

15 March 2024

Shay McDonald Consents Planner Otago Regional Council

Shay.McDonald@orc.govt.nz

Level 12 Otago House 477 Moray Place Dunedin 9016

Private Bag 1959 Dunedin 9054 New Zealand

al.nz

Dear Shay

Green Island Resource Recovery Park Precinct Consenting

- The Dunedin City Council (**DCC**) is lodging an application for consents necessary for a Resource Recovery Park Precinct (**RRPP**) at the Green Island Landfill.
- 2 The link below contains the signed Form 9 and an Assessment of Environmental Effects, alongside the following appendices:
 - (1) Records of title
 - (2) Design and Operations Report
 - (3) Stormwater Management Plan and Assessment of Effects
 - (4) Groundwater Technical Assessment
 - (5) Draft Construction and Operations Management Plans
 - (6) Landscape Effects Assessment and Graphic Supplement
 - (7) Ecological Assessment Report (and appendices)
 - (8) Bird Hazard Report
 - (9) Draft Southern Black Backed Gull Management Plan
 - (10) Aukaha Affected Party Approval Letter
 - (11) Cultural Impact Assessment Green Island landfill Operation, Closure and Aftercare
 - (12) Air Quality Assessment
 - (13) Integrated Transport Assessment
 - (14) Assessment of Acoustic Effects
 - (15) Interim Social Impact Assessment
 - (16) Consultation and Engagement Collateral

- (17) Aukaha and Te Runaka o Otakou Presentation Briefing
- (18) Site Options Assessment
- (19) Existing landfill Consents
- (20) Draft conditions of consent
- We note that there are related consents sought at the same time from DCC. These are for an outline plan of works under the designation, and resource consent under the NES for managing contaminants in soil.

Link: Green Island RRRP - ORC Application

4 Please let us know if you have any difficulty accessing the documents.

Yours faithfully

Anderson Lloyd

Michael Garbett

Partner

d +64 3 467 7173

m +64 27 668 9752

e michael.garbett@al.nz

APPLICATION FOR RESOURCE CONSENTS

Section 88 of the Resource Management Act 1991

To: Otago Regional Council

Resource Consent

- The Dunedin City Council ("the Applicant"), a local authority under the Local Government Act 2002, having its office at Ground Floor, Civic Centre, 50 The Octagon, Dunedin applies for resource consents associated with the construction and operation of a Resource Recovery Park at the Green Island Landfill for the receipt and recovery of waste, specifically:
 - (a) A permit for discharges to air from an organics processing facility;
 - (b) A permit for discharges to air from resource recovery buildings;
 - (c) A permit for the diversion and discharge of stormwater;
 - (d) A land use consent for the disturbance of contaminated soil during construction works; and
 - (e) A permit for discharges to air from the disturbance of contaminated soil during construction works.

Proposed Activity

- The activity to which the application relates ("the proposed activity") is the construction of a new Resource Recovery Park Precinct (RRPP) at the Green Island Landfill site, to the southwest of Dunedin central city.
- The Dunedin City Council has embarked on a Waste Futures Programme to develop an improved comprehensive waste management and diverted material system for Ōtepoti Dunedin. This system includes provision of an enhanced kerbside recycling and waste collection service for Dunedin from July 2024. The new kerbside collection service will include the provision of a domestic general waste bin to replace the current black bag system and the collection of residential organic (food and garden) waste. The new service requires advanced waste processing and recovery facilities at the landfill site.
- The RRPP is described in more detail in the accompanying Assessment of Environmental Effects, and includes the following key components:
 - Organics receival building (ORB) and processing facilities to support the organic waste collection;
 - Materials recovery facility (MRF) to sort and bale items collected from kerbside mixed recycling bins; and
 - Bulk waste transfer station (BWTS) to facilitate the consolidation and trucking of waste to landfill.

Additional facilities also include new glass bunkers, staff office facilities, parking, and associated access roads and truck parking areas.

The site at which the proposed activity is to occur is designated as the Green Island Landfill Site (as defined within the operative designation (D658) in the Second Generation Dunedin City District Plan (2GP)) for the purpose of Landfilling and Associated Refuse Processing Operations and Activities.

The site is located approximately 8.8 km southwest of Dunedin in the suburb of Green Island, adjacent to the Kaikorai Stream and Estuary. Primary access to the site is from Brighton Road. The site location is shown in Figure 1 below:



Figure 1: Green Island Landfill site

7 The addresses and legal descriptions making up the site at which the proposed activity is to occur are described in the table below. Copies of the records of title are included in the AEE.

SIIO	LegaldDescription	रिस्टनले जिल्लामिक	/A(ea)
9 Brighton Road	Part Section 45-47 Green Island Bush Survey District and Section 54 and 63 Block VII and Section 119 Block VII Dunedin & East Taieri Survey District	OT11B/1241	41.8120 hectares
9 Brighton Road	Part Section 45-47 Green Island Bush Survey District	OT368/19	1.0841 hectares
9 Brighton Road	Section 1 Survey Office Plan 24047	OT15C/1016	4718 square metres
9 Brighton Road	Lot 6-7 Deposited Plan 572543 and Section 1 Survey Office Plan 24040	1040235	4464 square metres
9 Brighton Road	Part Section 120 Dunedin & East Taieri Survey District and Part	OT16D/1193	4.0211 hectares

	Section 53 Block VII Dunedin &		
	East Taieri Survey District and		
	Closed Road intersecting Sections	·	
	86,87,98,102 and 103 Block V		
	Lower Kaikorai Survey District		
9 Brighton	Section 103 Block V Lower	OT16D/1194	5.5726 hectares
Road	Kaikorai Survey District and Part		
	Section 85-87, 98 Block V and Part		
	Section 99-101 Block V and Part		
	Section 102 Block V Lower		
	Kaikorai Survey District		
9 Brighton	Lot 2, 4 Deposited Plan 572543	1040233	1837 square metres
Road	and Lot 1 Deposited Plan 20826		·
114 Brighton	Part Section 38-40, Part Section 44	OT7C/934	8.2303 hectares
Road	and Part Section 156 Green Island		
	Bush Survey District		
140 Brighton	Part Lot 4 Deposited Plan 4550	OT12C/261	10.4655 hectares
Road			
170 Brighton	Lot 1 Deposited Plan 20582	OT12C/262	4.2766 hectares
Road			
170 Brighton	Section 81 Block VII Dunedin &	OT15A/266	4401 square metres
Road	East Taieri Survey District		<u>.</u>
Total Area			75.6164 hectares

Consents

- There has not been a previous application for the proposed activity which was returned as incomplete.
- The applicant has engaged in pre-application discussions with Rebecca Jackson and Shay McDonald at the Otago Regional Council. The Council has also carried out a pre-lodgement review of technical reports. Feedback has been incorporated into the revised reports.
- 10 Resource consents are being sought from Otago Regional Council for the following activities:
 - (a) Diversion of surface water and stormwater from working and non-working areas of the RRPP discretionary activity (Regional Water Plan Rule 12.3.4.1), and non-complying activity (National Environmental Standard Freshwater Regulation 54)
 - (b) Resource consent for discharge of stormwater from RRPP facilities to Kaikorai Stream restricted discretionary activity (Regional Water Plan Rule 12.B.3.1), and non-complying activity (National Environmental Standard Freshwater Regulation 54)
 - (c) Resource consent for discharge of odour and dust into air from industrial or trade processes not covered by the Waste Plan (BWTS and other buildings) discretionary activity (Regional Air Plan Rule 16.3.5.9)
 - (d) Resource consent for discharge of contaminants to air from soil disturbance (Regional Waste Plan Rule 5.6.1(5))
 - (e) Resource consent for discharge of odour and dust into air from composting activities discretionary activity (Regional Waste Plan Rule 7.6.13(3))
 - (f) Resource consent to disturb land at a contaminated site for construction of the RRPP (excluding ORB) discretionary activity (Regional Waste Plan Rule 5.6.1(1))
- 11 Based on the above assessment, the various resource consent applications are to be RRPP Application for Resource Consents.docx

- bundled, and considered as a **non-complying activity** under the Resource Management Act 1991 (RMA).
- Pursuant to section 123(d) of the RMA, a consent duration of **35 years** is sought for all resource consents.
- 13 A 5 year lapse date is proposed for all resource consents, pursuant to section 125(a) of the RMA.
- There are no other activities that are part of the proposal to which this application relates.

Additional Resource Consents

Applications have been made to the Dunedin City Council for an Outline Plan of Works for construction of the RRPP within Designation D658 (Green Island Landfill) and resource consent for disturbance of contaminated soil associated with construction of the RRPP under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES Soil).

Attachments

- 16 Attached is a comprehensive Assessment of Environmental Effects which assesses the proposed activity's effect on the environment that
 - (a) includes the information required by clause 6 of Schedule 4 of the RMA; and
 - (b) addresses the matters specified in clause 7 of Schedule 4 of the RMA; and
 - (c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.
 - (d) assesses the proposed activity against the matters set out in Part 2 of the RMA.
 - (e) assesses the proposed activity against any relevant provisions of a document referred to in section 104(1)(b) of the RMA, including the information required by clause 2(2) of Schedule 4 of that Act.
 - (f) includes further information required to be included in this application by the district plan, the regional plan, the RMA, or any regulations made under that Act.

عال: Date:

March 2024

Signature:

Sandy Graham

Chief Executive Officer, Dunedin City Council

(A signature is not required if notice is given by electronic means.)

Contact Details

Address for service	Anderson Lloyd Private Bag 1959 Dunedin 9016 Attention: Michael Garbett Phone: 03 467 7173 Email: michael.garbett@al.nz	
Address for fees	Dunedin City Council PO Box 5045 Dunedin 9054 Attention: Chris Henderson	



Green Island Resource Recovery Park Precinct

Applications for Resource Consent and Assessment of Environmental Effects Prepared for Dunedin City Council

15 March 2024











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Document Quality Assurance

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Prepared by:	Katrina Roos Planner/Associate Principal Boffa Miskell Limited	14205
Reviewed by:	Maurice Dale Planner / Senior Principal Boffa Miskell Limited	Ac.
Approved by:	Rachael Eaton Senior Principal Boffa Miskell Limited	4.74
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- Appendix 3: Green Island Resource Recovery Precinct Stormwater Management Plan and Assessment of Effects (GHD Feb 2024)
- Appendix 4: Green Island Resource Recovery Park Precinct Groundwater Technical Assessment (GHD 23 Feb 2024)
- Appendix 5: Green Island Resource Recovery Precinct Draft Construction and Operations Management Plans (GHD 2024)
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 - B: Draft Erosion and Sediment Control Plan (GHD 28 February 2024)
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- Appendix 9: Draft Southern Black Backed Gull (SBBG) Management Plan Dunedin and Environs (Avisure November 2023)
- Appendix 10: Affected Party Approval Letter (Aukaha 14 March 2024)
- Appendix 11: Cultural Impact Assessment Green Island Landfill Operation, Closure and Aftercare (Aukaha March 2023)
- Appendix 12: Green Island Resource Recovery Precinct Air Quality Assessment (Pattle Delamore Partners Jan 2024)
- Appendix 13: Waste Futures Green Island Resource Recovery Precinct Integrated Transport Assessment (GHD Feb 2024)
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- Appendix 15: Resource Recovery Park Precinct Interim Social Impact Assessment (GHD March 2024)
- Appendix 16: Consultation and Engagement Collateral
- Appendix 17: Aukaha and Te Runaka o Ōtākou Presentation/briefing
- Appendix 18: Resource Recovery Processing Precinct Site Options Assessment (GHD Oct 2022)
- Appendix 19: Existing Landfill Consents
- Appendix 20: Draft Conditions of Consent

1.0 Introduction

1.1 Brief description of the proposal

The Dunedin City Council (DCC) has embarked on a Waste Futures Programme to develop an improved comprehensive waste management and diverted material system for Ōtepoti Dunedin. This system includes provision of an enhanced kerbside recycling and waste collection service for Dunedin from July 2024. The new kerbside collection service will include the provision of a domestic general waste bin to replace the current black bag system and the collection of residential organic (food and garden) waste.

To meet the requirements of the new kerbside collection service DCC is developing a new Resource Recovery Park Precinct (RRPP) at Green Island landfill site, to the southwest of Dunedin central city, adjacent to the Green Island Wastewater Treatment Plant (GIWWTP).

Currently, waste, including organic and general waste, is disposed of at the Green Island landfill facility, which is coming to the end of its operational life. DCC is currently planning for its eventual closure, which based on current waste disposal rates, is anticipated to occur in 2029/2030. There are several other waste diversion and transfer facilities at the landfill, including facilities for the drop off and consolidation of general waste, reusable and recyclable material, garden waste, and household hazardous substances. DCC is investing in improvements and expansion to these existing facilities, as part of the new RRPP.

The new RRPP is situated within the operative designation (D658) in the Proposed Second-Generation Dunedin City District Plan (2GP) for the purpose of Landfilling and Associated Refuse Processing Operations and Activities. The location and extent of the designation is shown in **Figure 1**.



Figure 1 Green Island Landfill and Resource Recovery Park Precinct (RRPP) Site (Designation D658).

The proposed resource recovery facilities to be developed at the RRPP include:

- A new organics receival building (ORB) (subject of a separate resource consent application) and organics processing (composting) facility (OPF) including bunkers and maturation area.
- A new materials recovery facility (MRF) to sort and bale items collected from kerbside mixed recycling bins; and
- A new bulk waste transfer station (BWTS) to facilitate the compaction and trucking of general waste to landfill.
- New glass bunkers for sorting and storage of glass before being transported off site.

Ancillary RRPP facilities include staff offices and facilities, car parking, associated access/service roads and truck parking areas. Several existing facilities are to be retained including the Rummage Store, public drop-off areas for general waste, garden waste and recycling and the education centre. **Figure 2** shows the key components of the RRPP within the designation.



Figure 2: Proposed RRPP facilities adjacent to the Green Island landfill within designation (Boffa Miskell 2024)

The RRPP will be run by EnviroNZ on behalf of DCC. Resource consent required for activities associated with the establishment of the ORB was granted in late 2023. The ORB will start operating in July 2024, to receive the organic waste (food and green) waste collected in the new kerbside bins. The OPF and MRF are planned to start operating in mid- late 2025. The construction date for the BWTS is dependent on when Green Island landfill closes, and waste is transported to Smooth Hill or other waste disposal facility.

1.2 Summary of Applications

Resource consent applications are being made to Otago Regional Council (ORC) and DCC for activities associated with the RRPP facilities (excluding the ORB). The ORC resource consents required and being applied for are listed below and include consents for disturbance of contaminated soil and discharges to air and water for a period of 35 years. Overall, the proposal is considered a non-complying activity in respect of the ORC consent applications and a discretionary activity in respect of the DCC consent application.

