Regulatory Committee - 28 November 2018 Attachments

Minutes of a meeting of the Regulatory Committee held in the Council Chamber, Philip Laing House, Dunedin on Wednesday 17 October 2018, at 9:00am

Membership

Cr Bryan Scott	*(Chairperson)*
Cr Sam Neill	*(Deputy Chairperson)*
Cr Graeme Bell	
Cr Doug Brown	
Cr Michael Deaker	
Cr Carmen Hope	
Cr Trevor Kempton	
Cr Michael Laws	
Cr Ella Lawton	
Cr Andrew Noone	
Cr Gretchen Robertson	
Cr Stephen Woodhead	

Welcome

Cr Scott welcomed councillors, members of the public and staff to the meeting.

1. APOLOGIES

No apologises were advised.

2. LEAVE OF ABSENCE

No Leave of Absence advised.

3. ATTENDANCE

Sarah Gardner	*(Chief Executive)*
Nick Donnelly	*(Director Corporate Services)*
Tanya Winter	*(Director Policy, Planning and Resource Management)*
Sian Sutton	*(Director Stakeholder Engagement)*
Gavin Palmer	*(Director Engineering, Hazards and Science)*
Scott MacLean	*(Director Environmental Monitoring and Operations)*
Sally Giddens	*(Director People and Safety)*
Ian McCabe	*(Executive Officer)*
Lauren McDonald	*(Committee Secretary)*
Simon Beardmore	*(Senior Environmental Officer) Item 11.2*

4. CONFIRMATION OF AGENDA

The agenda was confirmed as tabled.

5. CONFLICT OF INTEREST

No conflict of interest was advised.

6. PUBLIC FORUM

No public forum was held.

7. PRESENTATIONS

No presentations were held.

8. CONFIRMATION OF MINUTES

Resolution

That the minutes of the meeting held on 13 September 2018 be received and confirmed as a true and accurate record.

Moved: Cr Scott
Seconded: Cr Hope
CARRIED

9. ACTIONS

Status report on the resolutions of the Regulatory Committee

11.3 Managing the use of coal for domestic heating in Otago and New Zealand (Technical Committee)	31/1/2018	*That the matter of the ability to enforce the current Regional Air Plan Air Zone 1 provisions be considered by the Regulatory Committee*	In process
Director's Report - Wallaby Control		*Arrange a meeting with governance and staff of Environment Canterbury re wallaby control issues*	CLOSED Meeting held with Environment Canterbury on 3/10/18. It was agreed to establish an MOU.

10. MATTERS FOR COUNCIL DECISION

10.1. Review of Council's Consents Function

The report sought Council approval for the intended review of Otago Regional Council's resource consents function. Ms Winter outlined the review's key focus areas for improvement and confirmed the changes were un-budgeted expenditure.

Feedback was provided to Ms Winter, including the need for:

- simplification of the resource consent application process
- provision of clarity on process for applicants
- effective integration of consent information through to regulatory

Ms Winter was asked to action suggested edits to the review:

- Review ORC's best practise as measured against other councils
- Amend the application process to identify if consent applications are being made without legal assistance
- Provide more detail for shared services within section 7 - Capacity and Capability
- Provide a report back on the processing of consents in current framework and deemed permits to the November committee meeting
- Add Best Practise for consistency of consenting processing for the region.

Resolution

Staff appoint a consultant/s to undertake the review.

Moved: Cr Robertson
Seconded: Cr Deaker
CARRIED

Resolution

a) That the Committee approves the brief attached as Appendix 1 for the Review of Council's Resource Consents Function, subject to the suggested edits outlined.

Moved: Cr Woodhead
Seconded: Cr Deaker
CARRIED

11. MATTERS FOR NOTING

11.1. Compliance Activity for 2017/18

The report summarised the compliance activities and consent conditions for the 2017/18 year for all major consent holders and prohibited activity monitoring.

Environmental Incidents

Discussion was held on freshwater complaints and incidents for the Kaikorai Stream and improved monitoring of the waterway. A suggestion was made for a case study to be undertaken on the Kaikorai stream.

Motion:
Move that the Director present a paper on the Kaikorai Stream particularly its surveillance and ability to respond quickly to incidents that occur in the Kaikorai stream and other urban waterways

Moved: Cr Deaker
Seconded: Cr Kempton

Amended motion:
That a case study be undertaken on the Kaikorai Stream with a view to informing future work on urban waterways and other waterways of concern.
CARRIED

An additional recommendation was moved for the report

That this paper be re-framed and represented with analysis of trends and of highlights and issues governance should be addressing.

Resolution

a) That this report be noted.
b) *That this paper be reframed and represented with analysis of trends and of highlights and issues governance should be addressing.*

Moved: Cr Laws
Seconded: Cr Deaker
CARRIED

11.2. Director's Report on Progress
The report described regulatory activity during the period 30 August 2018 – 3 October 2018. Compliance, forestry, regionally significant wetlands, dairy, contaminated land, incident response, harbour master activity, harbour safety, biosecurity, national wilding conifer control programme, winter poisoning season for rabbits,, rook monitoring, community meetings.

Mr Beardmore in attendance as ORC's contaminated land specialist.

A request was made for a list of contaminated sites in the region and the contaminants identified at those sites. Mr Beardmore responded to questions on permitted activities and monitoring undertaken within the Waste Plan.

Resolution
a) That this report be noted.

Moved: Cr Neill
Seconded: Cr Lawton
CARRIED

Lagarosiphon control for Lake Dunstan

A request was made for a report back on the effectiveness of the work being undertaken on Lake Dunstan. Mr Maclean advised he would be able to provide the information for the last financial year as the effectiveness of the current spraying programme would not be known before summer. He confirmed that NIWA and LINZ also provide reports on activity.

Resolution

That an effectiveness review of lagarosiphon control on Lake Dunstan be brought to next committee round

Moved: Cr Lawton
Seconded: Cr Laws
CARRIED

11.3. Enforcement Activities from 20 August to 5 October 2018

The report detailed Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 enforcement activities undertaken by the Otago Regional Council during the period 20 August 2018 to 28 September 2018.

Resolution

a) That this report be received and noted.

Moved: Cr Woodhead
Seconded: Cr Brown
CARRIED

11.4. Consents and Building Control

The report detailed consents and building control and deemed permit replacement progress for the period 18 August 2018 to 14 September 2018.

Resolution

a) That this report is noted.

Moved: Cr Woodhead
Seconded: Cr Deaker
CARRIED

12. RESOLUTION TO EXCLUDE THE PUBLIC

That the public be excluded from the following parts of the proceedings of this meeting, namely:

Item Enforcement – Current Matters
Section 6 (a) to prejudice the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial

Also move that staff be permitted to remain at this meeting, after the public has been excluded, because of their knowledge of current enforcement matters. This knowledge, which will be of assistance in relation to the matter to be discussed.

Moved: Cr Lawton
Seconded: Cr Noone
CARRIED

13. NOTICES OF MOTION

No Notices of Motion were advised.

14. CLOSURE

The meeting resumed in public session on the motion of Crs Hope and Deaker.

The meeting was declared closed at 11:14 am.

