional funding will come from e.g., applicant 50% contribution to salary could be from other grants, existing group funds, or existing staff capacity or volunteer contributions allocated to the same project position.

Assessment and decision

- All applications are assessed and ranked against the Site-Led assessment criteria.
- Applicants agree to be available (if requested) for a phone call and/or site visit with delegates of the Site-Led Assessment Panel as part of the assessment process at a day and time suitable to the applicant.
- Applicants may not speak to their applications to the assessment panel or approach representatives of the panel or Council to speak on their behalf.
- Decisions made are final and are made at the sole discretion of the assessment panel.
- If an applicant is unsuccessful in one round of ORC funding, they may apply again in a subsequent funding round.

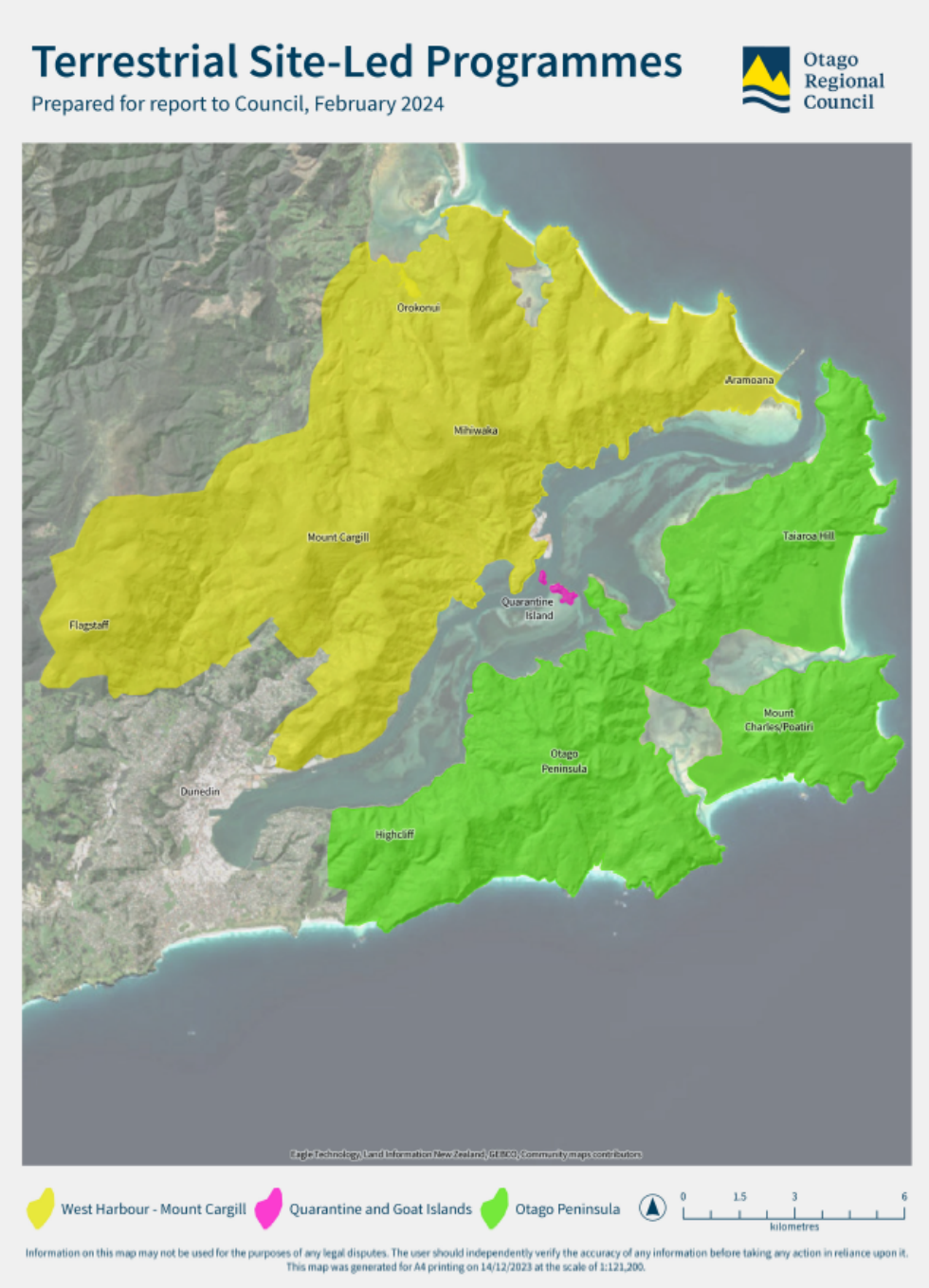
Site-Led Terms and Conditions – March 2024