Otago Regional Council approvals required/applied for

Resource consent to disturb land at a contaminated site for construction of the RRPP (excluding ORB) – discretionary activity (Regional Waste Plan – Rule 5.6.1(1))

Resource consent for discharge of contaminants to air from soil disturbance at a contaminated site - (Regional Waste Plan - Rule 5.6.1(5))

Resource consent for discharge of odour and dust into air from composting activities – discretionary activity (Regional Waste Plan – Rule 7.6.13(3))

Resource consent for diversion of surface water and stormwater from working and non-working areas of the RRPP – discretionary activity (Regional Water Plan - Rule 12.3.4.1) and non-complying activity (National Environmental Standard Freshwater – Regulation 54)

Resource consent for discharge of stormwater from RRPP facilities via stormwater detention pond to Kaikorai Stream – restricted discretionary activity (Regional Water Plan - Rule 12.B.3.1), and non-complying activity (National Environmental Standard Freshwater – Regulation 54)

Resource consent for discharge of odour and dust into air from industrial or trade processes not covered by the Waste Plan (BWTS and other buildings) – discretionary activity (Regional Air Plan - Rule 16.3.5.9)

The DCC resource consent required and being applied for in relation to disturbance of contaminated soil is listed below:

Dunedin City Council approvals required/applied for

Resource consent to disturb land at a contaminated site – discretionary activity (National Environmental Standard for Assessing and Managing Contaminants in Soil – Regulation 11)

These applications are submitted in parallel with an Outline Plan of Works (OPW) to DCC for construction and operation of the RRPP within designation D658 which encompasses the Green Island landfill and a separate consent application for disturbance of contaminated soils.

1.3 Pre-Application Meetings

Several pre-application meetings have been held with ORC planners regarding the proposed RRPP facilities throughout 2023 and early 2024. A fieldtrip to similar EnviroNZ RRPP facilities in Auckland and the Waikato was held on 17 January 2024 with an ORC planner and ORC technical specialists in attendance. Feedback provided in the meetings and the site visit has been incorporated into this application.

1.4 Related Consents and Approvals

A summary of related resource consents is provided below:

- ORC RM20.280, DCC LUC2020-405 Resource consents for the Smooth Hill landfill have been granted by Consent Order.
- RM23.185 Resource consents to extend the life of the Green Island landfill and its
 ultimate closure and ongoing aftercare are currently being processed by ORC. The
 existing ORC resource consents, required to operate a landfill at Green Island, expired in
 October 2023. In March 2023, DCC applied to ORC for replacement resource consents
 to continue to use the landfill until it closes completely, and waste disposal can be
 transferred to a new landfill facility. These consent applications are currently being
 considered by ORC.
- ORC RM23.426 Resource consent to disturb contaminated soil associated with the establishment of the Organics Receival Building (ORB) was granted by ORC in September 2023. Resource consent for the ORB were sought prior to those for the remainder of the RRPP to enable construction to be completed prior to the commencement of organics collection in mid-2024. In all other respects ORC have accepted that the operation of the ORB is authorised by the existing resource consents for the landfill as it falls within the scope of activities under those consents and can comply with all relevant consent conditions.
- DCC OUT-2023-6 ORB Outline Plan of Works.
- DCC LUC-2023-272 ORB disturbance of contaminated soils

1.5 Existing/Replacement Green Island Landfill Consents

There is a suite of consents for the Green Island landfill and existing transfer station for which replacement applications have been made and are being processed by ORC (RM23.185).

The RRPP will operate independent of these consents and does not rely on them to authorise any RRPP activities.

The application to discharge stormwater from the RRPP will however use the same surface water quality monitoring locations as that contained in the replacement application for stormwater discharges from the landfill. This is because the landfill and RRPP will use the same stormwater discharge infrastructure/points as the landfill.

The existing landfill consents are provided for reference in **Appendix 19**.

1.6 Purpose of this Document

An assessment of effects on the environment (AEE) is required to accompany an application for resource consent under section 88 and prepared in accordance with Schedule 4 of the Resource Management Act 1991 (RMA). This document comprises the AEE for the resource consents in respect of the proposal introduced in section 1.2 above.

The AEE is submitted to ORC in relation to the consents required for discharges associated with the construction and operation of the RRPP and to DCC in relation to consent for disturbance of contaminated soil. Consent is required from the DCC in respect of contaminated soil disturbance only.

As the site is under a designation there are no consenting requirements under the DCC Second Generation District Plan (2GP). Only the designation noise standard applies. In addition, under the designation an Outline Plan of Work (OPW) is required to be submitted to DCC for construction and operation of the RRPP buildings.

This document:

- Describes relevant background, including the history of the landfill, the site, and DCC's Waste Futures Programme (section 3).
- Describes the proposed RRPP facilities, operations, and effects as detailed in the supporting technical assessment reports (**section 4**).
- Describes the statutory framework and the resource consents applied for (section 5).
- Assesses the environmental effects of the proposal, including mitigation and monitoring measures, and proposed conditions (section 6).
- Assesses the proposal against the relevant planning documents and RMA statutory considerations (sections 7).
- Describes the consultation undertaken to date (section 9).

2.0 Applicant and Application Site Details

The applicant and subject site details are as follows:

Applicant's

Name: Dunedin City Council

Anderson Lloyd

Private Bag 1959

Address for Dunedin 9016

Service: Attention: Michael Garbett

Phone: 03 467 7173

Email: michael.garbett@al.nz

Dunedin City Council

Address for PO Box 5045 Fees: Dunedin 9054

Attention: Chris.Henderson@dcc.govt.nz

Site Details:

Green Island Landfill Site (as defined by the existing designation D568 in the Operative Second-Generation Dunedin City District Plan):

Site	Legal Description	Record of Title	Area
9 Brighton Road	Part Section 45-47 Green Island Bush Survey District and Section 54 and 63 Block VII and Section 119 Block VII Dunedin & East Taieri Survey District	OT11B/1241	41.8120 hectares
9 Brighton Road	Part Section 45-47 Green Island Bush Survey District	OT368/19	1.0841 hectares
9 Brighton Road	Section 1 Survey Office Plan 24047	OT15C/1016	4718 square metres
9 Brighton Road	Lot 6-7 Deposited Plan 572543 and Section 1 Survey Office Plan 24040	1040235	4464 square metres
9 Brighton Road	Part Section 120 Dunedin & East Taieri Survey District and Part Section 53 Block VII Dunedin & East Taieri Survey District and Closed Road intersecting Sections 86,87,98,102 and 103	OT16D/1193	4.0211 hectares

Site	Legal Description	Record of Title	Area
	Block V Lower Kaikorai Survey District		
9 Brighton Road	Section 103 Block V Lower Kaikorai Survey District and Part Section 85-87, 98 Block V and Part Section 99-101 Block V and Part Section 102 Block V Lower Kaikorai Survey District	OT16D/1194	5.5726 hectares
9 Brighton Road	Lot 2, 4 Deposited Plan 572543 and Lot 1 Deposited Plan 20826	1040233	1837 square metres
114 Brighton Road	Part Section 38-40, Part Section 44 and Part Section 156 Green Island Bush Survey District	OT7C/934	8.2303 hectares
140 Brighton Road	Part Lot 4 Deposited Plan 4550	OT12C/261	10.4655 hectares
170 Brighton Road	Lot 1 Deposited Plan 20582	OT12C/262	4.2766 hectares
170 Brighton Road	Section 81 Block VII Dunedin & East Taieri Survey District	OT15A/266	4401 square metres
Tota	I Area		75.6164 hectares

Records of title are included in **Appendix 1**.

3.0 Background

3.1 Dunedin Waste Futures Programme

The DCC embarked on the Waste Futures Programme in 2018 to develop a comprehensive waste management and diverted material system for Dunedin that aligns with its responsibility under the Waste Minimisation Act 2008 to 'promote effective and efficient waste management and minimisation'. The aim of the Waste Futures Programme is to improve Dunedin's whole waste system, including what is collected, recycled, or reused, and what must be disposed to a landfill. It is based around a circular economy approach and will help the DCC achieve its carbon emissions and waste reduction goals. The programme aligns with DCC's responsibility under the Waste Minimisation Act 2008 to 'promote effective and efficient waste management and minimisation within its district'.

The Waste Futures system is graphically shown below.



The Waste Futures Programme includes several work streams, including:

- Implementation of the updated Dunedin City Council Waste Minimisation and Management Plan (2020);
- Preparing for the closure of the Green Island landfill; and
- Improvements to the kerbside collection service, recycling system and waste diversion and transfer facilities.

3.1.1 Enhanced Kerbside Collection Service

The Waste Futures Programme includes provision of an enhanced kerbside recycling and waste collection service for Dunedin from July 2024. The new kerbside collection service will include collection of food and garden (green) waste. The development of the new RRPP facilities is required to support the improved collection service.

The DCC consulted with the community on changes to kerbside collection options over March – April 2020. The consultation was used to inform further development of kerbside options and costs suitable for inclusion in the DCC's draft 10-year plan 2021-2031.

During March to April 2021, as part of DCC's 10-year plan consultation document it consulted the community on the two final options for new kerbside collection systems; a 'three-bin' option consisting of separate glass, refuse, and recycling bins; and a 'four bin plus one' option which adds a "green" bin for food and optional garden waste bin in addition to separate glass, refuse, and recycling bins.

Following consideration of submissions, in June 2021 the DCC adopted the 'four bin plus one' option for roll-out in mid-2024 and work began on planning for the new RRPP.

3.2 Existing Site Description

The RRPP is within the Green Island landfill site as defined by the existing designation (D568) in the 2GP. It is located approximately 8.8km by road from central Dunedin in the suburb of Green Island. The designation comprises a total area of 75.6 hectares, with approximately 67.6 hectares dedicated to landfilling activity and approximately 8 hectares dedicated for resource recovery and waste transfer facilities. The underlying designation has one condition relating to permitted noise levels at the external boundary of the site. This condition will apply to the RRPP.

Primary access to the site is via Brighton Road. The site is generally bound by State Highway 1 to the north, the Kaikorai Stream and Lagoon to the north and west, the Clariton Avenue residential area to the South and Brighton Road industrial area to the east.

Waste disposal first occurred at the Green Island landfill site in 1954 and it has been used for waste disposal since that time. It became Dunedin's main municipal landfill in 1981 after the closure of Forrester Park landfill in north Dunedin.

Landfilling commenced at the south-eastern corner of the site. The pre-existing landform was a tidal estuary. Waste was originally disposed of directly onto the estuarine muds and up against the southern Kaikorai Estuary edge where the pre-existing landform rises gently to a hillside. Waste disposal on the eastern area of the site ceased in the late 1970's and the area has subsequently been capped. The RRPP is on this capped area. The depth of waste beneath the cap is estimated to be between 6 to 8 metres.

The Green Island landfill site has underlying mixed industrial and rural zoning, and in accordance with the designation, comprises several landfilling and refuse processing operations and activities including the working landfill area, the existing waste transfer station, public drop-off facilities, area of closed and capped landfill, sediment ponds and constructed wetlands. Vegetation consists of a mix of exotic and indigenous species with some ornamental garden areas around the public drop off and waste transfer station area.

Figure 3 below shows the designation, the extent of the landfill (once capped) and the extent of the RRPP site.



Figure 3: Green Island landfill and RRPP extents within designation

The site is surrounded by a landscape bund planted with extensive screening vegetation largely comprised of mature exotic tree species, including macrocarpa, willow and poplar. The bund and planting were developed in 1990 as part of the ongoing development of the landfill facility. This vegetation is of a height and density which reduces views into the operational areas of the site (both the landfill and the resource recovery facilities).

The surrounding area is a combination of industrial, rural and residential land. There is an existing commercial industrial park to the east of the site along Brighton Road.

The Clariton Ave residential area to the south, comprises the closest residential properties to the site, being approximately 200m southeast of the existing transfer station facilities, and 120m east of the current landfill footprint. Other residential areas are located to the southeast at Elwyn Crescent, and to the north and west within Sunnyvale and Fairfield. Those residential properties are located at greater distances and separated from the landfill site by a combination of Brighton Road, the State Highway 1 corridor, the Kaikorai Stream and Lagoon, and rural and open space land.

Undeveloped and rezoned land also exists around the Green Island landfill site which will add additional residential dwellings in future, being at 102 Walton Park Avenue on the opposite side of the lagoon, and 27 Weir Street to the south-east, Elwyn Crescent and Trudi Place.

The Green Island landfill site is not located in an area of natural hazards as identified by ORC or DCC mapping systems. It is identified on the ORC Hazardous Activities and Industries List (HAIL) database as being an operational landfill site (G3: Landfill sites).

The margins of the Kaikorai Stream and Lagoon border the site to the north and west are identified as a Regionally Significant Wetland in the Regional Plan: Water, and an Area of Significant Biodiversity Value in the 2GP.

They include areas of natural wetlands for the purposes of the National Environmental Standard for Freshwater (NES Freshwater) and comprise areas of significant indigenous vegetation and significant habitats of indigenous fauna. The RRPP site does not overlap with these areas, however stormwater from the Green Island landfill site does discharge to the Kaikorai Stream via a stormwater management system.

Detailed information on the natural and physical environment of the RRPP site is provided in the Design and Operations Report (GHD 2024) in **Appendix 2.**

4.0 The Proposal

4.1 Proposed Resource Recovery Park Precinct Facilities

This section provides a summary of the proposed new RRPP facilities, to be developed at the Green Island landfill site. The RRPP will be run by EnviroNZ on behalf of DCC and will start operating in July 2024 following construction of the ORB, which is currently underway. The remaining new RRPP facilities are planned to start operating in 2025/2026. The construction date for the BWTS is dependent on when Green Island landfill closes, and waste is transported to Smooth Hill or another waste disposal facility.

In addition to the new RRPP facilities, several of the existing resource recovery facilities at the Green Island landfill site will be retained including:

- Main access road (from Brighton Road)
- Kiosk, weighbridge, and wheel wash facilities
- Existing education centre and Rummage Store
- Domestic waste drop-off and transfer station (until replaced by the new BWTS), recycling and garden waste drop off areas
- Diverted materials storage area.

The proposed layout of the RRPP is shown in General Arrangement Plan (Boffa Miskell 2024) in Appendix **6** with further detailed information of the proposal provided in the Green Island Resource Recovery Park Design and Operations Report (GHD 2024) in **Appendix 2**.

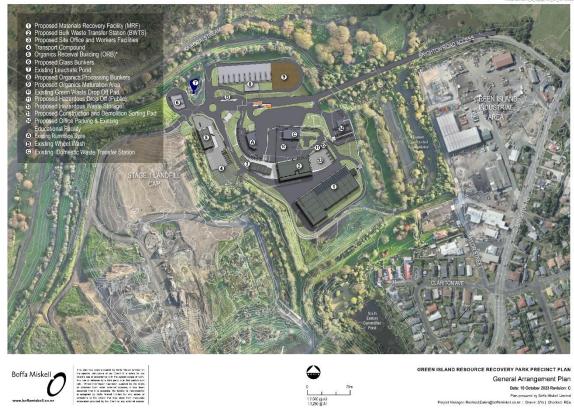


Figure 4: Proposed RRPP layout (Boffa Miskell 2024)

4.1.1 Materials Recovery Facility (MRF)

The purpose of the MRF building is to facilitate the effective sorting, processing, and recovery of recyclable materials from the waste stream. Recyclable materials include paper and cardboard, aluminium and steel cans and accepted plastics.

The MRF will have a level floor to facilitate the efficient and safe manoeuvring, unloading, and storage of materials. The processing equipment may have elevated and on ground infeed conveyors. The MRF footprint will be approximately 70m x 40m for the technical building and about 60m x 30m for the apron. The MRF portal knee height is 10 m above existing ground level with the roof ridge at maximum 16m above existing ground level.