Chairperson

1. Introduction

The past use and storage of hazardous substances has left a legacy of soil contamination in New Zealand. This contamination has been largely caused by historic practices in which chemicals were manufactured, used, stored and disposed in ways that are considered unacceptable by today's standards. Contaminated sites are often associated with industrial activities, but commercial, agricultural and residential land-uses or activities can also result in soil contamination.

In Otago, common land-uses that have the potential to cause soil contamination include timber treatment, tanning, sheep dipping, pesticide manufacture and use, petroleum storage and handling, and waste disposal to land.

Contaminants in soil can cause adverse effects on both human health and the environment through both short-term and long-term exposure. The value of land and its potential for rural, residential, or recreational uses can also be reduced by elevated concentrations of contaminants. Migration of contaminants may result in contamination of other land, sediment, air, groundwater or surface water, both at the source of contamination and at locations remote from the source.

It is therefore necessary to identify, prioritise, investigate, and remediate or manage any land in Otago where such adverse effects occur.

The Resource Management Act 1991 and the Regional Plan: Waste for Otago (1997) provide a basis for the management of contaminated sites for the council. The Regional Plan: Waste outlines the issues, objectives, policies, methods and rules associated with contaminated sites. It facilitates the development of methods for investigating, assessing, and mitigating adverse effects from contaminated land, maintaining a register of contaminated sites, and protocols for transferring information to Territorial Authorities (TAs), who are responsible for controlling the use of contaminated land.

Although the Regional Plan: Waste is still operative, several legislative, technological, and best practice changes have occurred since 1997, and updated detailed operational procedures are described in a separate Contaminated Sites Management Strategy for Otago Regional Council which was first developed in October 2000 with subsequent updates in 2013 and 2016.

This paper explains and summarises the activities that the Otago Regional Council undertakes with respect to contaminated land management and provides illustrative case-studies of real-world examples.

2. RMA Framework for Contaminated Land

The Resource Management Act's hierarchy of policy statements and plans provide the primary basis for the management of contaminated land in New Zealand. Other relevant legislation is summarised in Appendix 2.

Resource Management Act 1991

The primary legislation relevant to contaminated land management by local government is the Resource Management Act 1991 (RMA 1991).

Contaminated land is defined in section 2 of the RMA as land that:

- has a hazardous substance[1] in or on it that:
    - (i) Has significant adverse effect on the environment; or
    - (ii) Is reasonably likely to have significant adverse effects on the environment.

Regional councils have a function under section 30(1)(ca) to investigate land for the purposes of identifying and monitoring contaminated land.

Regional councils have a function under section 30(1)(f) to control discharges of contaminants into or onto land, air or water. At some contaminated sites, hazardous substance may be emanating into groundwater, running off to surface water, or escaping into air. The Otago Regional Council has a responsibility to control these types of 'passive discharges' of contaminants into or onto land, air, or water if they exist.

Territorial Authorities (TAs) in Otago have a function under section 31(b)(iia) to prevent or mitigate any adverse effects of the development, subdivision, or use of contaminated land.

It is therefore important that Regional Councils and Territorial Authorities work closely together when undertaking their respective functions relating to contaminated land.

Regional Policy Statement for Otago (1998)

Section 13 of the Regional Policy Statement for Otago (RPS) discusses contaminated sites. The policy statement provides the following objective:

> 13.4.4. To minimise the risks to people and the wider environment arising from existing contaminated sites.

To achieve that goal, the statement provides the following policy:

> 13.5.7 To address the adverse effect of past waste disposal practices through:

[1] "Hazardous substance" is defined in section 2 of the RMA as including, "but is not limited to, any substance defined in section 2 of the Hazardous Substances and New Organisms Act 1996 as a hazardous substance".

a) Identifying sites of old landfills, hazardous substance dumps, or contamination within Otago; and
b) Determining any adverse effects arising from those sites and requiring the remedying or mitigation of any adverse effects.

The Proposed Regional Policy Statement (2016)

The Proposed Regional Policy Statement is currently under appeal. Several appeals do relate to soil contamination and contaminated land. Once these appeals are resolved, a review of the Otago Regional Council's contaminated land work programme will take place to ensure it remains consistent with the RPS.

The Regional Plan: Waste for Otago (1997)

The Regional Plan: Waste gives effect to the policy statement by outlining the issues, objectives, policies, methods, and rules associated with contaminated sites.

There is one rule in the Regional Plan: Waste regarding contaminated sites which states that disturbance of or discharge from a contaminated site requires consent. This rule applies to both long-term passive discharges from contaminated sites, and short-term discharges associated with the disturbance or remediation of contaminated sites.

NES for Assessing and Managing Contaminants in Soil (2011)

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (the NES) took effect on 1 January 2012. Each Territorial Authority implements the NES in accordance with their section 31 functions. The NES is intended to ensure that contaminated land is identified at the time of development and remediated or managed to protect human health if necessary.

The NES creates a nationwide set of planning controls when contaminated or potentially contaminated land is subject to sampling, soil disturbance, land-use change or subdivision. It also sets out a methodology for deriving soil contaminant standards to protect human health. It does not consider ecological or other environmental receptors.

The NES applies to a piece of land if it is more likely than not to have had a land use history associated with the use, storage or disposal of hazardous substances. While Regional Council functions are not explicitly affected by the NES, any information available to the TA from a Regional Council is one method for determining whether the NES applies to a piece of land under Regulation 6(2)(b).

3. The HAIL Register

ORC takes a broad view of its function of investigating land - encompassing both direct investigation of sites, but also by using methods that will facilitate the identification of contaminated land by other parties and supporting TAs to give effect to the NES. To identify contaminated land, it is first necessary to identify and record land where activities have occurred that could have caused contamination.

The Ministry for the Environment's Hazardous Activities and Industries List (HAIL) is a compilation of 53 types of activities and industries that are considered to have some potential to cause land contamination resulting from hazardous substance use, storage or disposal. The HAIL is intended to identify most situations in New Zealand where inappropriate use and storage of hazardous substances could cause, and in some cases have caused, land contamination.

Since 1999, the Otago Regional Council has maintained a database containing information on land where hazardous substances have been stored or used, and which are considered to have potential to be contaminated. In 2016-2017, work was undertaken as part of the annual plan programme to systematically review existing council-held information and reformat the information into a geospatial database compatible with internal and external GIS systems. The structure of the database was developed in consultation with the Otago TAs, who are key users of the information, and in a manner that is consistent with Ministry for the Environment guidance, as well as the recommendations from a national working group on contaminated land data consistency.

Site Classifications

Each site is recorded on the database with attributes for its HAIL Status and Contamination Status. This specificity allows the database to be used effectively to help determine whether the NES would apply to a given site, as well to identifying land as contaminated or otherwise.

HAIL Status: The database includes sites with information regarding the land-use history of the piece of land, based on the Ministry for the Environment's Hazardous Activities and Industries List (revised 2011). A record of HAIL activities provides the basis for implementing the NES and is a key component for the usefulness of this register to TAs.