Funding agreement and obligations

- Successful applicants must meet any specified preconditions and accept the grant by signing a funding agreement.
- The funding agreement outlines the requirements and responsibilities of both the applicant and ORC. These include, but are not limited to:
    - Recipients must pay all costs associated with the project. Site-Led grants will be transferred to recipients' nominated bank accounts.
    - Nominated bank accounts cannot be private accounts; it must be an account in the name of the applicant. Grant funds will not be paid into individuals bank accounts, corporate bank accounts or another groups bank accounts on behalf.
    - Successful applicants must agree to submit a final report on the project outcomes to ORC within one year of receiving the grant, and account for how funds were spent.
    - Successful applicants agree to report on their project at a council meeting, if requested.
    - Funds granted expire in the new financial year. If the applicant fails to comply with the Otago Regional Council's terms and conditions within the financial year the money is approved (unless otherwise agreed), the funding lapses.
    - Grants are approved subject to the Otago Regional Council being satisfied that the information given by recipients is true and correct. Otago Regional Council reserves the right to refuse grant funding, and/or request return of grant funding where it determines that it has been misled, that the applicant or recipient has omitted relevant information, or if the recipient enters into receivership, liquidation or ceases to exist (e.g., removed from register).

Site-Led Terms and Conditions – March 2024

Appendix 1. Site-Led Programme Terrestrial Areas



Site-Led Programme Grant Application form for March 2024 round

This template is provided for you to complete your grant application for the Site-Led programme grant for submission from 1st – 24th March 2024.

Please check the Site-Led Terms and Conditions and Site-Led Assessment Scoring Criteria before completing this application.

Please submit your application to sophie.gibson-pinn@orc.govt.nz. You can contact me at any time if you would like any advice on your project prior to submitting your application.

Privacy disclaimer

Information provided as part of your application is subject to the Otago Regional Council Privacy Policy. The policy has been adopted for the control of our collection, use and disclosure of your personal information (as defined in the Privacy Act 2020). The Policy has been prepared in accordance with our obligations and your rights set out in the Privacy Act. You can access the Privacy Policy here.

* Denotes a mandatory field.

GETTING STARTED

Is your project eligible?

Please check the Site-Led Terms and Conditions and confirm below before proceeding.

I confirm that:

- ☐ I have read and agree with the Site-Led Terms and Conditions.*
- ☐ The proposed project aligns with the Site-Led Programme values and Otago Regional Council (ORC) Regional Pest Management Plan 2019-2029 (RPMP) objectives.
- ☐ The proposed project will occur within the Site-Led terrestrial area of Otago Peninsula, West Harbour – Mt. Cargill, and Quarantine and Goat Island.
- ☐ The proposed project is not:
  - For individuals or government organisations.
  - For commercial or private gain.
  - Created to comply with Resource Consent conditions.
  - Responsive to any actual or potential enforcement action.
  - For seed capital.
  - For retrospective costs.
- ☐ The proposed project has a defined start and finish date, and will be completed within 12 months of receiving funding.
- ☐ I have completed the accountability (final) reports for any previous ORC grants received to be eligible for funding.

Have you received funding from ORC before? *

☐ Yes ☐ No

If yes, please list all previous grants and how this project adds to previous outcomes (if applicable).