The MRF will be supported by shallow concrete foundations (overlying a compacted gravel raft) to a maximum depth of 2.5m below ground level. A landfill gas membrane will be included within the engineered fill to avoid penetration of landfill gas within the new building.

There will be large commercial motorised roller doors to allow the movement of vehicles and material in and out of the building as well as doors for staff. Intake and offtake will go through the north-east facade only and the canopy and loading zone to the north and west will be for storage. There will be no access in or out of the building along the southern façade nearest to Clariton Avenue neighbours. A one-way service road around the MRF will be built for both intake and offtake traffic. Traffic will comprise four EnviroNZ kerbside recycling trucks offloading approximately eight times per day each.

Recycling bins will continue to be available in the public drop-off areas for direct deposit of recyclable materials. Any recyclable materials deposited in the public drop off bins will also be transferred to the MRF using gantry or front-end loader trucks. After sorting and baling, the recycled material will then be loaded into shipping containers for transport from the site.

4.1.2 Bulk Waste Transfer Station (BWTS)

The proposed BWTS will be an industrial building designed to handle the receiving and loading of general waste for further transportation to appropriate disposal sites such as Smooth Hill. General waste typically includes non-hazardous materials from residential, commercial, and industrial sources.

The building footprint will be approximately 30 m x 55m with a portal knee height of 12m and the roof ridge at a maximum of 16m. The building will be constructed of a steel portal design positioned and fixed to an engineered concrete slab and foundation system. The building will include an engineered geotechnical sub floor design including membranes designed to prevent landfill gases from entering the building.

The concrete slab will include falls to drainage channels intended to collect and control all internal liquids and wash down water. These liquids will be managed as leachate and disposed of via the existing leachate collection system. An internal misting system will be installed to reduce dust and odour.

There will be large commercial motorised roller doors to allow the movement of vehicles and waste material in and out of the building as well as doors for staff use, and fire egress doors. All doors will be closed when the facility is closed. The opening and closing of the doors will depend on specific operational requirements. These doors will serve a crucial purpose during the loading process when trucks enter the building to load allowing them to efficiently deposit their cargo. Additionally, the doors may need to be opened when front loaders are moving sorted waste from the pad into the building. This allows for smooth movement and transfer of waste materials, ensuring an organised workflow within the facility.

The north façade will be for domestic drop off (car and trailers) and the west façade for commercial drop off (trucks). There will be a drive through lane along the south side for waste loading and offtake (semi-trailers) inside the building. The building will have an internal netting to prevent birds from perching or nesting on the internal building structure.

4.1.3 Construction and Demolition sorting pad

The C&D (Construction and Demolition) sorting pad will be a concrete slab adjoining the BWTS. Construction skip bins will be dropped off and sorted on the pad. Remaining waste that cannot be recycled or reused will be relocated to the BWTS.

4.1.4 Hazardous Waste Drop Off and Storage

The hazardous waste drop-off and storage building will be separated into two areas. The public facing zone will provide for waste drop off and a staff only zone for sorting and storing of hazardous waste. The total footprint will be approximately 90m2. A designated drop-off area will be provided within the building to facilitate the safe and organized unloading of hazardous materials from vehicles. The building will be equipped with a

ventilation system to ensure the removal of fumes, vapours, and other airborne contaminants. The building will replace an existing facility.

4.1.5 Organics Receival Building (ORB)

The ORB comprises a single level building with roller doors for the receipt and processing of organic waste for shredding and composting. The building will be supported by a transport compound comprising truck parking spots and associated turning space. The ORB site will be fenced for safety and security reasons. The ORB is currently under construction and due for completion in June 2024, in time to receive the organic waste collected from the new kerbside collection system.

The RRPP will continue to offer garden waste drop off following introduction of the new organics kerbside collection. The garden waste drop-off area will be made by reusing and upgrading the existing transfer station pit. Cars and trailers will reverse onto the south side of the pit and drop garden waste. The garden waste will be periodically collected and transferred to the ORB for processing. The drop-off area will incorporate safety measures to protect both users and staff.

4.1.6 Organics Processing (Composting) Facility (OPF)

The organics bunkers have been designed to receive shredded organic (food and garden) waste coming from the ORB. A mechanical ventilation system will accelerate the composting process. Bunkers will be constructed with concrete retaining walls for placement of the organic materials and to prevent these materials from spreading or contaminating the surrounding environment.

Six compost bunkers of 140m² each will be built on a concrete slab and the organic waste will be contained within three walls (all 3m height) The south wall will include penetrations for the mechanical ventilation system. The bunkers have been designed to allow for bidirectional air flow through the material, allowing for good control over temperature and aeriation with consistent air distribution. The bunkers will open to the north and a concrete apron (14m in width) level with the floor of the bunkers will provide a manoeuvring zone for the loader that fills and removes waste from the bunkers. Liquids from the bunkers will be collected and piped to the existing pumping stations and then piped via the existing rising main directly to the Green Island Waste Water Treatment Plant (WWTP)

Once the organic material has been composted, it will be moved from the bunkers to a separate maturation area and formed into windrows/piles ready for offtake.

Minimum retention times are 21 days in bunkers and 30 days in maturation area. The maturation pad will have a gentle slope to promote leachate flow away from the pad to the sump and leachate collection pipes.

A draft Composting Facility Management Plan (EnviroNZ 2024) is provided in **Appendix 5F** to ensure careful oversight of the composting receival, processing and site management and to reduce the likelihood of adverse effects. Bird management will apply to reduce and manage access by birds as detailed in the Site Environmental Management Plan (Enviro NZ 2024) provided in **Appendix 5D** and the Green Island Resource Recovery Park Precinct Bird Hazard Report (Avisure 2024) in **Appendix 8**.

4.1.7 Glass Bunkers

Three new glass bunkers will be located to the north of the site, adjacent to the OPF. Bunker walls will be 3m high and the total footprint of the bunkers will be 400m2. They are to be sited on a concrete slab and a one-way service road will be created around them. Within the bunkers, glass will be organised by colour ready to be transported off site.

4.1.8 Staff facilities and office building

Buildings will be provided to support the operations and administrative functions of the site. The staff facilities building will includes change rooms, a lunchroom, showers, and toilets for staff working on site, and truck drivers. The footprint of this building will be approximately 160m². The office building will include offices, meeting room and staff amenities. The footprint of this building will be approximately 200m². Both buildings will be single storey.

4.1.9 Truck Parking and Wash Bays

Two truck wash bays will consist of concrete pads with falls draining to the leachate management system. Sufficient space is allocated for manoeuvring and parking trucks during the cleaning process, accommodating vehicles of different sizes. The total number of truck parking spots will be 45, including the transport compound for the ORB which will be constructed first.

4.1.10 Building finishes and treatments

External steel finishing in neutral colours (such as Karaka Green) with low reflectivity value is proposed for the new RRPP buildings as detailed in the Design and Operations Report (GHD 2024) in **Appendix 2.**

4.1.11 Vegetation and landscape

Existing mature vegetation on the perimeter of the landfill site will largely screen the RRPP from view at public vantage points such as Brighton Road and Clariton Avenue and adjoining properties. The perimeter vegetation will be the subject of a Vegetation Management and Restoration Management Plan (VMRP) proposed as part of the application for the RRPP and as part of the OPW. Additional amenity planting is proposed to provide visual screening of the larger buildings (bund planting) and internal amenity value to the public.

4.2 Construction of the Resource Recovery Park Precinct

4.2.1 Contaminated Soils

The RRPP is in an area of historic waste placement at Green Island Landfill. Waste was placed through this area from the 1950s through to the late 1970s. The depth of waste is estimated at 6 to 8 metres.

An environmental site investigation was undertaken over the proposed RRPP portion of the Green Island landfill (Green Island Landfill - Resource Recovery and Processing Precinct | Environmental Site Investigation Factual Report by GHD, November 2021). The locations of the investigation points (test pits, boreholes, and landfill gas monitoring wells) were spread across the RRPP to provide coverage of the whole area including where the RRPP is proposed to be constructed. This report has the same status as a Detailed Site Investigation report under the NES-CS.

Several contaminants were discovered at the RRPP site. A Draft Contaminated Land Management Plan (GHD 2024) has been prepared to manage the risk to workers and the environment both during and after construction of the RRPP, provided in **Appendix 5C**. A site validation report will be provided once the works are completed. The contaminated soil will be removed and disposed of in the landfill. Separate resource consent applications have been made to the DCC and ORC under the NES-CS and Regional Plan: Waste.

4.2.2 Earthworks

Detailed earthworks information for each component of the RRPP and general construction methodology and management is provided in the Design and Operations Report (GHD 2024) in **Appendix 2.** Management of earthworks effects is also included in the management plans in **Appendix 5A, B** and **C**, including an Erosion and Sediment Control Plan.

4.2.3 Noise

All construction activities will comply with the noise limits established for the site through the designation condition. An Acoustic Assessment (GHD 2024) has been completed for the RRPP, provided in **Appendix 14**, to assess construction activities to confirm compliance with the designation noise condition is achievable.

4.2.4 Integration with Existing Facilities

The RRPP facilities will be seamlessly connected to the existing infrastructure of the waste transfer station and wider landfill. The positioning of entrances, exits, and access points has been strategically determined to minimise disruptions to the station's operations and to achieve integration with existing waste processing and handling systems. Existing resource recovery facilities will remain open during construction of the new RRPP.

4.3 Management of the Resource Recovery Park Precinct

4.3.1 Hours of Operation

The RRPP will only be accessible from the Brighton Road access. The publicly accessible areas of the RRPP, including the public-drop off areas, will be open between 8.00 am – 5.30 pm Monday – Saturday and 9.00 am – 5.30 pm Sunday.

The non-publicly accessible (operational) areas of the RRPP will be open 8.00 am - 5.30 pm Monday – Friday and at the weekends as required by the operator. The gates at the Brighton Road access will be locked after hours.

All areas of the RRPP will be closed Easter Friday, Christmas Day, and ANZAC day until 1pm.

Some parts of the RRPP will be in operation 24/7. This will include the mechanical aeration plant of the OPF bunkers and general traffic/other activities as required by operational needs for the MRF and BWTS.

All operations will comply with the noise limits established for the site through the designation condition. An acoustic assessment report (GHD 2024) (**Appendix 14**) has been completed for the RRPP to assess both likely day time and nighttime operations to confirm compliance with the designation noise condition is achievable. It recommends that works should only be undertaken between 7:30am and 6:00pm Monday to Saturday and that a community engagement programme including complaints handling procedure be established as part of construction works. This will be incorporated into the Draft Construction Environmental Management Plan (GHD 2024) in **Appendix 5F**.

4.3.2 Traffic and Parking

An Integrated Transport Assessment is provided in **Appendix 18** prepared in accordance with the standards in 6.14.2 of the DCC District Plan. The assessment addresses existing traffic, additional traffic arising from RRPP activities, the existing external roading network, parking, public transport and facilities for pedestrians and cyclists.

Staff numbers and weighbridge and rummage store data provided information on existing traffic volumes. All vehicles enter the site via the Brighton Road main entrance and will go through the existing weighbridge and exit the site via the weighbridge and this will continue with the RRPP for heavy and domestic traffic. Internal circulation of traffic and pedestrians and parking for heavy vehicles, staff and visitors is provided for, as set out in the Design and Operations Report (GHD 2024) in **Appendix 2**.

Currently the site does not provide for pedestrian/cyclist access which is separate from vehicles. The RRPP proposal allows for widening of the existing Brighton Road access to allow for a shared path into the site.

The traffic assessment confirms that traffic safety and congestion effects of the RRPP within the site and externally would be acceptable subject to implementing the internal configuration as proposed in the Design and Operations Report (GHD 2024) in **Appendix 2** and the pedestrian/cyclist improvements e.g separated footpath to the existing Brighton Road access.

4.3.3 Stormwater and Leachate Management

Stormwater and leachate are handled via fully separated discharge systems as detailed in the Stormwater Management Plan and Assessment of Effects (GHD 2024) and Groundwater Technical Assessment (GHD 2024) in **Appendix 3** and **4**.

Overview of Leachate Management

Six locations across the RRPP site have been identified that may generate leachate due to risk of runoff/water coming into contact with waste, including green waste. These include:

- Organic bunkers and maturation area.
- Glass bunkers.
- Wheel wash area;
- Construction and Demolition pad; and
- Pads within BWTS and MRF.

All locations are on concrete slab/hardfill to ensure that leachate generated from the RRPP facilities won't seep to underlying groundwater. All leachate generated from these locations will be collected and contained through a new system of underground drains and pipes.

The collected leachate will be piped to one of three existing pump stations for direct pumping to the Green Island WWTP. No leachate generated by the RRPP will discharge to the existing landfill leachate collection trench.

There will be a reduction in uncontrolled leachate percolating through the site to the landfill groundwater due to proposed leachate management system. Currently leachate at the resource recovery site is uncontained and leaches into the ground around the waste transfer station and green waste drop off area. The RRPP will remedy this situation with the new leachate management system in pace.



Figure 5 Overview of proposed leachate management system (Boffa Miskell 2024)

Overview of Stormwater Management

The RRPP stormwater is the rainwater runoff from the site, that doesn't come into contact with waste. It includes runoff from areas of asphalt and buildings.

Any stormwater contaminants within the runoff from the RRPP car park and service roads will be at a level consistent with low use. The stormwater will be collected through a system of sumps, filters (Enviropods) underground pipes and open grass swales. The filters will remove sediment and capture any oil/fuel from vehicles. Once collected stormwater will then be piped to either the existing landfill Northern Pond or Eastern Sedimentation Pond for further retention and removal of sediments. During larger rainfall events these sediment ponds will overflow to the Kaikorai Stream, including via the Eastern Wetland.

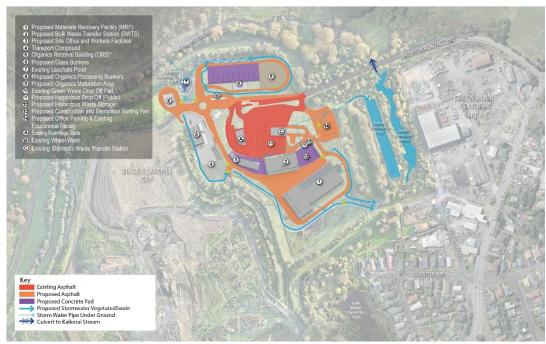


Figure 6 Overview of proposed stormwater management system (Boffa Miskell 2024)

The Stormwater Management Plan and Assessment of Effects (GHD 2024) in **Appendix 3** provides more detail of the proposed management of the leachate and stormwater. It divides the RRPP into three stormwater catchments with discharges dealt with as follows:

- <u>Catchment A</u> including organics bunkers, maturation plus glass bunkers and mechanical plant.
- As outlined above, from a leachate perspective, the runoff from the bunkers and maturation areas will be treated as leachate collected and pumped to the existing leachate collection Pump Stations 5 and 6.
- During high rainfall events the potential exists for the sump at Pump Station 6 to be
 unable to manage the combined leachate flow from the existing trench and the OPF
 bunkers/maturation area and leachate may backflow into the existing trench pipe and
 gravel either side of the sump. To prevent this occurring three 30,000 litre connected
 balance tanks will be installed. During high rainfall events a switch in the Pump Station 6
 sump will close the drain to PS6 and direct leachate to the tanks for storage.

There will be no discharge to ground via percolation.