Although the HAIL has no specific regulatory significance for the Regional Council, it is important to maintain a record of sites where ORC holds information that indicates a HAIL activity has occurred. Identification of HAIL sites is an initial step in identifying contaminated sites. Regional Council also receives approximately 400-500 requests per year for information on HAIL activities at specific properties. Maintaining a register with this information allows these enquiries to be handled quickly and efficiently.

Contamination Status: In addition to recording information about current or past land uses, the register also provides an indication of the level of investigation at the site and the concentrations of soil contaminants, if known, relative to the use of land or sensitivity of the environment.

The Regional Plan: Waste for Otago specifies that the Otago Regional Council will maintain a database called the “Otago Regional Contaminated Sites Register” outlining the details of sites that are contaminated. Those sites on the HAIL register with a status of ‘contaminated’ can be considered to comprise the ‘contaminated sites register,’ as mandated in the Regional Plan: Waste.

There are currently 38 identified ‘contaminated sites’ in Otago, covering an area of 72 hectares. 174 sites, covering 484 hectares were previously considered contaminated, but have now been remediated or managed to date. This figure is a key statistic for gauging the effectiveness of contaminated land management in Otago.

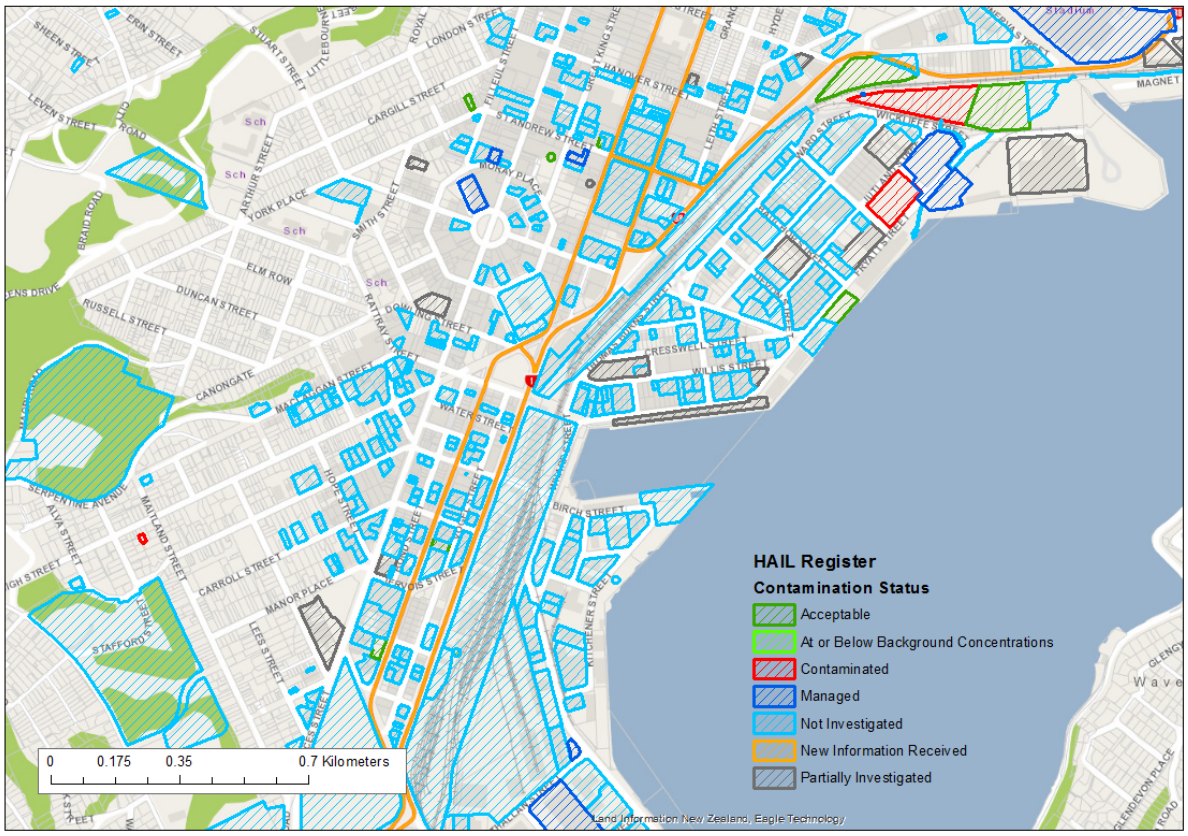


Figure 1: Screen shot from the HAIL register

The HAIL register was developed in-house, and provides a simple, but usable GIS interface. Several other fields for each site in the database store addition information such as information date, relevant HAIL categories, information source, whether remediation has taken place and a brief summary.

Information Sharing

Currently, the database is shared via a GIS server directly with the Otago territorial authorities. Territorial authorities do not have edit access but can provide additional information under a templated cover sheet for assessment by ORC staff and inclusion on the database.

Information on the HAIL register is available to members of the public upon request in accordance with the Local Government Official Information and Meetings Act 1987. ORC’s contaminated land

webpage directs requesters to a dedicated contaminated land email address to submit enquiries. Typically, no charge is levied for information requests, and requests are responded to within 1 to 5 working days.

Typical requesters include:

- Property owners
- Prospective purchasers or lawyers completing due diligence
- Property developers
- Contaminated Land consultants
- Territorial Authorities
- Property valuers
- Utility operators
- Central government agencies

The since the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health came into effect in 2012, the demand for contaminated land data by the end-users above has increased considerably (figure 2).