APPLICANT DETAILS

Name of organisation/group *

Which organisation type best describes your group? If other, please describe *

APPLICANT DETAILS

- ☐ Registered charity
- ☐ Community group – unincorporated
- ☐ Landowner group
- ☐ Iwi/hapu
- ☐ Private trust
- ☐ Community trust
- ☐ Incorporated society
- ☐ NGO
- ☐ Education – Tertiary
- ☐ Education – School
- ☐ Other – Please describe:

Registered charity number (if applicable)	
New Zealand Business Number (if applicable)	

Primary Contact Information *

First name *	
Last name *	
Role of contact person *	
Phone number *	
Email address *	

Alternative Contact Information

First name	
Last name	
Role of contact person	
Phone number	
Email address	

Mailing Address *

Mailing address details below provided for *

☐ Organisation ☐ Contact person

Number and street name / PO Box *	
Suburb *	
City *	
Region *	
Postcode *	

Otago Regional Council

PROJECT SUMMARY AND FUNDING SOUGHT

Project name *	
Project start date * Note: ORC funding does not cover retrospective projects and funds will only become available from June 2024.	
Project finish date *	

Please provide a brief 1-2 sentence description of your project objective i.e., what are you aiming to achieve and what the funding is requested for (e.g. wages, purchases of material, services, plants, fencing, etc) *****

Funding sought

Total funding requested from ORC (exclusive of GST) *

$

Is your group registered for GST?

☐ Yes ☐ No

Note:

- If you ARE NOT GST registered and successful with your application, you will not be able to invoice us for the GST amount. However, we will include the GST cost in your grant.
- If you ARE GST registered and successful with your application, you can include the GST cost in your invoice, but you should not include GST in this application.
- Funding of salary costs is capped to 50% of these costs. If applying to fund salary costs, provide evidence on how the other 50% of salary will be funded. The applicant 50% contribution to salary could be from: other grants, existing group funds, existing staff capacity or volunteer contributions allocated to the same project position.
- Your group is required to have its own bank account to be able to receive a grant if your application is successful. Nominated bank accounts cannot be private accounts; it must be an account in the name of the applicant. Grant funds will not be paid into individuals bank accounts, or corporate bank accounts.

PROJECT DETAILS – OBJECTIVES AND BEST PRACTICE

Outline what you plan to do, including:

- **the objective(s) of the project**
- **the specific works and activities that you will undertake to achieve the objective(s), and**
- **the methods you will use to deliver these works and activities – highlight how these are considered 'best practice' for the activity where applicable.**

Objective(s)
Specific works and activities
Methods to be used

Note: Have you checked whether your project requires a resource consent? If a resource consent is required, this could delay the implementation of your project and impact on your budget. Check this webpage.

Who (if anyone) has provided technical or best practice advice for your project? *

Note: Contact us if you would like some advice on your project prior to submitting your application.

PROJECT LOCATION, SITE VALUES & PERMISSIONS

Please provide the project site address or describe/list the locations where the project will be carried out *

Please attach any maps, or project site plans as supporting documents, if you have any.

Site area

What is the area of your project site in hectares?

Is the project on public or private/leasehold land? *

☐ Public land ☐ Private/leasehold land

Do you have a management agreement or written permission with the landowner? *

For public land, this could be an agreement with DOC, LINZ, ORC, or your local council.

☐ Yes ☐ No

If yes, please include the management agreement or written permission as a supporting document.

Note: If you don't have a management agreement or a written permission from the landowner and your application is successful, your funding agreement will require you to obtain one.

SITE VALUES

Pest plant and animal species to be managed in the project*

Please list any pest species that your project is aiming to manage.

Species*	**Species management from RPMP*** (Eradication, Exclusion, Site-Led, Progressive Containment, Sustained Control)	**Location***	

Expected biodiversity benefits of the project*

Please list any threatened species (and their status) that your project is aiming to support.