The stormwater (rainfall) runoff from the remaining site including roads and access ways will be conveyed to the stormwater system and treated as runoff from road surfaces with light vehicle movement. This stormwater will discharge to the Northern Leachate Pond.

Use of Northern Leachate Pond

Currently this pond receives runoff from the landfill and all water in this pond is therefore treated as leachate and directed to the landfill leachate collection system. However, once Green Island landfill is closed and capped, this pond will no longer receive leachate, and stormwater from this pond will instead be discharged to the Kaikorai Stream via a low-level culvert.

• <u>Catchment B</u> including the workers facilities, BWTS building, C&D sorting pad, hazardous waste storage (roof runoff) only and associated drop off area, office parking, EnviroNZ offices, and the existing educational facility. This catchment will discharge to

the existing stormwater network passing through the current site. Currently the stormwater system discharges directly to the Eastern Constructed Wetland, and it is proposed to divert the open drain to the Eastern Sedimentation Pond prior to its discharge to the Kaikorai Stream.

- Runoff from the C&D pad, truck wash pad area and BWTS will be collected and treated
 as leachate. It will be diverted and piped to the existing Pump Station 7 then pumped
 directly to the Green Island WWTP via the existing rising main.
- Catchment C including the MRF building and apron, ORB building and the transport compound. This catchment will collect rainfall runoff from roofs, and from paved and compacted gravel areas and direct them into a swale along the foot of the steep slope border between the capped landfill and the south-west of the site. The swale will discharge to the Eastern Sedimentation Pond via a pipeline prior to its discharge to the Kaikorai Stream. Contaminants from this catchment, include typical car park contaminants e.g. hydrocarbons are expected to be from the MRF apron and EnviroNZ transport compound.
- Water runoff from the pads within inside the MRF building will be treated as leachate and collected and discharged directly to Pump Station 7.

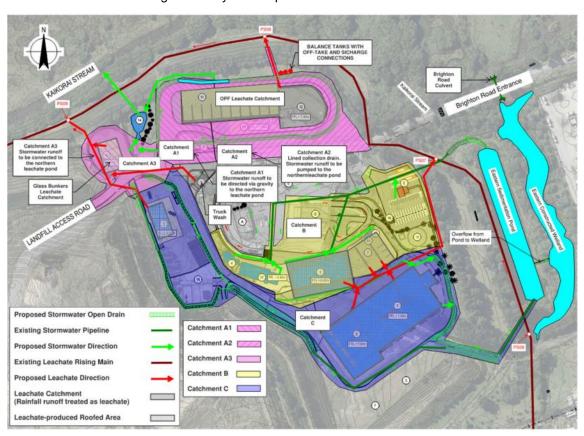


Figure 7: Stormwater and Leachate Management (GHD 2024)

A Draft Stormwater Management Operation and Maintenance Plan (GHD 2024) is provided in **Appendix 5E.** The ecological effects of the stormwater discharges to the Kaikorai Stream are considered in the Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7.**

4.3.4 Groundwater

The groundwater beneath the RRPP site will be largely unaffected by the proposal as there will be no discharge to ground via percolation as detailed above and in the Groundwater Technical Assessment (GHD 2024) in **Appendix 4.** Groundwater monitoring is currently carried out as part of the overall landfill consents. The RRPP development is expected to result in reduced leachate generation volumes from rainfall seepage into the underlying waste due to the increase in the area of hardstand and/or buildings and associated increase in stormwater runoff as detailed above.

4.3.5 Management of odour, dust, noise, litter, pests and birds

4.3.5.1 Odour

An Air Quality Assessment by Pattle Delamore Partners (PDP 2024) is provided in **Appendix 12** which details the potential sources of odour from the RRPP, the proposed mitigation measures and likely environmental effects on sensitive receptors. The assessment is based on the FIDOL (Frequency, Intensity, Duration, Offensiveness and Location) factors to determine whether an odour or dust discharge will cause an objectionable or offensive effect.

The air quality report author considered an existing, similar composting facility at Hampton Downs near Hamilton in assessing the potential effects of the OPF, and the transfer station at Sunshine Lane in Hamilton city for the BWTS. Multiple sensitive receptors were identified on the perimeter of the RRPP site.

The RRPP has been designed and will be managed so that there will be no odour discharge beyond the boundary of the landfill site. All staff working at the RRPP will have training, which will include the requirements of the resource consents, control of odorous waste, odour monitoring, housekeeping procedures, and contingency measures, governed by the Composting Facility Management Plan (Enviro NZ 2024) included in **Appendix 5F**.

The MRF, BWTS, ORB and hazardous waste buildings have rollers doors to their openings. To assist in managing any odour issues the doors to the RRPP buildings will be closed except when required to be open for deliveries, removals, and operations. Closed buildings will have mechanical ventilation. Highly odorous waste will be intercepted and disposed of direct to the receiving landfill.

A misting system will mitigate odour and dust from the BWTS. The composting system at the OPF is a high temperature aeration system which will result in fast processing of putrescible waste. The composting process will be carefully managed via a composting management plan to ensure odour from the shredding, composting and maturation processes is not detectable beyond the landfill boundary.

The conclusion of the Air Quality Assessment (PDP 2024) is that environmental effects of odour beyond the boundary of the landfill site will be less than minor, subject to ongoing mitigation and effective management of the buildings and composting process. This includes cumulative effects taking into account the existing landfill.

4.3.5.2 Dust

Dust is also addressed in the Air Quality Assessment (PDP 2024) in **Appendix 12**. The frequency of dust discharges is influenced by the regular occurrence of suitable meteorological conditions to carry dust beyond the boundary to a sensitive receptor. The infrequency of high wind events and activities being located indoors combined with other mitigation measures will make excessive dust events unlikely.

The site access roads and RRPP surfaces will be sealed to minimise dust within the site. Vehicle speeds on site will be limited to a maximum of 20 km/hr to minimise dust pollution. This speed limit will be clearly sign posted around the site. Sweeping of the drop-off areas and routes will be undertaken as necessary. If unsealed areas of the site are emitting dust, sprinklers will be used to wet down surfaces.

The weighbridge operator and transfer station staff will question the drivers about the nature of the waste dropped off. Excessively dusty loads will not be accepted at the site.

If excessive dust is being emitted during tipping, the tipping of the load will be temporarily stopped until the load is dampened, or the tipping of the load will be stopped, and the load refused entry and directed to the landfill for disposal.

A misting system will operate within the BWTS to control dust and odour.

4.3.5.3 Noise

The underlying landfill designation, which encompasses the new RRPP, has a single condition. This condition relates to permitted noise levels at the external boundary of the site and will apply to the RRPP.

Noise generated by any activity on the site shall comply with the following standards at the boundary of this site: 55Dt/40Nt dBA (NB These levels are subject to an adjustment of minus 5 dBA for noise emissions having special audible characteristics).

An Assessment of Acoustic Effects (PDP 2024) is provided in **Appendix 14**. The report considers the ambient noise levels in the receiving environment, including the Southern Motorway, and the layout and design of the RRPP, and models the likely noise levels at sensitive receivers from construction and ongoing operations, including night activities after 10pm.

The design of the RRPP has a number of features to manage noise including use of roller doors, additional planting and fencing and the location of glass bunkers at the northern end of the site away from residential properties. Some of these features have been incorporated on the recommendations of the noise report.

The noise modelling indicates compliance is predicted at all sensitive receiver locations with one exceedance predicted along the eastern boundary shared with nearby industrial premises on Taylor Street South.

A two-metre-high acoustic fence was modelled along the shared eastern boundary in order to reduce noise levels at the boundary to comply with the designation condition. The predicted noise results with the barrier in place are compliant at all locations.

4.3.5.4 Litter

All waste carriers will be required to adequately cover their loads to avoid litter escaping from carrier vehicles. The covers will be taken off once the vehicle has entered the offloading area. Perimeter fencing with litter netting will be maintained on site.

Litter checks within the site boundary will be undertaken by site staff and recorded in the EnviroNZ Odour and Litter Monitoring Record (ENV-50-028). Any windblown litter will be picked up as soon as practicable and returned to the facility for recycling or disposal.

Any complaints regarding litter nuisance will be investigated and any litter will be collected as soon as practicable.

4.3.5.5 Pests

The best practice operational procedures of the site aim for fast turn-around of incoming organic waste streams for processing. Nuisance caused by vermin (such as flies or rodents) is not expected.

An accredited pest control contractor will be engaged to put in place and service an ongoing pest control programme. Buildings will be designed in a way that minimises opportunities for vermin entry.

4.3.5.6 Management of Birds

Organic waste can act as a food resource for several bird species. Landfills that provide access to putrescible wastes can significantly influence local bird populations. The existing landfill has a significant population of Southern Black Backed Gulls (SBBG) who may be attracted to certain components of the RRPP when operational. The RRPP has been designed to minimise the bird attraction by unloading waste in enclosed buildings and isolating organic waste from the waste stream.

A number of bird mitigation measures are proposed in the design, and the specific effects of SBBG at the RRPP are addressed in the Bird Hazard Report (Avisure 2024) in **Appendix 8**. The Bird Hazard Report concludes that SBBG may be attracted to the RRPP buildings but are unlikely to frequent the ORB and OPF in significant numbers due to management of these facilities. Roller doors and internal netting will prevent large numbers of birds entering buildings and roosting/nesting.

4.3.5.7 Complaints

Complaints will be directed to the RRPP Operations Manager, or Branch Manager. Any complaints regarding noise, litter, dust, odour, or pests received by the site will be logged and investigated in accordance with Enviro NZ's complaints handling procedure (ENV-50-030) Environmental Complaint Handling Procedure. In addition and acknowledging there is also a landfill operations contractor on the same Green Island site, complaints can also be directed to either the landfill contractors Operations Supervisor, or Regional Manager. Complaints can also be directed to DCC Landfill Engineer or DCC Contracts Manager.

Specific information on complaints handling is provided in the Draft Site Environmental Management Plan (Enviro NZ 2024) in **Appendix 5D** and Composting Facilities Management Plan (Enviro NZ 2024) in **Appendix 5F.**

5.0 Reasons for the Application

5.1 Second Generation District Plan Appeals Version

The landfill site is designated for use for 'landfilling and associated refuse processing operations and activities' (reference D658) in the 2GP. The designation of the land means that section 9(3) of the RMA, which prevents persons from using land in a manner that contravenes a district plan rule, does not apply. Development and use of the underlying land for landfill and refuse processing is therefore enabled, subject to the requirement under section 176A of the RMA to submit an outline plan of works (or obtain a waiver for minor works) for any works to DCC's consenting authority. An OPW has been submitted for the RRPP in parallel with this application.

5.2 National Environmental Standards Contaminated Soil

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES Soil) is a nationally consistent set of planning controls and soil contaminant values. It ensures that land affected by contaminants in soil is appropriately identified and assessed before it is developed and if necessary, the land is remediated, or the contaminants contained to make the land safe for human use.

An environmental site investigation was undertaken over the proposed RRPP portion of the Green Island Landfill (Green Island Landfill - Resource Recovery and Processing Precinct | Environmental Site Investigation Factual Report by GHD, November 2021) for the landfill consents. The locations of the investigation points (test pits, boreholes, and landfill gas monitoring wells) were spread across the RRPP to provide coverage of the whole area. This report has the same status as a Detailed Site Investigation (DSI) report but does not meet the requirements of a DSI report.

The disturbance of soil associated with construction of the RRPP is a discretionary activity under **Regulation 11** of the NES Soil as the original investigation report and the contaminated land management plan do not meet the definition of a DSI report, although they provide the same information.

5.3 National Environmental Standards for Freshwater

The NES Freshwater is a nationally consistent set of planning controls relating to activities near freshwater, specifically natural inland wetlands. There are areas of natural wetland surrounding Kaikorai Stream, which is the endpoint receiving environment for stormwater discharges from the landfill site.

The diversion of surface water and stormwater, and end point stormwater discharge to Kaikorai Stream from the proposed RRPP stormwater management system for Catchment A and the contribution via the Eastern Sedimentation Pond for Catchment B and C are a **Regulation 54** non-complying activity under the NES Freshwater as there is a direct hydrological relationship between the wetland surrounding the stream and the pond discharges.

Regulation 54 NES Freshwater:

- (c) the taking, use, damming, or diversion of water within, or within a 100 m setback from, a natural inland wetland if—
 - (i) there is a hydrological connection between the taking, use, damming, or diversion and the wetland; and
 - (ii) the taking, use, damming, or diversion will change, or is likely to change, the water level range or hydrological function of the wetland:
- (d) the discharge of water into water within, or within a 100 m setback from, a natural inland wetland if—
 - (i) there is a hydrological connection between the discharge and the wetland; and
 - (ii) the discharge will enter the wetland; and
 - (iii) the discharge will change, or is likely to change, the water level range or hydrological function of the wetland

5.4 Regional Plans

The Regional Plan: Waste, the Regional Plan: Water and the Regional Plan: Air are all relevant to the RRPP. The resource consents required are summarised in the table below.

Approvals required	Explanation
Resource consent to disturb land at a contaminated site – discretionary activity (Waste Plan – Rule 5.6.1(1))	Disturbance of soil for construction of the RRPP.
Resource consent for diversion of surface water and stormwater from working and non-working areas of the RRPP – discretionary activity (Regional Water Plan - Rule 12.3.4.1)	Diversion of stormwater from the RRPP into swales and pipes.
Resource consent for discharge of stormwater from RRPP facilities to Kaikorai Stream – restricted discretionary activity (Regional Water Plan - Rule 12.B.3.1)	Discharge of stormwater from the RRPP into the Eastern Sedimentation Pond and Northern Leachate Pond with the end point being Kaikorai Stream.
Resource consent for discharge of contaminants to air from soil disturbance at a contaminated site (Waste Plan - Rule 5.6.1(5))	Dust/odour from disturbance of contaminated soil from construction of the RRPP.
Resource consent for discharge of odour and dust into air from composting activities – discretionary activity (Waste Plan – Rule 7.6.13(3))	Dust/odour from the OPF composting bunkers.

Approvals required	Explanation
Resource consent for discharge of odour and dust into air from industrial or trade processes not covered by the Waste Plan – discretionary activity (Air Plan - Rule 16.3.5.9)	Air discharges from the MRF and other buildings.

5.5 Activity Status

Overall, the proposal is considered a <u>non-complying activity</u> in respect of the bundled ORC consent application and a <u>discretionary activity</u> in respect of the DCC consent application.

6.0 Assessment of Environmental Effects

6.1 Assessment Overview

In accordance with Section 104(1)(a) of the RMA, the following section assesses the actual and potential effects of the construction and continued operation of the RRPP. These effects relate to the physical and natural elements that determine these environments, as well as the economic, social, and cultural environment associated with the area. The assessment has been informed by the assessments made in each of the technical reports contained in the appendices to this AEE and has had regard to any relevant assessment matters contained in the relevant NESs and regional plans.

The focus of the assessment is on the actual and potential effects of the activities for which resource consents are being applied for. Matters that relate to the use of land that is authorised under the existing designation in the 2GP have not been considered. For these reasons, no assessment of noise or transport related effects is provided in this AEE, being activities that relate to the use of land covered by the designation.

Key components of this assessment, are the monitoring and management measures proposed to be included in conditions of consent to avoid, remedy, and mitigate any adverse effects of the activities for which resource consent is being sought. Proposed conditions are described in the following sections and detailed in Appendix 20, including management plans. Conditions are expected to be the subject of ongoing discussion with ORC, and refined, during the processing of the applications.