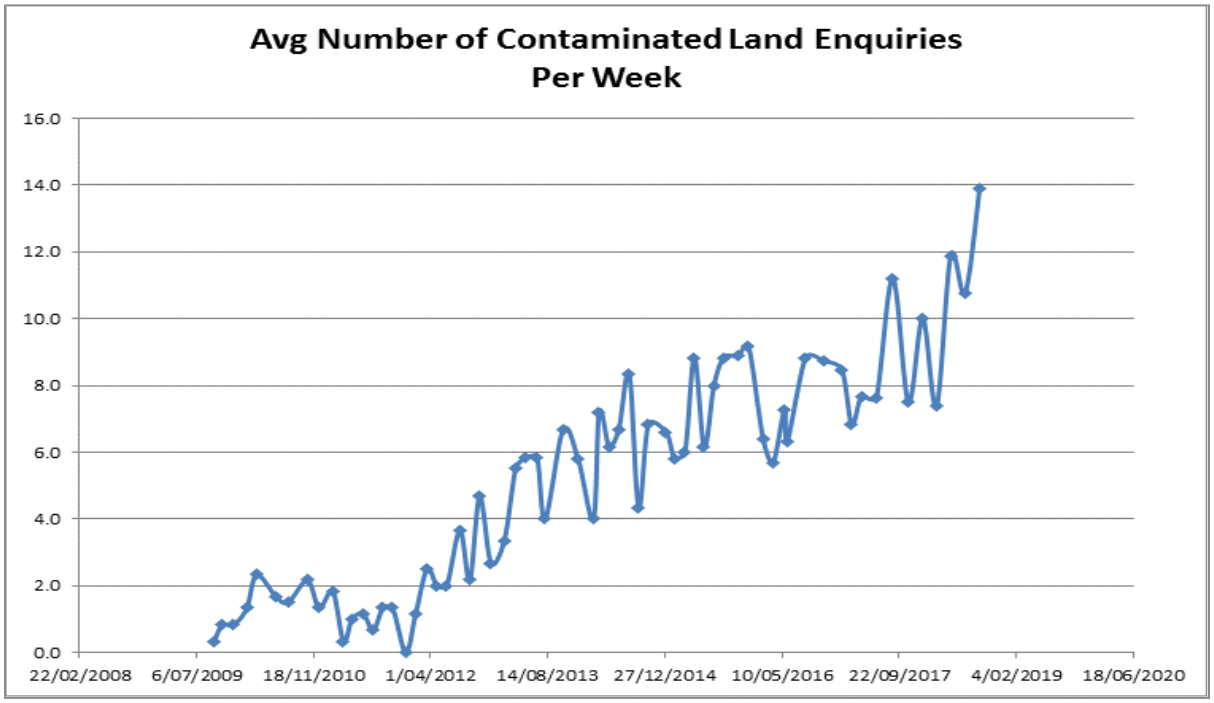


Figure 2: average number of contaminated land enquiries received per week- 2009 to 2018

Given the high demand for HAIL data, and signals of increasing public interest, it may be appropriate to consider providing ORC-held HAIL information on our webpage in a format similar to the Natural Hazards Database.

4. Prioritisation and Investigation of Sites

The fact that a site has been identified as having had a land use history that includes a HAIL activity or industry does not mean that hazardous substances were used or stored on it, nor that it will have

hazardous substances present in the land. The list merely indicates that such activities and industries are more likely to use or store hazardous substances and therefore there is a greater probability of site contamination occurring than other uses or activities.

To use resources efficiently, sites that are suspected to be contaminated are prioritised for further investigation by the Otago Regional Council or the landowner. High investigation priority is given to sites where the likelihood of contamination is highest, or the potential effects of contamination are significant. One method for prioritisation of sites for further investigation is using the Ministry for the Environment's risk screening system (Contaminated Land Management Guideline #3). Sites may also be prioritised in as part of wider Council work programmes or initiatives, e.g., investigation of specific activities throughout Otago, investigation of HAIL activities within a specific catchment or groundwater protection zone, or through complaints or incidents suggesting an immediate risk.

Methods used by the Otago Regional Council to investigate sites to identify contaminated land include both direct and indirect approaches.

Direct investigation of contaminated sites is undertaken on sites that are considered to have the highest priority and risk. These investigations may include preliminary or detailed site investigations (see Beach Road Landfills case study).

Indirectly, land is investigated by identifying and recording of HAIL sites through desk-top investigation. By accurately recording identified HAIL sites, it is expected that risks from these sites will also be assessed when activities occur that trigger the NES. Potential sources of information include:

- Resource Management or Hazardous substances incidents.
- Consent applications to ORC.
- Search of ORC records in response to public enquiries.
- Information provided by TA's from their property files or dangerous goods records.
- Active review of historic aerial photographs or other external information sources.

Lastly, ORC staff assess and review site investigation reports that are prepared by third party consultants and submitted to regulatory authorities. Landowner's often engage contaminated land consultants to prepare Preliminary and/or Detailed Site Investigations to support consent applications for site development. Once submitted to the relevant regulatory authority, ORC staff review these reports for quality and update the HAIL register accordingly. If requested, feedback is also provided to the relevant territorial authority regarding the adequacy of the investigation and its conclusions. In the 2017-2018 financial year, 79 site investigation reports were reviewed and assessed.

Case Study: Beach Road Landfills

In July 2017, the Otago Regional Council received a complaint from a member of the public regarding two historic landfill sites eroding onto a beach south of Oamaru.

The two sites are located along an eroding cliff face above the beach. Coastal erosion as resulted in the contents of the landfills spilling down the face of the cliff and onto the beach below. Following

the identification of the landfills in 2017, each site was added to the Otago Regional Council's HAIL Register as verified HAIL sites, with a contamination status of not investigated.

As an initial response, approximately 60 tonnes of landfilled material were removed from the sites in October 2017 by the Waitaki District Council. An unquantified amount of landfilled material remains at both sites. As coastal erosion progresses, it is anticipated additional refuse may be progressively exposed and deposited onto the beach.

Otago Regional Council staff completed a preliminary site investigation to provide a summary of the site conditions, a preliminary assessment of risk to human health and the environment, and recommendations to assist Waitaki District Council in the management of the sites. The preliminary site investigation is currently being used to support an application for central government funding for remediation (see section 6 on the Contaminated Sites Remediation Fund below).

5. Management, Remediation, and Monitoring of Sites

Where contaminated land is identified, the Otago Regional Council will take practicable steps to ensure that appropriate management or remediation is achieved. A process flow chart detailing the work flow is included in Appendix 1.

Site remediation and management includes the methods used to reduce or manage risks to human health and the environment from contaminated land. Some options for site remediation or management include:

- Removal of contaminated soil and disposal or treatment offsite;
- On-site treatment or stabilization of contaminated soil.
- On-site encapsulation of contaminated soil.
- Capping or paving of contaminated soil to prevent direct exposure.
- Pumping and/or treatment of contaminated groundwater.
- Natural attenuation and monitoring.
- Behavior control through a site management plan.

Liability for remediation or management

Liability for site remediation or management must be determined on a site by site basis with advice from ORC solicitors. In general, under liability regimes in New Zealand, the current owner/occupier of the site is responsible for implementing any remediation or site management practices to prevent or mitigate any adverse effects from contaminated land. This is supported by section 5.4.3 of the Regional Plan: Waste and section 314(1)(da) and 322(1)(b(ii) of the RMA 1991.

Where non-compliance with the RMA 1991 or a resource consent is identified, resulting in contamination of land, enforcement action can be utilised to require investigation and appropriate mitigation. Those responsible for the non-compliance have an obligation to investigate the site in accordance with their duty under section 17 of the RMA 1991. The Otago Regional Council may elect to investigate the land and seek cost recovery if possible.

If the responsible party sold the contaminated land prior to 1 October 1991, they cannot be subject to RMA enforcement action.

Remediation or management of sites without discharges

If contamination is found on a site but there is no evidence of active or ongoing discharges as described in Rule 5.6.1 of the Regional Plan: Waste, the Otago Regional Council has limited authority to require immediate action. In such cases, it is the responsibility of the relevant TA to ensure that adverse effects from the development, subdivision, or use of contaminated land are prevented or mitigated in accordance with their Section 31(1)(b)(iia) function.

Remediation or management of sites with discharges

Once land has been contaminated, a discharge of contaminants from the source of contamination can occur as a result of natural processes. This can be described as a 'passive discharge.' Rules in the Regional Plan: Water for Otago and Regional Plan: Waste for Otago, provide that such discharges are unlawful unless authorized by a discharge permit.

Where the effects of such a discharge are minor, their authorization by a discharge permit may be appropriate, subject to a satisfactory consent application process. Sites with consents for passive discharges can be considered managed, provided compliance with consent conditions is maintained (see Rosebank Sawmill case study).