Species * You can find out more about threatened species on https://nztcs.org.nz/	**Scientific Name**	**Threatened status** i.e. national critical, national endangered, nationally vulnerable or nationally increasing.	**Is this species endemic to Otago (Y/N)**

COMMUNITY INVOLVEMENT

How will this project involve or engage the community? *

Who (what groups) are involved in the project? *

How many community members are involved in the project? *

How many volunteer hours are you expecting from community members in this project? *

PROJECT OUTPUTS

Your project must include Pest Management *

Note: Pest Management is a mandatory field. You can outline if you project delivers any additional activities below.

- ☐ Pest Management
  - Pest plant management
  - Pest animal management

Please select any other activities your project involves

- ☐ Native revegetation
  - Planting
  - Natural regeneration
- ☐ Native fauna / habitat enhancement
  - Terrestrial habitat provision,
  - Improved fish passage,
  - Wetland hydrology reinstatement, or
  - Translocation
- ☐ Erosion control
- ☐ Environmental engagement
- ☐ Other

Provide information for the relevant outputs you anticipate achieving through your project *
Note: If successful with your application, you will be requested to provide an update on your project outputs with your final report.

PEST MANAGEMENT

PEST PLANT MANAGEMENT

Target species *	
Area managed (ha) *	

PEST ANIMAL MANAGEMENT

Target species *	
Area managed(ha) *	
Number of devices (if applicable) *	
Number of management plans*	

NATIVE REVEGETATION

☐ **PLANTING**
☐ **NATURAL REGENERATION**

Area (ha) *	
Length (m) – for riparian projects	

Note: Please include your planting plan and/or planting species list as a supporting document.

NATIVE FAUNA / HABITAT ENHANCEMENT

TERRESTRIAL HABITAT PROVISION

Note: this does not include habitat provided through native vegetation planting or regeneration

Target species *	
Type of devices, e.g. nesting boxes *	
Number of devices *	

IMPROVED FISH PASSAGE

Number of barriers added *	
Number of barriers removed *	
Number of passages added *	

WETLAND HYDROLOGY REINSTATEMENT

Area (ha) *	

TRANSLOCATION

Target species *	
Number of individuals *	

EROSION CONTROL

Area (ha) *	
Type, *e.g., steep slopes, riparian, sand dunes, tracks*	

ENVIRONMENTAL ENGAGEMENT

- ☐ **TRAINING**
- ☐ **EDUCATION AND AWARENESS**
- ☐ **PARTICIPATION AND ACCESS TO NATURE**

Number of events *	
Number of participants *	

PROJECT OUTPUTS – OTHER

Please describe and estimate any other measurable project outputs	

PROJECT IMPACT, MAINTENANCE, AND MONITORING

What scale will your project have a beneficial impact at? For example, landscape/property scale?

Tell us how long the project benefits will last (e.g. long, medium or short-term) and how they will be maintained into the future *

How will you monitor your project results or outcomes? *

Notes:

- Monitoring provides critical feedback for managing your project, understanding whether your actions are making a positive change to your site, and if project objectives are being achieved.
- Links on best practice monitoring methods may help you with your project.
- If successful, you will be required to report on the monitoring options you have selected for your project.

- ☐ Photo-points
- ☐ Planting survival rate
- ☐ Bird counts
- ☐ Sampling: water quality testing, eDNA
- ☐ Residual Trap Catch (RTC)
- ☐ Tracking tunnel
- ☐ Ecological survey monitoring
- ☐ Other – please outline

  _____

Please provide more details on the monitoring you will undertake, e.g. who, how, when.

PROJECT BUDGET

Funding amount

Please provide details in cost breakdown template attached.

Funds requested *	$
Your contribution – cash *	$
Your contribution – in kind *	$
Funding / donations received or applied from other sources *	$
Total project costs *	$

Notes:

- All financial information provided in an application must be exclusive of GST.
- In-kind contributions could be volunteer labour (costed at the living wage) or donated goods and materials. It does not include funding received from other sources.
- Total project costs need to add up to the four above-mentioned costs.
- If your application is successful, your organisation will be required to have its own bank account to receive a Site-Led grant. Your group/organisation will also need to acknowledge the funding you've received from the ORC.