6.2 Section 104(2) Permitted Baseline

Pursuant to section 95D(b) the Council has the discretion to disregard effects of an activity if a rule or national environmental standard permits an activity with that effect, this is known as the permitted baseline.

There is no relevant permitted baseline for the proposed disturbance of contaminated soils above 25 m3 per 500 m2 which is a permitted activity under Regulation 8(3) of the NES Soil. There is also no permitted baseline for the discharges to water, air or leachate to ground. No permitted baseline assessment is provided for discharges to air land, water, or disturbance of soil as a consequence.

There are no relevant national or regional planning instruments specific to the built form, landscape and visual effects of the buildings and associated site works, and activities, including noise, as these activities are permitted by the designation subject to the noise condition being complied with. However, the designation cannot be considered a permitted baseline as there is no land use consent required other than the disturbance of contaminated soil under the NES Soil.

6.3 Receiving Environment

The wider landfill, the RRPP site, its activities, its designation, and existing resource consents are described in Section 3.2 of this report. The landfill site comprises several landscapes including the working landfill area, the existing transfer station, areas of capped and finished landfill and waterbodies. Vegetation consists of a mix of exotic and indigenous species. Built form consists of low-level industrial sheds at the transfer station. The

stormwater receiving environment consists of sedimentation ponds, the Northern Leachate Pond, the constructed wetlands, and the discharge points to the Kaikorai Stream/Lagoon.

A detailed description of the natural and physical receiving environment is provided in the Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6**, and the social receiving environment in the Interim Social Impact Assessment (GHD 2024) in **Appendix 15**.

6.4 Consideration of Alternatives

The DCC has considered and evaluated alternative options for the RRPP to meet the requirements of the Waste Futures Programme, including alternative locations for the entire project or for the OPF facilities as a standalone off-site organics facility. The Resource Recovery Processing Precinct Site Options Report (GHD 2023) is included in **Appendix 18.**

A Spatial Multi Criteria Analysis (MCA) Methodology was used to identify potential sites from the RRPP within the greater Dunedin area. The method uses GIS technology to select optimum locations for infrastructure development based on geographically characterised social, economic, engineering, planning and environmental criteria.

Constraints such as access issues, remoteness of the site, availability of services and proximity to residential areas were discussed for each site identified through the MCA process. A shortlist of nine sites was then selected and considered against assessments relating to key planning constraints and benefits/opportunities and the following criteria:

- Investment consentability, affordability, operational aspects.
- Environmental/cultural environmental impact, effects on residents, community aspect;
- Critical success constructability, flexibility, legacy issues.

The most favourable site for the establishment of the RRPP identified from the shortlist was the Green Island landfill. The site is owned by Council and unlike the other sites is designated for the proposed use.

Two alternative sites were also shortlisted from the nine sites as potential sites for the establishment of the RRPP facilities and assessed against the landfill site:

- 80 Brighton Road, Fairfield; and
- 101 Milners Road, North Taieri

Environmental, consenting and cost constraints were identified for the development of the site at 80 Brighton Road, including the applicant's ability to obtain a commercial arrangement with the current owner within timeframes to meet the kerbside collection changes. In addition, it is likely that further consents would be required for indigenous vegetation removal (which could be difficult to secure), and upgrades for site access.

Part of the site at 101 Milners Road is designated for the Milners Pit/Closed North Taieri Tip Hard Fill Disposal, Composting and Quarry. The purpose of the designation does not capture all aspects of the RRPP operation, Furthermore, the site is in close proximity to the Taieri Airfield resulting in potential and/or perceived aviation bird strike risk. The site is also remote from the city urban areas resulting in additional transportation costs and the need to establish a transfer station closer to the city.

The Milners Road site was considered as a site for the organics processing in isolation, however it was considered unsuitable for the same reasons. It was also considered that the required discharges and potential odour effects of the ORB and OPF could be better managed at the Green Island landfill site given the presence of the existing leachate and

stormwater infrastructure, and the character of the landfill receiving environment and the mixed, semi-industrial character of the surrounding neighbourhood.

Overall, having regard to the assessment of alternative sites, it is considered that the Green Island landfill is the most economically and logistically feasible location for the RRPP and will have the lowest level of environmental effects. It is considered that there is sufficient mitigation of potential adverse environmental effects, including odour effects, that the adjoining residential activities can co-exist with the RRPP.

6.3.1 Odour

Consideration has been given to alternatives specific to the OPF processes given the odour sensitivities of the activity, detailed in the Air Quality Assessment (PDP 2024) in **Appendix 12**. It was considered that the open-air static pile system for the OPF was more effective at managing odour effects than composting within an enclosed building. The composting plant at Bromley in Christchurch was used as a case study.

6.3.2 Leachate

Consideration was also given to alternatives for leachate disposal to the existing leachate management system via direct discharge to the pumping stations in the Stormwater Management Plan and Assessment of Effects and Groundwater Technical Assessment (GHD 2024) in **Appendix 3 and 4.** It was considered that use of the existing pump station system and the Green Island WWTP would result in the least potential for adverse environmental effects.

6.3.3 Stormwater

The Stormwater Management Plan and Assessment of Effects (GHD 2024) in **Appendix 3** considers that the most logical arrangement for discharge of stormwater was via the existing pond assets available on site, which provide sufficient treatment prior to discharge to the Kaikorai Stream and have sufficient capacity to support the additional impermeable surfacing associated with the RRPP.

6.5 Construction Phase Effects

The construction phase of the RRPP is addressed in the supporting technical reports. All contaminated soil will be disposed of in the landfill and run-off from rain and sources of leachate will be discharged to the leachate management system. Dust controls will apply to minimise contaminated dust. Gravel for the building foundations and pavement will be clean fill imported from off-site. Construction will be limited to daytime hours and all necessary machinery will operate having regard to the designation noise condition. Each technical report concludes that the temporary construction effects will be less than minor. Draft construction management plans (GHD 2024) (Appendix 7, 8 and 9) including a detailed Draft Construction Environmental Management Plan are provided and will be finalised via conditions of consent.

6.6 Land Contamination Effects

A Draft Contaminated Land Management Plan (CLMP) (GHD 2024), provided in **Appendix 5C**, has been prepared to manage the risk to workers and the environment both during and after construction of the RRPP. The contaminated soil will be removed and disposed of in the landfill, and appropriate health and safety and containment measures will be established during construction works and a site validation report provided. Leachate from RRPP functions involving contaminants such as the OPF and any run-off from the construction phase will be discharged into the existing leachate management system and treated stormwater will be discharged to the separate stormwater management systems for each catchment.

6.7 Air Quality Effects

The MRF, BWTS, ORB and hazardous waste buildings have roller doors to their openings. To assist in managing any odour issues the doors to the RRPP buildings will be closed except when required to be open for deliveries, removals, and operations. Closed buildings will have mechanical ventilation except for the ORB.

The weighbridge operator and transfer station staff will question the driver about the nature of the waste to be disposed of and whether it is likely to be odorous. Highly odourous waste will be intercepted and disposed of directly to the receiving landfill.

A misting system will mitigate odour and dust from the BWTS. The composting system at the OPF is a high temperature aeration system which will result in fast processing of putrescible waste. The composting process will be carefully managed via a Composting Facility Management Plan (Enviro NZ 2024 - **Appendix 5F**) to ensure odour from the shredding, composting and maturation processes is not detectable beyond the landfill boundary.

Having assessed the odour and dust results against the FIDOL factors, the Air Quality Assessment (PDP 2024) in **Appendix 12** considers that there is a low likelihood of off-site odour and dust from the proposed RRPP being categorised as objectionable and offensive at nearby receiver locations and that effects would be less than minor.

This is based on the following factors:

- The meteorological conditions of the site;
- The varied emission rates from the composting operations and waste transfer facilities, meaning that there is a low probability of higher odour and dust emission rates occurring at the same time as poor dispersive conditions in the direction the nearest sensitive receptors;

- The separation distance between the RRPP operations and the nearest sensitive receptors;
- The OPF will be further away from nearby receptors and will adopt better technology with sophisticated monitoring and management techniques which will result in better control of odour;
- Excessive odour sources at the BWTS and OPF will be subject to careful management and mitigation; and
- Cumulative effects with the landfill are unlikely given the distance of the landfill from the sensitive receptors, the timing of RRPP works and eventual closure of the landfill in 2029.

The draft conditions of consent and the Composting Facility Management Plan (Enviro NZ 2024) included in **Appendix 5F** will ensure the OPF and ORB processes are managed effectively to reduce likelihood of persistent or transient odour.

6.8 Water Quality Effects

As outlined in section 5.3, the discharge of leachate and stormwater from the RRPP will be fully separated and will enter the respective management systems.

The landfill leachate management system disposes to the nearby wastewater treatment plant. Leachate from the RRPP will discharge via direct collection and piping to pumping stations. There will be no leachate from the RRPP entering groundwater via percolation or entering the Kaikorai Stream.

The stormwater management system for the RRPP involves treatment of stormwater prior to disposal to the Eastern Sedimentation Pond and then the end point of Kaikorai Stream/Lagoon for Catchment B and C. The discharges would constitute a small percentage of the overall eastern landfill activity. Stormwater runoff from Catchment A will also be subject to appropriate treatment once the Northern Leachate Pond becomes a stormwater pond following closure of the landfill. At this time stormwater from Catchment A will be redirected to discharge to the Kaikorai Stream rather than the leachate system.

The stormwater discharges will be subject to the same monitoring regime for the overall landfill, which includes quarterly monitoring of the eastern sedimentation pond and four terrestrial and water-based locations. Effects of the respective discharges are anticipated by the Stormwater Management Plan and Assessment of Effects and Groundwater Technical Assessment (GHD 2024) in **Appendix 3 and 4** to be less than minor.

The ecological effects of the respective RRPP discharges have been reviewed in the Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7**. The existing systems are considered adequate for managing water quality effects for the overall landfill including the RRPP facility.

6.9 Ecological Effects

The ecological effects of the overall landfill, including disturbance of contaminated land and discharges of stormwater, were assessed in detail as part of the landfill closure consent application. Overall, the level of ecological effects is very low for most effects identified. The effects of the RRPP are specifically addressed in the Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7** in relation these applications.

Continued operation of the current separated stormwater and leachate treatment systems is considered sufficient for managing effects on ecological values and the RRPP will utilise these systems with additional stormwater treatment to collect contaminants prior to pond discharge. The additional leachate from composting and other RRPP facilities will be fully captured by the leachate collection system before it reaches the Kaikorai Stream and Lagoon.

Earthworks are proposed with disposal of contaminated soil to landfill and capture of run off to the leachate collection system, and no indigenous vegetation clearance. Bird and pest management will be subject to specific operations management including bird control mechanisms and overall landfill management in respect of SBBG. Overall, the ecological effects of the RRPP are anticipated as very low or less than minor in line with the overall landfill activity.

6.10 Effects on Valued Natural and Physical Resources

Kaikorai Lagoon is listed as an Area of Significant Biodiversity Value (ASBV) in the DCC 2GP, it is described as of regional significance, with mudflat, saltmarsh, reed swamp, and succulent herb swamp. It is also listed as a wahi tupuna of cultural significance. Kaikorai Lagoon is also listed as a regionally significant wetland by ORC in the Regional Plan: Water. The Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7** concludes that the RRPP and associated discharges would not adversely affect the ecological values of the lagoon as existing stormwater and leachate systems are sufficient in terms of capacity and treatment.

6.11 Hazard Related Effects

The RRPP site is not located within the part of the landfill site subject to flood or coastal inundation hazard as identified in ORC's Natural Hazard Mapping, and the 2GP. The Stormwater Management Plan and Assessment of Effects (GHD 2024) in **Appendix 3** confirms capacity within the proposed stormwater management systems without downstream effects, including on the flood hazards within the Kaikorai Stream and Lagoon.

6.12 Natural Character Effects

The existing level of natural character within the application site and adjacent landfill is highly modified. Natural character of the adjacent waterways and nearby Kaikorai Estuary is higher, particularly in regard to the birdlife that the estuary supports and scenic qualities present. Those same scenic qualities are less apparent in the waterways immediately adjacent to the RRPP Site. The well-established perimeter vegetation also contributes somewhat to natural character, primarily in regard to experiential aspects as well as supporting some habitat.

Effects on the natural character values of Kaikorai Stream and Estuary related to the discharge of stormwater to the Kaikorai Stream falls within the scope of the consents required from ORC and are addressed in the Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6.** The assessment finds that natural character effects are assessed as very low with positive effects over time following implementation of the VMRP.

It is noted that the proposed development remains within the existing transfer station perimeter bunds and vegetation and the condition of the nearby waterbodies will not be further diminished. Effects on experiential aspects of natural character may be adverse during construction however these will be short term and temporary and the construction

sites will be largely screened by existing perimeter vegetation from the Kaikorai Stream and Estuary margins.

Overall, it is considered that the degree of change will be low overall due to the existing level of modification and the low profile and low density of the proposed structures at this northern location. It is proposed that the adjacent layers of perimeter vegetation between the RRPP site and Kaikorai Stream be maintained with potential for native succession planting as proposed in the VRMP, resulting in an increase in natural character at the wider scale overall.

Natural character effects are assessed as very low with positive effects over time following implementation of the VMRP.

Visual effects

Visual effects fall outside the scope of the consents required from ORC. Consideration of the landscape and visual effects of the RRPP on public vantage points and adjoining neighbours in relation to the built form of the buildings are instead addressed in the separate OPW application. However, the draft conditions in **Appendix 20** volunteer conditions of consent in respect of planting to mitigate visual effects as identified in the landscape assessment in order to align with the OPW.

6.13 Social Effects

The Interim Social Impact Assessment (GHD 2024) in **Appendix 15** provides an assessment of the potential social impacts of the RRPP, including health and wellbeing, amenity, fears and aspirations, and way of life. The assessment made the following conclusions regarding social effects:

Development of the RRPP will have moderate positive benefits to the regional and district communities because it will facilitate implementation of the Waste Futures Programme which will reduce carbon emissions and waste going to landfill. In addition, redevelopment of the site provides a number of opportunities to improve ecological values in the surrounding area as well as the provision of new paths and trails.

At the local level, there are number of adverse impacts that need to be mitigated. There are five residential properties on Clariton Avenue that directly adjoin the Green Island property boundary and will be located within 200 m of the proposed MRF. These residences have the potential to experience visual amenity impacts as the facility is visible from these properties. It is recommended that the VMRP be implemented in accordance with the recommendations of the Landscape Effects Assessment report (Boffa Miskell Feb 2024) in order to increase natural character overall as well as mitigate any visual impacts from adjoining properties. It is further recommended the mitigation measures set out in the acoustic assessment, noise assessment and air quality assessment are adopted and implemented.

The recommendations in the Affected Party Approval letter for the RRPP site should be implemented via design and operation, offered mitigation measures and conditions of consent.

The assessment considers that the proposal will have an overall social benefit to the community. The negative impacts were considered minor given the RRPP is proposed on an existing operational landfill site and the impacts can be mitigated through implementation of the recommendations made in the report, which reflect the proposed design, operation and mitigation measures.

6.14 Cultural Effects

A cultural effects assessment was carried out by Aukaha on behalf of Te Rūnaka o Ōtākou as part of the consent application for the operation and closure of the Green Island landfill (Cultural Assessment Green Island Landfill Operation Closure and Aftercare – Aukaha, March 2023 – **Appendix 11**).