Where a valid discharge permit is not held, enforcement procedures may be initiated to address the non-compliance and to ensure that any adverse effects are controlled. Enforcement procedures under the RMA 1991 could include infringement notices, abatement notices, enforcement orders or prosecution. Under the provisions of section 314, the Environment Court may require the owner or occupier of any land to take action, that in the opinion of the Court, is necessary to avoid, remedy, or mitigate any actual or likely adverse effect on the environment. This may include site remediation or management methods to cease discharges to the environment.

Case Study: Rosebank Sawmill

The Rosebank sawmill and timber treatment facility operated on a site outside Balclutha from 1968 to 2014. A variety of timber treatment chemicals were used on the site over time, including CCA (copper, chromium, arsenic), boron, and PCP. Soil contamination was identified on site in 1994, and the sawmill operator obtained resource consents to discharge stormwater and sediment containing these chemicals off site. The consents require site management practices to reduce and control stormwater run-off and regular monitoring. Regular stormwater monitoring had shown that contaminant concentrations were acceptably low.

When the sawmill closed in 2014, Clutha District Council purchased the site to provide industrial land for development. The discharge permits were transferred to CDC and they assumed responsibility for the site.

Sampling in March and May 2018 showed an increase in contaminants concentrations in sediment and stormwater, and consent trigger values for arsenic were exceeded at three locations off site. The consent requires that in this event 'the consent holder and consent authority shall mutually agree on the mitigation approach to be adopted for the pond sediments. Mitigation may include removal and disposal of the sediments in accordance with guideline procedures.'

Clutha District Council is working with the Otago Regional Council and the affected landowner to stabilise the site and develop a remediation action plan for sediment on the neighbouring property.

Site remediation and management

Remediation of contaminated sites which involve the disturbance of land will require resource consent under Rule 5.6.1 of the Regional Plan: Waste. Short term consents for the discharge of contaminants to air, land or water may also be required. Once site remediation is completed, an assessment of the site validation report may result in a change of contamination status.

Monitoring of sites

Contaminated and Managed Sites require on-going monitoring. Monitoring involves maintaining up to date records as new information becomes available and periodically contacting site owners and/or inspecting sites to ensure that conditions have not deteriorated or changed. The type and frequency of monitoring is determined on a site by site basis depending on the level of risk posed by each site. For sites with the passive discharge consents, monitoring takes place through council's routine consent monitoring programme.

6. Contaminated Sites Remediation Fund

The Ministry for the Environment's Contaminated Sites Remediation Fund provides funding to regional councils and unitary authorities for the investigation and remediation of high priority contaminated sites.

The contestable fund is designed to encourage willing parties to remediate sites where there is a risk to human health or the environment. The CSRF will only cover a portion of the costs, and it is Regional Council policy that where possible, landowners pay the balance of costs. To date, Otago has received approximately $800,000 in funding (table 1) for projects.

Year	Project	Site	CSRF Funding
2007	Groundwater Remediation and Planning	Blue Mountain Lumber	$278,707
2007	Detailed Site Investigation	Barrow Box Sawmill	$28,350
2008	Remediation Planning	Barrow Box Sawmill	$12,600
2008	Groundwater Investigation	Blue Mountain Lumber	$57,000
2009	Remediation	Barrow Box Sawmill	$105,000

2009	Detailed Site Investigation	Oamaru Timber Treatment Site	$38,000
2011	Remediation	Barrow Box Sawmill	$160,409
2011	Remediation Planning	Oamaru Timber Treatment Site	$11,257
2013	Remediation	Oamaru Timber Treatment Site	$76,000
2017	Remediation Planning	Dunedin City Gasworks	$17,087

Case Study: Oamaru Timber Treatment Site

The former Fletcher Placemakers site on the Oamaru Foreshore was used for timber treatment from the 1960's until 1985. Timber treatment processes involved applying copper, chromium arsenic (CCA) solution under pressure to wood. Freshly treated timber was then stacked across the site, resulting in soil contamination.

CSRF funded investigation in 2011 and 2012 documented that elevated concentrations of arsenic were present in the shallow surface soil across much of the site. Following an assessment of remedial options, stakeholders agreed to remediate the site by capping with 0.4m of clean imported soils to eliminate recreational site user's exposure to arsenic contamination. A remediation action plan for this approach was prepared and formed part of the CSRF application for the remediation of the site.

Physical site works were completed between April and September 2013. Approximately 2,200m^3 of marine sediment and 700m^3 of topsoil were placed at the site. During the site works, laser levels, measuring rods, and static markers were used to guide the placement of material. A comparison of high-accuracy topographic surveys was used to ensure sufficient depth had been achieved over the site. A Site Management Plan documents the nature and extent of residual contamination on site and methods to control and manage these risks during future site use.

The end result is functional, usable space near the Oamaru Harbour that supports the development of an emerging community, recreation and tourism asset.

7 Working closely with Territorial Authorities

Due to the shared responsibilities for managing contaminated land, Otago Regional Council and our territorial authority counter parts work closely together.

This work includes:

- Regular and comprehensive sharing of information held on the HAIL Register
- Communication with TAs to ensure that classification of sites on the HAIL Register are consistent with/cognisant of NES decisions for the benefit of landowners;
- Sharing of report interpretations in response to requests for advice in the context of our specific functions;
- Ongoing communication with central government agencies to ensure that best practice guidance is up-to-date and encourages that the separate but related functions of regional and territorial authorities operate consistently; and

- Ongoing participation in the Otago Contaminated Land Liaison Group to ensure effective and close working relationships and information sharing practices with our TA partners.

The Otago Contaminated Land Liaison Group consists of representatives of the Regional Council and Otago TLA's. The group was established in 2016 to provide a forum for discussion, information sharing, and group decision making on contaminated land matters that are relevant to the region. Under the current terms of reference, the group meets twice a year.

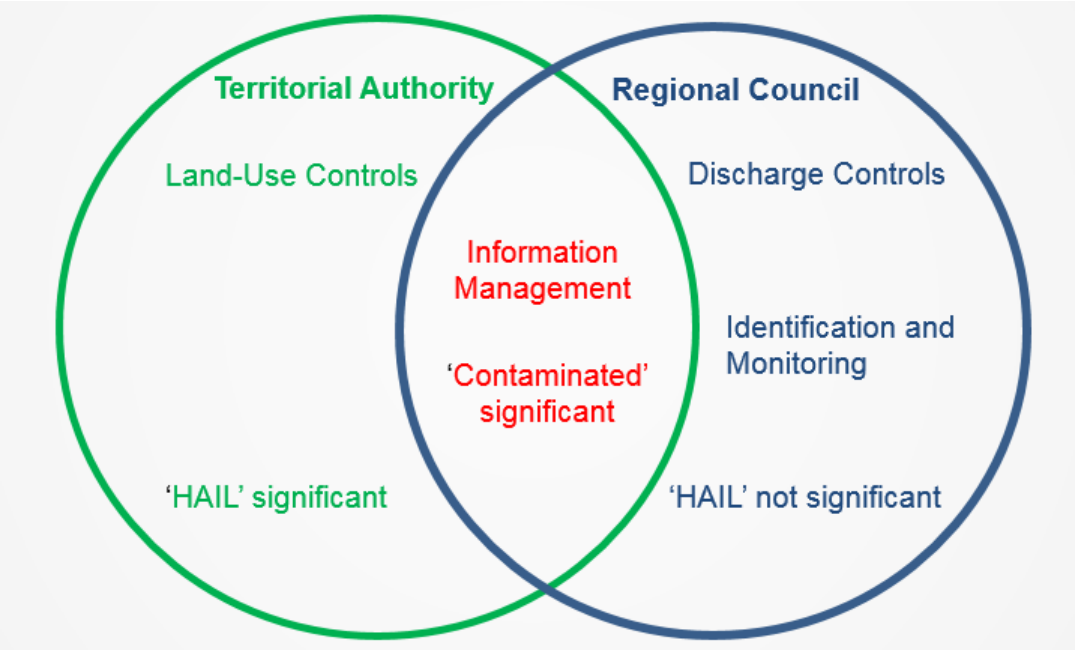


Figure 3: Overlap of contaminated land responsibilities between regional councils and territorial authorities.