Please show us how you worked out in-kind contributions *

Please list any major sources of funding (greater than $10,000) your group has received in the last 3 years and the amounts granted. *

Cost breakdown template

Expand table as needed. Please attach supporting quotes and other relevant information.

Cost item or activity *e.g., labour, plants, materials, administration support.*	**Funding source** *e.g., in-kind, cash, ORC funding, other funders*	**Cost $ (GST exclusive)**
	Total:	

DECLARATION

I have:

- ☐ Checked and confirmed that my project is eligible for funding. *
- ☐ Answered all the questions. *
- ☐ Supplied supporting information. *
- ☐ Provided an email address that is checked regularly. *
- ☐ Read and agree to the Terms and Conditions and confirm that all information of this form is true and correct. *

Signature:

Date:

Site-Led Programme - Assessment Scoring Criteria – March 2024

Description	Scoring & guidance	
1. Project objectives are realistic, and actions are likely to achieve the objectives	• Setting a clear project objective helps track the success of the project. Objectives should be realistic and able to be achieved within the timeframe of the project. • The project should also outline what actions will be undertaken to achieve the objective. There should be a clear linkage between the action and the intended outcome. • Consider overall group objectives and assess specific project actions in application in terms of contribution to that overall group objective / vision. • Projects that are implementing existing catchment group plans could be considered as higher scoring.	4 = Objectives are realistic and highly likely to be achieved within the timeframe. Obvious links between actions and objectives 3 = Objectives are realistic and likely to be achieved within the timeframe. Some linkage between the actions and objectives 2 = Objectives could be achievable, but project planning does not clearly demonstrate how proposed actions will lead to objectives 1 = Objectives are limited, and actions are not linked to the project objectives and unlikely to be achieved within the timeframe 0 = Objectives are unrealistic, irrelevant or unachievable.
2. Project is technically sound	• The likelihood of a successful project is increased when the applicants are well informed or experts in the area. • Projects should demonstrate that the planned approach is technically feasible and reflects best management practice. • This could be through the expertise of the project applicants or through information they have sought and intend on implementing	4 = Proponent has sought appropriate advice and/ or have the relevant expertise. Best practice is clearly being proposed. 3 = Proponent has sought some advice and/ or has some relevant experience. Best practice is mostly being proposed. 2 = Proponent has sought some advice and/ or has some relevant experience. Best practice is not being proposed or is not clear. 1 = Proponent has not demonstrated advice was sought or what relevant experience is being utilised. Best practice is not being proposed or is not clear. 0 = Best practice is not being implemented and proposed techniques are questionable.
3. Impact of the project - scale	• The impact a project can have can be assessed by: - Scale, how effective and far reaching will the project outcomes be; - Longevity, how enduring will the project outcomes be; - Intervention level, is the project addressing the cause or symptom of a problem.	4 = Significant environmental benefits encompass an entire key location or multiple key locations. 3 = Moderate environmental benefits encompass an entire key location or multiple key locations. 2 = Environmental benefits are within an area of a key location. 1 = Benefits are likely but are indirect and/or intangible. 0 = No clear benefits to the objectives of the Site-Led programme. **Key locations are defined in Table 2 and Figure 9 of the Site-Led Threats, Values, and Impacts Assessment (Appendix 5)**