Engagement with Aukaha and the rūnaka has continued since 2022, and is ongoing, including throughout the development of the design for the new RRPP facilities and the preparation of the supporting consent application. Through this process, feedback from Te Rūnaka o Ōtākou has focused on the extent to which the recommendations from the Green Island landfill closure cultural impact assessment have been acted upon namely in relation to:

- Wai Māori
- Mahika Kai and Biodiversity Values
- Wāhi Tūpuna
- Incorporation of Mana Whenua values through design

In addition, a number of RRPP specific issues have been raised including:

- The management of run-off from the composting area and parking areas.
- Erosion and sediment control during construction.
- The potential impact of the RRPP on the Kaikorai Stream and Estuary.

Through ongoing engagement with Aukaha, these issues have been addressed and are reflected in the RRPP design and technical reports.

The Affected Party Approval letter (APA) from Aukaha in relation to the RRPP is provided in **Appendix 10**. The letter confirms support for the proposed RRPP subject to recommendations to be reflected in the design and operation of the RRPP and offered conditions of consent in **Appendix 20**.

The recommendations from the APA are set out below (in italics) as they relate to the recommendations from the Green Island Landfill Cultural Impact Assessment. Below each recommendation is a description of the relevant proposals within the RRPP application that address the recommendation.

6.14.1 Wai Maori

The recommendations of the letter are, and corresponding proposals are:

- That all practicable measures are taken to prevent discharges entering water, including preventing, where possible, leachate from entering groundwater and surface water.
 - The Stormwater Management Plan and Assessment of Effects (GHD 2024) in **Appendix 3** proposes a detailed strategy for managing stormwater and leachate.
- That effects on mauri and whakapapa from alteration of the existing hydrology and contaminants entering water are offset by mitigation measures, including riparian planting and pest management.
 - The Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6** and proposed VMRP address this matter.
- Proposed offsetting or mitigation management plans need to be provided to mana whenua for review and consultation prior to implementation.

The draft conditions of consent in **Appendix 20** provide for mana whenua approval of final management plans and the VMRP.

6.14.2 Mahika Kai and Biodiversity

The recommendations of the letter and corresponding proposals are:

- The protection of habitats and the wider needs of mahika kai and taoka species is sought by mana whenua, including:
 - Indigenous plant and animal communities and the ecological processes that ensure their survival are recognised and protected to restore and improve indigenous biodiversity.
 - Creating networks of linked ecosystems.
 - Requiring the management of hazardous operations to avoid impacts on mahika kai values.

The Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6** and proposed VMRP address these matters, and the Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7** considers the effects of the RRPP on freshwater receiving environments and concludes that effects would be less than minor. The management plans in **Appendix 5A** to **F** provide for careful management of contaminants and hazardous substances.

6.14.3 Wāhi Tūpuna

The recommendations of the letter and corresponding proposals are:

The protection of the values of wāhi tupuna is sought by mana whenua, including:

- Protecting the full range of landscape features of significance.
- Ensuring that the interpretation of Kai Tahu histories associated with the Kaikarae Estuary and Pukemakamaka is undertaken by Te Rūnanga o Ōtākou.
- Requiring a site rehabilitation plan for land contaminated by the landfill.

The Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6** and proposed VMRP address these matters. Input into the exterior of the buildings and the VMRP is provided for in the conditions of consent in **Appendix 20**. The Contaminated Land Management Plan in **Appendix 5C** also provides for removal of contaminated soil from the RRPP site and disposal within an approved facility.

6.15 Summary of Mitigation and Monitoring Proposed

Based on the assessment within this report, the mitigation measures and/or conditions proposed to be applied are as follows and will be incorporated into the offered conditions of consent within the scope of the consents applied for:

- Construction management including construction environmental management plan and erosion and sediment control.
- Construction of a permanent stormwater management system with treatment devices for the RRPP site.
- Collection and discharge of leachate to the pumping stations within the leachate management system for the landfill.

- Collection and discharge of stormwater to the stormwater management system for the landfill.
- Implementing a stormwater maintenance plan for ongoing management of RRPP stormwater infrastructure.
- Implementing a contaminated land management plan for management of contaminated soils during construction.
- Implementing an operations management plan for everyday operations management, and a specific plan for the OPF site.
- Existing leachate and stormwater discharge monitoring for the overall landfill.
- Natural character mitigation in the form of screen planting.

Mitigation measures outside the scope of the consents applied for include:

- Acoustic fencing along the Taylor Street South boundary.
- Facilities for pedestrians and cyclists including a separated shared path along the Brighton Road access road into the Green Island landfill site
- Building design and use of visually recessive colours.
- Proposed tree and shrub planting on southern bund and at the entrance to manage visual effects on residential neighbours (see landscape assessment report

6.16 Positive Effects

In accordance with Section 104(1) (ab) the following positive effects have been identified:

- The stormwater management treatment and attenuation systems for the RRPP will improve the quality of stormwater discharged to Kaikorai Stream due to treatment prior to pond entry.
- The direct disposal of leachate to pumping stations within the leachate collection system is an improvement on the existing situation where leachate reaches the system via percolation.
- The RRPP will improve internal amenity for the site in the form of planting.
- The RRPP will improve external amenity for the site in the form of additional screen planting.
- Construction and operation of the RRPP will benefit the economic and social well-being
 of the Dunedin community by providing for continued use of an existing asset for
 resource recovery and transfer purposes instead of the expense and new potential
 adverse environmental effects of relocating all facilities to an alternate location.
- Construction and operation of the RRPP will enable the processing and recycling of all recoverable waste in accordance with the Waste Minimisation Act 2008 and internal DCC policy.

6.17 Conclusion of Assessment of Environmental Effects

Having regard to the above assessment, overall, the environmental effects of the RRPP will be <u>less than minor</u> for the following reasons:

- Stormwater from the RRPP will be treated prior to discharge to pond systems to mitigate
 effects on the water quality of Kaikorai Stream. The stormwater collection and
 attenuation will provide improved treatment to the existing situation for the site.
- Leachate from the RRPP will be collected and pumped directly to the existing leachate system, which will continue to operate following landfill closure.
- Effects on the ecological values of the Kaikorai Stream will be less than minor subject to the proposed separate management of stormwater and leachate.
- Effects on cultural values will be less than minor subject to the mitigation of effects on land, air and water as recommended by Aukaha and incorporated into the design and conditions of consent.
- There will be a reduction in uncontrolled leachate percolating through the site to the landfill groundwater due to the increased proportion of the site being covered in hard surfaces.
- Disturbance of contaminated soil during construction will be managed via the contaminated land management plan to minimise the potential for effects on human health
- Odour from construction and ongoing operation of the RRPP will not be detectable beyond
 the landfill boundary subject to mitigation measures and careful ongoing management,
 including odour from the BWTS and the composting process at the OPF.
- Natural character effects of the RRPP activities will be low taking into account the receiving environment, existing perimeter vegetation and the proposed planting.

6.18 Draft Conditions of Consent

The draft conditions of consent in **Appendix 20** are intended to implement the proposed design and ongoing operations and all mitigation measures offered. It is anticipated that the conditions will be amended during the consenting process to reflect any changes required by Council and their technical experts.

7.0 Statutory Assessment

In accordance with Section 104(1) of the Resource Management Act 1991 ('RMA'), this part of the report addresses the following statutory documents which are relevant to the assessment of this proposal:

- National Policy Statement for Freshwater
- National Policy Statement for Indigenous Biodiversity
- Partially Operative Otago Regional Policy Statement ('Otago RPS')
- Proposed Otago Regional Policy Statement ('Proposed RPS')
- ORC Regional Plans including relevant plan changes
- The Kāi Tahu ki Otago Natural Resources Management Plan 2005 (NRMP)
- Dunedin District Plan
- Other matters relevant and reasonably necessary to determine the application
- Part 2 of the RMA

The above planning documents present a hierarchy whereby the provisions of regional and district plans are required by the RMA to give effect to the policy direction within the regional policy statement, which in turn are required to give effect to any relevant national policy statement. However, in the Otago region, the current regional plans in particular predate and do not yet fully give effect to the higher order policy contained in the National Policy Statement for Freshwater, Otago RPS, and an emerging Proposed RPS. The Proposed RPS is also subject to extensive submissions for which decisions have yet to be issued. This overall results in a fragmented policy framework resulting in conflicts and uncertainty in the policy direction for managing the use and development of resources, including this proposal.

As for the assessment of effects in Section 7, the focus of this statutory assessment is on the provisions of the above planning documents that fall within the scope of the resource consents that have been applied for.

The assessment in particular focuses on the higher order, contemporary and settled provisions of the National Policy Statement for Freshwater, the Otago RPS, the Water Plan, the Air Plan and the Waste Plan.

7.1 Social and Cultural Wellbeing Provisions

The relevant objectives and policies are summarised in Table 1 below:

Table 1

Planning Document	Relevant Provisions
Otago RPS	Objectives 1.1 and Policies 1.1.1, 1.1.2
	Objective 2.2 and Policies 2.2.1, 2.2.2
Proposed RPS	Objective MW-O1, and Policies MW-P2, P3
NRMP	Section 5.2, objectives (i), (ii), (iii), and (iv)

The continued operation of the closed landfill for resource recovery purposes with construction and operation of the RRPP will provide for the economic, social, and cultural wellbeing of the DCC and the public.

The project will provide for Dunedin's waste disposal and recovery needs thereby providing for community resilience and sustainability, while avoiding adverse effects on human health from inadequate waste management and adverse economic effects from a more expensive waste minimisation model.

Adverse effects on the local community surrounding the landfill are minimised via appropriate design, amenity planting and infrastructure, and ongoing site management and accountability via management plans, monitoring and community liaison.

7.2 Water Quality Provisions

The relevant objectives and policies are summarised in Table 2 below:

Table 2

Planning Document	Relevant Provisions
NPS Freshwater	Objective 2.1 and Policies 1, 2, 5, 12, 13 15.
Otago RPS	Objective 3.1 and Policies 3.1.1
	Objective 5.4 and Policy 5.4.1
Proposed RPS	Objectives LF-WAI-O1, Policies LF-WAI-P1, P2, P3, P4
	Objectives LF-VM-O5, Policies LF-VM-P5
	Objectives LF-FW-O8, O10, and Policies LF-FW-P7, P13, P15
	Objective LF-O12, and Policy LF-LS-P21

Otago Regional Plan: Water	Objective 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.3.6, and
	Policies 5.4.2, 5.4.3, 5.4.8, 5.4.9
	Objective 7.A.1, 7.A.2, 7.A.3 and Policies 7.B.1, 7.B.2, 7.B.4, 7.B.6, 7.B.7, 7.B.8, 7.C.1, 7.C.2,
	7.C.3, 7.C.5, 7.C.8, 7.C.9
NRMP	Section 5.3, Objectives (i), (ii), (iv), (v), and Policies 1, 2, 4, 5, 10, 11, 12, 13, 14, 15, 16, 17, 18.

The discharge of leachate and stormwater will be fully separated and will enter the respective management systems, with treatment of stormwater via Enviropods and swales prior to sedimentation pond discharge. Treatment prior to discharge is an improvement on the existing situation where stormwater is discharged from the existing recovery park to the Eastern Sedimentation Pond without filtering.

Percolating groundwater will be reduced by the increase in impermeable surfacing and the introduction of collection systems and direct pumping to the leachate pumping stations.

Increased adverse water quality effects on the receiving environment of Kaikorai Stream and the regionally significant lagoon are not anticipated as detailed in the Ecological Assessment Report (Boffa Miskell 2024) in **Appendix 7**. The proposal is overall considered consistent with the objectives and policies having regard to the operations management and discharge mitigation offered.

7.4 Indigenous Biodiversity and Wetland Provisions

The relevant objectives and policies are summarised in **Table 3** below:

Table 3

Planning Document	Relevant Provisions
NPS Freshwater	Objective 2.1 and Policies 1, 2, 5, 6, 9, 13, 15, clause 3.22(1).
NPS Biodiversity	Objective 2.1, Policy 1, 2, 13, 14, 15
Otago RPS	Objective 3.1 and Policies 3.1.2, 3.1.9 Objective 3.2 and Policies 3.2.2, 3.2.16 Objective 5.4 and Policies 5.4.2, 5.4.6, and 5.6.4A

Proposed RPS	Objectives LF-WAI-O1, Policies LF-WAI-P1, P2, P3, P4
	Objectives LF-VM-O5, Policies LF-VM-P5
	Objectives LF-FW-O9, O10, and Policies LF-FW-P9, P13
	Objectives ECO-O1, O3, and Policies ECO-P1, and P5, P10
Otago Regional Plan: Water	Objectives 10.3.1, 10.3.2 and Policies 10.4.1,
	10.4.2, 10.4.8
NRMP	Section 5.7, Objectives (i), (ii), (iii), and Policies 1, 2, 3, 4, 5.
	Section 5.5, Objectives (i), (ii), (iii), (iv), (v), (vi),
	(ix) and Policies 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13,
	15, 16.

The RRPP construction requires no indigenous vegetation clearance and earthworks will be appropriately managed via management plans which will ensure collection of runoff to discharge to the leachate collection system and disposal of soil to landfill.

The discharge of leachate and stormwater from the RRPP will be fully separated and will be collected by their respective management systems. The proposal will reduce the existing volumes of percolating leachate into groundwater and non-treated stormwater.

Operations management will apply to control of pests and birds, including SBBG. Increased effects on the receiving environment of Kaikorai Stream and Estuary are not anticipated, and effects on the natural character of these freshwater features will be minimal as detailed in the Landscape Effects Assessment (Boffa Miskell 2024) in **Appendix 6**.

The proposal is overall considered consistent with the objectives and policies having regard to the visual mitigation, operations management and discharge management regimes offered.

7.5 Air Discharge Provisions

The relevant objectives and policies are summarised in **Table 4** below:

Planning Document	Relevant Provisions
Otago RPS	Objective 3.1 and Policy 3.1.6 Objective 5.4 and Policies 5.4.1

Proposed RPS	Objective AIR-O2, and Policies AIR-P3, P4, P6
Otago Regional Plan: Air	Objective 6.1.2, Policies 7.1.1, 8.2.2, 8.2.3, 8.2.8, 10.1.1, 11.1.1
NRMP	Section 5.7, Objectives (i), (ii), (iii), and Policies 1, 2, 3, 4, 5.

The application is supported by an Air Quality Assessment (PDP 2024) in **Appendix 12** which considers sources of air discharges from the RRPP with a particular focus on odour and dust and makes conclusions on cross boundary effects based upon the design and operation measures for the BWTS and OPF.

The composting system at the OPF is a high temperature aeration system which will result in fast processing of putrescible waste to minimise odour effects. The composting process will also be carefully managed via a composting management plan to ensure odour from the shredding, composting and maturation processes is not detectable beyond the landfill boundary. A misting system will mitigate odour from the BWTS.

It is considered that odour and dust effects will not be detectible beyond the operational boundary of the RRPP and therefore the proposal is consistent with the above objectives and policies.