8.0 Supporting the contaminated land sector

In addition to fulfilling its regulatory functions, there are several other ways in which the Otago Regional Council supports the wider contaminated land sector. This sector includes other regulatory authorities, developers, contaminated land and planning consultants, public health professionals, and landowners. These methods help to achieve the broader aims of the Waste Plan and Regional Policy Statement.

Improving public access to historic aerial imagery

Historic aerial photographs are often a key component of the site history research that underlies contaminated land investigation. ORC has supported the Crown Aerial Scanning project and the publication of historic imagery on the website retrolens.nz which run by the Local Government Geospatial Alliance.

Undertaking or commissioning research

Periodically, issues emerge for which a body of research is required to help inform decisions and management practices. The Otago Regional Council undertakes to identify issues pertinent to the region, and in partnership with other councils, Crown Research Institutes, and universities, undertake or support research. Recent examples include contributions to research projects involving emerging contaminants (see Non-foam sources of PFAS case study) and risk characterization of arsenic leaching from treated timber vineyard posts.

Case Study: Non-Foam Sources of PFAS

Per- and Polyfluoroalkyl Substances (PFAS) associated with Class B fire-fighting foams have recently emerged as a contaminant of concern in New Zealand. As a result, the Defense Force, Fire and Emergency NZ, and commercial airport operators have initiated investigations at several facilities. There are other known sources of PFAS contamination, including, but not limited to: closed landfills, wastewater treatment plants and some industrial/manufacturing processes; however, the scale of use and likelihood of contamination from these non-firefighting-foam sources is not well understood. A need was identified to produce a reference document exploring the relative significance of these non-foam PFAS sources. A consortium of regional councils including Otago, the Ministry for the Environment, and consultancy firm Tonkin and Taylor Limited funded an international literature review to provide commentary on non-foam sources of PFAS that are relevant to NZ. This work will help support regional councils in identifying and prioritizing sites were PFAS is likely to have been used.

Regional Waste and Contaminated Land Forum

The Regional Waste and Contaminated Land Forum (RWCLF) is a special interest group under the umbrella of the Resource Manager Group. The purpose of the forum is to achieve better management of waste and contaminated land in New Zealand through the sharing of information and experiences between regional officers, and to coordinate activities between Regional Councils where appropriate and external organizations such as Ministry for the Environment.

The RWCLF provides a key link to other councils and central government, and the Otago Regional Council seeks to be an active and contributing member of the forum.

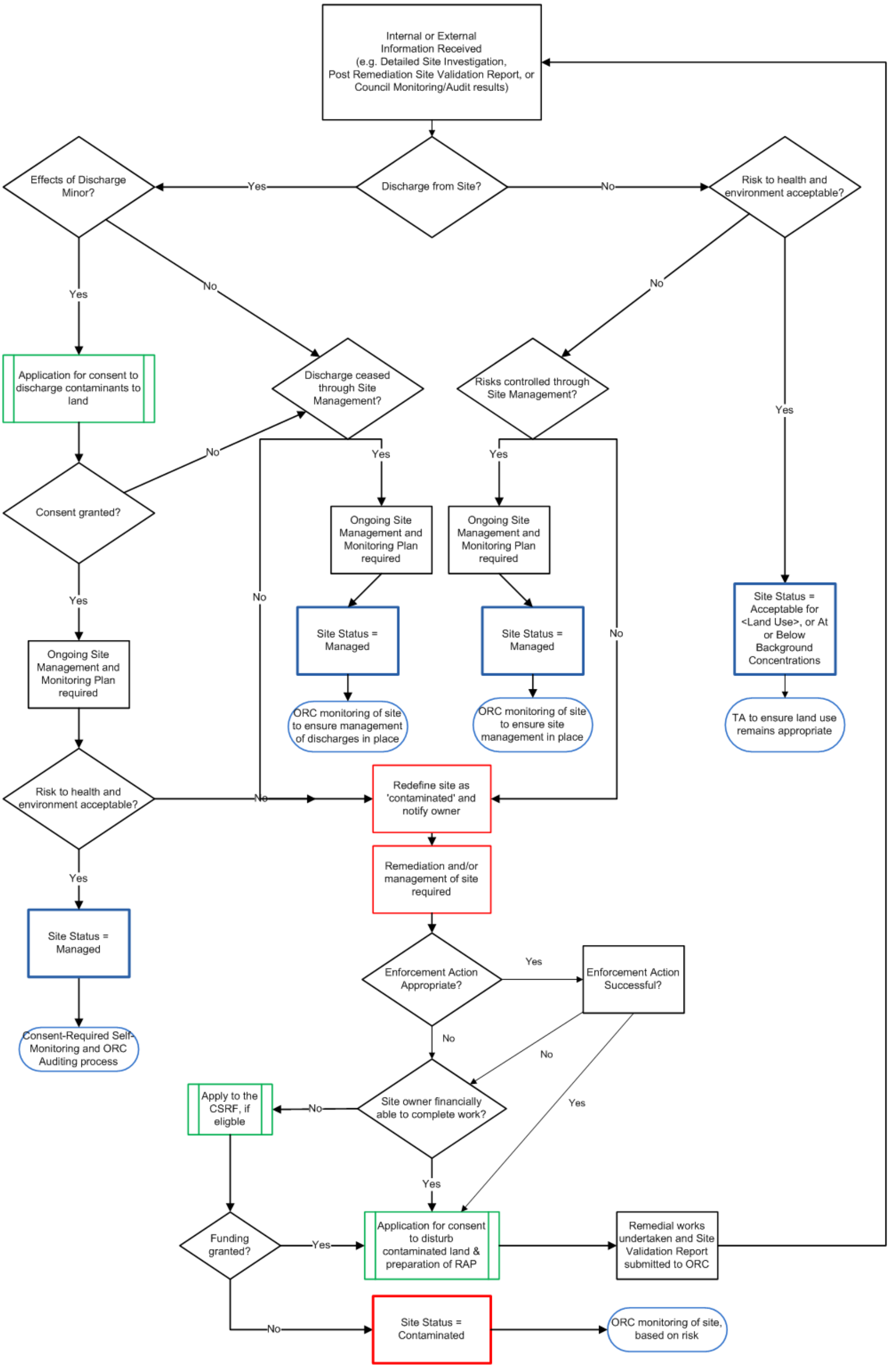
9.0 Conclusion

Regional councils have specific functions with respect to contaminated land prescribed in the Resource Management Act 1991. The Otago Regional Council undertakes these functions in accordance with the policies and methods outlined in the Regional Policy Statement and Regional Plan: Waste.