Site-Led Programme - Assessment Scoring Criteria – March 2024

4. Impact of the project - timeframe	• The impact a project can have can be assessed by: - Scale, how effective and far reaching will the project outcomes be; - Longevity, how enduring will the project outcomes be; - Intervention level, is the project addressing the cause or symptom of a problem.	4 = Environmental benefits for long-term. (20+ years) 3 = Environmental benefits medium-term (6-20 years). 2 = Environmental benefits short-term (<5 years). 1 = Benefits are likely but are indirect and/or intangible and timeframes are difficult to assess. 0 = No clear benefits to the environment over any timeframe.
5. Special site values	• Projects should align with the values of the Regional Pest Management Plan 2019-2029 Site-Led programmes. To be eligible for the Site-Led grant the projects should: - Be working within the defined Site-Led area; - Have an interest in biosecurity and management of pest plants and/or pest animals outlined in the RPMP as Site-Led species; - Have a focus on biodiversity outcomes.	3 = Project involves the management of both Site-Led pest plants and pest animals within the Site-Led area and have clear biodiversity outcomes. 2 = Project involves the management of either Site-Led pest plants or pest animals within the Site-Led area and have clear biodiversity outcomes. 1 = Project involves the management of pest plant or pest animal species (not Site-Led Species) 0 = Project involves common species.
6. Cultural site values	• The *Regional Pest Management Plan 2019-2029* (RPMP) recognises the need to provide protection of the relationship between Māori, in this case Kāi Tahu descendants affiliated to Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou, and their ancestral lands, waters, sites, wāhi tapu and taoka. Projects being considered will be assessed on the ability of proposed actions to enhance or support Mahika kai species or habitat, taoka species and/or habitat, wāhi tapu, or wahi tūpuna values.	**Values for Scoring Criteria** • **Environmental values:** - Supports mahika kai species and/ or their habitat - Supports taoka species and/ or their habitat • **Site values include:** - known wāhi tūpuna values - known wāhi tapu values - importance as a traditional mahika kai gathering site 4 = The project satisfies all of the values for scoring criteria and the project area has physical and legal access. 3 = The project satisfies one of the environmental values and two of the site values, and the project area has physical and legal access. 2 = The project satisfies at least one of the environmental values and one of the site values, and the project area has physical and legal access. 1 = The project satisfies one of the environmental values but does not have physical or legal access. 0 = The project does not satisfy any of the values for scoring criteria.

Site-Led Programme - Assessment Scoring Criteria – March 2024

7. Level of community engagement	• A key objective for the Site-Led grant is community involvement. This criterion assesses how much community involvement is being proposed and how far reaching that involvement may be.	4 = Project is led by a community group and engages with other members of the community. 3 = Project is led and implemented by a community group with some community engagement. 2 = Not led by community but involves community in the delivery of the proposed actions. 1 = Not led by community but outcomes will benefit or be utilised by the community. 0 = No community involvement or benefit.
8. Value for money	• Considering any level of investment contributed by the applicant, that is, their level of investment is a good measure for value for money. • See Funding Details section in application. • Applicant investment can include in-kind contributions such as labour or volunteer hours ($20 per hour minimum), monetary input from the group itself or project partners. • However, contributions from other grants are not considered applicant's investment and should not be used to leverage funding.	4 = Project is more than 1:1 cost sharing between fund requested and fund contributed 3 = Project is 1:1 (or within 5%) cost sharing 2 = Project is 1:2 applicant vs Site-Led grant requested 1 = Project has some applicant contribution but not clear or costed 0 = Project relies solely on Site-Led grant and/or other grants
9. New applicants	• It is good to encourage new applicants to access funding. • However, previous applicants are also typically involved in good works and maintaining momentum can be good. • Some previous successful applicants may not have completed all previous commitments, e.g., reporting.	2 = New applicant or previously unsuccessful applicant to ORC grants overall (with eligible project) 1 = Previous successful applicants to ORC grants with all requirements completed on time 0 = Previous successful applicant to ORC grants with outstanding reports or other commitments
10. Other funding	• Site-Led grant has many repeat applicants and some with significant other funding to achieve their objectives, enabling them to commit resources to applying for additional funding. • Community groups without significant additional funding should receive a boost to their score to encourage new groups, new projects and a diversity and spread of Site-Led grant projects.	2 = Community group has no other significant funding sources (total <$100k) 1 = Community group has other significant funding sources (total $100-$500k) 0 = Community group has other significant funding sources (total >$500k)

Note: Maximum score = 35