7.6 Waste Management and Contamination Provisions

The relevant objectives and policies are summarised in Table 5 below:

Table 5

Planning Document	Relevant Provisions
Otago RPS	Objective 4.6 and Policies 4.6.2, 4.6.3, 4.6.6,
	4.6.7, 4.6.8
	Objective 5.3 and Policy 5.3.1
Proposed RPS	Objective HAZ-CL-O3, Policies HAZ-CL-P14, P16, P17, and P18

3.3.4
olicies 4.4.1, 4.4.2,
olicy 6.4.1, 6.4.12
licies 7.4.1, 7.4.3,
, and (iii), and
and (iii), and

The RRPP and associated discharges and soil disturbance will provide for the ongoing use of the Green Island landfill to deliver an integrated waste solution encompassing waste reduction, recycling, and recovery to minimise the amount of residual waste being disposed of to a new landfill location.

The contaminated soil from the RRPP site will be removed and disposed of within the landfill and managed by a contaminated land management plan. Contaminated discharges from construction and operation will discharge directly to the leachate collection system pump stations. Stormwater will be treated prior to discharge to existing stormwater management ponds.

Discharges to air from composting, open doors and mechanical ventilation will be appropriately managed by the contractor to ensure no objectionable odour and dust are detectible beyond the landfill boundary.

Overall, the proposal is considered consistent with the purposes of the landfill site and the disturbance of contaminated soil, discharges to air and discharges to ground and water will be appropriately mitigated.

7.7 Integrated Management Provisions

The relevant objectives and policies are summarised in **Table 6** below:

Table 6

Planning Document	Relevant Provisions
NPS Freshwater	Policies 3 and 4
Otago RPS	Objectives 1.2 and Policy 1.2.1
Proposed RPS	Objective LF-VM-O7 and Policy LF-WAI-P3

The RRPP and associated discharges, construction drainage and soil disturbance will provide for the ongoing use of the Green Island landfill for resource recovery post-closure in conjunction with improved kerbside collection and recycling. The continued use of the site is an efficient use of an existing community resource.

An integrated approach has been taken to management of stormwater, leachate and odour with overlapping management plans and the use of existing landfill infrastructure for management of environmental effects on land, air and water. The built form of the RRPP buildings will be integrated with the receiving landscape by way of external design, landscape planting and ongoing maintenance.

7.8 Second Generation District Plan Appeals Version

The landfill site is designated for use for 'landfilling and associated refuse processing operations and activities' (reference D658) in the 2GP. The designation, is subject to the following one condition:

 Noise generated by any activity on the site shall comply with the following standards as the boundary of the site - 55Dt/40Nt dBA. (NB These levels are subject to an adjustment of minus 5dBA for noise emissions having special audible characteristics).

The designation of the land means that section 9(3) of the RMA, which prevents persons from using land in a manner that contravenes a District Plan rule, does not apply. Development and use of the underlying land for a landfill and refuse processing is therefore enabled, subject to the requirement under section 176A of the RMA to submit an outline plan of works (or obtain a waiver for minor works) for any works to DCC's consenting authority.

An OPW for the RRPP is being submitted alongside these applications. The noise generated from construction and operation of the RRPP will comply with the above condition.

An assessment against the objectives and policies of the District Plan is not required in this application, as the DCC consent relates to the NES Soil only. However, regard is had to the following:

Objective 9.2.2

Land use, development and subdivision activities maintain or enhance people's health and safety.

Policy 9.2.2.X

Activities on land that has a history of land use that may have resulted in contamination are managed in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, including by:

- at the time of subdivision, land use or when land development activities involving soil disturbance take place, identifying and assessing risk to human health from contaminants in soil, where practicable; and
- b. if necessary based on the intended use of the land, remediating or managing the contaminants to make it safe for human use.

It is considered that the measures proposed for works involving contaminated soil as described in this application are sufficient to align the proposal with the above objective and policy.

7.9 Conclusion on Statutory Considerations

Having regard to the above assessment, overall the proposed air and water discharges and soil disturbance associated with the RRPP would be considered consistent with the above objectives and policies.

8.0 Part 2 of the RMA

- The Activity has been assessed against all relevant planning instruments and is consistent with / not contrary to those instruments.
- Those instruments are not considered to be invalid, incomplete, or uncertain, and in turn
 can be assumed to have particularised and already given effect to Part 2 of the Act,
 therefore the Activity is also consistent with Part 2.
- However, for the purposes of completeness, and in compliance with Schedule 4(2)(a)
 RMA, a separate assessment against Part 2 of the Act follows.

Part 2 of the RMA sets out the purpose (**Section 5**) and principles (**Sections 6-8**) of the RMA.

Section 5 of the RMA states that the purpose of the RMA is:

"to promote the sustainable management of natural and physical resources".

Section 5 also states:

- "(2) In this Act, ``sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—
- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems;
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment."

The construction and operation of the RRPP will benefit the social, economic and cultural well- being of Dunedin City while mitigating adverse effects on the environment.

Section 6 "Matters of National Importance" of the RMA states:

"In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance."

There are "Matters of National Importance" considered potentially relevant to this proposal relating to significant indigenous vegetation and significant habitats of indigenous fauna associated with Kaikorai Lagoon. Increased or additional effects on the regionally significant wetlands of Kaikorai Lagoon and their biodiversity value are not anticipated as the stormwater and leachate management systems are considered adequate to manage effects on water quality which may lead to adverse effects on flora and fauna.

Section 7 "Other Matters" of the RMA states:

"In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—"

The "Other Matters" considered potentially relevant to this proposal are:

- (b) The efficient use and development of natural and physical resources.
- (c) The maintenance and enhancement of amenity values.
- (f) Maintenance and enhancement of the quality of the environment.

The construction and operation of the RRPP constitutes an efficient use of the existing landfill resource while maintaining the quality of the receiving environment and amenity values.

Section 8 of the RMA states:

"In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)."

The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga have been recognised and provided for and the principles of Te Tiriti o Waitangi have been taken into account in respect of the RRPP. In its engagement and consultation to date and proposed ongoing collaboration with Te Rūnanga o Ōtākou in the operation of the landfill and resource recovery facilities the DCC is recognising mana whenua and actively protecting Māori interests.

9.0 Consultation

9.1 Engagement Approach

The following section sets out the engagement process undertaken to date by DCC and up to the lodgement of consent applications for the development of the RRPP at Green Island landfill site. Following consultation and engagement on the plans for the future kerbside collection in 2020, key stakeholder engagement in relation to the future of Green Island started in 2022 in tandem with the engagement on the ongoing operation of the landfill facility closure and long-term use of the site post-closure. Wider community engagement commenced in February 2023 and is ongoing.

DCC are leading the engagement with support from the wider project team. Engagement has been undertaken in accordance with DCC's *Significance and Engagement Policy (August 2017)*. In line with this policy, the consultation approach has been based on the International Association of Public Participation (IAP2) spectrum of engagement.

Engagement key messages have focused on the need for the Waste Futures Programme, including the interrelationship between the roll out of the new kerbside collection service in July 2024, the proposed new/improved RRPP facilities needed to support the new collection service, the proposed closure of the landfill itself, and the new Class 1 landfill currently planned at Smooth Hill.

A range of partners/stakeholders have been identified as part of the engagement process and additional stakeholder groups and individuals will be engaged with as this process continues. Public engagement has been targeted to focus on the local Green Island community and immediate neighbours. Engagement with mana whenua is as a Treaty partner with regular huis and is ongoing.

The main partners/stakeholder groups DCC have engaged with to date include:

- Te Rūnaka o Ōtākou (via Aukaha);
- Key local community stakeholders, local business owners, community organisations, and interest groups;
- Residential neighbours in Clariton Avenue; and
- Greater Green Island community and residents

Engagement will continue post-lodgement of the consent application for the proposed RRPP. The future engagement conversations will help to keep people informed about the RRPP project, and about plans for the closure of the landfill and will continue to seek ideas for the future use and enhancement of the site post closure of the landfill. One-on-one engagement will continue between DCC and the neighbours in Clariton Avenue to agree the plans to enhance the existing screening planting on the southern bund, prior to construction starting, and to mitigate views of the MRF building.

9.2 Engagement to Date

Below is a summary of the engagement undertaken by DCC since October 2022 in relation to the proposed RRPP.

9.2.1 Aukaha and Te Rūnaka o Ōtākou

DCC initially engaged with Aukaha and Te Rūnaka o Ōtākou on the Waste Futures Programme, in mid-2019. A series of briefing meetings were held by the DCC, prior to a hui with members of the rūnaka in August 2019. The hui focused on future waste management options for Dunedin and explored opportunities to achieve waste futures outcomes that supported wider outcomes sought by mana whenua.

After this hui there was ongoing engagement throughout 2020 and 2021, as part of the consent application process for the proposed new Class 1 landfill facility at Smooth Hill.

Post-lodgement of the Smooth Hill resource consent application, and in relation to the plans for the future of Green Island landfill site, including the RRPP, a hui and site visit of the Green Island landfill was undertaken with Aukaha and representatives of the rūnaka in April 2022.

The purpose of the hui was to collectively discuss the future plans for the landfill site, including the proposed RRPP facilities and eventual landfill closure and hear the key priorities for whānau. Acknowledging that the site has been used as a landfill since the 1950s, a number of areas of interest were highlighted that have been incorporated into the design of the RRPP as the project progresses.

These priorities included:

- The need to protect and restore the Kaikorai Stream and Estuary;
- Ability to incorporate mana whenua design principles/narratives in the proposed RRPP buildings and supporting infrastructure;
- Ensure the finish and colour(s) of the new buildings and facilities complemented the surrounding landscape and maintained natural character.
- Use of nature-based solutions e.g planted swales for on-site stormwater management.
- Use of native planting to enhance the existing screening vegetation around the landfill site and increase local biodiversity
- Maintain/enhance views to Pukemakamaka Saddle Hill.

As technical work continued to help inform the plans for the new RRPP facilities, a further design hui was held with DCC, the project team, EnviroNZ and representatives from Aukaha in September 2022, to ensure whānau concerns and aspirations continued to be considered as part of the plans for the RRPP site.

Since then, there has been ongoing engagement with Aukaha via regular huis to:

- Assist Aukaha with the development of the cultural impact assessment for the Green Island landfill ongoing operation and closure consent;
- Inform the design, and the scopes and outcomes of the technical assessments required for the landfill closure AEE, including the assessments in relation to ground, water quality, air quality, ecology and landscape and visual effects; and
- Seek Te Rūnaka o Ōtākou input into the ORB consent application.

Engagement with Aukaha and the rūnaka has continued since 2022, and is ongoing, including throughout the development of the design for the new RRPP facilities and the preparation of the supporting consent application.

Through ongoing engagement with Aukaha, these issues have been addressed and are reflected in the RRPP design and technical reports and AEE.

The DCC and project team provided a further briefing presentation to Te Rūnaka o Ōtākou (and Aukaha) on 22 February 2024 (**Appendix 17**). Further to this presentation, and ongoing engagement, Aukaha provided the Affected Party Approval letter on behalf of Te Rūnaka o Ōtākou (March 2024) (**Appendix 10**).

Engagement will continue with Te Rūnaka o Ōtākou via Aukaha. It will continue throughout 2024 to ensure that their concerns and aspirations are consistently understood and considered as part of the landfill closure consent process, future plans for the RRPP site and for the long-term use and enhancement of the site post closure. In addition, consultation is also currently underway in relation to the wider Waste Futures Programme, including requirements for engagement under the conditions of the Smooth Hill consent granted in May 2023.

9.2.2 Otago Regional Council (ORC)

DCC initially engaged with ORC in Oct 2022 to obtain feedback/input into the consent process for the closure of the Green Island landfill, the scopes of the technical assessments, and the requirements for the applications for resource consent.

Following lodgement of the Green Island landfill closure consent, engagement on the RRPP consent application started in May 2023, and has continued through to lodgement as part of the pre-application process.

Most recently a pre-application meeting was held with ORC planners on 16 May 2023, 7 September 2023,18 October 2024 and 15 February 2024. Areas of interest included the proposed RRPP design and assessment of effects in relation to the Waste Plan, Water Plan and Regional Policy Statement, including potential effects on air quality, water quality and ecology.

A fieldtrip to EnviroNZ facilities in Auckland and the Waikato was held on 17 January 2024 with an ORC staff member and DCC technical specialists in attendance. Feedback provided in the meetings has been incorporated into this application.

ORC has also carried out a pre-lodgement review of technical reports of relevance. Feedback has been incorporated into the revised technical reports.

9.2.3 Dunedin City Councillors

Regular briefings on the Waste Futures Programme, including the RRPP project have been given to Dunedin City Councillors from 2022 onwards. The updates have provided an overview of the project and proposed consenting process. Areas of interest identified by the Councillors included how the Waste Futures Programme will contribute to DCC zero-waste and carbon reduction objectives, the potential ongoing effects of the Green Island landfill operation and closure on the local community and environment, the future development of the RRPP and use of the site post closure, as well as funding options for the project. Engagement with the Councillors will be ongoing.

9.2.4 Community Boards

DCC have provided updates on the project to both the Chairs of the Mosgiel – Taieri Community Board and the Saddle Hill Community Board. The purpose of the updates was to provide information to assist the Community Boards understanding of the future plans for the Green Island landfill site, its ongoing operation and closure and future development of the RRPP and plans for post-closure use and enhancements. Areas of interest included potential ongoing effects of the Green Island landfill operation and closure on the local community and environment, the ability of people to continue to visit the rummage store and use the future RRPP, and opportunities to improve public access to the site and the Kaikorai Stream and Estuary post closure. Engagement with the Community Boards will be ongoing.

9.2.5 Dunedin International Airport Ltd and New Zealand Airline Pilots Association

DCC commenced discussions with representatives from Dunedin International Airport Ltd (**DIAL**) regarding the Waste Futures Programme in late-2019 as part of the Smooth Hill landfill consent application process. Initial meetings provided an opportunity to discuss the project, including the proposed approach to bird management and to exchange relevant information. Key areas of interest included the risks associated with increased bird activity in the vicinity of the airport. Discussions with DIAL in respect to bird strike risk and management are ongoing as part of the development of the working draft of the SBBG Management Plan that has been submitted as part of this RRPP consent application process. Engagement with both DIAL and the New Zealand Airline Pilots Association (**NZAPA**) will be ongoing, with regular liaison meetings underway.

9.2.6 Department of Conservation (DOC)

To date DCC have also engaged with DOC as part of the development of the draft SBBG management plan which has been developed to support the Green Island landfill closure consent application. DOC have acknowledged that, as black-backed gulls/karoro are not protected wildlife, DOC has no direct statutory role in their management and as such their main area of interest is in supporting the interests of Te Rūnanga O Ōtākou and their aspirations regarding karoro. DCC intend to continue to engage with DOC throughout the consent process and post lodgement, on the plans for the landfill closure, the new RRPP facilities and the public use and environmental enhancement of the site post closure.

9.2.7 Local Green Island Community

With support from Boffa Miskell, DCC began community engagement on the RRPP facilities as part of the engagement on future operation and closure of the GIL in February 2023. A range of different types of engagement collateral outlined in **Appendix 16** was developed. This included flyers, public drop-in sessions banners, and handouts to support and promote the engagement activities. The purpose of the community engagement is to inform neighbours and the wider Green Island community and residents about the plans for the future of the Green Island landfill, including:

- the wider Waste Futures Programme and Dunedin's wider commitment to reducing carbon emissions and reducing waste going to landfill;
- the roll-out of an enhanced kerbside recycling and waste collection service for the city from July 2024 and that the new service will include collection of food and green waste as well as a new bin to collect general rubbish;
- the staged closure of the landfill itself and the consent application process; and

- plans for the new RRPP facilities and opportunities for future public access to the site and surrounding environment, including Kaikorai Stream and Estuary post closure.
- Specific community engagement activities undertaken from February 2023 are listed under the headings below.