Activities in the current programme include maintaining a regional register of HAIL sites, investigating land, and assisting with any active CSRF projects. As with many other areas of council business,

there is a desire ‘to do more’ in the contaminated sites work programme, and the 2018-2028 Long Term Plan indicates a 90% increase in budget available for contaminated site work for the 2019/20 and 2020/21 financial years. Staff are currently reviewing the work programme to identify how these additional resources can be best used to support ORC’s vision for a prosperous and sustainable future for Otago.

Appendix 1: Process Flow Chart


Internal or External Information Received (e.g. Detailed Site Investigation, Post Remediation Site Validation Report, or Council Monitoring/Audit results)
Discharge from Site?
Yes
Effects of Discharge Minor?
No
Risk to health and environment acceptable?
Yes
Application for consent to discharge contaminants to land
No
Discharge ceased through Site Management?
No
Risks controlled through Site Management?
Yes
Yes
Consent granted?
No
Yes
Ongoing Site Management and Monitoring Plan required
Ongoing Site Management and Monitoring Plan required
Yes
Site Status = Managed
Site Status = Managed
Site Status = Acceptable for <Land Use>, or At or Below Background Concentrations
ORC monitoring of site to ensure management of discharges in place
ORC monitoring of site to ensure site management in place
TA to ensure land use remains appropriate
No
No
No
Risk to health and environment acceptable?
Redefine site as 'contaminated' and notify owner
Yes
Remediation and/or management of site required
Site Status = Managed
Enforcement Action Appropriate?
Yes
Enforcement Action Successful?
Consent-Required Self-Monitoring and ORC Auditing process
No
No
Yes
Apply to the CSRF, if eligble
No
Site owner financially able to complete work?
Yes
Funding granted?
Yes
Application for consent to disturb contaminated land & preparation of RAP
Remedial works undertaken and Site Validation Report submitted to ORC
No
Site Status = Contaminated
ORC monitoring of site, based on risk

Appendix 2: Other relevant legislation

While the primary drivers for Regional Council's role in the contaminated land area are the RMA 1991 and the Regional Plan: Waste, there are several other legislative instruments that also provide context to the contaminated land framework. It is important that the Regional Council is cognisant of these and their implications for other stakeholders.

Local Government Official Information and Meetings Act 1987

The Local Government Official Information and Meetings Act 1987 (LGOIMA 1987) regulates the management and release of official information from Regional Councils. The guiding principle for access to official information is that information shall be made available, unless there is a good reason for withholding it.

Under LGOIMA 1987 any person may apply in writing to a territorial authority for an issue of a LIM to disclose everything that is known about a parcel of land, including the "likely presence of hazardous contaminants."

The release of contaminated sites information by the Regional Council is bound by the provisions of LGOIMA 1987.

Building Act 2004

The Building Act 2004 requires TA's, upon request, to provide project information memoranda (PIM) which includes information on the "likely presence of hazardous contaminants" In addition to the PIM requirements, clause F1 of the Building Code specifically requires building sites be assessed to determine the presence and potential threat of any hazardous agents or contaminants.

Health Act 1956

The Health Act 1956 is relevant to contaminated land where it provides powers and sets up a duty for TAs to abate health nuisances. Health nuisances are defined by the Act as conditions that are "offensive or likely to be injurious to health". It is understood that the use of these powers for contaminated land is unusual and that they are only likely to be applied if there is a possibility of immediate harm.

Health and Safety at Work Act 2015

The object of the Health and Safety at Work Act 2015 (HSW 2015) is to secure the health and safety of works and workplaces. It places emphasis on employees, employers, and visitors to take responsibility for the well-being of themselves and others at work. The act requires that hazards at work are identified and steps are taken to manage and control them in the work place.

A health, safety and environment plan should be prepared as part of the planning for site work. Worksafe New Zealand has prepared a position statement on managing occupational health on potentially contaminated sites, which references a number of guidelines including the Department of Labour Health and Safety Guidelines on the Cleanup of Contaminated Sites (1994).

Hazardous Substances and New Organisms Act 199

The purpose of the Hazardous Substances and New Organisms Act 1996 (HSNO 1996) is to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms (including genetically modified organisms) in New

Zealand. The primary role of local government under the HSNO 1996 is the prevention of new contaminated sites arising from the use, storage or manufacture of hazardous substances.

TAs must enforce the provisions of HSNO 1996 on any premises not covered by the other HSNO enforcement agencies, which include for example WorkSafe at places of work. The chief executive of a Regional Council may enforce the provisions of HSNO in or on specified premises if the Regional Council is in or on those premises for the purposes of enforcing the provisions of the RMA 1991.

Income Tax Act 2007

Under the Income Tax Act 2007, a taxpayer may be eligible for tax deductions when they have incurred expenditure to investigate, monitor or rectify discharges of contaminants.

Common Law

The common law torts of negligence, nuisance and the rule of Rylands v Fletcher may be applicable in some instances. These are generally outside the scope of Regional Council involvement.

REPORT

Document Id: A1161104

Report Number: 2018/1072
Prepared For: Regulatory Committee
Prepared By: Environmental Officer, Kirk Robertson and Team Leader- Biosecurity Compliance, Richard Lord
Date: 24/09/2018

Subject: Spartina Report

1. History

Spartina is a vigorous perennial estuarine sward grass that was introduced into New Zealand in the 1920's to aid foreshore protection and to reclaim marshes and tidal flats due to its ability to trap sediment. Spartina grows to a metre in height. It forms a massive underground rhizomatous root system which can be difficult to control. Spartina may grow from seed, or root fragments and over a period of time can spread out to cover entire estuarine areas. Studies have shown that vegetative spread is as much as 0.6 metres per annum. Spartina spp. is particularly quick to spread in muddy substrates alongside streams, creeks and open mangrove swamps (Bascand, 1970), these areas share common features with upper arms of an estuary that is fed with fresh water as well as salty.

The first control operations for Spartina commenced in 1979 by helicopter spraying in the Merton Arm of the Karitane estuary at a time when this estuary was completely infested and dominated by Spartina. The two areas where effort is still required is the Waikouaiti River / Karitane Estuary, and the Pleasant River Estuary near Goodwood. Control has always been challenging with having to work around tides, ensuring the weather is suitable and the plants are in a clean state, and accessing the soft tidal beds of the estuaries by foot, four-wheel motorcycle, or four wheel drive vehicle where possible in a safe manner.

Previously, Spartina has been found in the Otago Harbour at Harwood, and in Blueskin Bay near Evansdale. There have been no sightings at these sites for over 5 years and it is reasonable to suggest that eradication has been achieved in those two areas.

Spartina is known to have existed in the estuarine areas of the Hawksbury Lagoon, (Waikouaiti), Taieri River, (Henley to Taieri Mouth) and Catlins Lake. Annual inspections are still undertaken and although eradication cannot be yet claimed. The incidence of Spartina within these areas ranges from being extremely low to non-existent with eradication likely in the coming years.

The above photo shows a small patch of Spartina growing amongst other coastal grasses.

The above photo shows a large patch of Spartina that was sprayed in early 2018, has significantly reduced in size.

The above map of the Waikouaiti Estuary shows sites controlled in 2017 (green) compared to sites identified back in 2008 (blue

2. University Report - Department of Marine Science

The Marine Science department at Otago University have been monitoring the Spartina in the Waikouaiti Estuary for a number of years. Their results have found that when surveying the Waikouaiti River Estuary, it was found that where spraying had occurred, the spread of Spartina spp. had reduced. Overall, there has been a trend of decrease in the total number of medium and large patches of Spartina spp. from 2015 to 2018. The total number of small patches did increase from 2015 to 2018, which indicates that some plants are still seeding and young plants are beginning to re-establish and spread.

The Hawkesbury lagoon has been modified greatly with the development of the Waikouaiti township (Hepburn et al., 2010) and therefore can no longer support the original species found in the area so now boasts a variation of wading bird species. Hawkesbury Lagoon is not the only inland area to be modified in order to reclaim land. The Waikouaiti river estuary has been reduced in size dramatically as people reclaimed land for primarily farming purposes. Many methods were employed to aid in reclaiming the land including the use of tidal gates and introducing species to trap sediments.

For the areas checked in the Waitati Inlet and Purakanui Inlet, no Spartina spp. was observed to have established which is a very good sign that it is still contained within the Waikouaiti River Estuary and hasn't spread further south.

3. ORC Control Programme

Control is undertaken during the summer and autumn months by accessing the mudflats and estuaries by walking or using quad bikes to spray the plants. Monitoring and control must be worked around tides and good weather conditions and is often made more difficult with the plants being covered in silt or other debris from high flows. When spraying it is essential to use an adjuvant in combination with the herbicide to ensure that the spray sticks to the plants, especially with the short period in which the plants are visible around low tide. More recently, another adjuvant has been used with the herbicide and it is believed we are having superior results when compared with years gone by when some results have been rather sporadic for no apparent reason.

The above photos show isolated patches of Spartina which have been sprayed using a blue dye

The Waikouaiti and Pleasant River Estuaries are the two main areas of concern, with both being controlled using a combination of spray truck (where accessible), quad, and backpack spraying of the outlying smaller patches. This work was carried out by contractors and ORC staff. All sites (at 10m intervals) were recorded on GPS to measure the spread and density of the Spartina over time.

The Council carries out control of Spartina in conjunction with the Department of Conservation and Kiwi Rail (narrow corridor of land running through both estuaries).

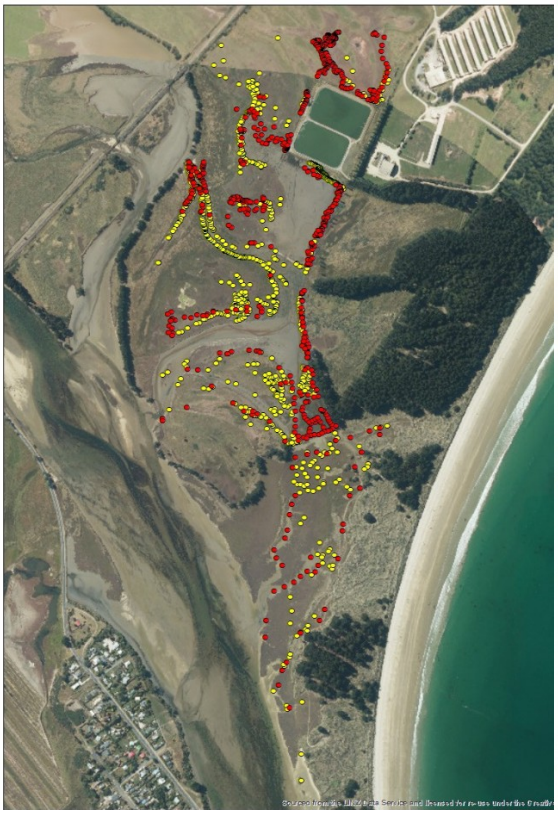


Figure 1 – Waikouaiti Estuary Spartina Sites from 2017 (yellow) and 2018 (red)

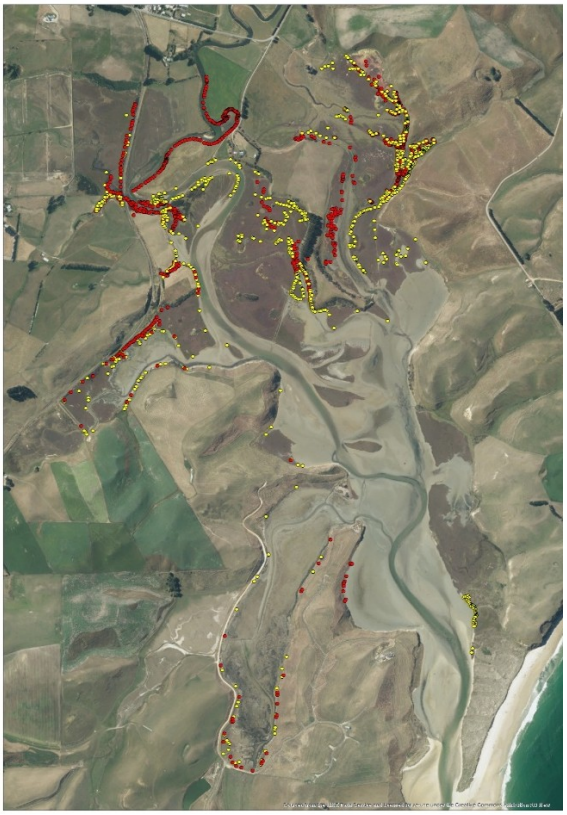


Figure 2 – Pleasant Estuary Spartina Sites from 2017 (yellow) and 2018 (red)

Figure 3 – Spartina controlled in 2018 by DOC (yellow) and ORC (red)

Figure 1 – Area of Spartina sprayed in the Pleasant River Estuary

Figure 2 – Area of Spartina sprayed in the Waikouaiti River Estuary

4. Summary

It appears that although the overall density of the Spartina is decreasing with the yearly control programme, but the distribution of seedling plants has increased over a wider geographical area. This has been identified and confirmed by DOC and Council staff, as well as by marine science students from the University. However, both estuaries were inspected in May and revealed a very successful result been achieved during the 2018 control program.

One explanation for the increased spread of smaller plants in the Waikouaiti Estuary could be the increasing size of the estuary itself. A large proportion of the estuary was developed farmland until the mid-1990's, when a stop bank was destroyed in a large flood, allowing the estuary to reclaim the farmland over time.

The impact of control over the last few years has shown a visible decrease in the large patches of Spartina. Ongoing control of these patches is essential, as well as continued surveillance and control of the smaller, more isolated patches.

Further follow up control of re-growth /Spartina seedlings from both estuaries will be required for some years into the future.

Scott MacLean
Director Environmental Monitoring and Operations