Development of the DCC website

A video has been developed and is available on the DCC website that further explains the project and provides regular updates.

https://www.dunedin.govt.nz/council/council-projects/waste-futures/green-island-landfill-site

The most recent update provided information about the construction of the ORB on the Green Island Resource Recovery site. It outlines how the building will be used to receive food scraps and garden waste collected as part of the new kerbside collection service beginning on 1 July 2024 and provides information about the remaining facilities, including composting and processing, which are due be operational in 2025. The ORB will be a rectangular steel design, in Karaka Green, adjacent to a parking area for trucks, with some trees and plants planned around the area.

Pop-up information sessions around Green Island community

A series of pop-up information sessions have been held at different locations around the Green Island community from February 2023 as below:

- Saturday, 11 March at Sunnyvale Community Centre sportsground;
- Sunday, 12 March at Fresh Choice Supermarket, Green Island;
- 4-6pm Thursday, 9 March at Fresh Choice Supermarket, Green Island;
- 2-4pm Sunday, 5 March at Green Island Landfill, near rummage store
- 10-12 noon and 2-4pm Sunday 26 February at Fresh Choice Supermarket, Green Island;
 and
- 10am-1pm, Saturday, 9 September 2023 at the 'Greater Green Island Get Together'.

DCC staff and project team members were at the sessions and available to talk to people more about the plans for the Green Island landfill site including the new RRPP facilities. A series of banners were prepared specifically to assist with the drop-in sessions and show people the proposed changes at the site and present ideas for future use of the site, including improving access to the Kaikarae Stream and Estuary following completion of the construction of the RRPP and post-closure of the landfill.

The key feedback that came from speaking to people was:

- They appreciate being informed about what's happened and responded positively to "being kept informed about what was happening at Green Island landfill, including plans for development of the new RRPP facilities" ask guestions and meet the DCC team;
- There is a high level of interest in the new kerbside collection bin system, including the new bin to collect green and food waste and efforts made by DCC to reduce waste and process recycling;
- People are interested in understanding the need for the new RRPP facilities to support
 the new kerbside collections service that they would be able to continue to use the new
 RRPP facilities, even once the landfill itself is closed;

- Support for keeping the RRPP open to the public in the long-term as it was felt that
 having people coming to the site, particularly at weekends, resulted in people spending
 time at Green Island shops/centre;
- They liked the idea that the area around the Green Island site could provide recreation opportunities in the future, such as tracks and trails, when the landfill closed;
- There is some concern for the health of the Kaikorai Stream and Estuary and whether there were plans to improve the health of the waterway, including action needed to stop illegal dumping of waste;
- People are keen to get updates on the plans for the proposed landfill at Smooth Hill and what was happening with that process;

It is estimated that over the course of the pop-up sessions the team have engaged with over 400 people.

Information flyers/handouts

Flyers were also designed and handed out at the sessions to provide further information and direct people to the DCC Wase Future website page if they wanted to know more and be kept informed. The dedicated Waste Futures website has been regularly updated with Waste Futures information since it was established in 2018. It will continue to be updated post lodgement of the RRPP consent application and as work continues on site and to collect ideas for the use of the site post closure.

At each engagement activity there was opportunities for people to register their interest to be kept informed via email about the above activities as they progress, via providing their contact details to DCC. Flyers were also handed out which directed people to the Waste Futures website for regular updates.

9.2.8 Greater Green Island Community Network

Engagement with the Greater Green Island Community Network (GGICN) as a key stakeholder in the project began in 2022 and has continued throughout 2023 and 2024, with DCC staff attending GGICN Committee meetings and talking to other groups in the Green Island community as opportunities arise, this includes the Green Island Business Association. Also, and with support from the GGICN regular articles have been included in the local newsletter (The Informer) since March 2023 advising people about what is happening and the opportunity to find out more and keep up to date.

Both the Green Island Business Association and the GGICN expressed support for keeping the RRPP open to the public in the long-term as it was felt that having people coming to the site, particularly at weekends, resulted in people spending time at Green Island shops/centre.

Engagement with the GGICN and regular articles in the Informer will continue throughout 2024/2025, during construction of the RRPP, with plans for DCC to attend local events as opportunities arise, to continue to talk to people about the project.



Figure 8: Pop-up information sessions have been held at public locations and events around the Green Island community, throughout 2023.

9.2.9 Residential Neighbours

Flyer drops to residential neighbours

Over 100 flyers were delivered to neighbour's houses in Clariton Avenue, Taylor Street, Wavy Knowes and parts of Walton Park on 18 and 19 February 2023.

The purpose of the flyers was to invite neighbours to attend a series of information sessions to find out more about the plans for the future of Green Island landfill, meet the DCC team and ask questions.

Online information sessions with neighbours

Online information sessions, via Zoom, were held in February and March 2023. The meetings were attended by the DCC Group Manager Waste and Environmental Solutions and key members of the project team who presented imagery that explained what was planned for the Green Island landfill, including the staged closure of the site and the new RRPP facilities. Seven people took the opportunity to attend the sessions. Areas of interest included ongoing management of the landfill up to closure, including odour, noise, and potential for increased views of the landfill as it continued to fill up. All attendees were appreciative of the chance to meet the team and find out more about what was planned and asked to be kept informed as the plans progressed.

On-on-one meetings with interested residential neighbours (Clariton Avenue)

Following the online information sessions, several of the neighbours who attended the sessions expressed interest in being kept informed about the plans for the RRPP. Regular one-on-one meetings (six over the course of 2023) were subsequently held with these

neighbours to discuss the plans for the RRPP in detail, hear their concerns and provide opportunities to ask questions.

Input was also sought from the neighbours in relation to plans for enhancing the planting on the south bund, to help mitigate the visual effects of the MRF, whilst limiting shade and maintaining long-distance views.

The neighbours involved in the one-on-one meeting were appreciative of the ability to meet regularly with the Council team and ensure a 'no surprises' approach about the consent process. Key issues raised by the neighbours at these meetings included:

- the management of the composting facilities to ensure odour effects are minimised.
- noise during construction and operation of the RRPP, including noise from glass sorting and the recycling facilities.
- the potential impact of the MRF on their long-distance views, ability to enjoy their gardens and outdoor areas and overall natural character of their surrounding environment.
- opportunities for the RRPP consent process to address concerns regarding loss of views to Pukemakamaka Saddle Hill.
- how they can continue to work in collaboration with DCC, to agree the plans to enhance the existing screening planting on the southern bund, to mitigate views of the MRF building and prior to construction starting later in 2024/25.
- how they will be kept informed about the plans for the RRPP, its construction and its ongoing operation; and
- ability for them to be able to easily raise concerns/complaints about the day-to day operations with DCC once the RRPP is open and be assured of a response (clear complaints resolution process).

These concerns have been addressed through the technical reports, updates to management plans and RRPP design and operations, including the development of a specific composting management plan (draft) and specific complaint procedures.

Information evening

The DCC have also held an information evening for Clariton Ave neighbours on site at Green Island landfill to provide more information about the RRPP project, the resource consent process, and an opportunity to ask questions and meet the team.

9.3 Ongoing Engagement

Engagement will continue post-lodgement of the consent application for the proposed RRPP. The future engagement conversations will help to keep people informed about the RRPP project, as well as plans for the closure of the landfill and continue to seek ideas for the future use and enhancement of the site post closure of the landfill.

One-on-one engagement will continue with the neighbours in Clariton Avenue, as DCC work in collaboration with interested parties, to agree the plans to enhance the existing screening planting on the southern bund, prior to construction starting, and to mitigate views of the MRF building.

It is also intended that the Green Island landfill community liaison group (CLG) proposed as part of the Green Island landfill consent application will include the operation and

management of the RRPP.. Membership of the CLG is yet to be confirmed. It is likely to include representatives of key stakeholder and community groups, as well as residents who have expressed an interest in being part of a group as part of the initial engagement undertaken to date.

10.0 Notification

10.1 Public Notification

Section 95A provides a step-by-step guide in determining whether public notification is required:

Step 1	Mandatory public notification in certain circumstances. An application must be publicly notified if: the applicant requests public notification public notification is required under section 95C the application is made jointly with an application to exchange recreation reserve land
Step	If not required by step 1, public notification is precluded in certain circumstances. An application cannot be publicly notified if: • a rule or national environmental standard (NES) precludes notification • the application is for one or more of the following, but no other, activities: - a controlled activity - a restricted-discretionary or discretionary application for: • a subdivision of land • a residential activity (defined in new section 95A(6))
2	 a boundary activity (defined in section 87AAB; an activity prescribed in regulations.
Step 3	If not precluded by step 2, public notification is required in certain circumstances. Other than for those activities in step 2, public notification is required if: • a rule or NES requires public notification • the assessment under section 95D determines that the activity will have, or is likely to have, adverse effects on the environment that are more than minor.
Step 4	Public notification in special circumstances If notification is precluded under step 2, or isn't required under step 3, consideration must be given to whether special circumstances exist that warrant public notification of the application.

Public notification under section 95A is precluded because:

- None of the circumstances of Step 1 (section 95A(3)) exist;
- None of the circumstances in step 2 apply as the consent applications are discretionary/non-complying.
- None of the circumstances in step 3 apply because the adverse effects on the environment are no more than minor or are not likely to be more than minor in

accordance with section 95D (as assessed above in Section 7); and there is no NES requiring public notification.

• Step 4 does not apply as there are no special circumstances which could warrant public notification under s95A(9)

Accordingly, the consent authority does not have grounds to publicly notify this application.

10.2 Limited Notification

Where the consent authority accepts that public notification is not required (see Part 11.1 above), the consent authority must determine if limited notification is required under section 95B:

	Certain affected groups and affected persons must be notified.
	If the consent authority determines that certain people or groups are affected, these persons/groups must be given limited notification:
Step 1	affected protected customary rights groups
Ctop 1	 affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)
	 an affected person under section 95E to whom a statutory acknowledgement is made (if the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement)
	If not required by step 1, limited notification is precluded in certain circumstances. An application cannot be limited notified if:
Step 2	a rule or NES precludes limited notification of the application
Jp =	it is for either or both of the following, but no other, activities:
	 a controlled land use activity under a district plan
	 an activity prescribed through regulations.
	If not precluded by step 2, certain other affected persons must be notified.
Step 3	Determine whether, in accordance with section 95E, the following persons are affected persons:
5.0,0	 in the case of a boundary activity, an owner of an allotment with an infringed boundary; and
	 in the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity.
	In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.
	Further notification in special circumstances.
Step 4	If the consent authority determines special circumstances exist that warrant limited notification of the application to any other persons not already determined to be eligible for limited notification (excluding persons assessed under section 95E as not being affected persons), the council must give limited notification to those persons.

Limited Notification under section 95B is precluded because:

- None of the circumstances of step 1 (section 95B(2) or (3)) exist;
- None of the circumstances in step 2 exist;
- Step 3 does not apply as there are no adversely affected persons in accordance with section 95E within the scope of the consents applied for.
- Step 4 does not apply as there are no special circumstances which would warrant limited notification under Section 95B(10) to persons other than those considered as affected persons under section 95E.

Accordingly, it is considered that the consent authority need not give notice of this proposal to any person.

10.3 Conclusion of Notification Assessment

Pursuant to Sections 95 to 95G of the RMA, this application must be processed without public notification and without limited notification to any person, protected customary rights group or customary marine title group because:

- None of the steps under section 95A are applicable in this instance to warrant public notification. In particular, the activity is not considered likely to have adverse effects on the environment that are more than minor in accordance with section 95D.
- The application has been assessed against each of the steps under section 95B to determine whether limited notification is required. None of the steps are applicable in this instance to warrant limited notification.
- There are no persons considered to be 'affected persons' in accordance with section 95E within the scope of the consents applied for.
- There are no special circumstances that exist which would otherwise warrant public or limited notification of this application. The proposal is consistent with the designated landfill site and the mixed character of the receiving environment, and potentially adverse environmental effects will be appropriately mitigated.

11.0 Other Matters

11.1 Section 107 RMA

Section 107 of the Act provides that a consent authority shall not grant a discharge permit, that would allow the discharge of contaminant or water into water, or the discharge of a contaminants onto or into land in circumstances which may result in that contaminant entering water, if after reasonable mixing, the contaminant or discharge is likely to give rise to the following effects in the receiving waters:

- (c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:
- (d) any conspicuous change in the colour or visual clarity:
- (e) any emission of objectionable odour:
- (f) the rendering of fresh water unsuitable for consumption by farm animals:
- (g) any significant adverse effects on aquatic life.

As described in this AEE, the stormwater and leachate management systems for the RRPP provide effective collection, treatment and disposal of stormwater, and containment of leachate to protect freshwater receiving environments. It is considered unlikely that the continued discharges of contaminants to land and water associated with the RRPP will give rise to any of the effects listed in section 107 of the RMA in the receiving waters, after reasonable mixing.

11.2 Dunedin City Council Waste Minimisation and Management Plan 2020

The Waste Minimisation Act 2008 required DCC to adopt a Waste Management and Minimisation Plan (WMMP). The current WWMP was adopted in June 2020 as part of the Waste Futures Programme. The vision of the plan is:

- We have a duty to protect and enhance Dunedin's natural environment and resources for those generations who come after us (mō tatou, ā, mō kā uri ā, muri ake nei).
- Dunedin is actively committed to zero waste, inclusive of a circular economy, to enhance the health of our environment and people by 2030.

Targets of the plan include:

- Reduce the municipal solid waste generation per capita by at least 15% by 2030 compared to 2015;
- Reduce the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015; and
- Increase the diversion rate away from landfill and incineration to at least 70% by 2030.

The plan includes several objectives, policies and methods (implementation pathways) supporting this vision, outlines how the plan will be funded, and sets performance indicators against which to measure implementation progress. Also included in the plan is a summary forecast of future waste demands. Relevant objectives and methods relevant to the RRPP are as follows:

- OBJECTIVE 2: The community has access to diverted material services
- OBJECTIVE 3: The community has access to diverted material facilities
- OBJECTIVE 5: The community has access to well managed waste disposal facilities
- OBJECTIVE 6: Hazardous waste is managed in accordance with best practice

The expanded provision of resource recovery at the Green Island landfill via construction and operation of the RRPP will be consistent with the vision, objectives, and methods of the WMMP.

12.0 Conclusion

The proposal is for construction and operation of a resource recovery park at the Green Island landfill for the handling of recoverable and non-recoverable waste for Dunedin city.

Having regard to the above assessment, overall, the environmental effects of the RRPP will be less than minor in respect of effects that are within the scope of the resource consents applied for.

The proposal is also considered consistent with the relevant objectives and policies of the relevant planning documents.

It is considered that resource consent should be granted subject to the offered conditions of consent.

About Boffa Miskell

Boffa Miskell is a leading New Zealand professional services consultancy with offices in Whangarei, Auckland, Hamilton, Tauranga, Wellington, Nelson, Christchurch, Dunedin, and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural advisory, graphics and mapping. Over the past five decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

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